

2ND - SEMI-ANNUAL POST-CLOSURE GROUNDWATER MONITORING REPORT 2022

SUBMITTED TO:



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2022
1370 MAJORS PATH
SOUTHAMPTON, NEW YORK**

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1.0 INTRODUCTION

1.1 Purpose and Scope

P.W. Grosser Consulting Inc. (PWGC) has prepared the following post-closure groundwater monitoring report for the North Sea Landfill, Southampton, New York. This report is intended to satisfy the New York State Department of Environmental Conservation (NYSDEC) requirements for post-closure monitoring at the North Sea Landfill. The landfill is currently in post-closure and was removed from the United States Environmental Protection Agency (USEPA) Superfund National Priorities List (NPL) in 2005. The report provides a summary of the groundwater monitoring and results of groundwater and leachate samples collected during the Second Half of 2022.

1.2 Site Location and Description

North Sea Landfill (the Landfill) was initially constructed in 1963 for the disposal of solid waste, refuse and septic system waste. The Landfill consisted of three cells (Cell No. 1, Cell No. 2 and Cell No. 3), sludge lagoons, a leachate collection system and a gas monitoring system. Cell No. 1 is an inactive, unlined landfill that has been capped and closed. Cell No. 2 is an inactive, lined landfill with a leachate collection system that was capped and closed in 1990. Cell No. 3 is a 6.6-acre, inactive, lined landfill with a leachate collection system that was capped and closed in 1997. The sludge lagoons were decommissioned in 1986.

2.0 GROUNDWATER MONITORING PLAN

Groundwater monitoring and sampling is performed in accordance with the USEPA approved Operation and Maintenance (O&M) Manual dated November 1994 and subsequent amendments.

The groundwater monitoring plan for the site calls for the monitoring of both leachate and groundwater to confirm that the historic operation of the facility has not adversely impacted groundwater quality. The groundwater well network currently utilized for monitoring purposes at the Landfill consists of 20 groundwater monitoring wells that were installed as a part of the Remedial Investigation / Feasibility Study, the Cell No. 3 landfill expansion hydrogeologic investigation, and earlier monitoring activities.

2.1 Sampling Frequency

In accordance with the O&M Manual, groundwater monitoring well sampling was performed on a quarterly basis. In 2005, the USEPA and NYSDEC approved a reduction of the number of wells sampled and sampling frequency to semi-annual as detailed in the table below:

1 st Half Semi-Annual Sampling (April)		2 nd Half Semi-Annual Sampling (October)	
Analysis	Sample Locations	Analysis	Sample Locations
Baseline Parameters (6 NYCRR Part 360-2.11 (d)(6))	1A, 1B, 1C, 3A, 3B, 3C, 4A, 4B, 4C, 11A, 11B, 12A, & 12B	Routine Parameters (6 NYCRR Part 360-2.11 (d)(6))	1A, 1B, 1C, 3A, 3B, 3C, 4A, 4B, 4C, 6AR, 6B, 8, 9, 11A, 11B, 12A, 12B
		Baseline Parameters (6 NYCRR Part 360-2.11 (d)(6)) Metals Only	6AR, 6B, 11A, & 11B
Routine Parameters + Arsenic (6 NYCRR Part 360-2.11 (d)(6)) Minus VOC Analysis	LEA-Primary & LEA-Secondary	Baseline Parameters (6 NYCRR Part 360-2.11 (d)(6)) VOCs Only	11A & 11B
		Routine Parameters + Arsenic (6 NYCRR Part 360-2.11 (d)(6)) Minus VOC Analysis	LEA-Primary & LEA-Secondary

Note: Filtered metals analysis run on samples with turbidity in excess of 50 nephelometric turbidity units (NTUs).

Appendix D includes list of analytes for 6 New York Codes, Rules and Regulations (NYCRR) Part 360-2.11 (d) (6).

2.2 Leachate Monitoring

The objectives of the leachate monitoring program are to adequately characterize and monitor the composition of:

1. Leachate in the primary leachate collection systems; and
2. Liquids detected in the secondary liquids collection systems, prior to off-site treatment and disposal.

The Town of Southampton monitors the leachate storage system and submits monthly status reports, which includes the monthly summary tables of leachate



volumes consisting of the amount of leachate trucked, storage tank levels and the volume of leachate removed from the storage tank. Leachate quantity removals and allowable leakage rate (ALR) calculations will be discussed in the Annual Report.

2.3 Groundwater Monitoring

The groundwater monitoring well network for the Landfill consists of nine groundwater monitoring locations (MW-1A, B, C, MW-3A, B, C, MW-4A, B, C, MW-6A, B, MW-7, MW-8, MW-9, MW-11A, B, and MW-12A, B) which are currently in use. Several of these locations are constructed with multiple wells which are screened at varying depths throughout the aquifer (A=shallow, B=intermediate, C=deep).

Seventeen groundwater monitoring wells, as well as the primary and secondary leachate collection systems were sampled on October 26 and 27, 2022 as part of the Second Half 2022 sampling event. Samples collected as part of the Second Half 2022 sampling event were delivered to Pace Analytical Laboratories of Melville, New York and analyzed for the baseline and/or routine parameters. Turbid groundwater samples were also analyzed for filtered metals. The data collected in the field and laboratory are summarized on Tables 1 through 4 and the laboratory reports are attached in **Appendix A**. Depth to water and groundwater elevation data are summarized on **Table 4** and a water table flow map is shown on **Figure 1**.

Analytical results from each monitoring well were compared to applicable standards and guidance values, as well as analytical results from the previous years. Compounds that exceed NYSDEC groundwater standards or guidance values are indicated by shading on **Tables 1** through **3** and are discussed in the water quality section of this report.

2.4 Well Condition Report

During the Second Half 2022 sampling event, PWGC assessed the monitoring wells. Well assessment checklists (**Appendix B**) were filled out appropriately in the field during the sampling event. The assessment checklist included well headspace readings, well conditions, and recommendations. Headspace readings were collected utilizing a photoionization detector (PID). No PID responses were observed. The lock for MW-11B was found to be rusted. No other deficiencies with the well conditions were noted.

2.5 Sample Collection Procedures

Prior to collection of each sample, a minimum of three casing volumes were evacuated (purged) from the well using a Grundfos, submersible pump and temperature, specific conductivity, pH, dissolved oxygen, oxygen reduction potential (ORP) and turbidity measurements were collected and recorded. Groundwater sampling logs are included in **Appendix C**. Groundwater samples were collected using a submersible pump and dedicated polyethylene tubing. Primary and secondary leachate collection systems were also sampled using disposable polyethylene bailers and a dedicated polyethylene line.

Additional sample volume was collected from groundwater monitoring wells where turbidity could not be reduced below 50 NTUs for laboratory filtering of metals. This included groundwater monitoring well MW-11A.

2.6 Decontamination and Quality Assurance / Quality Control Procedures

All non-disposable sampling equipment (i.e., submersible pump) were decontaminated prior to and between each well by using a distilled water and non-phosphate detergent wash followed by a distilled water rinse.

2.7 Groundwater Quality

During the Second Half 2022 (October) groundwater sampling event, samples from seventeen groundwater monitoring wells were collected and submitted for analysis of routine and/or baseline metals and volatile organic compound (VOC) parameters. The inorganic portion of the analysis includes metals, nutrients, and the physical properties of the sample. Routine parameters include a condensed version of the baseline parameters. Routine metals are reduced to cadmium, calcium, iron, lead, magnesium, manganese, potassium, and sodium. In addition, VOCs, color, and hexavalent chromium are not analyzed as part of the routine parameters. Specific conductivity, temperature, turbidity, and pH values were reported from field measurements. However, they are listed in **Table 1** and discussed in the inorganic water quality section below. The list of organic groundwater quality results (**Table 2**) is comprised of volatile organic compounds (VOCs).

Groundwater quality as it relates to inorganic metal concentrations is evaluated at looking at the total metal concentrations for samples with turbidity values below 50 NTUs and dissolved metal concentrations with turbidity values above 50 NTUs.

The laboratory results are compared to NYSDEC's Class GA Groundwater Standards, 6NYCRR Part 703. Analytical results are discussed below. The locations of groundwater monitoring wells are illustrated on **Figure 1**. The wells are grouped into clusters consisting of varying depths (A=shallow, B=intermediate, C=deep).

2.7.1 Inorganic Water Quality Results - October 2022

Long Island groundwater generally has a low pH and is typically measured below the NYSDEC standard range of 6.5 to 8.5. Three of the seventeen samples had a measured pH level below 6.5. pH concentrations ranged from 6.16 (MW-6B) to 6.90 (MW-1C).

Chromium was detected above method detection limits in one of the four groundwater samples analyzed for baseline metals. Chromium concentrations ranged from less than 0.01 mg/L to 0.0577 mg/L (MW-11B). Chromium was detected in one of the four groundwater samples (MW-11B) at a concentration exceeding the NYSDEC groundwater standard (0.05 mg/L). Hexavalent chromium, the toxic form of chromium, was not detected above method detection limits in the four groundwater samples.

Iron was detected above method detection limits in eleven of the seventeen groundwater samples. Iron concentrations ranged from less than 0.100 mg/L to 12.3 mg/L (MW-11B). Iron was detected in eight of the seventeen groundwater samples (MW-1A, MW-3A, MW-3B, MW-4B, MW-4C, MW-9, MW-11A, and MW-11B) at concentrations exceeding the NYSDEC groundwater standard (0.3 mg/L).

Manganese was detected above method detection limits in eleven of the seventeen groundwater samples. Manganese concentrations ranged from less than 0.01 mg/L to 1.88 mg/L (MW-3A). Manganese was detected in six of the seventeen groundwater samples (MW-3A, MW-3B, MW-4B, MW-11A, MW-12A, and MW-12B) at a concentration exceeding the NYSDEC groundwater standard (0.3 mg/L).

Sodium was detected above method detection limits in each of the seventeen groundwater samples. Sodium concentrations ranged from 7.15 mg/L (MW-1B) to 34.6 mg/L (MW-3A). Sodium was detected in two of the seventeen groundwater samples (MW-3A and MW-4C) at a concentration exceeding the NYSDEC groundwater standard (20 mg/L).

Ammonia was detected above method detection limits in eight of the seventeen groundwater samples. Ammonia concentrations ranged from less than 0.1 mg/L to 3.8 mg/L (MW-12A). Ammonia was detected in three of the seventeen groundwater samples (MW-3B, MW-12A, and MW-12B) at a concentration exceeding the NYSDEC groundwater standard (2 mg/L).

Nitrate was detected above method detection limits in sixteen of the seventeen groundwater samples. Nitrate concentrations ranged from less than 0.050 mg/L to 10.7 mg/L (MW-1A). Nitrate was detected in one of the seventeen groundwater samples (MW-1A) at a concentration exceeding the NYSDEC groundwater standard (10 mg/L).

Phenol was detected above method detection limits in four of the seventeen groundwater samples. Phenol concentrations ranged from less than 0.0028 mg/L to 0.0059 mg/L (MW-1A). Phenol was detected in four of the seventeen groundwater samples (MW-1A, MW-4A, MW-8, and MW-11B) at a concentration exceeding the NYSDEC groundwater standard (0.001 mg/L).

2.7.2 Organic Water Quality Results - October 2022

Groundwater samples collected from two of the wells (MW-11A and MW-11B) were analyzed for VOCs as part of the Second Half 2022 sampling program. Analytical results indicate that no VOCs were detected in the samples collected at concentrations exceeding the laboratory detection limits with the exception of chloroform in MW-11A and MW-11B. Chloroform did not exceed its NYSDEC groundwater standard of 0.007 mg/L.

2.7.3 Well Cluster 4 & 11 Analysis - October 2022

Monitoring wells MW-4A, MW-4B, and MW-4C are located down-gradient of the Landfill along the edge of Fish Cove Pond. These wells represent the farthest down-gradient wells that are used to monitor the Landfill. Historical monitoring has shown that the leading edge of the leachate plume is migrating into Fish Cove Pond. In addition, there is an upward groundwater flow gradient from MW-4C to MW-4B. Concentrations of Conductivity, Chloride, Chromium, and total dissolved solids (TDS) have been increasing in MW-4C. The increasing trends observed in MW-4C may be attributed to a former salt storage area. The former salt storage area was located at the southwestern portion of the North Sea Landfill. A monitoring well was installed in this area during the Remedial Investigation and Feasibility Study (RI/FS) performed under the USEPA and

NYSDEC oversite. This well exhibited similar water quality of elevated chlorides and trivalent chromium as that exhibited in MW-4C. This area was not included as an operable unit at the time of the RI/FS and Remedial actions. These increasing trends are not coupled with any significant increases in iron and manganese which would indicate the presence of leachate that is being broken down. Iron and manganese are prevalent in MW-4B where the plume has been documented. Iron and manganese levels in MW-4C are at background levels when compared to MW-4B. A steady increase in Nitrate has been observed in MW-4A. This is likely attributed to the increase in development of the area up-gradient of this well by homes with onsite sanitary systems. Concentrations of Nitrate are lower in the onsite landfill wells with the exception of MW-1A, located adjacent to a compost storage area. Trend charts are included as **Figures 4** through **11** to depict historic trends in monitoring wells MW-4A, 4B, and 4C.

Monitoring wells MW-11A and MW-11B are located down-gradient of Cell 3. These wells have been under close observation since March 1993. A graph of several leachate indicators detected in samples collected from monitoring wells MW-11A and MW-11B since 1997 are shown on **Figures 2** and **3**. Detected concentrations of certain constituents were noted in MW-11A during this sampling event. As noted previously, a sample was not collected from MW-11B during this sampling event. A review of the trends shows that concentrations have generally decreased over time indicating that the plume continues to degrade over time. Slightly elevated concentrations of iron and manganese are still detected in these wells.

2.8 Groundwater Flow & Migration of Leachate Plume

Groundwater elevation data and laboratory analytical results are utilized to determine groundwater flow and to map the horizontal and vertical migration of the leachate plume. Depth to water and groundwater elevation data are shown on **Table 4**.

A groundwater contour map for October 2022 (**Figure 1**) was created with groundwater elevation data from nine water table monitoring wells (MW-1A, MW-3A, MW-4A, MW-6AR, MW-7A, MW-8, MW-9, MW-11A, and MW-12A). An evaluation of the water table elevation data indicates that groundwater flows from the landfill towards Fish Cove Pond. At Fish Cove Pond, an upward vertical flow component has been observed based upon head differential observed in the groundwater monitoring wells indicating groundwater is discharging into the pond.

Based upon historical groundwater sampling results and previous remedial investigations, the leachate plume migrates from the landfill, specifically Cell No. 1, and travels horizontally towards the northwest and discharges into Fish Cove Pond. The plume has been observed at its deepest point vertically at the MW-3B depth interval.

2.9 Leachate Quality

The October 2022 analytical data indicate that contaminant concentrations in the leachate detection system (secondary) are slightly lower when compared to those of the leachate collection system (primary). Concentrations observed



in both the primary and secondary leachate are similar when compared to concentrations detected during the October 2021 sampling event. The analytical results for the primary and secondary leachate are shown on **Table 3** and the laboratory report is attached as part of **Appendix A**.



3.0 DATA VALIDATION AND USABILITY REPORT

In accordance with the contract, five percent of the groundwater analytical results are in the process of being validated by Laboratory Data Consultants, Carlsbad, California. As part of the data validation process, all quality control (QC) issues are being reviewed. Upon completion, a copy of the data validation and usability report shall be submitted under separate cover. Compliance chart, re-submission communications, and the NYSDEC laboratory sample preparation and analysis summary forms will also be included.



4.0 SUMMARY

Review of the data for the Second Half 2022 indicates that previously implemented remedial actions continue to be effective at minimizing potential site impacts. In brief, the leachate quality has remained similar and the groundwater quality with regards to the inorganic constituents has improved when compared to the previous reporting periods. The groundwater quality with regards to other organic constituents has improved when compared to the previous reporting periods with concentrations remaining below laboratory detection levels except for chloroform (MW-1B, MW-1C, and MW-4A). Several inorganic compounds are sporadically detected in wells MW-1A, 1B, 1C, 3A, 3B, 3C, 4A, 4B, 4C, 11A, 11B, 12A, and 12B. Contaminants detected in wells MW-3A, 3B, 3C, 4A, 4B, and 4C may be due to the expansion of the recharge basin, which is now located up-gradient of these wells.

Monitoring well cluster MW-4 has shown Nitrate and potential former salt storage impact. Nitrate concentrations in MW-4A have been trending upwards and are a potential result of development of the area upgradient. Conductivity, Chloride, Chromium, and TDS concentrations have been trending upwards in MW-4C, indicating potential impact from the former salt storage area at the landfill.

All sample results are usable as reported or usable with minor qualification as estimated or edited to non-detection to determine the presence, absence, and magnitude of environmental contamination in the samples collected from the site.



5.0 RECOMMENDATIONS

PWGC recommends that the post-closure monitoring and maintenance operations program be continued, and the groundwater and leachate sampling program be continued with the following modifications:

- Reduction from semi-annual monitoring and sampling to annual monitoring and sampling.
 - Baseline sampling will be performed on an annual basis in October of each calendar year and extend to the entire groundwater monitoring well network except the MW-7 cluster.



TABLES



TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
OCTOBER 2022

ANALYTICAL PARAMETERS	UNITS	GW STND ⁽¹⁾	MW-1A																					
			October 2017	April 2018		October 2018		April 2019		October 2019		April 2020		October 2020		April 2021		October 2021		April 2022		October 2022		
Aluminum as Al	mg/L	NA	PNA		0.0134 <i>UJ</i>		PNA		0.200 U		PNA		0.200 U		PNA		0.200 U		PNA		0.200 U		PNA	
Antimony as Sb	mg/L	0.003 #	PNA		0.003 U		PNA		0.0600 U		PNA		0.0600 U		PNA		0.0600 U		PNA		0.0600 U		PNA	
Arsenic as As	mg/L	0.025	PNA		0.0068 U		PNA		0.0100 U		PNA		0.0100 U		0.0100 U		0.0100 U		0.0100 U		0.0100 U		0.0100 U	
Barium	mg/L	1	PNA		0.0218 J		PNA		0.200 U		PNA		0.200 U		PNA		0.200 U		PNA		0.200 U		PNA	
Beryllium as Be	mg/L	0.003	PNA		0.0006 U		PNA		0.0050 U		PNA		0.0050 U		PNA		0.0050 U		PNA		0.0050 U		PNA	
Boron as B	mg/L	1	PNA		0.0324 <i>J</i>		PNA		0.0917		PNA		0.0807		PNA		0.0611		PNA		0.0500 U		PNA	
Cadmium as Cd	mg/L	0.005	0.0025 U		0.00011 <i>J</i>		0.0025 U		0.0025 U		0.0025 U		0.0025 U		0.0025 U		0.0025 U		0.0025 U		0.0025 U		0.0025 U	
Calcium as Ca	mg/L	NA	55.6		17.7		63.9		76.400		63.400		46.700		77.800		40.200		54.700		21.700		60.000	
Chromium as Cr	mg/L	0.05	PNA		0.0016 U		PNA		0.0100 U		PNA		0.0100 U		PNA		0.0184		PNA		0.0100 U		PNA	
Cobalt	mg/L	NA	PNA		0.0006 U		PNA		0.0500 U		PNA		0.0500 U		PNA		0.0500 U		PNA		0.0500 U		PNA	
Copper as Cu	mg/L	0.2	PNA		0.0025 U		PNA		0.0250 U		PNA		0.0250 U		PNA		0.0250 U		PNA		0.0250 U		PNA	
Cyanide as CN	mg/L	0.2	PNA		0.0029 U		PNA		0.0100 U		PNA		0.0100 U		PNA		0.0100 U		PNA		0.0100 U		0.0100 U	
Iron as Fe	mg/L	0.3	0.0625		0.0109 U		0.0601		0.0261		0.742		0.0291		3.840		0.800		0.179		0.100 U		0.393	
Lead as Pb	mg/L	0.025	0.005 U		0.0013 U		0.005 UB		0.0050 U		0.0050 U		0.0050 U		0.0050 U		0.0050 U		0.0050 U		0.0050 U		0.0050 U	
Magnesium	mg/L	35 #	22.100		7.25 <i>J</i>		24.8		28.700		22.600		19.000		27.000		15.800		18.700		7.450		20.300	
Manganese as Mn	mg/L	0.3	0.028		0.005 <i>U</i>		0.0196		0.0100 U		0.217		0.0100 U		0.243		0.100		0.0126		0.0100 U		0.0100 U	
Mercury as Hg	mg/L	0.0007	PNA		0.000056 U		PNA		0.00020 U		PNA		0.00020 U		PNA		0.00020 U		PNA		0.00020 U		PNA	
Nickel as Ni	mg/L	0.1	PNA		0.0009 <i>UJ</i>		PNA		0.0400 U		PNA		0.0400 U		PNA		0.0400 U		PNA		0.0400 U		PNA	
Potassium	mg/L	NA	12.900		4 J		12.5		13.900		12.600		6.820		17.300		5.580		11.100		5.000 U		13.500	
Selenium as Se	mg/L	0.01	PNA		0.0063 U		PNA		0.0100 U		PNA		0.0100 U		PNA		0.0100 U		PNA		0.0100 U		PNA	
Silver as Ag	mg/L	0.05	PNA		0.0036 <i>UJ</i>		PNA		0.0100 U		PNA		0.0100 U		PNA		0.0100 U		PNA		0.0100 U		PNA	
Sodium as Na	mg/L	20	13.400		11.1		15.2		15.400		18.600		14.400		22.300		12.800		16.300		10.800		19.900	
Thallium as Tl	mg/L	0.0005 #	PNA		0.0036 U		PNA		0.0100 U		PNA		0.0100 U		PNA		0.0100 U		PNA		0.0100 U		PNA	
Vanadium	mg/L	NA	PNA		0.0008 U		PNA		0.0500 U		PNA		0.0500 U		PNA		0.0500 U		PNA		0.0500 U		PNA	
Zinc as Zn	mg/L	2 #	PNA		0.0022 <i>UJ</i>		PNA		0.0200 U		PNA		0.0200 U		PNA		0.0200 U		PNA		0.0200 U		PNA	
Alkalinity tot CaCo3	mg/L	NA	132		46.6		98.4		178		127		55.5		194		76.1		119		29.3		142	
Chloride as Cl	mg/L	250	22.6		18.3		30.2		39.6		41.0		26.6		43.4		20.7		26.3		20.0		39.0	
Sulfate as SO4	mg/L	250	85.8		37.2		125		120		106		91.9		103		58.4		67.7		36.7		87.3	
Bromide	mg/L	2 #	0.5 U		0.038 J		0.5 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	
BOD5	mg/L	NA	2 U		2 U		4.1		2.0 U		2.0 U		2.0 U		2.0 U		2.0 U		2.0 U		2.0 U		2.0 U	
COD	mg/L	NA	10 U		10 U		15.5		32.2		10.2		16.7		27.3		10 U		21.2		10 U		20.8	
Color	units	NA	PNA		5 U		PNA		10.0		PNA		5.0		PNA		6.2		PNA		5.0 U		6.0	
Chromium hex as Cr	mg/L	0.05	PNA		0.003 U		PNA		0.020 U		PNA		0.020 U		PNA		0.020 U		PNA		0.020 U		PNA	
Hardness as CaCO3	mg/L	NA	200		166		187		265		220		130		280		120		300		56.7		273	
Ammonia as N	mg/L	2	0.1 U		0.018 J		0.10 U		0.10 U		0.10 U		0.18		0.10 U		0.10 U		0.10 U		0.10 U		0.10 U	
Nitrite as N	mg/L	NA	0.05 U		0.05 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	
Nitrate as N	mg/L	10	6.4		4		10.5		11.0		6.6		9.2		9.5		6.2		8.1		5.8		10.7	
Phenols as Phenol	mg/L	0.001	0.005 U		0.0056		0.005 U		0.0050 U		0.0118		0.0050 U		0.0050 U		0.0050 U		0.0050 U		0.0050 U		0.0059	
Tot Dissolved Solids	mg/L	NA	305.0		144		326		390		330		286		472		258		234		129		342	
Tot. Kjeldahl Nitrogen	mg/L	NA	0.38		0.1 U		0.10 U		0.10 U		0.10 U		0.10 U		0.10 U		0.10 U		0.36 <i>U</i>		0.10 U		0.10 U	
Tot Organic Carbon	mg/L	NA	3.7 B		1.2		4.4		6.2		4.8		4.0		5.4		3.5		3.5		1.4		5.1	
Turbidity	NTU	NA	2.8		5.4		5.1		0.0		3.9		32.4		31.4		118.6		PNA		0.0		0.0	
Temperature	deg.C	NA	12.26		11.42		12.16		12.01		12.77		11.7		12.63		12.62		15.27		12.44		13.45	
pH	units	6.5-8.5	6.09		5.54		5.61		6.73		6.29		6.30		6.40		7.95		4.19		5.46		6.60	
Spec. Cond	umho/cm	NA	568		244		192		373		522		384		56		329		576		187		578	

NOTES:

(1) = NYSDEC, Class GA Groundwater Standards

Bold indicates update due to data validation.

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J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

J - Data Validation Qualifier - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

R - Data Validation Qualifier - Rejected.

U - Indicates the compound was analyzed for, but not detected.

U - Data Validation Qualifier - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

UJ - Data Validation Qualifier - The analyte was not detected above the reported sample quantitation limit. However, the reported 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.

Highlighted text denotes concentrations exceeding the NYSDEC, Class GA Groundwater Quality Standard or Guidance Value



TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
OCTOBER 2022

ANALYTICAL PARAMETERS	UNITS	GW STND ⁽¹⁾	MW-1B											
			October 2017	April 2018	October 2018	April 2019	October 2019	April 2020		October 2020	April 2021	October 2021	April 2022	October 2022
								Unfiltered	Filtered					
Aluminum as Al	mg/L	NA	PNA	0.0134 U	PNA	0.200 U	PNA	0.200 U	0.200 U	PNA	0.200 U	PNA	0.200 U	PNA
Antimony as Sb	mg/L	0.003 #	PNA	0.003 U	PNA	0.0600 U	PNA	0.0600 U	0.0600 U	PNA	0.0600 U	PNA	0.0600 U	PNA
Arsenic as As	mg/L	0.025	PNA	0.0068 U	PNA	0.0100 U	PNA	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Barium	mg/L	1	PNA	0.0107 J	PNA	0.200 U	PNA	0.200 U	0.200 U	PNA	0.200 U	PNA	0.200 U	PNA
Beryllium as Be	mg/L	0.003	PNA	0.0006 U	PNA	0.0050 U	PNA	0.0050 U	0.0050 U	PNA	0.0050 U	PNA	0.0050 U	PNA
Boron as B	mg/L	1	PNA	0.0132 J	PNA	0.0500 U	PNA	0.0500 U	0.0500 U	PNA	0.0500 U	PNA	0.0500 U	PNA
Cadmium as Cd	mg/L	0.005	0.0025 U	0.00006 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Calcium as Ca	mg/L	NA	4.46	4.29	4.74	4.440	3.130	3.830	3.750	3.670	4.630	4.380	4.440	4.190
Chromium as Cr	mg/L	0.05	PNA	0.0027 J	PNA	0.010 U	PNA	0.0303	0.010 U	PNA	0.0472	PNA	0.0100 U	PNA
Cobalt	mg/L	NA	PNA	0.0006 U	PNA	0.0500 U	PNA	0.0500 U	0.0500 U	PNA	0.0500 U	PNA	0.0500 U	PNA
Copper as Cu	mg/L	0.2	PNA	0.0025 U	PNA	0.0250 U	PNA	0.0250 U	0.0250 U	PNA	0.0250 U	PNA	0.0250 U	PNA
Cyanide as CN	mg/L	0.2	PNA	0.0029 U	PNA	0.0100 U	PNA	0.0100 U	PNA	PNA	0.0100 U	PNA	0.0100 U	0.0100 U
Iron as Fe	mg/L	0.3	0.02 U	0.0109 U	0.0200 U	0.0200 U	0.0528	0.114	0.0200 U	0.0378	0.190	0.102	0.100 U	0.237
Lead as Pb	mg/L	0.025	0.005 U	0.0013 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Magnesium	mg/L	35 #	1.94	1.98	2.160	1.850	1.250	1.620	1.570	1.740	2.180	2.150	2.100	2.160
Manganese as Mn	mg/L	0.3	0.01 U	0.0035 J	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Mercury as Hg	mg/L	0.0007	PNA	0.000069 J	PNA	0.00020 U	PNA	0.00020 U	0.00020 U	PNA	0.00020 U	PNA	0.00020 U	PNA
Nickel as Ni	mg/L	0.1	PNA	0.0139 J	PNA	0.0400 U	PNA	0.0400 U	0.0400 U	PNA	0.0400 U	PNA	0.0400 U	PNA
Potassium	mg/L	NA	5 U	0.83 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U
Selenium as Se	mg/L	0.01	PNA	0.0063 U	PNA	0.0100 U	PNA	0.0100 U	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA
Silver as Ag	mg/L	0.05	PNA	0.0036 U	PNA	0.0100 U	PNA	0.0100 U	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA
Sodium as Na	mg/L	20	8.44	8.42	9.750	9.180	9.040	8.370	8.480	7.990	8.190	8.770	7.070	7.150
Thallium as Tl	mg/L	0.0005 #	PNA	0.0036 U	PNA	0.0100 U	PNA	0.0100 U	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA
Vanadium	mg/L	NA	PNA	0.0008 U	PNA	0.0500 U	PNA	0.0500 U	0.0500 U	PNA	0.0500 U	PNA	0.0500 U	PNA
Zinc as Zn	mg/L	2 #	PNA	0.0012 J	PNA	0.0200 U	PNA	0.0200 U	0.0200 U	PNA	0.0200 U	PNA	0.0200 U	PNA
Alkalinity tot CaCo3	mg/L	NA	10.8	11	13.4	11.4	5.4	8.5	PNA	11.4	11.7	15.1	12.5	14.7
Chloride as Cl	mg/L	250	11.2	9	16.3	14.5	15.4	9.0	PNA	9.9	13.9	10.9	9.6	12.1
Sulfate as SO4	mg/L	250	6.3	7.9	8.5	7.9	8.7	8.3	PNA	7.4	7.4	7.1	8.3	9.4
Bromide	mg/L	2 #	0.5 U	0.025 J	0.50 U	0.50 U	0.50 U	0.50 U	PNA	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
BOD5	mg/L	NA	2 U	2 U	2.0 U	2.0 U	2.0 U	2.0 U	PNA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
COD	mg/L	NA	10 U	10 U	10.0 U	38.9	10.0 U	14.6	PNA	10.0 U	10.0 U	10.9	10.0 U	10.0 U
Color	units	NA	PNA	5 U	PNA	5.0 U	PNA	5.0 U	PNA	PNA	5.0 U	PNA	5.0 U	7.0
Chromium hex as Cr	mg/L	0.05	PNA	0.003 U	PNA	0.020 U	PNA	0.020 U	PNA	PNA	0.020 U	PNA	0.020 U	PNA
Hardness as CaCO3	mg/L	NA	18.7	15	14.0	17.0	8.0	12.0	PNA	23.3	5.0 U	30	5.0 U	20.0
Ammonia as N	mg/L	2	0.1 U	0.065 J	0.10 U	0.10 U	0.10 U	0.13	PNA	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Nitrite as N	mg/L	NA	0.5 U	0.05 U	0.050 U	0.050 U	0.050 U	0.050 U	PNA	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Nitrate as N	mg/L	10	0.05 U	0.056	7.9	0.050 U	0.050 U	0.093	PNA	0.053	0.050 U	0.050 U	0.050 U	0.070
Phenols as Phenol	mg/L	0.001	0.005 U	0.0029 J	0.0050 U	0.0050 U	0.0115	0.0050 U	PNA	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0028 U
Tot Dissolved Solids	mg/L	NA	38	59	61.0	26.0	59.0	65.0	PNA	75.0	75.0	34.0	20.0	93.0
Tot. Kjeldahl Nitrogen	mg/L	NA	0.1 U	0.1 U	0.10 U	0.42	0.10 U	0.24	PNA	0.10 U	0.14	0.27	0.10 U	0.17
Tot Organic Carbon	mg/L	NA	1 U	0.23 U	1.0 U	1.0 U	1.0 U	1.0 U	PNA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Turbidity	NTU	NA	0.7	3.2	0.0	0.0	0.0	64.4	PNA	1.20	31.9	PNA	0.00	0.0
Temperature	deg.C	NA	11.38	11.66	12.38	11.22	12.01	11.68	PNA	12.18	13.82	12.62	11.57	12.70
pH	units	6.5-8.5	6.54	6.17	6.31	5.87	5.89	6.40	PNA	6.33	7.92	3.85	5.62	6.56
Spec. Cond	umho/cm	NA	96	84	96	93	71	63	PNA	65	76	95	62	82

NOTES:

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TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
OCTOBER 2022

ANALYTICAL PARAMETERS	UNITS	GW STND ⁽¹⁾	MW-1C										
			October 2017	April 2018	October 2018	April 2019	October 2019	April 2020	October 2020	April 2021	October 2021	April 2022	October 2022
Aluminum as Al	mg/L	NA	PNA	0.0134 U	PNA	0.200 U	PNA	0.200 U	PNA	0.200 U	PNA	0.200 U	PNA
Antimony as Sb	mg/L	0.003 #	PNA	0.003 U	PNA	0.0600 U	PNA	0.0600 U	PNA	0.0600 U	PNA	0.0600 U	PNA
Arsenic as As	mg/L	0.025	PNA	0.0068 U	PNA	0.0100 U	PNA	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Barium	mg/L	1	PNA	0.0101 J	PNA	0.200 U	PNA	0.200 U	PNA	0.200 U	PNA	0.200 U	PNA
Beryllium as Be	mg/L	0.003	PNA	0.0006 U	PNA	0.0050 U	PNA	0.0050 U	PNA	0.0050 U	PNA	0.0050 U	PNA
Boron as B	mg/L	1	PNA	0.0121 J	PNA	0.0500 U	PNA	0.0500 U	PNA	0.0500 U	PNA	0.0500 U	PNA
Cadmium as Cd	mg/L	0.005	0.0025 U	0.00006 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Calcium as Ca	mg/L	NA	4.14	4.63	4.910	4.770	5.120	4.640	4.660	4.440	5.020	4.500	4.550
Chromium as Cr	mg/L	0.05	PNA	0.0048 J	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0121	PNA	0.0100 U	PNA
Cobalt	mg/L	NA	PNA	0.0006 U	PNA	0.0500 U	PNA	0.0500 U	PNA	0.0500 U	PNA	0.0500 U	PNA
Copper as Cu	mg/L	0.2	PNA	0.0025 U	PNA	0.0250 U	PNA	0.0250 U	PNA	0.0250 U	PNA	0.0250 U	PNA
Cyanide as CN	mg/L	0.2	PNA	0.0029 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	0.0100 U
Iron as Fe	mg/L	0.3	0.02 U	0.0301	0.0200 U	0.0200 U	0.0840	0.0200 U	0.0241	0.0709	0.195	0.100 U	0.100 U
Lead as Pb	mg/L	0.025	0.005 U	0.0013 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Magnesium	mg/L	35 #	2.17	2.45	2.510	2.420	2.410	2.370	2.390	2.270	2.480	2.210	2.310
Manganese as Mn	mg/L	0.3	0.01 U	0.0037 J	0.0100 U	0.0100 U	0.0110	0.0100 U	0.0100 U	0.0100 U	0.0121	0.0100 U	0.0100 U
Mercury as Hg	mg/L	0.0007	PNA	0.000075 J	PNA	0.00020 U	PNA	0.00020 U	PNA	0.00020 U	PNA	0.00020 U	PNA
Nickel as Ni	mg/L	0.1	PNA	0.0129 J	PNA	0.0400 U	PNA	0.0400 U	PNA	0.0400 U	PNA	0.0400 U	PNA
Potassium	mg/L	NA	5 U	0.83 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U
Selenium as Se	mg/L	0.01	PNA	0.0063 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA
Silver as Ag	mg/L	0.05	PNA	0.0036 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA
Sodium as Na	mg/L	20	7.48	7.83	7.930	8.230	8.620	8.080	8.040	7.010	7.620	6.770	7.590
Thallium as Tl	mg/L	0.0005 #	PNA	0.0036 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA
Vanadium	mg/L	NA	PNA	0.0008 U	PNA	0.0500 U	PNA	0.0500 U	PNA	0.0500 U	PNA	0.0500 U	PNA
Zinc as Zn	mg/L	2 #	PNA	0.002 J	PNA	0.0200 U	PNA	0.0200 U	PNA	0.0200 U	PNA	0.0200 U	PNA
Alkalinity tot CaCo3	mg/L	NA	12	13.2	14.6	14.0	14.7	13.4	14.6	13.5	14.8	14.7	16.8
Chloride as Cl	mg/L	250	8.1	9.3	10.7	10.9	11.4	8.9	9.3	9.7	9.2	8.9	11.1
Sulfate as SO4	mg/L	250	8.1	9.3	10.9	10.6	10.6	9.4	8.2	9.2	8.5	8.7	10.6
Bromide	mg/L	2 #	0.5 U	0.023 J	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
BOD5	mg/L	NA	2 U	2 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
COD	mg/L	NA	10 U	10 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	13.0	10.0 U	10.0 U
Color	units	NA	PNA	5 U	PNA	5.0 U	PNA	5.0 U	PNA	5.0 U	PNA	5.0 U	PNA
Chromium hex as Cr	mg/L	0.05	PNA	0.003 U	PNA	0.020 U	PNA	0.020 U	PNA	0.020 U	PNA	0.11	PNA
Hardness as CaCO3	mg/L	NA	17.3	19	16.0	20.0	16.0	22.0	10.0	36.7	6.0	22.0	
Ammonia as N	mg/L	2	0.13	0.11	0.10 U	0.10 U	0.10 U	0.10 U	0.21	0.10 U	0.10 U	0.10 U	0.10 U
Nitrite as N	mg/L	NA	0.1 U	0.05 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
Nitrate as N	mg/L	10	0.17	0.24	0.25	0.26	0.37	0.24	0.23	0.13	0.22	0.17	0.20
Phenols as Phenol	mg/L	0.001	0.005 U	0.0043 J	0.0050 U	0.0050 U	0.0161	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0028 U
Tot Dissolved Solids	mg/L	NA	48	57	45.0	49.0	97.0	62.0	99.0	64.0	26.0	43.0	78.0
Tot. Kjeldahl Nitrogen	mg/L	NA	0.11	0.1 U	0.64	0.10 U	0.10 U	0.10 U	0.31	0.35	0.45	0.22	0.12
Tot Organic Carbon	mg/L	NA	1 U	0.23 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
Turbidity	NTU	NA	1	2.2	0.0	0.0	0.0	36.2	0.00	8.80	PNA	0.00	0.0
Temperature	deg.C	NA	11.23	10.99	12.11	11.41	12.76	11.38	11.58	12.62	12.62	11.46	12.44
pH	units	6.5-8.5	6.02	5.89	6.1	6.28	6.56	6.60	6.43	7.75	3.85	5.63	6.90
Spec. Cond	umho/cm	NA	90	92	87	100	84	72	72	73	95	46	86

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NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
OCTOBER 2022

ANALYTICAL PARAMETERS	UNITS	GW STND ⁽¹⁾	MW-3A																						
			October 2017		April 2018		October 2018	April 2019	October 2019	April 2020		October 2020		April 2021	October 2021		April 2022	October 2022							
			Unfiltered	Filtered	Unfiltered	Filtered				Unfiltered	Filtered	Unfiltered	Filtered												
Aluminum as Al	mg/L	NA	PNA	PNA	0.127	J	0.0327	J	PNA	0.200	U	PNA	0.200	U	PNA	PNA	0.200	U	PNA						
Antimony as Sb	mg/L	0.003 #	PNA	PNA	0.0089	J	0.003	U	PNA	0.0600	U	PNA	0.0600	U	PNA	PNA	0.0600	U	PNA						
Arsenic as As	mg/L	0.025	PNA	PNA	0.0068	U	0.0068	U	PNA	0.0100	U	PNA	0.0100	U	0.0100	U	0.0100	U	0.0100						
Barium	mg/L	1	PNA	PNA	0.107	J	0.0669	J	PNA	0.200	U	PNA	0.201	U	0.203	PNA	PNA	0.200	U	PNA					
Beryllium as Be	mg/L	0.003	PNA	PNA	0.0006	U	0.0006	U	PNA	0.0050	U	PNA	0.0050	U	0.0050	U	PNA	PNA	0.0050	U	PNA				
Boron as B	mg/L	1	PNA	PNA	0.0331	J	0.0321	J	PNA	0.0500	U	PNA	0.0500	U	0.0500	U	PNA	PNA	0.0500	U	PNA				
Cadmium as Cd	mg/L	0.005	0.0025	U	0.0025	U	0.0006	U	0.00063	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	
Calcium as Ca	mg/L	NA	15.6	14.4	19.5		19.4		22.900	20.300		18.200	27.800		28.700	23.100	21.600		21.700	19.800	12.600		22.900	20.600	
Chromium as Cr	mg/L	0.05	PNA	PNA	1.84		0.143		PNA	0.251		PNA	0.506		0.0380	PNA	PNA	0.182		PNA	1.080		PNA		
Cobalt	mg/L	NA	PNA	PNA	0.0084	J	0.00063	U	PNA	0.0500	U	PNA	0.0500	U	0.0500	U	PNA	PNA	0.0500	U	PNA	0.0500	U	PNA	
Copper as Cu	mg/L	0.2	PNA	PNA	0.0351		0.0097	J	PNA	0.0250	U	PNA	0.0250	U	0.0250	U	PNA	PNA	0.0250	U	PNA	0.0264		PNA	
Cyanide as CN	mg/L	0.2	PNA	PNA	0.0029	U	PNA		PNA	0.0100	U	PNA	0.0100	U	PNA	PNA	0.0100	U	PNA	PNA	0.0100	U	0.0100	U	
Iron as Fe	mg/L	0.3	2.460		0.1	U	7.37		0.514	2.520		0.953	3.630		2.000	0.122	14.500	3.270	0.700	2.090	0.116	4.200		5.170	
Lead as Pb	mg/L	0.025	0.005	U	0.005	U	0.0024	J	0.0013	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U	
Magnesium	mg/L	35 #	4.88		4.36		5.82		6.56	6.770		8.080	8.280		6.560	6.200	6.680		5.770	6.440	6.020		6.010		
Manganese as Mn	mg/L	0.3	0.113		0.0419		1.18		0.0483	0.190		0.0914	0.390		0.227	0.0951	1.200	0.628	0.0526	0.155	0.0384	0.218		1.880	
Mercury as Hg	mg/L	0.0007	PNA	PNA	0.002	U	0.000068	J	0.0002	U	PNA	0.00020	U	PNA	0.00020	U	PNA	PNA	0.00020	U	PNA	0.00020	U	PNA	
Nickel as Ni	mg/L	0.1	PNA	PNA	0.181		0.0541		PNA	0.0416		PNA	0.0546		0.0490	PNA	PNA	0.0984	PNA	PNA	0.117		PNA		
Potassium	mg/L	NA	5.0	U	5.0	U	6.65		6.9	9.530		7.930	11.400		7.790	10.500	10.000	5.000	U	6.710	7.150	5.000	U	11.300	
Selenium as Se	mg/L	0.01	PNA	PNA	0.0063	U	0.0062	U	PNA	0.0100	U	PNA	0.0100	U	0.0100	U	PNA	PNA	0.0100	U	PNA	PNA	0.0100	U	PNA
Silver as Ag	mg/L	0.05	PNA	PNA	0.0036	U	0.0036	U	PNA	0.0100	U	PNA	0.0100	U	0.0100	U	PNA	PNA	0.0100	U	PNA	PNA	0.0100	U	PNA
Sodium as Na	mg/L	20	43.1		40.3		56.3		50.7	105.000		40.100	33.000		157.000	168.000	25.200	25.600	99.800	65.100	84.100	85.100		34.600	
Thallium as Tl	mg/L	0.0005 #	PNA	PNA	0.0036	U	0.0036	U	PNA	0.0100	U	PNA	0.0100	U	0.0100	U	PNA	PNA	0.0100	U	PNA	PNA	0.0100	U	PNA
Vanadium	mg/L	NA	PNA	PNA	0.0052	J	0.0008	U	PNA	0.0500	U	PNA	0.0500	U	0.0500	U	PNA	PNA	0.0500	U	PNA	PNA	0.0500	U	PNA
Zinc as Zn	mg/L	2 #	PNA	PNA	0.0026	J	0.0012	U	PNA	0.0200	U	PNA	0.0200	U	0.0200	U	PNA	PNA	0.0200	U	PNA	PNA	0.0200	U	PNA
Alkalinity tot CaCo3	mg/L	NA	69.6		PNA		47.4		PNA	78.0		69.4	83.8		71.1	PNA	88.3	PNA	54.6	60.7	PNA	61.8		97.8	
Chloride as Cl	mg/L	250	58		PNA		98.1		PNA	217		79.5	46.8		295	PNA	41.5	PNA	191	116	PNA	175		51.8	
Sulfate as SO4	mg/L	250	5	U	PNA		5.6		PNA	9.0		5.0	U		5.0	U	PNA	14.0	PNA	5.0	U	6.9		15.4	
Bromide	mg/L	2 #	0.5	U	PNA		0.021	J	PNA	0.50	U	0.50	U		0.50	U	PNA	0.50	U	0.50	U	PNA	0.50	U	0.50
BOD5	mg/L	NA	2	U	PNA		2	U	PNA	2.0	U	2.0	U		2.0	U	PNA	2.0	U	2.0	U	PNA	2.0	U	2.0
COD	mg/L	NA	11.9		PNA		10	U	PNA	16.2		19.0			27.3	PNA	20.9	PNA	14.2		15	PNA	14.7		23.00
Color	units	NA	PNA	PNA			5	U	PNA	PNA		15.0			PNA	PNA	PNA	PNA	40.0	PNA	PNA	90.0		140	
Chromium hex as Cr	mg/L	0.05	PNA	PNA	0.00003	U	PNA	PNA	0.020	U	PNA	0.020	U	PNA	PNA	PNA	PNA	0.020	U	PNA	PNA	0.020	U	0.020	
Hardness as CaCO3	mg/L	NA	70		PNA		68		PNA	72.0		53.3			100	PNA	120	PNA	53.3		93.3	PNA	93.3		73.3
Ammonia as N	mg/L	2	0.1	UB	PNA		0.46		PNA	0.10	U	0.10	U		0.51	PNA	0.10	U	PNA	0.10	U	PNA	0.13		0.10
Nitrite as N	mg/L	NA	0.05	U	PNA		0.05	U	PNA	0.050	U	0.050	U		0.050	U	PNA	0.050	U	PNA	0.050	U	PNA	0.050	U
Nitrate as N	mg/L	10	0.22		PNA		2		PNA	0.34		0.58			0.33		PNA	0.33	PNA	0.38	0.15	PNA	0.78		0.17
Phenols as Phenol	mg/L	0.001	0.005	U	PNA		0.0034	J	PNA	0.0050	U	0.0050	U		0.0099	0.0050	U	PNA	0.0050	U	PNA	0.0050	U	0.0028	
Tot Dissolved Solids	mg/L	NA	165		PNA		266		PNA	367		186			209	508	PNA	184	PNA	384	218	PNA	335		268
Tot Kjeldahl Nitrogen	mg/L	NA	0.37		PNA		0.83		PNA	0.23		0.58			1.3	1.3	PNA	0.45	PNA	0.53	0.71	PNA	0.48		0.42
Tot Organic Carbon	mg/L	NA	3.9		PNA		3		PNA	4.8		4.9			5.5	5.2	PNA	3.9	PNA	3.1	4.1	PNA	3.0		4.5
Turbidity	NTU	NA	104		PNA		86.6		PNA	32.0		12.8			36.7	56.3	PNA	101	PNA	87.3	PNA	PNA	34.5		24.5
Temperature	deg.C	NA	10.93		PNA		11.79		PNA	11.17		10.39			10.14	11.59	PNA	10.53	PNA	11.60	9.9	PNA	12.20		10.54
pH	units	6.5-8.5	6.41		PNA		5.79		PNA	6.66		6.47			6.55	6.60	PNA	6.38	PNA	8.47	4.17	PNA	6.00		6.65
Spec. Cond	umho/cm	NA	423		PNA		487		PNA	504		420			303	1,350	PNA	262	PNA	81	9	PNA	364		375

NOTES:
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U - Indicates the compound was analyzed for, but not detected.
U - Data Validation Qualifier - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
UJ - Data Validation Qualifier - The analyte was not detected above the reported sample quantitation limit. However, the reported 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.
Highlighted text denotes concentrations exceeding the NYSDEC, Class GA Groundwater Quality Standard or Guidance Value



TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
OCTOBER 2022

ANALYTICAL PARAMETERS	UNITS	GW STND ⁽¹⁾	MW-3B											
			October 2017	April 2018	October 2018	April 2019	October 2019	April 2020	October 2020		April 2021	October 2021	April 2022	October 2022
									Unfiltered	Filtered				
Aluminum as Al	mg/L	NA	PNA	0.0134 U	PNA	0.200 U	PNA	0.200 U	PNA	PNA	0.200 U	PNA	0.200 U	PNA
Antimony as Sb	mg/L	0.003 #	PNA	0.003 U	PNA	0.0600 U	PNA	0.0600 U	PNA	PNA	0.0600 U	PNA	0.0600 U	PNA
Arsenic as As	mg/L	0.025	PNA	0.0068 U	PNA	0.0100 U	PNA	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Barium	mg/L	1	PNA	0.0208 J	PNA	0.200 U	PNA	0.200 U	PNA	PNA	0.200 U	PNA	0.200 U	PNA
Beryllium as Be	mg/L	0.003	PNA	0.0006 U	PNA	0.0050 U	PNA	0.0050 U	PNA	PNA	0.0050 U	PNA	0.0050 U	PNA
Boron as B	mg/L	1	PNA	0.0409 J	PNA	0.0500 U	PNA	0.0545 U	PNA	PNA	0.110	PNA	0.0582 U	PNA
Cadmium as Cd	mg/L	0.005	0.0025 U	0.00006 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Calcium as Ca	mg/L	NA	11.7	8.64	14.000	14.400	18.900	15.500	24.000	22.800	18.600	22.400	15.000	18.400
Chromium as Cr	mg/L	0.05	PNA	0.0016 U	PNA	0.0100 U	PNA	0.0100 U	PNA	PNA	0.0100 U	PNA	0.0100 U	PNA
Cobalt	mg/L	NA	PNA	0.0035 J	PNA	0.0500 U	PNA	0.0500 U	PNA	PNA	0.0500 U	PNA	0.0500 U	PNA
Copper as Cu	mg/L	0.2	PNA	0.0025 U	PNA	0.0250 U	PNA	0.0250 U	PNA	PNA	0.0250 U	PNA	0.0250 U	PNA
Cyanide as CN	mg/L	0.2	PNA	0.0029 U	PNA	0.0100 U	PNA	0.0100 U	PNA	PNA	0.0100 U	PNA	0.0100 U	0.0100 U
Iron as Fe	mg/L	0.3	9.97	6.69	9.990	8.710	8.570	5.860	9.780	5.880	7.690	7.900	5.470	4.140
Lead as Pb	mg/L	0.025	0.005 U	0.0013 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Magnesium	mg/L	35 #	3.98	3.08	4.950	5.150	6.810	5.530	8.810	8.420	6.480	7.500	5.210	6.370
Manganese as Mn	mg/L	0.3	2.95	2.6	3.700	2.920	2.440	1.680	3.370	3.210	2.590	2.270	1.430	1.640
Mercury as Hg	mg/L	0.0007	PNA	0.000063 J	PNA	0.00020 U	PNA	0.00020 U	PNA	PNA	0.00020 U	PNA	0.00020 U	PNA
Nickel as Ni	mg/L	0.1	PNA	0.0025 J	PNA	0.0400 U	PNA	0.0400 U	PNA	PNA	0.0400 U	PNA	0.0400 U	PNA
Potassium	mg/L	NA	5.0 U	2.19 J	5.000 U	5.000 U	5.940	6.660	5.480	5.330	5.780	6.760	5.810	5.930
Selenium as Se	mg/L	0.01	PNA	0.0063 U	PNA	0.0100 U	PNA	0.0100 U	PNA	PNA	0.0100 U	PNA	0.0100 U	PNA
Silver as Ag	mg/L	0.05	PNA	0.0036 U	PNA	0.0100 U	PNA	0.0100 U	PNA	PNA	0.0100 U	PNA	0.0100 U	PNA
Sodium as Na	mg/L	20	12.0	9.37	20.900	13.800	11.400	13.400	19.300	19.700	16.600	17.300	12.700	19.500
Thallium as Tl	mg/L	0.0005 #	PNA	0.0036 U	PNA	0.0100 U	PNA	0.0100 U	PNA	PNA	0.0100 U	PNA	0.0100 U	PNA
Vanadium	mg/L	NA	PNA	0.0008 U	PNA	0.0500 U	PNA	0.0500 U	PNA	PNA	0.0500 U	PNA	0.0500 U	PNA
Zinc as Zn	mg/L	2 #	PNA	0.0016 J	PNA	0.0200 U	PNA	0.0200 U	PNA	PNA	0.0200 U	PNA	0.0200 U	PNA
Alkalinity tot CaCO3	mg/L	NA	47	37.2	48.3	59.4	77.7	74.0	119	PNA	95.8	99.7	72.5	90.6
Chloride as Cl	mg/L	250	14.7	11.0	49.9	22.5	20.1	12.8	21.9	PNA	16.8	21.6	18.7	37.3
Sulfate as SO4	mg/L	250	11	12.1	7.5	10.1	9.5	12.4	15.4	PNA	12.3	5.6	12.2	12.8
Bromide	mg/L	2 #	0.5 U	0.038	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	PNA	0.50 U	0.50 U	0.50 U	0.50 U
BOD5	mg/L	NA	2 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	PNA	2.0 U	2.0 U	2.0 U	2.0 U
COD	mg/L	NA	10 U	10.0 U	10.0 U	12.4	21.2	10.4	10.0 U	PNA	16.3	27.3	10.3	18.7
Color	units	NA	PNA	5 U	PNA	5.0	PNA	20.0	PNA	PNA	5.0	PNA	35.0	100
Chromium hex as Cr	mg/L	0.05	PNA	0.003 U	PNA	0.020 U	PNA	0.020 U	PNA	PNA	0.020 U	PNA	0.020 U	0.020 U
Hardness as CaCO3	mg/L	NA	60	34.0	56.0	40.0	90.0	80.0	86.7	PNA	60.0	120.0	26.7	66.7
Ammonia as N	mg/L	2	1	0.39	0.28	0.30	0.30	0.12	0.36	PNA	1.1	5.5	2.7	3.4
Nitrite as N	mg/L	NA	0.05 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	PNA	0.050 U	0.050 U	0.050 U	0.050 U
Nitrate as N	mg/L	10	0.25	0.74	0.37	0.15	0.43	0.35	0.19	PNA	0.050 U	0.050 U	0.260	0.098
Phenols as Phenol	mg/L	0.001	0.005 U	0.00084 U	0.0050 U	0.0074	0.0116	0.0050 U	0.0050 U	PNA	0.0050 U	0.0051	0.0050 U	0.0028 U
Tot Dissolved Solids	mg/L	NA	89	111	142	168	183	147	173	PNA	120	137	150	184
Tot. Kjeldahl Nitrogen	mg/L	NA	1.2	0.34	0.37	0.62	0.84	0.48	0.68	PNA	1.6	8.0	2.9	3.4
Tot Organic Carbon	mg/L	NA	1.4 B	0.45 J	3.9	3.2	6.8	1.8	3.8	PNA	3.2	7.7	3.0	3.7
Turbidity	NTU	NA	4.9	1.2	17.0	2.2	0.0	22.0	50.0	PNA	12.4	PNA	0.0	0.0
Temperature	deg.C	NA	11.52	11.61	11.49	11.70	8.61	11.85	10.73	PNA	12.32	9.72	12.11	11.38
pH	units	6.5-8.5	6.12	5.95	6.19	6.16	6.11	6.50	6.66	PNA	8.41	4.06	5.59	6.64
Spec. Cond	umho/cm	NA	220	156	199	246	281	174	271	PNA	254	364	187	300

NOTES:

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TOWN OF SOUTHAMPTON
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TABLE 1
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OCTOBER 2022

ANALYTICAL PARAMETERS	UNITS	GW STND ⁽¹⁾	MW-3C											
			October 2017	April 2018	October 2018	April 2019	October 2019	April 2020	October 2020		April 2021	October 2021	April 2022	October 2022
									Unfiltered	Filtered				
Aluminum as Al	mg/L	NA	PNA	0.0134 U	PNA	0.200 U	PNA	0.200 U	PNA	PNA	0.200 U	PNA	0.200 U	PNA
Antimony as Sb	mg/L	0.003 #	PNA	0.003 U	PNA	0.0600 U	PNA	0.0600 U	PNA	PNA	0.0600 U	PNA	0.0600 U	PNA
Arsenic as As	mg/L	0.025	PNA	0.0068 U	PNA	0.0100 U	PNA	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Barium	mg/L	1	PNA	0.0185 J	PNA	0.200 U	PNA	0.200 U	PNA	PNA	0.200 U	PNA	0.200 U	PNA
Beryllium as Be	mg/L	0.003	PNA	0.0006 U	PNA	0.0050 U	PNA	0.0050 U	PNA	PNA	0.0050 U	PNA	0.0050 U	PNA
Boron as B	mg/L	1	PNA	0.0124 J	PNA	0.0500 U	PNA	0.0500 U	PNA	PNA	0.0500 U	PNA	0.0500 U	PNA
Cadmium as Cd	mg/L	0.005	0.0025 U	0.00006 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Calcium as Ca	mg/L	NA	7.35	8.06	8.68	8.95	8.80	8.44	8.960	8.620	10.8	10.80	7.32	8.630
Chromium as Cr	mg/L	0.05	PNA	0.022	PNA	0.0146	PNA	0.0100 U	PNA	PNA	0.0133	PNA	0.0240	PNA
Cobalt	mg/L	NA	PNA	0.0006 U	PNA	0.0500 U	PNA	0.0500 U	PNA	PNA	0.0500 U	PNA	0.0500 U	PNA
Copper as Cu	mg/L	0.2	PNA	0.0025 U	PNA	0.0250 U	PNA	0.0250 U	PNA	PNA	0.0250 U	PNA	0.0250 U	PNA
Cyanide as CN	mg/L	0.2	PNA	0.0029 U	PNA	0.0100 U	PNA	0.0100 U	PNA	PNA	0.0100 U	PNA	0.0100 U	0.0100 U
Iron as Fe	mg/L	0.3	0.02 U	0.108	0.100	0.0862	0.0285	0.0868	0.0616	0.0200 U	0.181	0.0291	0.151	0.100 U
Lead as Pb	mg/L	0.025	0.005 U	0.0013 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Magnesium	mg/L	35 #	3.52	3.93	3.980	4.050	4.080	3.820	4.190	4.050	4.770	4.360	3.420	3.890
Manganese as Mn	mg/L	0.3	0.01 U	0.0063 J	0.0167	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0132	0.0100 U	0.0100 U	0.0100 U
Mercury as Hg	mg/L	0.0007	PNA	0.000067 J	PNA	0.00020 U	PNA	0.00020 U	PNA	PNA	0.00020 U	PNA	0.00020 U	PNA
Nickel as Ni	mg/L	0.1	PNA	0.0046 J	PNA	0.0400 U	PNA	0.0400 U	PNA	PNA	0.0400 U	PNA	0.0400 U	PNA
Potassium	mg/L	NA	5 U	0.841 J	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U
Selenium as Se	mg/L	0.01	PNA	0.0063 U	PNA	0.0100 U	PNA	0.0100 U	PNA	PNA	0.0100 U	PNA	0.0100 U	PNA
Silver as Ag	mg/L	0.05	PNA	0.0036 U	PNA	0.0100 U	PNA	0.0100 U	PNA	PNA	0.0100 U	PNA	0.0100 U	PNA
Sodium as Na	mg/L	20	10.1	10.8	11.000	12.100	12.100	11.800	10.900	11.400	12.200	13.900	9.260	10.700
Thallium as Tl	mg/L	0.0005 #	PNA	0.0036 U	PNA	0.0100 U	PNA	0.0100 U	PNA	PNA	0.0100 U	PNA	0.0100 U	PNA
Vanadium	mg/L	NA	PNA	0.0012 J	PNA	0.0500 U	PNA	0.0500 U	PNA	PNA	0.0500 U	PNA	0.0500 U	PNA
Zinc as Zn	mg/L	2 #	PNA	0.0012 U	PNA	0.0200 U	PNA	0.0200 U	PNA	PNA	0.0200 U	PNA	0.0200 U	PNA
Alkalinity tot CaCo3	mg/L	NA	41.6	33	42.8	45.0	45.8	45.9	47.3	PNA	54.3	50.3	41.1	45.7
Chloride as Cl	mg/L	250	9.5	10.7	12.6	12.4	13.0	9.9	10.4	PNA	10.2	9.6	10.2	13.2
Sulfate as SO4	mg/L	250	5 U	3.2 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	PNA	5.0 U	5.0 U	5.0 U	5.8
Bromide	mg/L	2 #	0.5 U	0.056 J	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	PNA	0.50 U	0.50 U	0.50 U	0.50 U
BOD5	mg/L	NA	2 U	2 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	PNA	2.0 U	2.0 U	2.0 U	2.0 U
COD	mg/L	NA	10 U	10 U	10.0 U	10.0 U	10.0 U	10.0 U	12.5	PNA	10.0 U	10.0 U	10.0 U	10.0 U
Color	units	NA	PNA	5 U	PNA	5.0	PNA	5.0 U	PNA	PNA	5.0 U	PNA	5.0 U	5.0 U
Chromium hex as Cr	mg/L	0.05	PNA	0.003 U	PNA	0.020 U	PNA	0.020 U	PNA	PNA	0.020 U	PNA	0.020 U	0.020 U
Hardness as CaCO3	mg/L	NA	33	32	33.0	24.0	23.3	32.0	25.0	PNA	13.3 J	66.7 J	13.3	36.0
Ammonia as N	mg/L	2	0.1 UB	0.023 J	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	PNA	0.100 U	0.100 U	0.100 U	0.20
Nitrite as N	mg/L	NA	0.05 U	0.05 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	PNA	0.050 U	0.050 U	0.050 U	0.050 U
Nitrate as N	mg/L	10	0.16	0.21	0.17	0.18	0.19	0.18	0.27	PNA	0.18	0.24	0.19	0.20
Phenols as Phenol	mg/L	0.001	0.005 U	0.0038 J	0.0050 U	0.0050 U	0.0121	0.0050 U	0.0050 U	PNA	0.0050 U	0.0050 U	0.0050 U	0.0028 U
Tot Dissolved Solids	mg/L	NA	41	102	65.0	80.0	102	94.0	103	PNA	90.0	62.0	126	106
Tot. Kjeldahl Nitrogen	mg/L	NA	0.1 U	0.1 U	0.10 U	0.14	0.10 U	0.29	0.10 U	PNA	0.21 J	0.11 J	0.10 U	0.10 U
Tot Organic Carbon	mg/L	NA	1 UB	0.24 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	PNA	1.0 U	1.0 U	1.0 U	1.0 U
Turbidity	NTU	NA	3.8	1.9	4.6	0.0	0.0	29.4	51.0	PNA	6.10	PNA	0.0	0.0
Temperature	deg.C	NA	11.76	11.79	11.82	11.86	10.75	11.81	11.64	PNA	12.50	10.95	12.13	12.19
pH	units	6.5-8.5	6.61	6.19	7.01	6.64	6.71	6.90	6.93	PNA	8.09	3.67	6.20	6.77
Spec. Cond	umho/cm	NA	131	127	127	142	126	103	118	PNA	120	148	74	129

NOTES:

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NA = Not available.

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J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

J - Data Validation Qualifier - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

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U - Indicates the compound was analyzed for, but not detected.

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UJ - Data Validation Qualifier - The analyte was not detected above the reported sample quantitation limit. However, the reported 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.

Highlighted text denotes concentrations exceeding the NYSDEC, Class GA Groundwater Quality Standard or Guidance Value



TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
OCTOBER 2022

ANALYTICAL PARAMETERS	UNITS	GW STND ⁽¹⁾	MW-4A											
			October 2017	April 2018	October 2018	April 2019	October 2019	April 2020	October 2020		April 2021	October 2021	April 2022	October 2022
									Unfiltered	Filtered				
Aluminum as Al	mg/L	NA	PNA	0.187 J	PNA	0.200 U	PNA	0.200 U	PNA	PNA	0.202	PNA	0.200 U	PNA
Antimony as Sb	mg/L	0.003 #	PNA	0.003 U	PNA	0.0600 U	PNA	0.0600 U	PNA	PNA	0.0600 U	PNA	0.0600 U	PNA
Arsenic as As	mg/L	0.025	PNA	0.0068 U	PNA	0.0100 U	PNA	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Barium	mg/L	1	PNA	0.123 J	PNA	0.200 U	PNA	0.200 U	PNA	PNA	0.200 U	PNA	0.200 U	PNA
Beryllium as Be	mg/L	0.003	PNA	0.0006 U	PNA	0.0050 U	PNA	0.0050 U	PNA	PNA	0.0050 U	PNA	0.0050 U	PNA
Boron as B	mg/L	1	PNA	0.0488 J	PNA	0.0500 U	PNA	0.0500 U	PNA	PNA	0.0500 U	PNA	0.0500 U	PNA
Cadmium as Cd	mg/L	0.005	0.0025 U	0.00015 J	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Calcium as Ca	mg/L	NA	10.9	10.4	8.330	7.700	9.030	8.270	7.370	7.120	8.690	11.500	7.500	12.500
Chromium as Cr	mg/L	0.05	PNA	0.0039 J	PNA	0.0100 U	PNA	0.0100 U	PNA	PNA	0.0100 U	PNA	0.0177	PNA
Cobalt	mg/L	NA	PNA	0.0006 U	PNA	0.0500 U	PNA	0.0500 U	PNA	PNA	0.0500 U	PNA	0.0500 U	PNA
Copper as Cu	mg/L	0.2	PNA	0.0025 U	PNA	0.0250 U	PNA	0.0250 U	PNA	PNA	0.0250 U	PNA	0.0250 U	PNA
Cyanide as CN	mg/L	0.2	PNA	0.0029 U	PNA	0.0100 U	PNA	0.0100 U	PNA	PNA	0.0100 U	PNA	0.0100 U	0.0100 U
Iron as Fe	mg/L	0.3	1.69	0.0583	0.0302	0.0200 U	2.140	0.0358	0.183	0.0200 U	0.0238	0.256	0.246	0.135
Lead as Pb	mg/L	0.025	0.005 U	0.0013 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Magnesium	mg/L	35 #	4.24	3.82	3.170	2.960	3.190	2.810	2.520	2.450	3.000	3.570	2.300	4.410
Manganese as Mn	mg/L	0.3	0.219	0.0702	0.0244	0.0225	0.224	0.0630	0.0607	0.0506	0.0691	0.0787	0.0467	0.0217
Mercury as Hg	mg/L	0.0007	PNA	0.000066 J	PNA	0.00020 U	PNA	0.00020 U	PNA	PNA	0.00020 U	PNA	0.00020 U	PNA
Nickel as Ni	mg/L	0.1	PNA	0.0031 J	PNA	0.0400 U	PNA	0.0400 U	PNA	PNA	0.0400 U	PNA	0.0400 U	PNA
Potassium	mg/L	NA	5 U	3.45 J	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U
Selenium as Se	mg/L	0.01	PNA	0.0063 U	PNA	0.0100 U	PNA	0.0100 U	PNA	PNA	0.0100 U	PNA	0.0100 U	PNA
Silver as Ag	mg/L	0.05	PNA	0.0036 U	PNA	0.0100 U	PNA	0.0100 U	PNA	PNA	0.0100 U	PNA	0.0100 U	PNA
Sodium as Na	mg/L	20	25.9	29.8	24.400	25.000	19.200	16.900	18.800	19.500	24.900	24.800	25.400	20.000
Thallium as Tl	mg/L	0.0005 #	PNA	0.0036 U	PNA	0.0100 U	PNA	0.0100 U	PNA	PNA	0.0100 U	PNA	0.0100 U	PNA
Vanadium	mg/L	NA	PNA	0.0008 U	PNA	0.0500 U	PNA	0.0500 U	PNA	PNA	0.0500 U	PNA	0.0500 U	PNA
Zinc as Zn	mg/L	2 #	PNA	0.006 J	PNA	0.0200 U	PNA	0.0200 U	PNA	PNA	0.0200 U	PNA	0.0200 U	PNA
Alkalinity tot CaCo3	mg/L	NA	50.4	6.4 J	12.7	7.0	4.8	5.6	8.3	PNA	2.6	3.3	6.1	16.6
Chloride as Cl	mg/L	250	46.6	42.9	39.0	49.4	37.1	27.5	32.1	PNA	40.1	40.3	40.3	43.9
Sulfate as SO4	mg/L	250	11.4	14.4	8.5	16.7	19.5	12.7	12.0	PNA	15.3	20.9	17.7	21.6
Bromide	mg/L	2 #	0.5 U	0.027 J	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	PNA	0.50 U	0.50 U	0.50 U	0.50 U
BOD5	mg/L	NA	2 U	2 U	2.0 U	2.0 U	4.0 U	2.0 U	2.0 U	PNA	2.0 U	2.0 U	2.0 U	2.0 U
COD	mg/L	NA	10 U	10 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	PNA	10.0 U	13.0	14.7	10.0 U
Color	units	NA	PNA	5 U	PNA	5.0 U	PNA	5.0 U	PNA	PNA	5.0 U	PNA	5.0 U	5.0 U
Chromium hex as Cr	mg/L	0.05	PNA	0.003 U	PNA	0.020 U	PNA	0.020 U	PNA	PNA	0.020 U	PNA	0.020 U	0.020 U
Hardness as CaCO3	mg/L	NA	88	41	29.0	23.3	34.0	32.0	25.0	PNA	20.0	66.7	6.7	48.0
Ammonia as N	mg/L	2	0.1 U	0.073 U	0.10 U	0.10 U	0.20	0.12	0.15	PNA	0.10 U	0.10 U	0.10 U	0.10 U
Nitrite as N	mg/L	NA	0.05 U	0.05 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	PNA	0.050 U	0.050 U	0.050 U	0.050 U
Nitrate as N	mg/L	10	0.29	0.46	7.2	1.4	3.6	5.0	4.4	PNA	5.7	3.4	1.7	2.1
Phenols as Phenol	mg/L	0.001	0.005 U	0.0043 UJ	0.0050 U	0.0050 U	0.0161	0.0050 U	0.0050 U	PNA	0.0050 U	0.0050 U	0.0050 U	0.0030
Tot Dissolved Solids	mg/L	NA	120	166	117	97.0	126	109	138	PNA	137	195	118	127
Tot. Kjeldahl Nitrogen	mg/L	NA	0.41	0.1 U	0.10 U	0.01 U	0.10 U	0.10 U	0.10 U	PNA	0.10 U	0.10 U	0.18	0.10 U
Tot Organic Carbon	mg/L	NA	1 U	0.66 J	1.0 U	1.0 U	1.8	1.0 U	1.0 U	PNA	1.0 U	1.0 U	1.0 U	1.0 U
Turbidity	NTU	NA	22.9	1.4	14.88	0.0	48.2	18.4	66.0	PNA	4.00	PNA	0.0	0.0
Temperature	deg.C	NA	13.31	10.78	13.49	10.46	12.91	11.59	12.95	PNA	11.14	13.71	11.33	12.65
pH	units	6.5-8.5	5.22	4.89	5.4	5.26	4.75	6.00	5.41	PNA	7.70	4.84	4.45	6.68
Spec. Cond	umho/cm	NA	272	278	296	232	171	145	148	PNA	222	272	84	227

NOTES:

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TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
OCTOBER 2022

ANALYTICAL PARAMETERS	UNITS	GW STND ⁽¹⁾	MW-4B															
			October 2017	April 2018	October 2018	April 2019	October 2019	April 2020	October 2020		April 2021	October 2021	April 2022	October 2022				
									Unfiltered	Filtered								
Aluminum as Al	mg/L	NA	PNA	0.0137	J	PNA	0.200	U	PNA	0.200	U	PNA	PNA	0.200	U	PNA		
Antimony as Sb	mg/L	0.003 #	PNA	0.0055	J	PNA	0.0600	U	PNA	0.0600	U	PNA	PNA	0.0600	U	PNA		
Arsenic as As	mg/L	0.025	PNA	0.0068	U	PNA	0.0100	U	PNA	0.0100	U	0.0100	U	0.0100	U	0.0100	U	
Barium	mg/L	1	PNA	0.0589	J	PNA	0.200	U	PNA	0.200	U	PNA	PNA	0.200	U	PNA		
Beryllium as Be	mg/L	0.003	PNA	0.0006	U	PNA	0.0050	U	PNA	0.0050	U	PNA	PNA	0.0050	U	PNA		
Boron as B	mg/L	1	PNA	0.0713		PNA	0.0569		PNA	0.0574		PNA	PNA	0.0500	U	PNA		
Cadmium as Cd	mg/L	0.005	0.0025	U	0.00006	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U
Calcium as Ca	mg/L	NA	16.9	15.6	15.400	13.800	14.400	13.800	14.500	14.000	12.000	12.200	13.200	14.200				
Chromium as Cr	mg/L	0.05	PNA	0.0055	J	PNA	0.0100	U	PNA	0.133		PNA	PNA	0.0100	U	PNA		
Cobalt	mg/L	NA	PNA	0.0046	J	PNA	0.0500	U	PNA	0.0500	U	PNA	PNA	0.0500	U	PNA		
Copper as Cu	mg/L	0.2	PNA	0.0025	U	PNA	0.0250	U	PNA	0.0250	U	PNA	PNA	0.0250	U	PNA		
Cyanide as CN	mg/L	0.2	PNA	0.0029	U	PNA	0.0100	U	PNA	0.0100	U	PNA	PNA	0.0100	U	PNA		
Iron as Fe	mg/L	0.3	3.89	9.32	10.600	4.800	5.430	4.020	3.640	1.530	0.341	0.331	8.040	4.770				
Lead as Pb	mg/L	0.025	0.005	U	0.0013	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U
Magnesium	mg/L	35 #	8.31	7.35	7.500	6.900	7.320	6.730	7.440	7.250	6.310	6.340	6.350	6.830				
Manganese as Mn	mg/L	0.3	0.633	1.08	1.270	0.710	0.959	0.395	0.790	0.758	0.186	0.160	0.812	1.040				
Mercury as Hg	mg/L	0.0007	PNA	0.000067	J	PNA	0.00020	U	PNA	0.00020	U	PNA	PNA	0.00020	U	PNA		
Nickel as Ni	mg/L	0.1	PNA	0.0034	J	PNA	0.0400	U	PNA	0.0400	U	PNA	PNA	0.0400	U	PNA		
Potassium	mg/L	NA	5	U	3.74	J	5.000	U	5.000	U	5.000	U	5.000	U	5.000	U	5.000	U
Selenium as Se	mg/L	0.01	PNA	0.0063	U	PNA	0.0100	U	PNA	0.0100	U	PNA	PNA	0.0100	U	PNA		
Silver as Ag	mg/L	0.05	PNA	0.0036	U	PNA	0.0100	U	PNA	0.0100	U	PNA	PNA	0.0100	U	PNA		
Sodium as Na	mg/L	20	16.6	17.8	16.700	23.000	26.000	14.200	13.100	13.800	11.000	12.300	12.500	13.000				
Thallium as Tl	mg/L	0.0005 #	PNA	0.0036	U	PNA	0.0100	U	PNA	0.0100	U	PNA	PNA	0.0100	U	PNA		
Vanadium	mg/L	NA	PNA	0.0008	U	PNA	0.0500	U	PNA	0.0500	U	PNA	PNA	0.0500	U	PNA		
Zinc as Zn	mg/L	2 #	PNA	0.0022	J	PNA	0.0200	U	PNA	0.0200	U	PNA	PNA	0.0200	U	PNA		
Alkalinity tot CaCo3	mg/L	NA	91.4	68.6	79.6	77.8	68.6	69.2	70.8	PNA	67.2	51.1	74.4	62.5				
Chloride as Cl	mg/L	250	22.4	19.2	20.4	30.4	43.4	13.8	15.6	PNA	11.7	10.5	15.8	32.4				
Sulfate as SO4	mg/L	250	10.3	14.7	15.2	10.4	14.9	9.8	11.8	PNA	9.8	5.0	U	13.4	15.4			
Bromide	mg/L	2 #	0.5	U	0.09	J	0.50	U	0.50	U	0.50	U	PNA	0.50	U	0.50	U	
BOD5	mg/L	NA	2	U	2	U	4.0	U	2.0	U	2.0	U	PNA	2.0	U	2.0	U	
COD	mg/L	NA	10	U	10	U	10.0	U	10.0	U	10.0	U	10.4	PNA	10.0	U	10.0	U
Color	units	NA	PNA	5	U	PNA	6.0	PNA	10.0	PNA	5.0	U	PNA	60.0	55.0			
Chromium hex as Cr	mg/L	0.05	PNA	0.015	U	PNA	0.020	U	PNA	0.020	U	PNA	PNA	0.020	U	PNA		
Hardness as CaCO3	mg/L	NA	74	70	60.0	50.0	66.7	53.3	66.7	PNA	40.0	63.3	43.3	64.0				
Ammonia as N	mg/L	2	2.3	2.5	2.8	1.4	2.1	0.62	1.9	PNA	0.50	0.13	2.9	1.2				
Nitrite as N	mg/L	NA	0.05	U	0.05	U	0.050	U	0.050	U	0.050	U	PNA	0.050	U	0.050	U	
Nitrate as N	mg/L	10	0.069	0.13	0.11	0.16	0.21	0.27	0.28	PNA	0.35	0.34	0.11	0.11				
Phenols as Phenol	mg/L	0.001	0.005	U	0.0029	J	0.0050	U	0.0050	U	0.0050	U	PNA	0.0050	U	0.0050	U	
Tot Dissolved Solids	mg/L	NA	137	161	114	144	216	128	154	PNA	112	86.0	128	120				
Tot. Kjeldahl Nitrogen	mg/L	NA	2.5	2.7	3.0	1.3	2.4	1.2	2.0	PNA	0.39	0.48	3.3	1.5				
Tot Organic Carbon	mg/L	NA	1.5	1.6	1.9	1.3	1.4	1.0	U	1.1	PNA	1.0	U	1.3	1.0	U		
Turbidity	NTU	NA	2.7	2.2	0.0	0.0	0.0	24.8	51.0	PNA	3.60	PNA	PNA	3.0	0.0			
Temperature	deg.C	NA	12.73	12.04	12.55	12.1	12.48	12.42	12.68	PNA	12.34	12.76	12.77	12.89				
pH	units	6.5-8.5	6.41	6.31	6.4	6.58	6.29	6.80	6.87	PNA	7.51	4.57	6.10	6.68				
Spec. Cond	umho/cm	NA	283	281	285	270	252	155	182	PNA	152	165	186	233				

NOTES:

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TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
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INORGANIC GROUNDWATER QUALITY RESULTS
OCTOBER 2022

ANALYTICAL PARAMETERS	UNITS	GW STND ⁽¹⁾	MW-4C											
			October 2017	April 2018	October 2018	April 2019	October 2019	April 2020	October 2020		April 2021	October 2021	April 2022	October 2022
									Unfiltered	Filtered				
Aluminum as Al	mg/L	NA	PNA	0.0134 U	PNA	0.200 U	PNA	0.200 U	PNA	PNA	0.200 U	PNA	0.200 U	PNA
Antimony as Sb	mg/L	0.003 #	PNA	0.0052 J	PNA	0.0600 U	PNA	0.0600 U	PNA	PNA	0.0600 U	PNA	0.0600 U	PNA
Arsenic as As	mg/L	0.025	PNA	0.0068 U	PNA	0.0100 U	PNA	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Barium	mg/L	1	PNA	0.0491 J	PNA	0.200 U	PNA	0.200 U	PNA	PNA	0.200 U	PNA	0.200 U	PNA
Beryllium as Be	mg/L	0.003	PNA	0.0006 U	PNA	0.0050 U	PNA	0.0050 U	PNA	PNA	0.0050 U	PNA	0.0050 U	PNA
Boron as B	mg/L	1	PNA	0.0011 J	PNA	0.0500 U	PNA	0.0500 U	PNA	PNA	0.0500 U	PNA	0.0500 U	PNA
Cadmium as Cd	mg/L	0.005	0.0025 U	0.00006 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Calcium as Ca	mg/L	NA	30.4	25.3	25.800	24.600	25.300	19.600	20.800	19.400	19.100	17.700	13.000	11.700
Chromium as Cr	mg/L	0.05	PNA	0.564	PNA	0.367	PNA	0.345	PNA	PNA	0.230	PNA	0.378	PNA
Cobalt	mg/L	NA	PNA	0.0099 J	PNA	0.0500 U	PNA	0.0500 U	PNA	PNA	0.0500 U	PNA	0.0500 U	PNA
Copper as Cu	mg/L	0.2	PNA	0.0104 J	PNA	0.0250 U	PNA	0.0250 U	PNA	PNA	0.0250 U	PNA	0.0250 U	PNA
Cyanide as CN	mg/L	0.2	PNA	0.0029 U	PNA	0.0100 U	PNA	0.0100 U	PNA	PNA	0.0100 U	PNA	0.0100 U	0.0100 U
Iron as Fe	mg/L	0.3	1.41	2.15	4.160	1.450	2.640	1.470	7.720	0.172	0.913	1.610	1.590	0.764
Lead as Pb	mg/L	0.025	0.0050 U	0.0013 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Magnesium	mg/L	35 #	13.9	11.7	11.700	11.100	11.400	8.640	9.400	8.860	8.710	7.900	5.860	5.220
Manganese as Mn	mg/L	0.3	0.0479	0.070	0.108	0.0417	0.0933	0.0336	0.175	0.0165	0.0120	0.0538	0.0334	0.0208
Mercury as Hg	mg/L	0.0007	PNA	0.00007 J	PNA	0.00020 U	PNA	0.00020 U	PNA	PNA	0.00020 U	PNA	0.00020 U	PNA
Nickel as Ni	mg/L	0.1	PNA	0.274	PNA	0.288	PNA	0.203	PNA	PNA	0.880	PNA	0.194	PNA
Potassium	mg/L	NA	5.00 U	1.51 J	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U
Selenium as Se	mg/L	0.01	PNA	0.0063 U	PNA	0.0100 U	PNA	0.0100 U	PNA	PNA	0.0100 U	PNA	0.0100 U	PNA
Silver as Ag	mg/L	0.05	PNA	0.0036 U	PNA	0.0100 U	PNA	0.0100 U	PNA	PNA	0.0100 U	PNA	0.0100 U	PNA
Sodium as Na	mg/L	20	44.6	34.1	37.4	39.7	44.2	33.200	40.200	40.600	39.300	44.000	26.300	26.500
Thallium as Tl	mg/L	0.0005 #	PNA	0.0036 U	PNA	0.0100 U	PNA	0.0100 U	PNA	PNA	0.0100 U	PNA	0.0100 U	PNA
Vanadium	mg/L	NA	PNA	0.0017 J	PNA	0.0500 U	PNA	0.0500 U	PNA	PNA	0.0500 U	PNA	0.0500 U	PNA
Zinc as Zn	mg/L	2 #	PNA	0.0015 J	PNA	0.0200 U	PNA	0.0200 U	PNA	PNA	0.0200 U	PNA	0.0200 U	PNA
Alkalinity tot CaCO3	mg/L	NA	47.4	43.0	46.6	45.3	44.2	50.0	46.6	PNA	48.3	45.1	39.3	42.4
Chloride as Cl	mg/L	250	125	101	122	125	134	84.6	90.1	PNA	86.1	79.6	55.4	58.6
Sulfate as SO4	mg/L	250	5.00 U	4.60 J	5.9	5.2	6.6	5.2	5.6	PNA	5.9	6.0	6.4	7.8
Bromide	mg/L	2 #	0.50 U	0.072 J	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	PNA	0.50 U	0.50 U	0.50 U	0.50 U
BOD5	mg/L	NA	2.0 U	10.0 U	4.0 U	2.0 U	2.0 U	2.0 U	2.0 U	PNA	2.0 U	2.0 U	2.0 U	2.0 U
COD	mg/L	NA	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	16.7	16.7	PNA	10.0 U	17.1	10.3	10.0 U
Color	units	NA	PNA	5.0 U	PNA	30.0	PNA	25.0	PNA	PNA	40.0	PNA	26.0	7.0
Chromium hex as Cr	mg/L	0.05	PNA	0.015 U	PNA	0.020 U	PNA	0.020 U	PNA	PNA	0.020 U	PNA	0.020 U	0.020 U
Hardness as CaCO3	mg/L	NA	120	110	96.0	80.0	90.0	80.0	93.3	PNA	46.7	100	30.0	40.0
Ammonia as N	mg/L	2	0.10 U	0.021 J	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	PNA	0.10 U	0.10 U	0.10 U	0.10 U
Nitrite as N	mg/L	NA	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	PNA	0.050 U	0.050 U	0.050 U	0.050 U
Nitrate as N	mg/L	10	0.050 U	0.076	0.062	0.050 U	0.050 U	0.050 U	0.060	PNA	0.050 U	0.050 U	0.050 U	0.050 U
Phenols as Phenol	mg/L	0.001	0.0050 U	0.0020 J	0.0050 U	0.0050 U	0.0114	0.0050 U	0.0050 U	PNA	0.0050 U	0.0050 U	0.0050 U	0.0028 U
Tot Dissolved Solids	mg/L	NA	230	307	234	266	300	212	279	PNA	222	212	174	131
Tot. Kjeldahl Nitrogen	mg/L	NA	0.17	0.10 U	0.10 U	0.30	0.10 U	0.20	0.23 J	PNA	0.12	0.45	0.15	0.16
Tot Organic Carbon	mg/L	NA	1.0 U	0.00023 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	PNA	1.0 U	1.0 U	1.0 U	1.0 U
Turbidity	NTU	NA	8.3	18.3	5.6	8.4	12.5	100	55.7	PNA	19.6	PNA	1.0	0.0
Temperature	deg.C	NA	12.67	12.14	13.22	12.16	12.65	12.51	12.2	PNA	12.17	12.89	12.92	13.03
pH	units	6.5-8.5	6.85	6.7	6.74	6.87	6.83	7.10	7.19	PNA	7.79	4.68	6.63	6.55
Spec. Cond	umho/cm	NA	566	437	543	485	412	306	331	PNA	354	437	216	257

NOTES:

(1) = NYSDEC, Class GA Groundwater Standards

Bold indicates update due to data validation.

= Guidance value, no standard exists.

NA = Not available.

PNA = parameter not analyzed for.

B - Analyte was detected in the associated method blank.

H - Received / analyzed outside of analytical holding time

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

J - Data Validation Qualifier - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

R - Data Validation Qualifier - Rejected.

U - Indicates the compound was analyzed for, but not detected.

U -Data Validation Qualifier - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

UJ - Data Validation Qualifier - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely me

Highlighted text denotes concentrations exceeding the NYSDEC, Class GA Groundwater Quality Standard or Guidance Value



TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
OCTOBER 2022

ANALYTICAL PARAMETERS	UNITS	GW STND ⁽¹⁾	MW-6A								MW-6B					
			October 2014	October 2017	October 2018	October 2019	October 2020	October 2021	October 2022	October 2017	October 2018	October 2019	October 2020	October 2021	October 2022	
Aluminum as Al	mg/L	NA	0.0543 B	0.200 U	0.200 U	0.200 U	0.200 U	0.200 UJ	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	
Antimony as Sb	mg/L	0.003 #	0.0044 B	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	
Arsenic as As	mg/L	0.025	0.0009 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	
Barium	mg/L	1	0.056 B	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	
Beryllium as Be	mg/L	0.003	0.0002 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	
Boron as B	mg/L	1	0.0182 B	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	
Cadmium as Cd	mg/L	0.005	0.0003 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	
Calcium as Ca	mg/L	NA	19.3	7.930	6.510	8.690	20.800	13.000	7.180	3.980	4.420	4.540	4.120	3.910	4.290	
Chromium as Cr	mg/L	0.05	0.0017 B	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0137	0.0100 U	0.0110	0.0100 U	
Cobalt	mg/L	NA	0.0002 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	
Copper as Cu	mg/L	0.2	0.0011 B	0.0250 U	0.0250 U	0.0250 U	0.0250 U	0.0250 U	0.0250 U	0.0250 U	0.0250 U	0.0250 U	0.0250 U	0.0250 U	0.0250 U	
Cyanide as CN	mg/L	0.2	PNA	PNA	PNA	PNA	PNA	PNA	0.0100 U	PNA	PNA	PNA	PNA	PNA	0.0100 U	
Iron as Fe	mg/L	0.3	0.128	0.0201	0.0361	0.261	0.286	0.101	0.100	0.0254	0.108	0.100	0.0638	0.105	0.100 U	
Lead as Pb	mg/L	0.025	0.0013 U	0.0005 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	
Magnesium	mg/L	35 #	7.54	3.380	2.730	4.340	8.070	5.190	2.680	2.320	2.540	2.650	2.380	2.260	2.390	
Manganese as Mn	mg/L	0.3	0.0136 B	0.0100 U	0.0100 U	0.0405	0.0172 J	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0154	0.0143	0.0100 U	0.0100 U	
Mercury as Hg	mg/L	0.0007	0.0001 U	0.0002 U	0.0002 U	0.00020 U	0.00020 U	PNA	0.00020 U	0.0002 UB	0.0002 U	0.00020 U	PNA	0.00020 U	0.00020 U	
Nickel as Ni	mg/L	0.1	0.0008 B	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	
Potassium	mg/L	NA	2.86	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	
Selenium as Se	mg/L	0.01	0.0014 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	
Silver as Ag	mg/L	0.05	0.0007 U	0.0100 U	0.0100 U	0.0100 U	0.0100 UJ	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	
Sodium as Na	mg/L	20	9.16	6.520	7.680	8.600	8.820	8.040	7.680	8.210	7.800	7.820	7.240	7.840	8.000	
Thallium as Tl	mg/L	0.0005 #	0.001 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	
Vanadium	mg/L	NA	0.0007 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	
Zinc as Zn	mg/L	2 #	0.0086 B	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 UB	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	
Alkalinity tot CaCo3	mg/L	NA	66.8	23.6	16.3	29.9	79.1	47.2	17.8	11.0	12.2	13.0	14.2 U	1.0	12.3	
Chloride as Cl	mg/L	250	12.0	10.3	16.2	17.0	13.5	12.5	16.0	9.8	12.9	13.2	10.7	2.0	12.9	
Sulfate as SO4	mg/L	250	10.9	6.4	8.2	10.2	10.7	7.3	7.4	6.9	9.0	9.7	8.4	5.0	8.7	
Bromide	mg/L	2 #	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	0.5 U	0.50 U	0.50 U	0.50 U	
BOD5	mg/L	NA	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	2.0 U	2.0 U	
COD	mg/L	NA	10.0 U	10.0 U	10.0 U	10.0 U	14.6	10.9	10.0 U	10.0 U	10.0 U	10.0 U	14.6	10.0 U	10.0 U	
Color	units	NA	PNA	PNA	PNA	PNA	PNA	PNA	5.0 U	PNA	PNA	PNA	PNA	PNA	5.0 U	
Chromium hex as Cr	mg/L	0.05	PNA	PNA	PNA	PNA	PNA	PNA	0.020 U	PNA	PNA	PNA	PNA	PNA	0.020 U	
Hardness as CaCO3	mg/L	NA	120	PNA	23.0	36.7	80.0	80.0	24.0	PNA	16.0	17.5	18.0	33.3	22.0	
Ammonia as N	mg/L	2	0.10 U	0.10 U	0.10 U	0.10 U	0.41	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.33	
Nitrite as N	mg/L	NA	0.10 U	0.05 U	0.05 U	0.05 U	0.050 U	0.050 U	0.050 U	0.05 U	0.05 U	0.05 U	0.050 U	0.050 U	0.050 U	
Nitrate as N	mg/L	10	1.74	0.091	0.38	0.79	0.19	0.23	0.21	0.36	0.36	0.42	0.22	0.11	0.16	
Phenols as Phenol	mg/L	0.001	0.0050 U	0.00050 U	0.0054	0.0050 U	0.0050 U	0.0050 U	0.0028 U	0.0050 U	0.0050 U	0.013	0.0050 U	0.0050 U	0.0028 U	
Tot Dissolved Solids	mg/L	NA	107	52	62	76	158	60	82.0	43.0	38.0	142	79.0	38.0	64.0	
Tot. Kjeldahl Nitrogen	mg/L	NA	0.1 U	0.2	0.1 U	0.1 U	0.14 R	0.62	0.20	0.30	0.10 U	0.10 U	0.33	0.43 J	0.53	
Tot Organic Carbon	mg/L	NA	16.4	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	
Turbidity	NTU	NA	1.6	9.0	23.0	10.5	2.1	PNA	0.0	3.5	2.6	0.0	4.8	PNA	0.0	
Temperature	deg.C	NA	12.18	12.02	12.04	12.39	12.92	13.31	13.1	11.41	12.25	12.00	11.98	12.59	12.47	
pH	units	6.5-8.5	5.86	5.83	5.96	5.55	6.11	3.84	6.30	5.94	5.89	5.60	6.19	3.80	6.16	
Spec. Cond	umho/cm	NA	230	114	112	124	184	166	106	94	112	84	72	93	89	

NOTES:

(1) = NYSDEC, Class GA Groundwater Standards

Bold indicates update due to data validation.

= Guidance value, no standard exists.

NA = Not available.

PNA = parameter not analyzed for.

B - Analyte was detected in the associated method blank.

H - Received / analyzed outside of analytical holding time

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

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UJ - Data Validation Qualifier - The analyte was not detected above the reported sample quantitation limit. However, the reported 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.

Highlighted text denotes concentrations exceeding the NYSDEC, Class GA Groundwater Quality Standard or Guidance Value

TOWN OF SOUTHAMPTON
 NORTH SEA LANDFILL
 TABLE 1
 INORGANIC GROUNDWATER QUALITY RESULTS
 OCTOBER 2022

ANALYTICAL PARAMETERS	UNITS	GW STND ⁽¹⁾	MW-8					
			October 2017	October 2018	October 2019	October 2020	October 2021	October 2022
Aluminum as Al	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA
Antimony as Sb	mg/L	0.003 #	PNA	PNA	PNA	PNA	PNA	PNA
Arsenic as As	mg/L	0.025	PNA	PNA	PNA	PNA	0.0100 U	0.0100 U
Barium	mg/L	1	PNA	PNA	PNA	PNA	PNA	PNA
Beryllium as Be	mg/L	0.003	PNA	PNA	PNA	PNA	PNA	PNA
Boron as B	mg/L	1	PNA	PNA	PNA	PNA	PNA	PNA
Cadmium as Cd	mg/L	0.005	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Calcium as Ca	mg/L	NA	10.500	13.300	16.000	11.900	13.600	7.410
Chromium as Cr	mg/L	0.05	PNA	PNA	PNA	PNA	PNA	PNA
Cobalt	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA
Copper as Cu	mg/L	0.2	PNA	PNA	PNA	PNA	PNA	PNA
Cyanide as CN	mg/L	0.2	PNA	PNA	PNA	PNA	PNA	0.0100 U
Iron as Fe	mg/L	0.3	0.4210	0.1400	10.300	1.610	0.376	0.221
Lead as Pb	mg/L	0.025	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Magnesium	mg/L	35 #	4.470	5.110	6.740	5.040	5.650	3.130
Manganese as Mn	mg/L	0.3	0.0140	0.0128	0.126	0.0850	0.0850	0.0202
Mercury as Hg	mg/L	0.0007	PNA	PNA	PNA	PNA	PNA	PNA
Nickel as Ni	mg/L	0.1	PNA	PNA	PNA	PNA	PNA	PNA
Potassium	mg/L	NA	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U
Selenium as Se	mg/L	0.01	PNA	PNA	PNA	PNA	PNA	PNA
Silver as Ag	mg/L	0.05	PNA	PNA	PNA	PNA	PNA	PNA
Sodium as Na	mg/L	20	8.440	8.370	8.850	7.960	10.800	7.380
Thallium as Tl	mg/L	0.0005 #	PNA	PNA	PNA	PNA	PNA	PNA
Vanadium	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA
Zinc as Zn	mg/L	2 #	PNA	PNA	PNA	PNA	PNA	PNA
Alkalinity tot CaCO ₃	mg/L	NA	37.0	45.7	52.0	39.2	44.1	25.7
Chloride as Cl	mg/L	250	11.4	13.1	13.8	12.3	11.2	10.7
Sulfate as SO ₄	mg/L	250	7.7	10.0	13.4	8.6	7.1	10
Bromide	mg/L	2 #	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
BOD ₅	mg/L	NA	2.0 U	2.0 U	4.0 U	2.0 U	2.0 U	2.0 U
COD	mg/L	NA	11.9	11.4	12.4	10.4	10.0 U	10.0 U
Color	units	NA	PNA	PNA	PNA	PNA	PNA	12.0
Chromium hex as Cr	mg/L	0.05	PNA	PNA	PNA	PNA	PNA	0.020 U
Hardness as CaCO ₃	mg/L	NA	50.0	48.0	80.0	35.0	63.3	34.0
Ammonia as N	mg/L	2	0.10 U	0.10 U	0.10 U	0.24	0.10 U	0.10 U
Nitrite as N	mg/L	NA	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Nitrate as N	mg/L	10	1.2	0.71	0.65 J	1.0	1.4	0.67
Phenols as Phenol	mg/L	0.001	0.005 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0038
Tot Dissolved Solids	mg/L	NA	79	78	103	113	113	87.0
Tot. Kjeldahl Nitrogen	mg/L	NA	0.14	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Tot Organic Carbon	mg/L	NA	1.0 UB	1.0 U	1.3	1.0 U	1.0 U	1.0 U
Turbidity	NTU	NA	25.1	29.9	42.8	48.20	PNA	0.0
Temperature	deg.C	NA	11.85	12.11	12.14	12.36	13.96	12.61
pH	units	6.5-8.5	5.55	5.61	5.86	6.10	4.09	6.26
Spec Cond	umho/cm	NA	151	148	156	119	173	112

NOTES:

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R - Data Validation Qualifier - Rejected.

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U -Data Validation Qualifier - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

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Highlighted text denotes concentrations exceeding the NYSDEC, Class GA Groundwater Quality Standard or Guidance Value

TOWN OF SOUTHAMPTON
 NORTH SEA LANDFILL
 TABLE 1
 INORGANIC GROUNDWATER QUALITY RESULTS
 OCTOBER 2022

ANALYTICAL PARAMETERS	UNITS	GW STND ⁽¹⁾	MW-9					
			October 2017	October 2018	October 2019	October 2020	October 2021	October 2022
Aluminum as Al	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA
Antimony as Sb	mg/L	0.003 #	PNA	PNA	PNA	PNA	PNA	PNA
Arsenic as As	mg/L	0.025	PNA	PNA	PNA	0.0100 U	0.0100 U	0.0100 U
Barium	mg/L	1	PNA	PNA	PNA	PNA	PNA	PNA
Beryllium as Be	mg/L	0.003	PNA	PNA	PNA	PNA	PNA	PNA
Boron as B	mg/L	1	PNA	PNA	PNA	PNA	PNA	PNA
Cadmium as Cd	mg/L	0.005	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Calcium as Ca	mg/L	NA	5.24	8.99	7.430	6.080	5.720	3.540
Chromium as Cr	mg/L	0.05	PNA	PNA	PNA	PNA	PNA	PNA
Cobalt	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA
Copper as Cu	mg/L	0.2	PNA	PNA	PNA	PNA	PNA	PNA
Cyanide as CN	mg/L	0.2	PNA	PNA	PNA	PNA	PNA	0.0100 U
Iron as Fe	mg/L	0.3	0.188	1.400	1.160	1.030	0.304 J	0.423
Lead as Pb	mg/L	0.025	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	5.0000 U
Magnesium	mg/L	35 #	2.740	8.830	2.940	2.900	2.720 J	1.740
Manganese as Mn	mg/L	0.3	0.0110	0.0776	0.0986	0.0891	0.0465	0.0291
Mercury as Hg	mg/L	0.0007	PNA	PNA	PNA	PNA	PNA	PNA
Nickel as Ni	mg/L	0.1	PNA	PNA	PNA	PNA	PNA	PNA
Potassium	mg/L	NA	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U
Selenium as Se	mg/L	0.01	PNA	PNA	PNA	PNA	PNA	PNA
Silver as Ag	mg/L	0.05	PNA	PNA	PNA	PNA	PNA	PNA
Sodium as Na	mg/L	20	10.200	11.100	8.710	8.630	11.800	6.630
Thallium as Tl	mg/L	0.0005 #	PNA	PNA	PNA	PNA	PNA	PNA
Vanadium	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA
Zinc as Zn	mg/L	2 #	PNA	PNA	PNA	PNA	PNA	PNA
Alkalinity tot CaCO ₃	mg/L	NA	19.0	52.6	14.0	16.3	14.8	12.2
Chloride as Cl	mg/L	250	17.9	17.5	18.7	15.4	14.6	11.4
Sulfate as SO ₄	mg/L	250	5.8	8.6	9.0	8.1	7.2	7.5
Bromide	mg/L	2 #	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
BOD ₅	mg/L	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
COD	mg/L	NA	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Color	units	NA	PNA	PNA	PNA	PNA	PNA	6.0
Chromium hex as Cr	mg/L	0.05	PNA	PNA	PNA	PNA	PNA	0.020 U
Hardness as CaCO ₃	mg/L	NA	22	40	28.0	30.0	40.0	22.0
Ammonia as N	mg/L	2	0.1 U	0.1 U	0.10 U	0.10 U	0.10 U	0.10 U
Nitrite as N	mg/L	NA	0.05 U	0.05 U	0.05 U	0.050 U	0.050 U	0.050 U
Nitrate as N	mg/L	10	0.18	0.81	0.24	0.13	0.18	0.19
Phenols as Phenol	mg/L	0.001	0.0050 U	0.0050 U	0.0176	0.0050 U	0.0050 U	0.0028 U
Tot Dissolved Solids	mg/L	NA	61	70	74.0	62.0	49.0	62.0
Tot Kjeldahl Nitrogen	mg/L	NA	0.14	0.10 U	0.10 U	0.33	0.36 U	0.10 U
Tot Organic Carbon	mg/L	NA	1.0 UB	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Turbidity	NTU	NA	5.5	0.0	42.8	70.0	PNA	0.0
Temperature	deg.C	NA	12.73	12.88	12.82	12.93	13.77	13.17
pH	units	6.5-8.5	5.21	5.27	6.14	5.59	4.03	6.56
Spec. Cond	umho/cm	NA	122	126	92	91	112	57

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OCTOBER 2022

ANALYTICAL PARAMETERS	UNITS	GW STND ⁽¹⁾	MW-11A																																		
			October 2017		April 2018		October 2018		April 2019		October 2019	April 2020		October 2020		April 2021		October 2021		April 2022		October 2022															
			Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered		Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered														
Aluminum as Al	mg/L	NA	0.2	U	0.2	U	0.0975	J	0.0239	J	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U													
Antimony as Sb	mg/L	0.003 #	0.06	U	0.06	U	0.003	U	0.003	U	0.0600	U	0.0600	U	0.0600	U	0.0600	U	0.0600	U	0.0600	U	0.0600	U													
Arsenic as As	mg/L	0.025	0.0188	U	0.01	U	0.0068	U	0.0068	U	0.0100	U	0.0100	U	0.0651	0.0100	U	0.0100	U	0.0100	U	0.0114	0.0100	U	0.0100	U											
Barium	mg/L	1	1.03	U	0.2	U	0.0891	J	0.0717	J	0.200	U	0.200	U	0.721	0.200	U	0.200	U	0.200	U	0.358	0.200	U	0.269	J	0.200	U	0.320	0.200	U	0.200	U	0.200	U		
Beryllium as Be	mg/L	0.003	0.005	U	0.005	U	0.0006	U	0.0006	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.0050	0.0050	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U				
Boron as B	mg/L	1	0.05	U	0.05	U	0.0324	J	0.0288	J	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U			
Cadmium as Cd	mg/L	0.005	0.0121	U	0.0025	U	0.00006	U	0.000063	U	0.0025	U	0.0025	U	0.0048	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U		
Calcium as Ca	mg/L	NA	60.5	U	43.1	U	25.3	U	25.7	U	36.300	U	34.200	J	49.400	32.900	36.500	32.800	31.700	31.000	53.500	38.700	48.200	39.600	28.600	25.100	17.300	17.600	17.300	17.600	17.300	17.600					
Chromium as Cr	mg/L	0.05	0.1	U	0.01	U	0.003	J	0.0016	U	0.0100	U	0.0100	U	0.136	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U		
Cobalt	mg/L	NA	0.05	U	0.05	U	0.0237	J	0.0216	J	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U			
Copper as Cu	mg/L	0.2	0.25	U	0.025	U	0.0067	J	0.0025	U	0.0250	U	0.0250	U	0.0250	U	0.0250	U	0.0250	U	0.0250	U	0.0250	U	0.0250	U	0.0250	U	0.0250	U	0.0250	U	0.0250	U			
Cyanide as CN	mg/L	0.2	PNA	PNA	PNA	PNA	0.0029	U	PNA	PNA	PNA	0.0100	U	PNA	PNA	PNA	PNA	PNA	PNA	PNA	PNA	PNA	PNA	PNA	PNA	PNA	PNA	PNA	PNA	PNA	PNA	PNA	PNA	PNA			
Iron as Fe	mg/L	0.3	539	U	0.1	U	11.3	U	0.127	U	26.300	J	0.243	J	306.000	0.326	35.600	17.200	0.0555	21.000	6.020	154.000	0.0200	U	53.800	J	0.575	36.000	0.100	U	37.100	0.601					
Lead as Pb	mg/L	0.025	0.0052	0.005	U	0.0024	J	0.0013	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U		
Magnesium	mg/L	35 #	16.6	U	14.4	U	9.07	U	8.93	U	13.000	12.500	12.600	10.800	12.700	10.400	11.300	14.300	14.200	13.400	11.900	20.200	J	19.800	7.700	7.810	6.890	7.000	7.810	6.890	7.000	7.810	6.890				
Manganese as Mn	mg/L	0.3	15.2	U	1.49	U	1.32	U	1.13	U	1.930	1.260	24.600	1.560	5.400	1.660	1.710	1.790	1.660	J	9.600	0.010	U	6.370	2.680	8.440	2.640	2.040	8.440	2.640	2.040	8.440	2.640				
Mercury as Hg	mg/L	0.0007	PNA	0.0002	U	0.000079	J	0.0002	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	0.00020	U	0.00020	U	0.00020	U		
Nickel as Ni	mg/L	0.1	0.04	U	0.04	U	0.0136	J	0.023	J	0.0400	U	0.0400	U	0.0400	U	0.0400	U	0.0400	U	0.0400	U	0.0400	U	0.0400	U	0.0400	U	0.0400	U	0.0400	U	0.0400	U	0.0400	U	
Potassium	mg/L	NA	10.2	U	5.0	U	2.77	J	2.99	J	5.000	U	5.000	U	5.000	U	5.000	U	5.000	U	5.000	U	5.000	U	5.000	U	5.000	U	5.000	U	5.000	U	5.000	U	5.000	U	
Selenium as Se	mg/L	0.01	0.01	U	0.01	U	0.0063	U	0.0062	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	
Silver as Ag	mg/L	0.05	0.0525	0.01	U	0.0036	U	0.0036	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U		
Sodium as Na	mg/L	20	11	U	9.81	U	9	U	8.74	U	10.200	10.500	10.400	9.700	8.960	9.690	9.720	7.130	7.590	21.300	24.100	11.100	10.900	12.700	12.200	7.230	7.510	12.200	7.230	7.510	12.200	7.230	7.510				
Thallium as Tl	mg/L	0.0005 #	0.0254	0.01	U	0.0036	U	0.0036	U	0.0100	U	0.0100	U	0.0261	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	
Vanadium	mg/L	NA	0.05	U	0.05	U	0.0008	U	0.00083	J	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	
Zinc as Zn	mg/L	2 #	0.112	0.02	U	0.039	U	0.0173	J	0.0367	0.0200	U	0.0254	0.0200	U	0.0200	U	0.0200	U	0.0200	U	0.0200	U	0.0649	0.0200	U	0.0910	0.0200	U	0.0616	0.0200	U	0.0604	0.0292			
Alkalinity tot-CaCo3	mg/L	NA	195	J	PNA	87.2	PNA	138	PNA	131	PNA	141	PNA	145	PNA	151	PNA	158	PNA	207	PNA	79.4	PNA	58.5	PNA												
Chloride as Cl	mg/L	250	11.3	PNA	14.8	PNA	13.9	PNA	16.7	PNA	14.3	11.4	PNA	10.3	PNA	22.7	PNA	9.9	PNA	14.2	PNA	14.2	PNA	14.5	PNA												
Sulfate as SO4	mg/L	250	6.6	PNA	23.9	PNA	9.7	PNA	18.8	PNA	14	10.8	PNA	5.8	PNA	35.0	PNA	5.8	PNA	11.7	PNA	25.6	PNA														
Bromide	mg/L	2 #	0.5	U	PNA	0.032	J	PNA	0.50	U	PNA	0.50	U	PNA	0.50	U	0.50	U	PNA	0.50	U	PNA	0.50	U	PNA	0.50	U	PNA	0.50	U	PNA	0.50	U	PNA	0.50	U	
BOD5	mg/L	NA	4	U	PNA	2	U	PNA	4.0	U	PNA	4.0	U	PNA	4.0	U	PNA	2.0	U	PNA	2.0	U	PNA	2.0	U	PNA	2.0	U	PNA	2.0	U	PNA	2.0	U	PNA	2.0	U
COD	mg/L	NA	30.9	PNA	10	U	PNA	10.0	U	PNA	27.8	PNA	10.2	18.8	PNA	29.4	PNA	35.6	PNA	29.4	PNA	32.4	PNA	23.0	PNA												
Color	units	NA	PNA	PNA	40	PNA	PNA	PNA	5.0	U	PNA	PNA	40.0	PNA	PNA	PNA	PNA	5.0	U	PNA	PNA	PNA	900	PNA													
Chromium hex as Cr	mg/L	0.05	PNA	PNA	0.003	U	PNA	PNA	PNA	0.020	U	PNA	PNA	0.032	PNA	PNA	PNA	PNA	PNA	PNA	PNA	0.020	U	PNA	0.020	U	PNA	0.020	U	PNA	0.020	U	PNA	0.020	U		
Hardness as CaCO3	mg/L	NA	133	PNA	PNA	PNA	120	PNA	150	PNA	200	150	PNA	173	PNA	127	PNA	167	PNA	80.0	PNA	86.7	PNA														
Ammonia as N	mg/L	2	0.69	U	PNA	0.19	PNA	0.28	PNA	0.15	PNA	1.0	0.32	PNA	0.53	PNA	0.10	U	PNA	0.38	PNA	0.10	U	PNA	0.10	U	PNA	0.10	U	PNA	0.10	U	PNA	0.10	U		
Nitrite as N	mg/L	NA	0.5	U	PNA	0.05	U	PNA	0.51	PNA	0.05	U	PNA	0.05	U	PNA	0.050	U	PNA	0.050	U	PNA	0.050	U	PNA	0.050	U	PNA	0.050	U	PNA	0.050	U	PNA	0.050	U	
Nitrate as N	mg/L	10	0.25	PNA	0.33	PNA	0.51	PNA	0.39	PNA	0.11	0.075	PNA	0.063	PNA	0.70	PNA	0.050	U	PNA	0.050	U	PNA	0.78	PNA												
Phenols as Phenol	mg/L	0.001	0.005	U	PNA	0.0038	J	PNA	0.0050	U	PNA	0.0084	PNA	0.0054	0.0050	U	PNA	0.0050	U	PNA	0.0050	U	PNA	0.0070	PNA	0.0050	U	PNA	0.0050	U	PNA	0.0050	U	PNA	0.0050	U	
Tot Dissolved Solids	mg/L	NA	222	PNA	152	PNA	173	PNA	240	PNA	171	166	PNA	154	PNA	280	PNA	192	PNA	133	PNA	120	PNA														
Tot. Kjeldahl Nitrogen	mg/L	NA	1.5	J	PNA	0.16	PNA	0.43	PNA	0.86	PNA	0.99	0.74	PNA	0.89	PNA	1.5	PNA	1.8	PNA	1.5	PNA	0.49	PNA													
Tot Organic Carbon	mg/L	NA	20.2	PNA	1.9	PNA	2.9	PNA	4.2	PNA	3.0	1.8	PNA	2.3	PNA	16.0	PNA	4.2	PNA	6.4	PNA	2.5	PNA														
Turbidity	NTU	NA	>1,000	PNA	573	PNA	198	PNA	298	PNA	35.2	313	PNA	125	PNA	>1,000	PNA	PNA	PNA	714	PNA	191	PNA														
Temperature	deg.C	NA	13.31	PNA	12.91	PNA	14.00	PNA	12.70	PNA	13.05	12.53	PNA	13.42	PNA	13.65	PNA	13.65	PNA	13.65	PNA	13.13	PNA														
pH	units	6.5-8.5	6.13	PNA	5.7	PNA	6.15	PNA	6.15	PNA	6.06	PNA	6.09	6.45	PNA	6.04	PNA	8.14	PNA	4.86	PNA	5.73	PNA														
Spec. Cond	umho/cm	NA	453	PNA	267	PNA	470	PNA	356	PNA	315	282	PNA	284	PNA	429	PNA	487	PNA																		

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			Unfiltered	Filtered			Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered			Unfiltered	Filtered	
Aluminum as Al	mg/L	NA	0.994	0.2 U	0.312	0.200 U	7.780	0.200 U	3.540	0.200 U	1.400	0.200 U	0.204	0.200 U	0.544	0.200 U	1.530
Antimony as Sb	mg/L	0.003 #	0.06 U	0.06 U	0.003 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 <i>UJ</i>	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U
Arsenic as As	mg/L	0.025	0.01 U	0.01 U	0.0068 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Barium	mg/L	1	0.2 U	0.2 U	0.0155 J	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
Beryllium as Be	mg/L	0.003	0.005 U	0.005 U	0.0006 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Boron as B	mg/L	1	0.05 U	0.05 U	0.0133 J	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
Cadmium as Cd	mg/L	0.005	0.0025 U	0.0025 U	0.00006 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Calcium as Ca	mg/L	NA	7.43	6.95	6.83	6.950	30.300	22.400	16.800	13.500	14.000	13.700	26.300	28.300	12.700	11.800	17.700
Chromium as Cr	mg/L	0.05	0.01 U	0.01 U	0.0082 J	0.0100 U	0.0198	0.0100 U	0.0190	0.0100 U	0.0100 U	0.0104 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0577
Cobalt	mg/L	NA	0.05 U	0.05 U	0.0006 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
Copper as Cu	mg/L	0.2	0.025 U	0.025 U	0.0025 U	0.0250 U	0.0322	0.0250 U	0.0250 U	0.0250 U	0.0250 U	0.0250 U	0.0250 U	0.0250 U	0.0250 U	0.0250 U	0.0250 U
Cyanide as CN	mg/L	0.2	PNA	PNA	0.0029 U	PNA	0.0100 U	PNA	PNA	PNA	0.0100 U	PNA	PNA	PNA	0.0100 U	PNA	0.0100 U
Iron as Fe	mg/L	0.3	14.6	0.1 U	3.4	2.170	14.400	0.241	11.600 <i>J</i>	0.0325	5.950	0.0200 U	4.890	2.210	3.320	0.100 U	12.300
Lead as Pb	mg/L	0.025	0.0065	0.005 U	0.0014 J	0.0050 U	0.0413	0.0050 U	0.0195	0.0050 U	0.0060	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0088
Magnesium	mg/L	35 #	2.9	2.47	2.99	3.160	7.700	4.010	6.210	4.150	6.140	6.100	5.900	5.450	2.790	2.430	3.000
Manganese as Mn	mg/L	0.3	0.603	0.01 U	0.0676	0.0570	0.500	0.130	0.369	0.181	0.152	0.0100 U	0.652	0.358	0.0804	0.0181	0.1920
Mercury as Hg	mg/L	0.0007	0.0002 U	0.0002 UB	0.000073 J	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	0.00020 U
Nickel as Ni	mg/L	0.1	0.04 U	0.04 U	0.0034 J	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0559
Potassium	mg/L	NA	5.0 U	5.0 U	1.12 J	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.800	5.000	5.000	5.000	5.010
Selenium as Se	mg/L	0.01	0.01 U	0.01 U	0.0063 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Silver as Ag	mg/L	0.05	0.01 U	0.01 U	0.0036 U	0.0100 U	0.0100 U	0.0100 U	0.0100 <i>UJ</i>	0.0100 <i>UJ</i>	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Sodium as Na	mg/L	20	8.21	7.04	8.77	8.680	10.400	9.360	10.500	10.300	12.400	12.500	9.410	10.800	8.210	8.710	7.980
Thallium as Tl	mg/L	0.0005 #	0.01 U	0.01 U	0.0036 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Vanadium	mg/L	NA	0.05 U	0.05 U	0.0008 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
Zinc as Zn	mg/L	2 #	0.02 U	0.02 U	0.0062 J	0.0200 U	0.0774	0.0200 U	0.0394	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0227
Alkalinity tot CaCo3	mg/L	NA	26.8	PNA	21.8	26.6	59.6	PNA	40.4	PNA	41.5	PNA	86.3	91.3	34.9	PNA	31.4
Chloride as Cl	mg/L	250	8.8	PNA	11.4	12.1	14.0	PNA	13.9	PNA	12.0	PNA	10.5	9.7	10.1	PNA	11.5
Sulfate as SO4	mg/L	250	7.2	PNA	8.9	12.5	19.9	PNA	20.0	PNA	25.5	PNA	21.6	15.6	11.8	PNA	11.4
Bromide	mg/L	2 #	0.5 U	PNA	0.032 J	0.50 U	0.50 U	PNA	0.50 U	PNA	0.50 U	PNA	0.50 U	0.50 U	0.50 U	PNA	0.50 U
BOD5	mg/L	NA	4 U	PNA	2 U	4.0 U	6.7 U	PNA	4.0 U	PNA	4.0 U	PNA	2.0 U	2.0 U	2.0 U	PNA	2.0 U
COD	mg/L	NA	18.2	PNA	10 U	10.0 U	266	PNA	165	PNA	61.0	PNA	16.7	15.0	36.8	PNA	75.8
Color	units	NA	PNA	PNA	5 U	PNA	5.0	PNA	PNA	PNA	20.0	PNA	PNA	PNA	90.0	PNA	130.0
Chromium hex as Cr	mg/L	0.05	PNA	PNA	0.003 U	PNA	0.020 U	PNA	PNA	PNA	0.020 U	PNA	PNA	PNA	0.020 U	PNA	0.020 U
Hardness as CaCO3	mg/L	NA	32	PNA	30	30.0	90.0	PNA	70.0	PNA	66.7	PNA	127	66.7	36.7	PNA	66.7
Ammonia as N	mg/L	2	0.1 UB	PNA	0.021 J	0.10 U	0.14	PNA	0.87	PNA	0.10	PNA	4.8	2.5	0.15	PNA	0.40
Nitrite as N	mg/L	NA	0.05 U	PNA	0.05 U	0.050 U	0.050 U	PNA	0.050 U	PNA	0.050 U	PNA	0.050 U	0.050 U	0.050 U	PNA	0.050 U
Nitrate as N	mg/L	10	0.29	PNA	0.3	0.50	0.72	PNA	0.69 <i>J</i>	PNA	1.2	PNA	0.050 U	0.050 U	0.44	PNA	0.33
Phenols as Phenol	mg/L	0.001	0.005 U	PNA	0.0043 J	0.0064	0.0390	PNA	0.0116	PNA	0.0050 U	PNA	0.0050 U	0.0050 U	0.0050 U	PNA	0.0030
Tot Dissolved Solids	mg/L	NA	57	PNA	83	58	121	PNA	94	PNA	106	PNA	139	142	63.0	PNA	110
Tot Kjeldahl Nitrogen	mg/L	NA	0.43	PNA	0.11	0.10 U	0.58	PNA	0.59	PNA	1.2	PNA	2.5	4.2	0.80	PNA	1.5
Tot Organic Carbon	mg/L	NA	1.7 B	PNA	0.59 J	1.0 U	23.9	PNA	16.7	PNA	2.7	PNA	1.8	1.5	1.5	PNA	4.0
Turbidity	NTU	NA	115	PNA	34.4	26.5	1,000	PNA	587	PNA	58.0	PNA	39.6	PNA	79.6	PNA	0.0
Temperature	deg.C	NA	12.7	PNA	12.02	12.85	12.22	PNA	12.42	PNA	12.15	PNA	13.56	14.27	13.26	PNA	12.76
pH	units	6.5-8.5	6.4	PNA	5.79	6.24	6.57	PNA	6.62	PNA	6.83	PNA	6.35	4.74	6.32	PNA	6.58
Spec. Cond	umho/cm	NA	129	PNA	109	144	183	PNA	156	PNA	146	PNA	203	272	108	PNA	305

NOTES:

(1) = NYSDEC, Class GA Groundwater Standards

Bold indicates update due to data validation.

= Guidance value, no standard exists.

NA = Not available.

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B - Analyte was detected in the associated method blank.

H - Received / analyzed outside of analytical holding time

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

J - Data Validation Qualifier - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

R - Data Validation Qualifier - Rejected.

U - Indicates the compound was analyzed for, but not detected.

U -Data Validation Qualifier - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

UJ - Data Validation Qualifier - The analyte was not detected above the reported sample quantitation limit. However, the reported 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.

Highlighted text denotes concentrations exceeding the NYSDEC, Class GA Groundwater Quality Standard or Guidance Value



TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
OCTOBER 2022

ANALYTICAL PARAMETERS	UNITS	GW STND ⁽¹⁾	MW-12A											
			October 2017	April 2018	October 2018	April 2019	October 2019	April 2020	October 2020	April 2021	October 2021	April 2022	October 2022	
Aluminum as Al	mg/L	NA	PNA	0.0134 U	PNA	0.200 U	PNA	0.200 U	PNA	0.200 U	PNA	0.200 U	PNA	
Antimony as Sb	mg/L	0.003 #	PNA	0.003 U	PNA	0.0600 U	PNA	0.0600 U	PNA	0.0600 U	PNA	0.0600 U	PNA	
Arsenic as As	mg/L	0.025	PNA	0.0068 U	PNA	0.0100 U	PNA	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	
Barium	mg/L	1	PNA	0.0442 J	PNA	0.200 U	PNA	0.200 U	PNA	0.200 U	PNA	0.200 U	PNA	
Beryllium as Be	mg/L	0.003	PNA	0.0006 U	PNA	0.0050 U	PNA	0.0050 U	PNA	0.0050 U	PNA	0.0050 U	PNA	
Boron as B	mg/L	1	PNA	0.0541	PNA	0.0680	PNA	0.0500 U	PNA	0.0639	PNA	0.0506	PNA	
Cadmium as Cd	mg/L	0.005	0.0025 U	0.00006 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	
Calcium as Ca	mg/L	NA	22.2	20.4	25.3	23.800	29.100	15.600	8.720	25.400	21.800	16.500	19.100	
Chromium as Cr	mg/L	0.05	PNA	0.0016 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	
Cobalt	mg/L	NA	PNA	0.006 J	PNA	0.0500 U	PNA	0.0500 U	PNA	0.0500 U	PNA	0.0500 U	PNA	
Copper as Cu	mg/L	0.2	PNA	0.0025 U	PNA	0.0250 U	PNA	0.0250 U	PNA	0.0250 U	PNA	0.0250 U	PNA	
Cyanide as CN	mg/L	0.2	PNA	0.0029 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	0.0100 U	
Iron as Fe	mg/L	0.3	18.7	1.48	2.56	1.420	4.100	0.445	0.414	0.158	1.47	3.75	0.100 U	
Lead as Pb	mg/L	0.025	0.005 U	0.0013 U	0.005 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	
Magnesium	mg/L	35 #	6.15	6.08	7.78	7.250	8.070	4.560	2.760	8.310	7.570	5.160	6.000	
Manganese as Mn	mg/L	0.3	3.37	1.98	2.54	1.500	2.270	1.770	0.747	2.270	0.261	2.090	0.534	
Mercury as Hg	mg/L	0.0007	PNA	0.000056 U	PNA	0.00020 U	PNA	0.00020 U	PNA	0.00020 U	PNA	0.00020 U	PNA	
Nickel as Ni	mg/L	0.1	PNA	0.0035 J	PNA	0.0400 U	PNA	0.0400 U	PNA	0.0400 U	PNA	0.0400 U	PNA	
Potassium	mg/L	NA	6.46	7.74	5.66	9.370	9.110	5.000 U	5.000 U	5.000 U	5.000 U	5.000 U	5.570	
Selenium as Se	mg/L	0.01	PNA	0.0063 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	
Silver as Ag	mg/L	0.05	PNA	0.0036 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	
Sodium as Na	mg/L	20	9.02	13.3	11.9	13.900	11.700	9.350	7.020	12.300	10.700	9.590	9.930	
Thallium as Tl	mg/L	0.0005 #	PNA	0.0036 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	
Vanadium	mg/L	NA	PNA	0.0012 J	PNA	0.0500 U	PNA	0.0500 U	PNA	0.0500 U	PNA	0.0500 U	PNA	
Zinc as Zn	mg/L	2 #	PNA	0.0049 J	PNA	0.0200 U	PNA	0.0200 U	PNA	0.0200 U	PNA	0.0200 U	PNA	
Alkalinity tot CaCO3	mg/L	NA	80	59.4	79.7	88.3	114	56.1	21.8	93.3	68.4	61.2	89.5	
Chloride as Cl	mg/L	250	11.5	15.7	16.8	17.3	17.1	10.8	10.1	15.0	12.0	12.9	14.9	
Sulfate as SO4	mg/L	250	16	32	31.2	32.4	26.8	15.6	11.6	24.3	5.0 U	16.0	16.0	
Bromide	mg/L	2 #	0.5 U	0.13 J	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.5	0.50 U	0.50 U	
BOD5	mg/L	NA	11.3	2 U	2 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	
COD	mg/L	NA	14	10 U	10 U	10.0 U	10.0 U	18.8	10.0 U	12.1	13.0	10.0 U	10.0 U	
Color	units	NA	PNA	15	PNA	5.0	PNA	5.0 U	PNA	5.0 U	PNA	7.0	5.0 U	
Chromium hex as Cr	mg/L	0.05	PNA	0.003 U	PNA	0.010 U	PNA	0.020 U	PNA	0.020 U	PNA	0.020 U	0.020 U	
Hardness as CaCO3	mg/L	NA	88.0	PNA	66.7	66.7	110	53.3	36.7	66.7	50.0	46.7	70.0	
Ammonia as N	mg/L	2	2.9	2.8	0.53	3.2	6.1	1.0	0.32	0.67	0.10 U	2.0	3.8	
Nitrite as N	mg/L	NA	0.05 U	0.05 U	0.05 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	
Nitrate as N	mg/L	10	0.23	0.46	0.75	0.48	0.16	0.83	0.59	0.52	0.94	1.0	0.80	
Phenols as Phenol	mg/L	0.001	0.005 U	0.0051	0.005 U	0.0050 U	0.0144	0.0050 U	0.0050 U	0.0053	0.0050 U	0.0050 U	0.0028 U	
Tot Dissolved Solids	mg/L	NA	107	136	136	146	157	100	116	166	124	132	126	
Tot. Kjeldahl Nitrogen	mg/L	NA	3.3	2.7	0.72	3.8	7.6	1.7	0.48	0.76	0.66	2.60	3.9	
Tot Organic Carbon	mg/L	NA	1.9	1.6	2.2	1.6	2.4	1.0 U	1.0 U	1.7	1.1	1.1	1.0 U	
Turbidity	NTU	NA	106	43	5.2	11.7	27.5	23.5	40.2	6.60	PNA	0.0	0.0	
Temperature	deg.C	NA	12.55	11.94	13.21	12.26	12.63	12.06	13.15	12.93	14.07	12.88	12.79	
pH	units	6.5-8.5	6.36	6.1	6.39	6.44	6.14	6.70	5.96	7.98	4.64	5.57	6.63	
Spec. Cond	umho/cm	NA	261	280	275	314	306	146	88	252	235	141	241	

NOTES:
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Highlighted text denotes concentrations exceeding the NYSDEC, Class GA Groundwater Quality Standard or Guidance Value



TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
OCTOBER 2022

ANALYTICAL PARAMETERS	UNITS	GW STND ⁽¹⁾	MW-12B											
			October 2017	April 2018	October 2018	April 2019	October 2019	April 2020	October 2020	April 2021	October 2021	April 2022	October 2022	
Aluminum as Al	mg/L	NA	PNA	0.0134 U	PNA	0.200 U	PNA	0.200 U	PNA	0.200 U	PNA	0.200 U	PNA	
Antimony as Sb	mg/L	0.003 #	PNA	0.0035 J	PNA	0.0600 U	PNA	0.0600 U	PNA	0.0600 UJ	PNA	0.0600 U	PNA	
Arsenic as As	mg/L	0.025	PNA	0.0068 U	PNA	0.0100 U	PNA	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	
Barium	mg/L	1	PNA	0.0119 J	PNA	0.200 U	PNA	0.200 U	PNA	0.200 U	PNA	0.200 U	PNA	
Beryllium as Be	mg/L	0.003	PNA	0.0006 U	PNA	0.0050 U	PNA	0.0050 U	PNA	0.0050 U	PNA	0.0050 U	PNA	
Boron as B	mg/L	1	PNA	0.0133 J	PNA	0.0500 U	PNA	0.0500 U	PNA	0.0598	PNA	0.0625	PNA	
Cadmium as Cd	mg/L	0.005	0.0025 U	0.00006 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	
Calcium as Ca	mg/L	NA	19.5	10	9.35	11.700	34.400	13.700	13.100	16.300	31.300	16.700	17.900	
Chromium as Cr	mg/L	0.05	PNA	0.0016 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	
Cobalt	mg/L	NA	PNA	0.0006 U	PNA	0.0500 U	PNA	0.0500 U	PNA	0.0500 U	PNA	0.0500 U	PNA	
Copper as Cu	mg/L	0.2	PNA	0.0025 U	PNA	0.0250 U	PNA	0.0250 U	PNA	0.0250 U	PNA	0.0250 U	PNA	
Cyanide as CN	mg/L	0.2	PNA	0.0029 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	0.0100 U	
Iron as Fe	mg/L	0.3	0.02 U	0.0109 U	0.0232	0.0200 U	0.0499	0.0405	0.0659	0.0200 U	0.0708	0.149	0.100 U	
Lead as Pb	mg/L	0.025	0.005 U	0.0013 U	0.005 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	
Magnesium	mg/L	35 #	5.89	4.3	3.7	6.340	14.000	5.630	4.230	6.180	10.500	5.260	5.780	
Manganese as Mn	mg/L	0.3	0.01 U	0.0086 J	0.01 U	0.0100 U	0.0256	0.0116	0.0248	0.0100 U	0.0512	0.230	0.812	
Mercury as Hg	mg/L	0.0007	PNA	0.000056 U	PNA	0.00020 U	PNA	0.00020 U	PNA	0.00020 U	PNA	0.00020 U	PNA	
Nickel as Ni	mg/L	0.1	PNA	0.0018 J	PNA	0.0400 U	PNA	0.0400 U	PNA	0.0400 U	PNA	0.0400 U	PNA	
Potassium	mg/L	NA	5.14	1.64 J	5 U	5.000	6.990	5.640	5.000 U	5.000 U	5.000 U	7.250	8.400	
Selenium as Se	mg/L	0.01	PNA	0.0063 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	
Silver as Ag	mg/L	0.05	PNA	0.0036 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 UJ	PNA	0.0100 U	PNA	
Sodium as Na	mg/L	20	12.1	9.23	8.15	10.800	19.900	10.600	8.480	11.400	16.400	10.400	12.500	
Thallium as Tl	mg/L	0.0005 #	PNA	0.0036 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	0.0100 U	PNA	
Vanadium	mg/L	NA	PNA	0.00092 J	PNA	0.0500 U	PNA	0.0500 U	PNA	0.0500 U	PNA	0.0500 U	PNA	
Zinc as Zn	mg/L	2 #	PNA	0.0016 J	PNA	0.0200 U	PNA	0.0200 U	PNA	0.0200 U	PNA	0.0200 U	PNA	
Alkalinity tot CaCO3	mg/L	NA	56.6	25.2	24.6	45.6	114	49.8	34.8	46.1	75	56.8	78.7	
Chloride as Cl	mg/L	250	15.8	13.4	13.8	16.1	28.0	13.8	12.3	15.4	17.5	16.6	20.8	
Sulfate as SO4	mg/L	250	26.5	9.7	12.1	11.3	49.3	20.8	9.0	22.4	5.0 U	21.6	12.2	
Bromide	mg/L	2 #	0.5 U	0.03 J	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.8	0.50 U	0.50 U	
BOD5	mg/L	NA	2 U	2 U	2 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	
COD	mg/L	NA	10 U	10 U	10 U	10.0 U	12.4	12.5	10.0 U	10.0 U	21.2	10.3	10.0 U	
Color	units	NA	PNA	5 U	PNA	5.0	PNA	5.0 U	PNA	5.0 U	PNA	5.0 U	5.0 U	
Chromium hex as Cr	mg/L	0.05	PNA	0.003 U	PNA	0.020 U	PNA	0.020 U	PNA	0.020 U	PNA	0.020 U	0.020 U	
Hardness as CaCO3	mg/L	NA	60	PNA	34	44.0	127	53.3	50.0	40.0	56.7	13.3	66.7	
Ammonia as N	mg/L	2	1.1	0.068 J	0.1 U	0.10 U	1.8	1.8	PNA	0.53	0.17	3.5	3.5	
Nitrite as N	mg/L	NA	0.05 U	0.05 U	0.05 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	
Nitrate as N	mg/L	10	1.2	0.75	1.3	0.97	0.41	1.7	0.80	1.6	1.0	2.6	1.4	
Phenols as Phenol	mg/L	0.001	0.006	0.006	0.005 U	0.0050 U	0.0109	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0028 U	
Tot Dissolved Solids	mg/L	NA	150	85	70	84.0	238	112	111	120	172	153	150	
Tot. Kjeldahl Nitrogen	mg/L	NA	1.5	0.1 U	0.1 U	0.33	2.9	2.2	0.13 R	0.72	0.80	3.30	3.5	
Tot Organic Carbon	mg/L	NA	1.4	0.23 U	1 U	1.0 U	3.2	1.0 U	1.0 U	1.1	2.2	1.0 U	1.1	
Turbidity	NTU	NA	13.8	0.2	8	0.2	0.0	16.8	10.1	3.20	PNA	0.0	0.0	
Temperature	deg.C	NA	12.05	11.83	12.85	11.84	12.57	11.81	13.86	12.66	13.98	12.70	12.55	
pH	units	6.5-8.5	5.81	6.00	5.76	6.26	6.26	6.85	6.25	8.41	4.64	5.86	6.66	
Spec. Cond	umho/cm	NA	261	140	25	180	30	223	98	179	254	153	262	

NOTES:

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J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

J - Data Validation Qualifier - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

R - Data Validation Qualifier - Rejected.

U - Indicates the compound was analyzed for, but not detected.

U -Data Validation Qualifier - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

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Highlighted text denotes concentrations exceeding the NYSDEC, Class GA Groundwater Quality Standard or Guidance Value



TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 2
ORGANIC GROUNDWATER QUALITY RESULTS
OCTOBER 2022

Parameters	Units	GW Standard ⁽¹⁾	MW-11A	MW-11B
1,1,1,2-Tetrachloroethane	mg/L	0.005	0.0050 U	0.0050 U
1,1,1-Trichloroethane	mg/L	0.005	0.0050 U	0.0050 U
1,1,2,2-Tetrachloroethane	mg/L	0.005	0.0050 U	0.0050 U
1,1,2-Trichloroethane	mg/L	0.001	0.0050 U	0.0050 U
1,1-Dichloroethane	mg/L	0.005	0.0050 U	0.0050 U
1,1-Dichloroethene	mg/L	0.005	0.0050 U	0.0050 U
1,2-Dibromo-3-chloropropane	mg/L	0.0004	0.0050 U	0.0050 U
1,2-Dibromoethane	mg/L	NA	0.0050 U	0.0050 U
1,2-Dichlorobenzene	mg/L	0.003	0.0050 U	0.0050 U
1,2-Dichloroethane	mg/L	0.005	0.0050 U	0.0050 U
1,2-Dichloropropane	mg/L	0.001	0.0050 U	0.0050 U
1,4-Dichlorobenzene	mg/L	0.003	0.0050 U	0.0050 U
2-Butanone	mg/L	0.005	0.0050 U	0.0050 U
2-Hexanone	mg/L	NA	0.0050 U	0.0050 U
4-Methyl-2-pentanone	mg/L	0.005	0.0050 U	0.0050 U
Acetone	mg/L	NA	0.0050 U	0.0050 U
Acrylonitrile	mg/L	0.005	0.0050 U	0.0050 U
Benzene	mg/L	0.001	0.0050 U	0.0050 U
Bromochloromethane	mg/L	0.005	0.0050 U	0.0050 U
Bromodichloromethane	mg/L	NA	0.0050 U	0.0050 U
Bromoform	mg/L	NA	0.0050 U	0.0050 U
Bromomethane	mg/L	0.005	0.0050 U	0.0050 U
Carbon disulfide	mg/L	NA	0.0050 U	0.0050 U
Carbon tetrachloride	mg/L	0.005	0.0050 U	0.0050 U
Chlorobenzene	mg/L	0.005	0.0050 U	0.0050 U
Chloroethane	mg/L	0.005	0.0050 U	0.0050 U
Chloroform	mg/L	0.007	0.0050	0.0050
Chloromethane	mg/L	NA	0.0050 U	0.0050 U
cis-1,2-Dichloroethene	mg/L	0.005	0.0050 U	0.0050 U
cis-1,3-Dichloropropene	mg/L	0.0004	0.0050 U	0.0050 U
Dibromochloromethane	mg/L	0.005	0.0050 U	0.0050 U
Dibromomethane	mg/L	0.005	0.0050 U	0.0050 U
Ethylbenzene	mg/L	0.005	0.0050 U	0.0050 U
Iodomethane	mg/L	NA	0.0050 U	0.0050 U
Methylene chloride	mg/L	0.005	0.0050 U	0.0050 U
Styrene	mg/L	0.005	0.0050 U	0.0050 U
Tetrachloroethene	mg/L	0.005	0.0050 U	0.0050 U
Toluene	mg/L	0.005	0.0050 U	0.0050 U
trans-1,2-Dichloroethene	mg/L	0.005	0.0050 U	0.0050 U
trans-1,3-Dichloropropene	mg/L	0.0004	0.0050 U	0.0050 U
trans-1,4-Dichloro-2-butene	mg/L	0.005	0.0050 U	0.0050 U
Trichloroethene	mg/L	0.005	0.0050 U	0.0050 U
Trichlorofluoromethane	mg/L	0.005	0.0050 U	0.0050 U
Vinyl acetate	mg/L	0.005	0.0050 U	0.0050 U
Vinyl chloride	mg/L	0.002	0.0050 U	0.0050 U
Xylene (total)	mg/L	0.005	0.0050 U	0.0050 U

NOTES:

(1) = NYSDEC, Class GA Groundwater Standards

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TABLE 3
LEACHATE QUALITY RESULTS
October 2022

Analytical Parameter Units mg/L	Leachate Collection (Primary)											
	April 2017	October 2017	April 2018	October 2018	April 2019	October 2019	April 2020	October 2020	April 2021	October 2021	April 2022	October 2022
Arsenic as As	0.01 U	0.01 U	0.0068 U	0.01 U	0.01 U	0.010 U	0.010 U	0.0214	0.0100 U	0.0100 U	0.0100 U	0.0102
Cadmium as Cd	0.00021 J	0.0025 U	0.00006 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Calcium as Ca	60.2	84.8	38.0	59.3	78.8	107.000	49.800	89.700	54.100	73.100	66.100	89.600
Iron as Fe	29.9	47.9	11.3	17.0	34.6	1.020	13.500	34.000	13.100	3.470	2.740	1.380
Lead as Pb	0.0014 J	0.005 U	0.0013 U	0.005 U	0.005 U	0.0050 U	0.0050 U	0.0142	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Magnesium as Mg	8.93	27	5.37	13.3	12.0	19.600	10.500	12.000	9.960	12.900	11.500	22.100
Manganese as Mn	2.2	2.03	0.966	1.78	2.28	0.848	1.460	0.547	1.660	1.080	0.778	0.172
Potassium as K	18	134	7.22	48.0	33.1	87.200	31.600	37.200	18.600	37.100	22.700	68.000
Sodium as Na	37.9	352	9.39	122	76	225.000	82.400	56.900	13.000	50.000	25.900	39.800
Alkalinity total CaCO3	231	995	110	583	512	793	402	280	218	330	255	347
BOD5	5	20.9	4.0 U	28.6 U	13.3	8.9	12.4	8.4	5.2	10.4	2.0 U	2.0 U
COD	60.9	425	15.5	136	74.2	231	82.2	244	39.8	74.5	52.3	296
Chloride as Cl	42.5	446	11	170	99.1	332	92.8	88.2	13.6	51.2	28.4	
Hardness as CaCO3	204	200	116	180	200	320	180	333	120	360	173	327
Ammonia as N	9.5	280	3	86.2	57.9	83.7	32.0	8.6	3.5	19.9	10.2	1.0
Nitrite as N	0.05 U	0.056	0.067	0.05 U	0.05 U	1.4	0.052	0.63	0.30	0.27	0.072	0.067
Nitrate as N	0.036 J	0.22	1	0.19	0.074	12	1.5	10.7	0.15	11	0.74	0.42
Bromide	0.18 J	1.8	0.034 J	0.91	0.05 U	1.7	0.50	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Total Recoverable Phenolics	0.0282	0.0213	0.0137	0.0110	0.0064	0.0148	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0132
Sulfate as SO4	52.2	24.2	3.7 J	8.1	5 U	44.7	5.7	27.2	6.6	11.3	12.5	31.6
Total Dissolved Solids	363	1,610	191	658	440	648	416	591	240	404	317	970
Total Organic Carbon	12.2	130	8.6	44.5	22	69	23.5	59.7	13.2	23.2	16.2	1.0 U
Total Kjeldahl Nitrogen	23.6	305	3.8	99.8	54.3	127	69.9	15.6	5.3	27.3	10.7	5.1
Turbidity NTU	88.5	130	85.6	92.0	>50	>50	469	PNA	14.52	PNA	0.00	0.00

Analytical Parameter Units mg/L	Leachate Detection (Secondary)											
	April 2017	October 2017	April 2018	October 2018	April 2019	October 2019	April 2020	October 2020	April 2021	October 2021	April 2022	October 2022
Arsenic as As	0.01 U	0.01 U	0.0068 U	0.01 U	0.01 U	0.010 U	0.0407	0.0127	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Cadmium as Cd	0.00022 J	0.0025 U	0.00006 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Calcium as Ca	73	70.6	53.1	76.8	76.1	84.400	65.600	84.100	53.800	61.600	57.600	66.700
Iron as Fe	32.4	0.407	1.17	1.62	2.88	2.010	65.500	159.000	0.687	0.0215	0.116	0.100 U
Lead as Pb	0.0015 J	0.005 U	0.0013 U	0.0050 U	0.0050 U	0.0104	0.0067	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Magnesium as Mg	12.6	9.66	5.64	11.60	12.00	13.900	9.690	14.100	9.950	8.870	7.300	8.810
Manganese as Mn	8.16	1.82	2.75	1.07	3.33	0.231	0.947	0.896	0.149	0.0217	0.0154	0.0206
Potassium as K	31.9	30.2	9.81	34.40	31.70	48.200	27.800	52.300	16.200	17.300	14.100	17.900
Sodium as Na	62.2	47.4	17.4	77.8	70.1	74.600	75.700	85.300	7.820	7.320	6.570	10.900
Alkalinity total CaCO3	381	427	195	460	483	368	277	410	198	188	169	189
BOD5	11.6	5.2	4 U	71.2	7.4	9.0	46.4	10.1	7.7	2.0 U	2.0 U	2.0 U
COD	117	54.2	13.4	84.9	78.6	125	137	300	31.3	27.3	32.4	93.4
Chloride as Cl	71.7	45.9	22.2	90	87	113	79.2	118	8.6	5.3	8.4	22.0
Hardness as CaCO3	320	230	150	230	180	240	250	287	127	213	133	193
Ammonia as N	16.0	20.7	8.8	43.0	51.0	32.3	13.7	46.8	0.10 U	0.14	0.10 U	0.10 U
Nitrite as N	0.0058 J	0.064	0.05 U	0.05 U	0.05 U	0.81	0.60	0.18	0.054	0.050 U	0.050 U	0.050 U
Nitrate as N	0.066	5.3	0.36	2.8	0.29	8.2	11.9	2.8	1.9	1.8	2.2	1.7
Bromide	0.32 J	0.5 U	0.1 J	0.57	0.5 U	0.50 U	0.50	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Total Recoverable Phenolics	0.0135	0.0083	6	0.0115	0.0151	0.0050 U	0.0064	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0128
Sulfate as SO4	6.4	8.2	6.3	19.8	6.9	58.7	46.6	23.6	6.1	17.6	22.1	28.0
Total Dissolved Solids	472	431	237	554	472	634	471	609	222	206	241	440
Total Organic Carbon	30.0	19.5	6	29.3	24.2	41.9	39.8	86.4	13.4	9.1	11.6	26.1
Total Kjeldahl Nitrogen	40.6	27.2	8	58	55.7	43.5	21.0	65.0	1.8	0.88	0.90	2.1
Turbidity NTU	28.6	8.94	NM	6.0	0.0	0.0	423	PNA	12.17	PNA	0.00	0.00

NOTES:

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H - Received / analyzed outside of analytical holding time

E - Serial dilution is not within acceptance criteria or the reported value is estimated because of the presence of interference.

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Highlighted text denotes concentrations exceeding the NYSDEC, Class GA Groundwater Quality Standard or Guidance Value



TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL

TABLE 4

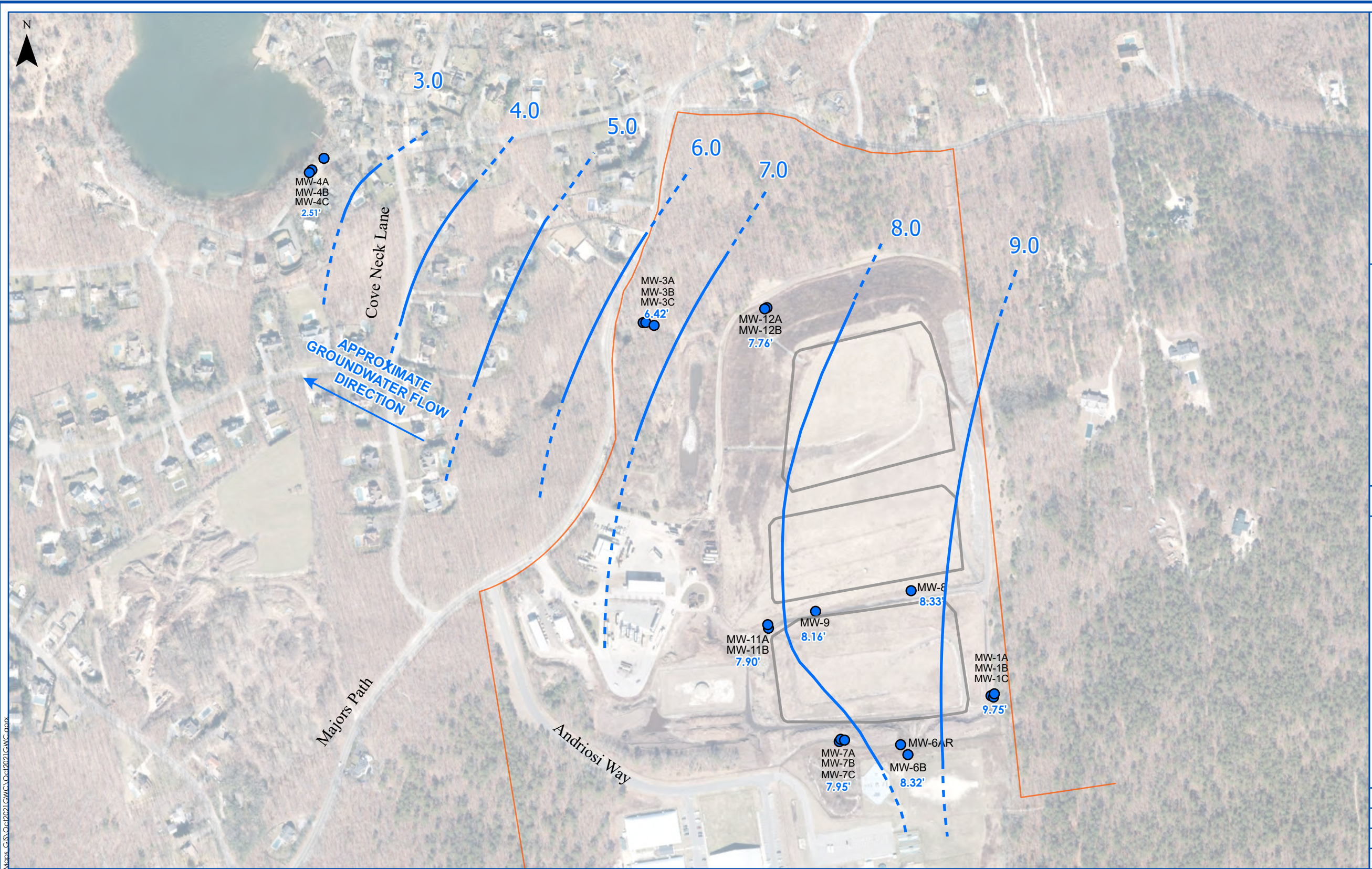
GROUNDWATER ELEVATIONS
October 2022

Monitoring Well Number	* Casing Elevation	October 2017		April 2018		October 2018		April 2019		October 2019		April 2020		October 2020		April 2021		October 2021		April 2022		October 2022	
		DTW	GWE	DTW	GWE	DTW	GWE	DTW	GWE	DTW	GWE	DTW	GWE	DTW	GWE	DTW	GWE	DTW	GWE	DTW	GWE	DTW	GWE
MW-1A	113.87	105.28	8.59	104.37	9.50	104.72	9.15	102.40	11.47	103.10	10.77	103.27	9.73	103.24	10.63	104.72	9.15	104.59	9.28	104.09	9.78	104.12	9.75
MW-1B	115.09	106.50	8.59	105.70	9.39	108.80	6.29	103.57	11.52	104.30	10.79	104.50	10.59	107.28	7.81	105.04	10.05	105.82	9.27	105.34	9.75	106.39	8.70
MW-1C	114.99	106.28	8.71	106.10	8.89	106.88	8.11	104.45	10.54	105.60	9.39	105.20	9.79	106.31	8.68	106.75	8.24	106.68	8.31	105.99	9.00	107.18	7.81
MW-2	74.8	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--
MW-3A	55.3	48.88	6.42	47.50	7.80	48.43	6.87	46.56	8.74	47.35	7.95	47.12	8.18	48.40	6.90	47.30	8.00	48.27	7.03	47.81	7.49	48.88	6.42
MW-3B	51.9	45.47	6.43	44.20	7.70	44.96	6.94	45.24	6.66	44.00	7.90	43.92	7.98	45.11	6.79	44.09	7.81	44.96	6.94	44.45	7.45	45.57	6.33
MW-3C	51.4	45.07	6.33	43.78	7.62	44.40	7.00	44.98	6.42	44.80	6.60	43.36	8.04	44.72	6.68	44.71	6.69	44.50	6.90	43.99	7.41	45.08	6.32
MW-4A	16	13.99	2.01	13.40	2.60	12.75	3.25	13.58	2.42	13.30	2.70	13.10	2.90	13.86	2.14	13.42	2.58	13.58	2.42	13.45	2.55	13.49	2.51
MW-4B	16.1	14.15	1.95	13.60	2.50	12.74	3.36	13.49	2.61	13.54	2.56	13.31	2.79	13.98	2.12	13.47	2.63	13.15	2.95	13.27	2.83	13.40	2.70
MW-4C	16	10.31	5.69	9.80	6.20	9.51	6.49	8.57	7.43	9.12	6.88	8.64	7.36	9.56	6.44	9.06	6.94	9.79	6.21	9.31	6.69	10.01	5.99
MW-5A	74.27	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--
MW-5B	75.25	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--
MW-5C	74.33	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--
MW-6A	NS	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--
MW-6AR	100.72	92.89	7.83	91.81	8.91	93.71	7.01	88.85	11.87	90.70	10.02	91.83	8.89	92.35	8.37	91.25	9.47	92.19	8.53	91.57	9.15	93.84	6.88
MW-6B	103.46	95.20	8.26	94.12	9.34	94.46	9.00	92.19	11.27	93.20	10.26	94.43	9.03	94.68	8.78	93.59	9.87	94.18	9.28	93.97	9.49	95.14	8.32
MW-7A	92.83	84.98	7.85	83.15	9.68	83.55	9.28	81.50	11.33	82.43	10.40	82.23	10.60	82.54	10.29	80.43	12.40	83.12	9.71	83.99	8.84	84.88	7.95
MW-7B	92.72	84.67	8.05	83.54	9.18	83.70	9.02	81.68	11.04	82.50	10.22	82.26	10.46	82.14	10.58	83.11	9.61	NM	--	83.45	9.27	84.67	8.05
MW-7C	93.31	86.20	7.11	84.69	8.62	84.08	9.23	83.51	9.80	83.81	9.50	84.17	9.14	84.85	8.46	84.56	8.75	85.66	7.65	84.98	8.33	86.18	7.13
MW-8	86.02	77.76	8.26	76.75	9.27	77.13	8.89	74.97	11.05	76.80	9.22	77.41	8.61	77.03	8.99	76.23	9.79	77.11	8.91	76.74	9.28	77.69	8.33
MW-9	82.56	74.73	7.83	73.60	8.96	74.10	8.46	72.00	10.56	73.90	8.66	74.20	8.36	74.30	8.26	73.23	9.33	74.12	8.44	74.02	8.54	74.40	8.16
MW-11A	80.78	73.69	7.09	73.40	7.38	74.00	6.78	71.19	9.59	71.40	9.38	71.32	9.46	71.76	9.02	71.55	9.23	72.99	7.79	72.55	8.23	72.88	7.90
MW-11B	78.32	74.56	3.76	73.38	4.94	74.10	4.22	66.88	11.44	68.80	9.52	73.75	4.57	73.91	4.41	NM	--	73.75	4.57	73.75	4.57	74.38	3.94
MW-12A	87.95	81.88	6.07	79.66	8.29	80.40	7.55	78.57	9.38	79.20	8.75	79.75	8.20	80.40	7.55	79.42	8.53	80.11	7.84	79.84	8.11	80.19	7.76
MW-12B	88.28	81.47	6.81	80.20	8.08	80.12	8.16	79.36	8.92	78.00	10.28	79.14	9.14	80.99	7.29	80.02	8.26	80.92	7.36	80.43	7.85	81.70	6.58

NOTES:
* = SURVEYED TO MEAN SEA LEVEL
GWE = GROUNDWATER ELEVATION
DTW = DEPTH TO WATER
NM = NOT MONITORED
NS = NOT SURVEYED



FIGURES

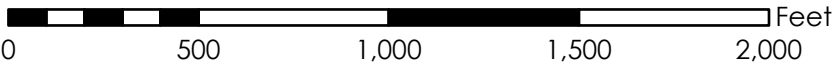


Document Path: G:\Shared drives\SHIP GIS Maps GIS Oct 2021\GWC\Oct 2021\GWC.aprx

- Groundwater Contour**
- Actual
 - - - Inferred
 - Cells
 - Landfill Boundary
 - Groundwater Monitoring Well

SITE PLAN - OCTOBERC 2022

NORTH SEA LANDFILL
SOUTHAMPTON, NY



PWGC
CLIENT DRIVEN SOLUTIONS

P.W. Grosser Consulting, Inc.

630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgros.com

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OF SEC. 7209 OF THE N.Y.S. EDUCATION LAW

TOWN OF SOUTHAMPTON
1370 MAJORS PATH
SOUTHAMPTON, NY 11968
OCTOBER 2022

DRAWING INFORMATION:		
Project:	SHP2201	Designed by: AJL
Date:	11/15/2022	Drawn by: FT
Scale:	AS SHOWN	Approved by: DE

FIGURE NO:

1

Figure 2
Monitoring Well 11A
(1997 - 2022)

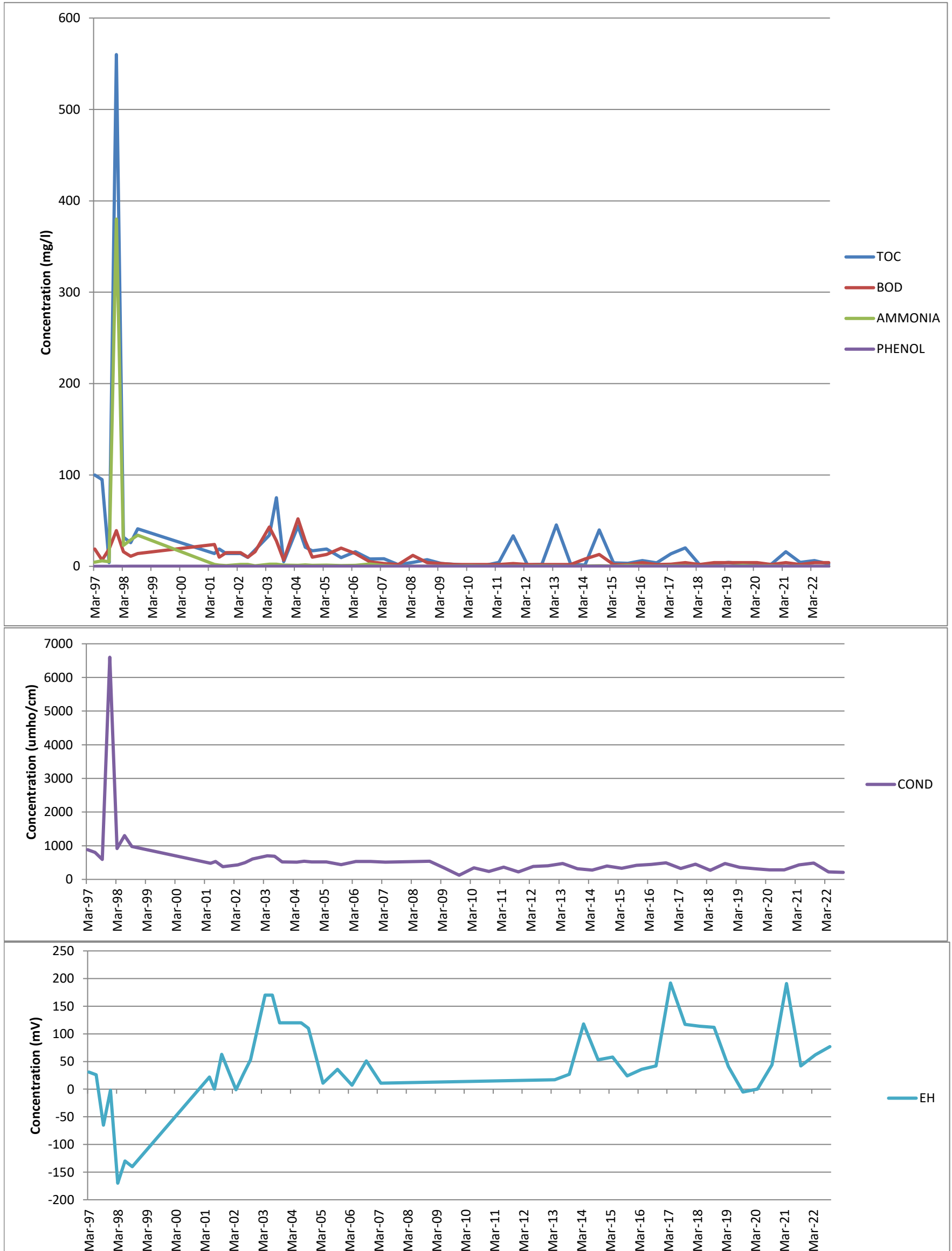


Figure 3
Monitoring Well 11B
(1997 - 2022)

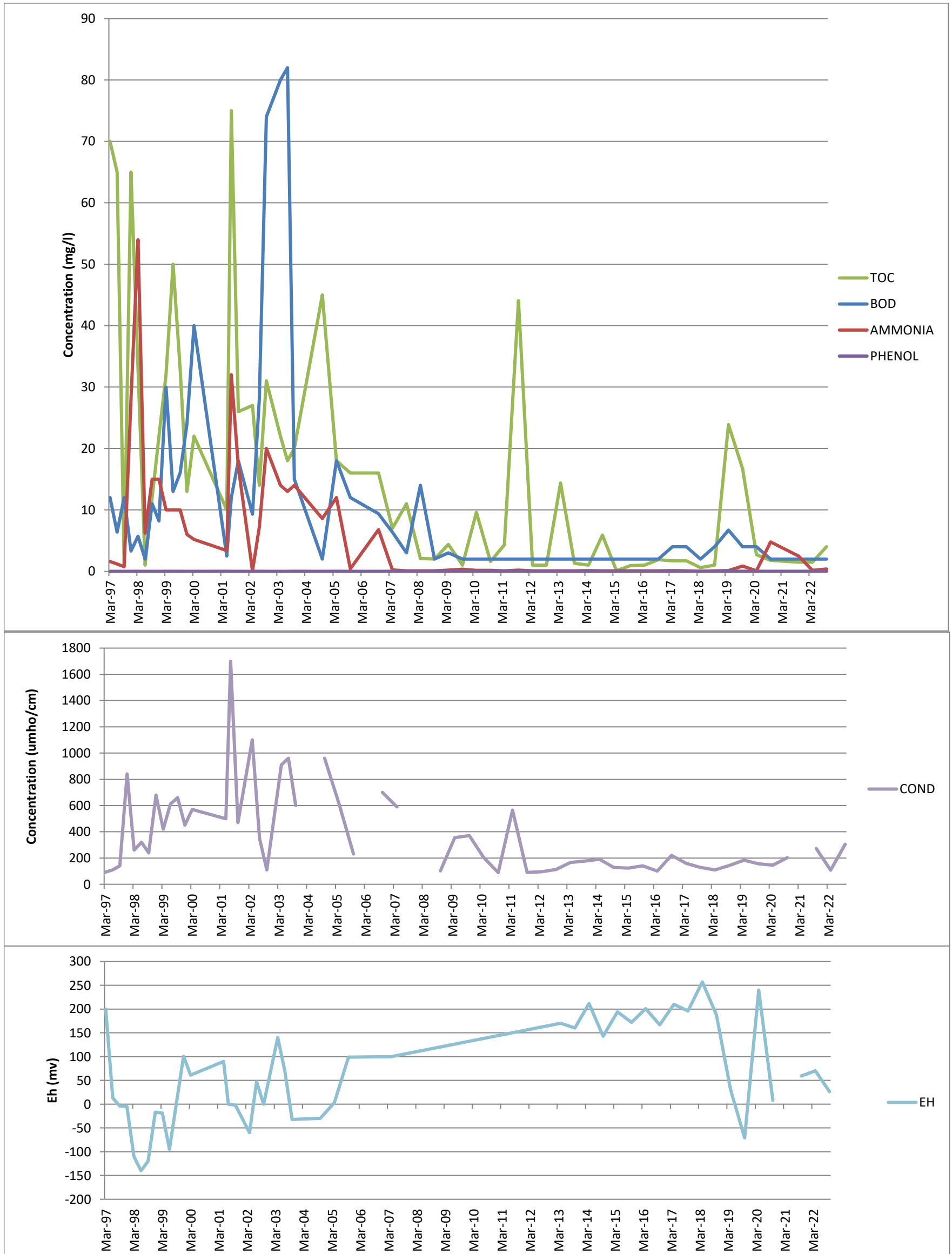


Figure 4
Monitoring Well Cluster 4
Ammonia Trends
(1993 - 2022)

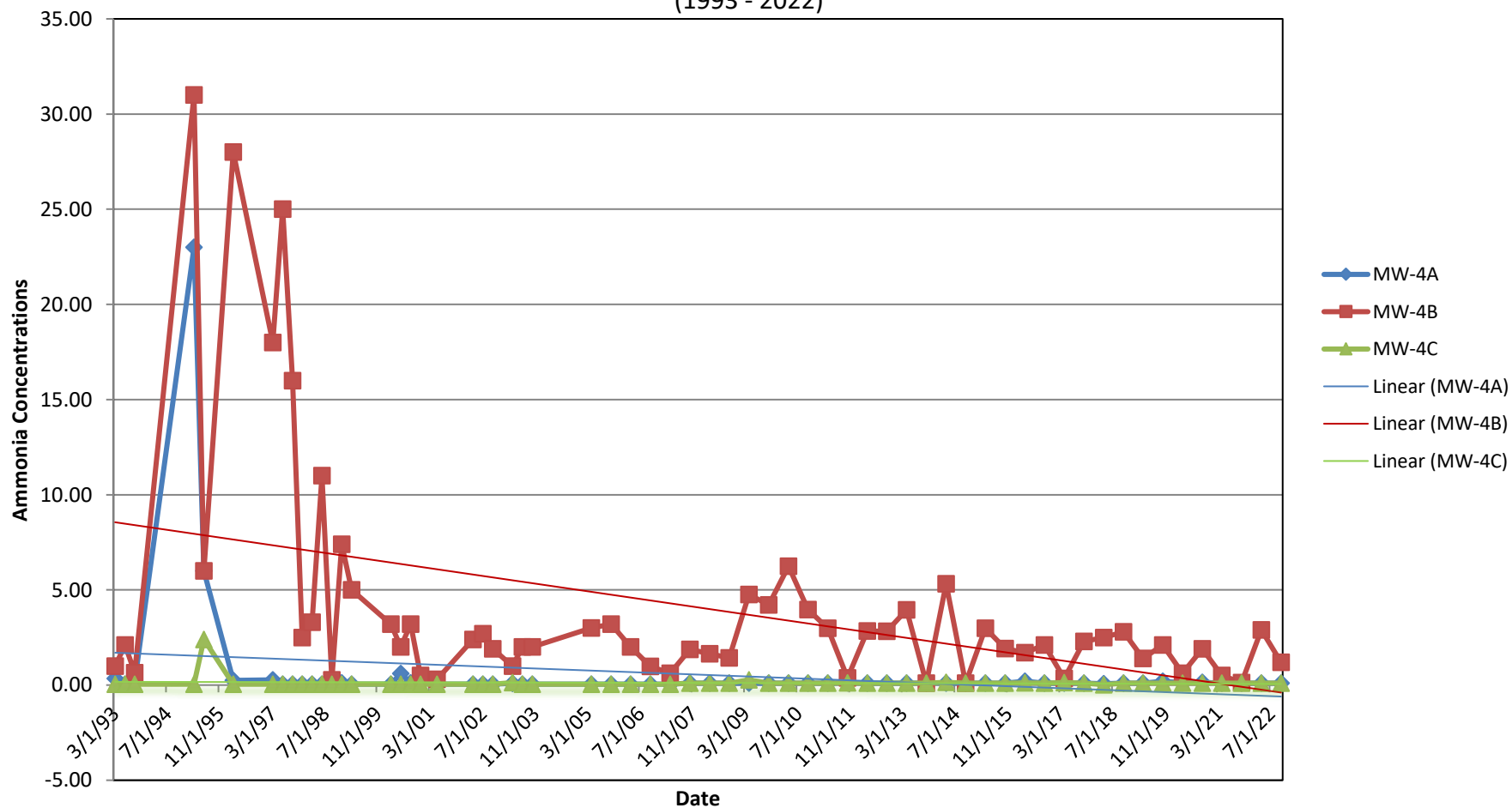


Figure 5
Monitoring Well Cluster 4
Chloride Trends
(1995 - 2022)

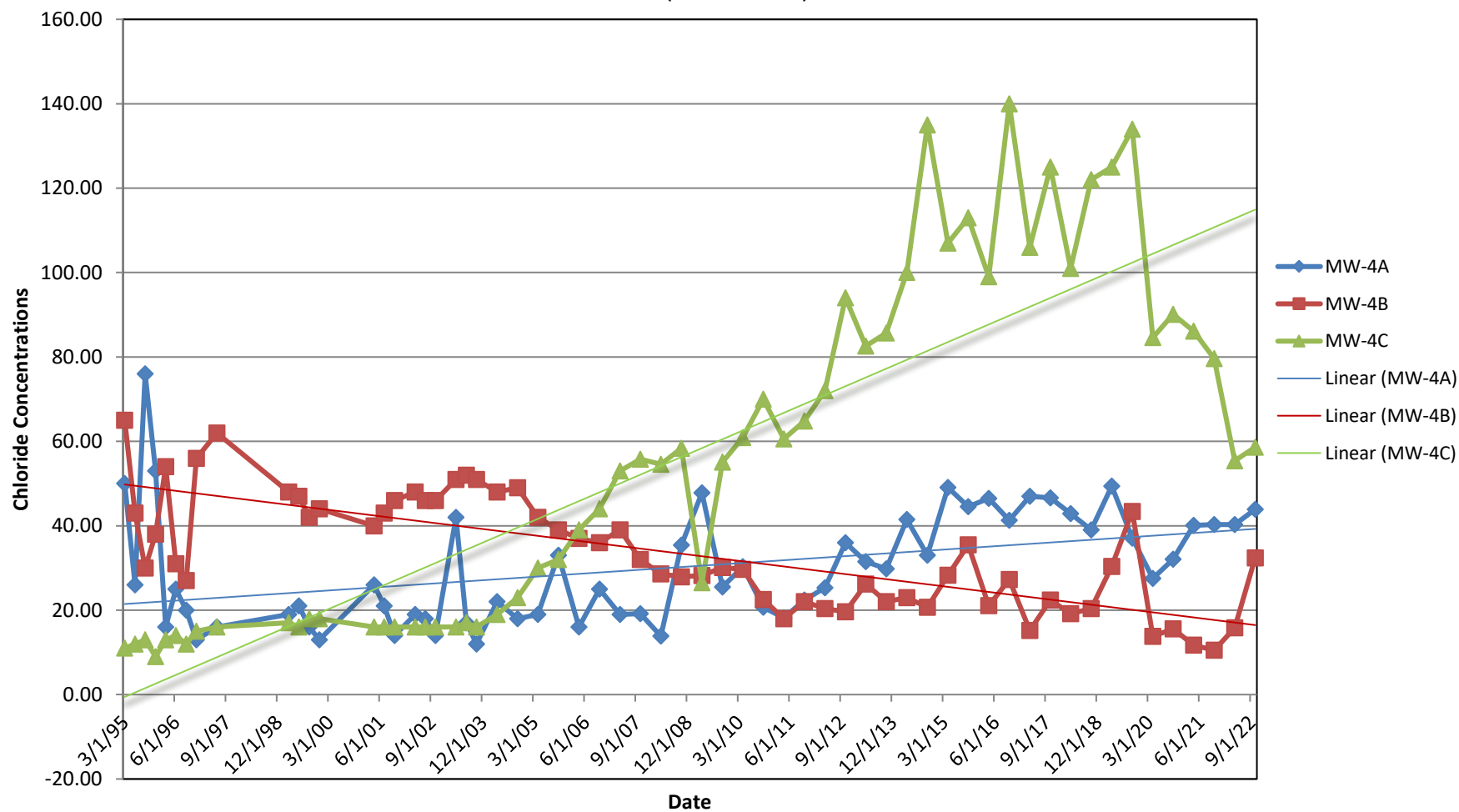


Figure 6
Monitoring Well Cluster 4
Chromium Trends
(1995 - 2022)

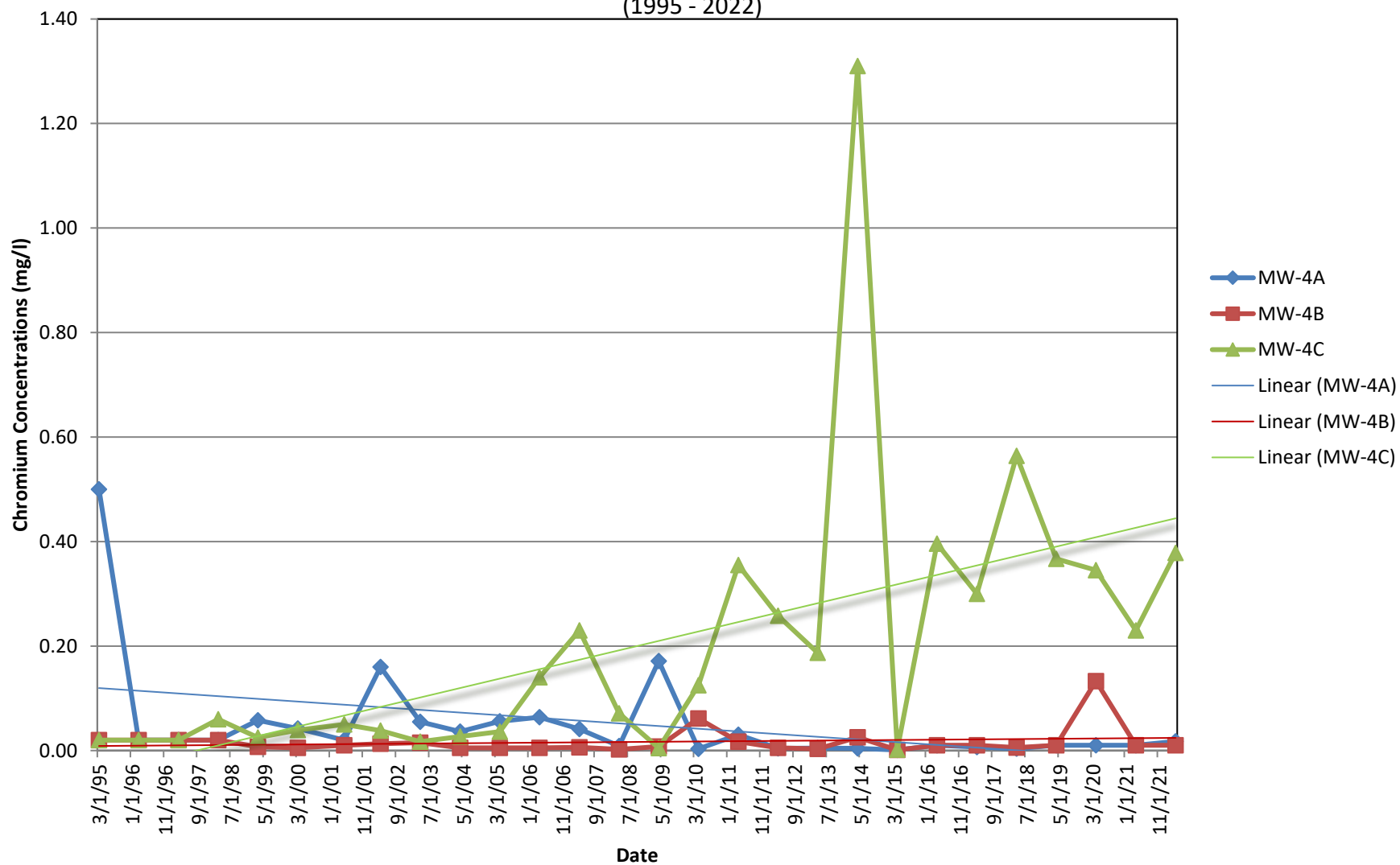


Figure 7
Monitoring Well Cluster 4
Conductivity Trends
(1995 - 2022)

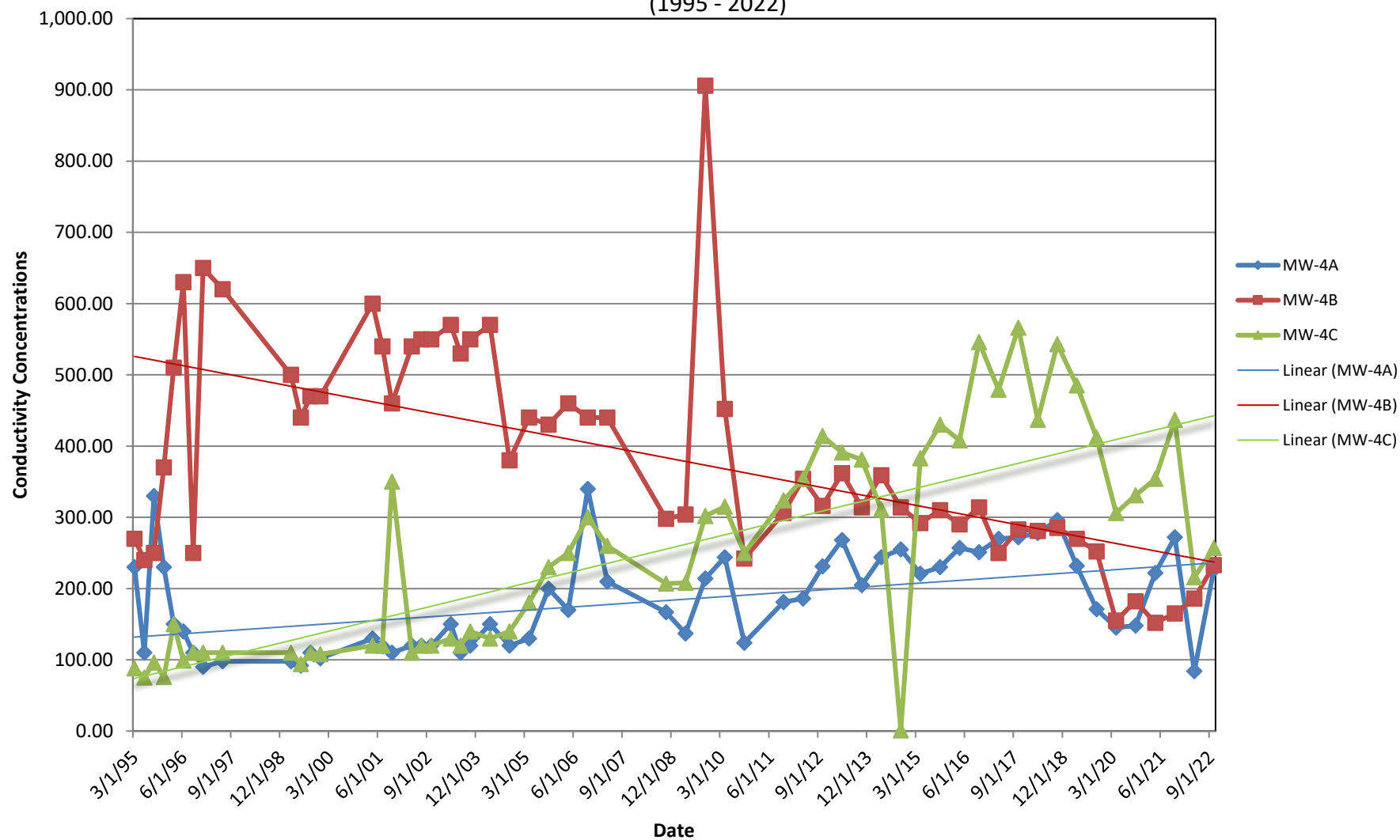


Figure 8
Monitoring Well Cluster 4
Iron Trends
(1993 - 2022)

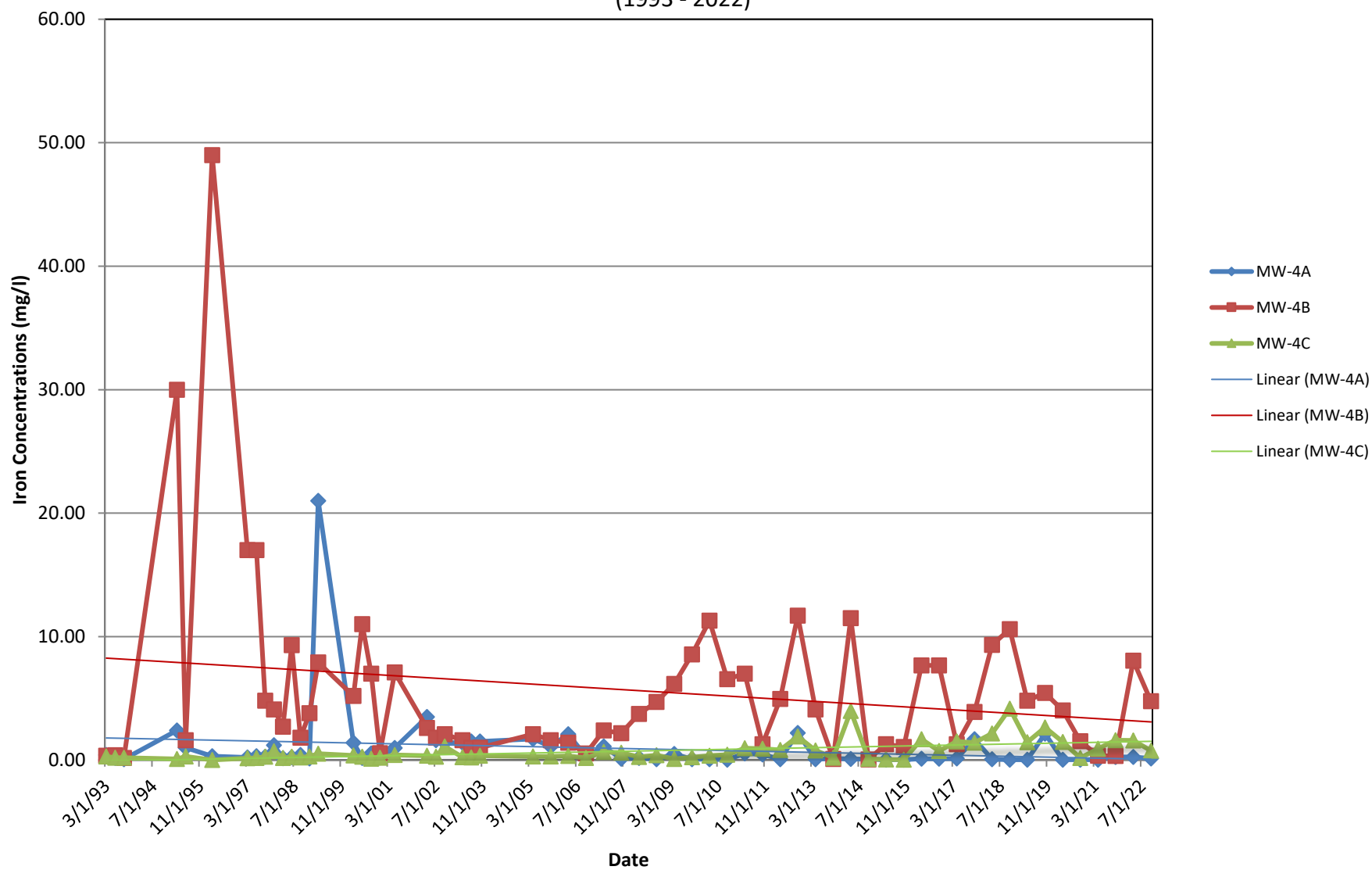


Figure 9
Monitoring Well Cluster 4
Manganese Trends
(1995 - 2022)

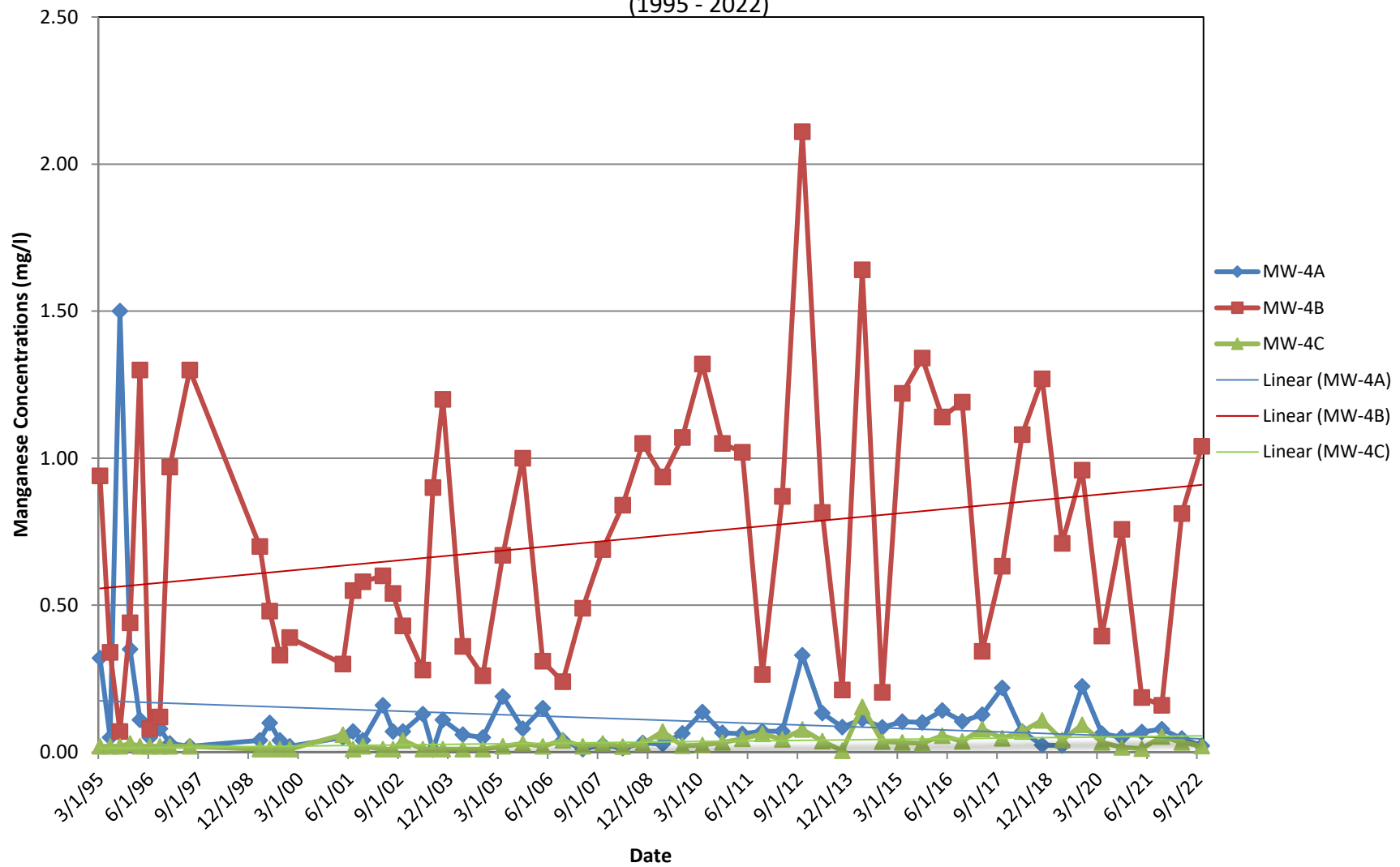


Figure 10
Monitoring Well Cluster 4
Nitrate Trends
(1993 - 2022)

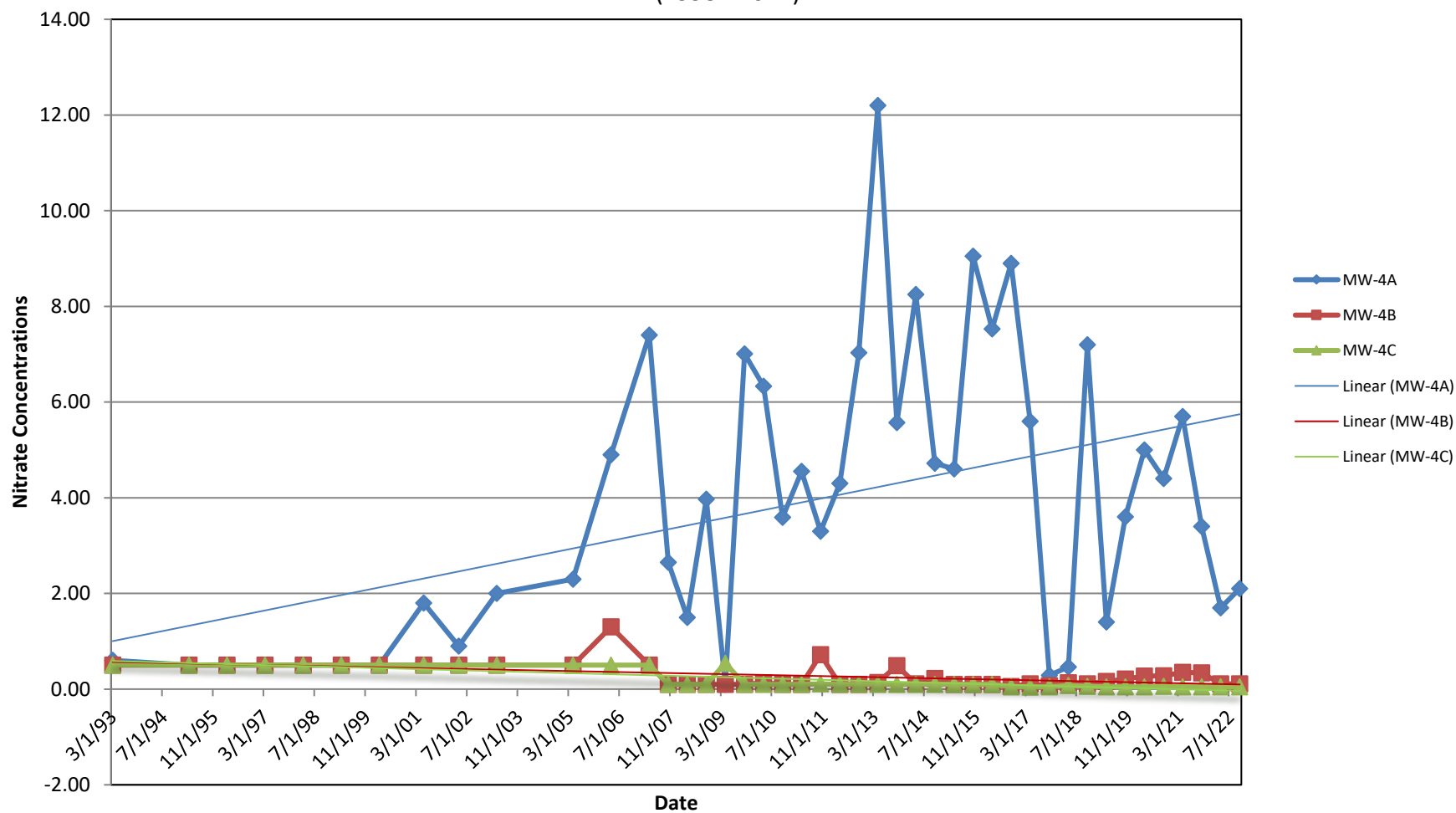
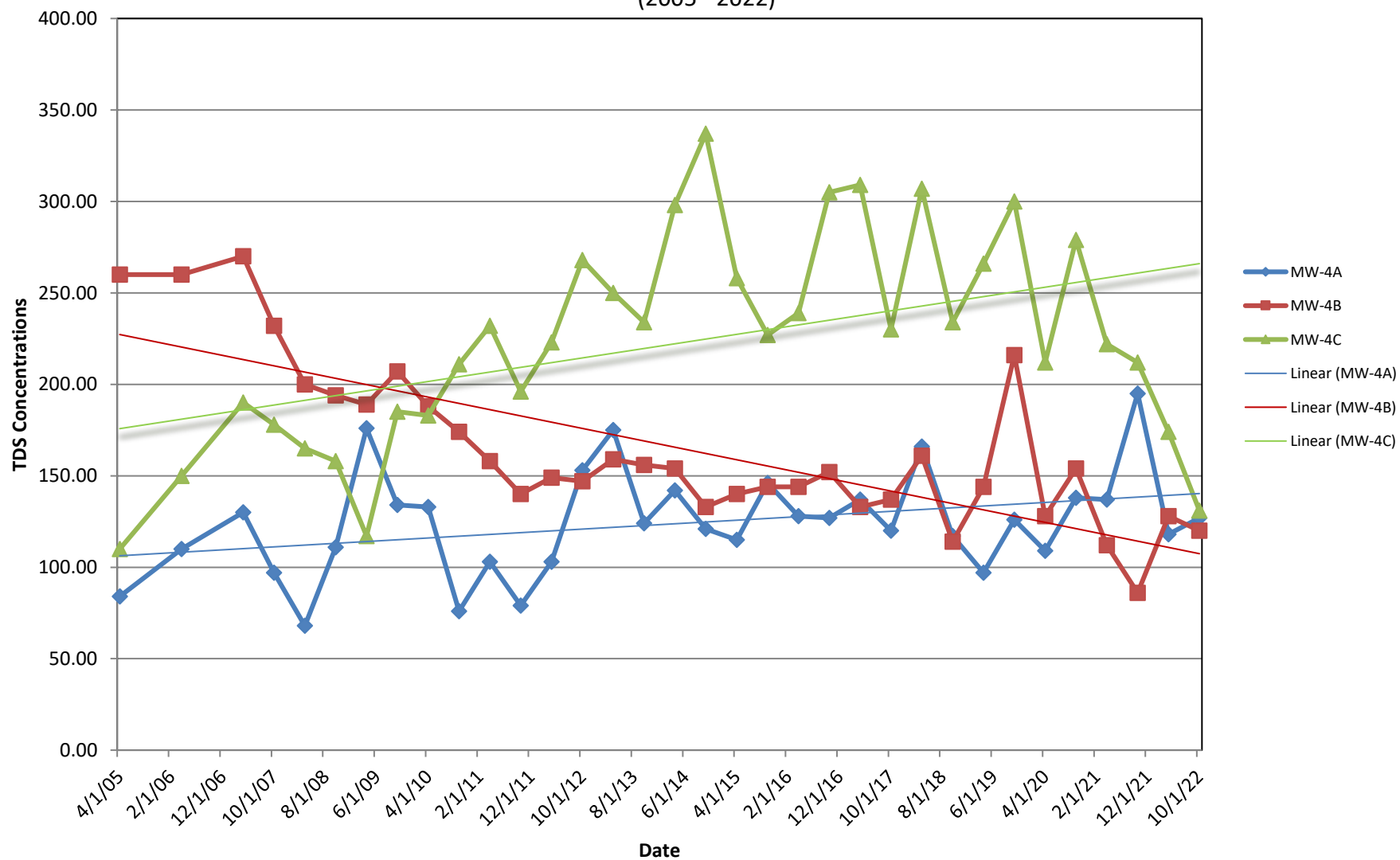


Figure 11
Monitoring Well Cluster 4
Total Dissolved Solids Trends
(2005 - 2022)





APPENDIX A LABORATORY ANALYTICAL REPORTS

SHP2201 – 2nd SEMI-ANNUAL POST-CLOSURE GROUNDWATER MONITORING REPORT 2022

P.W. GROSSER CONSULTING, INC.
P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, P.C.

PHONE: 631.589.6353 630 JOHNSON AVENUE, STE 7
PWGROSSER.COM BOHEMIA, NY 11716

LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SHELTON

November 22, 2022

Tom Houghton
Town of Southampton
116 Hampton Road
Waste Management Division
Southampton, NY 11968

RE: Project: NORTH SEA LANDFILL 10/26
Pace Project No.: 70234792

Dear Tom Houghton:

Enclosed are the analytical results for sample(s) received by the laboratory on October 27, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

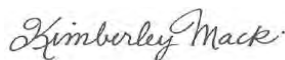
Some analyses were subcontracted outside of the Pace Network. The test report from the external subcontractor is attached to this report in its entirety.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Melville

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kimberley M. Mack
kimberley.mack@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Kaitlyn Crosby, P.W. Grosser Engineer & Hydrogeologist
Derek Ersbak, P.W. Grosser Consulting
Richard Hodgson, Town of Southampton
Amanda Lauth, PW Grosser
Ed Thompson, Town of Southampton



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Pace Analytical Services Long Island

575 Broad Hollow Rd, Melville, NY 11747

Connecticut Certification #: PH-0435

Delaware Certification # NY 10478

Maryland Certification #: 208

Massachusetts Certification #: M-NY026

New Hampshire Certification #: 2987

New Jersey Certification #: NY158

New York Certification #: 10478 Primary Accrediting Body

Pennsylvania Certification #: 68-00350

Rhode Island Certification #: LAO00340

Virginia Certification # 460302

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Method: EPA 6010C

Description: 6010 MET ICP

Client: Town of Southampton

Date: November 22, 2022

General Information:

11 samples were analyzed for EPA 6010C by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Method: SM22 2120B

Description: 2120B W Apparent Color

Client: Town of Southampton

Date: November 22, 2022

General Information:

11 samples were analyzed for SM22 2120B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Method: SM22 2320B

Description: 2320B Alkalinity

Client: Town of Southampton

Date: November 22, 2022

General Information:

11 samples were analyzed for SM22 2320B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Method: SM22 2340C

Description: 2340C Hardness, Total

Client: Town of Southampton

Date: November 22, 2022

General Information:

11 samples were analyzed for SM22 2340C by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Method: SM22 2540C

Description: 2540C Total Dissolved Solids

Client: Town of Southampton

Date: November 22, 2022

General Information:

11 samples were analyzed for SM22 2540C by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 280248

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 1416501)
- Total Dissolved Solids

QC Batch: 280249

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 1416510)
- Total Dissolved Solids

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Method: SM22 3500-Cr B

Description: Chromium, Hexavalent

Client: Town of Southampton

Date: November 22, 2022

General Information:

11 samples were analyzed for SM22 3500-Cr B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

H1: Analysis conducted outside the EPA method holding time.

- 11A (Lab ID: 70234792008)
- 11B (Lab ID: 70234792009)
- 1A (Lab ID: 70234792001)
- 1B (Lab ID: 70234792002)
- 1C (Lab ID: 70234792003)
- 8 (Lab ID: 70234792006)
- 9 (Lab ID: 70234792007)

H3: Sample was received or analysis requested beyond the recognized method holding time.

- 6AR (Lab ID: 70234792004)
- 6B (Lab ID: 70234792005)
- LEA-PRIMARY (Lab ID: 70234792010)
- LEA-SECONDARY (Lab ID: 70234792011)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Method: EPA 410.4

Description: 410.4 COD

Client: Town of Southampton

Date: November 22, 2022

General Information:

11 samples were analyzed for EPA 410.4 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 281327

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 1422198)
- Chemical Oxygen Demand

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Method: SM22 5210B

Description: 5210B BOD, 5 day

Client: Town of Southampton

Date: November 22, 2022

General Information:

11 samples were analyzed for SM22 5210B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

H2: Extraction or preparation conducted outside EPA method holding time.

- LEA-PRIMARY (Lab ID: 70234792010)
- LEA-SECONDARY (Lab ID: 70234792011)

Sample Preparation:

The samples were prepared in accordance with SM22 5210B with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Method: EPA 300.0

Description: 300.0 IC Anions 28 Days

Client: Town of Southampton

Date: November 22, 2022

General Information:

11 samples were analyzed for EPA 300.0 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 280155

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70234863001,70234863002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1416125)
 - Bromide
 - Chloride
 - Sulfate
- MS (Lab ID: 1416127)
 - Bromide
 - Chloride
 - Sulfate

QC Batch: 280662

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70234792006,70235213001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1418863)
 - Bromide
 - Chloride
 - Sulfate
- MS (Lab ID: 1418865)
 - Bromide
 - Chloride
 - Sulfate

QC Batch: 282458

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70234908002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1427716)

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PROJECT NARRATIVE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Method: EPA 300.0

Description: 300.0 IC Anions 28 Days

Client: Town of Southampton

Date: November 22, 2022

QC Batch: 282458

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70234908002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- Bromide
- Sulfate

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Method: EPA 351.2

Description: 351.2 Total Kjeldahl Nitrogen

Client: Town of Southampton

Date: November 22, 2022

General Information:

11 samples were analyzed for EPA 351.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 351.2 with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 281329

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70234792006,70235887002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1422207)
- Nitrogen, Kjeldahl, Total

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Method: EPA 353.2

Description: 353.2 Nitrogen, NO₂/NO₃ unpres

Client: Town of Southampton

Date: November 22, 2022

General Information:

10 samples were analyzed for EPA 353.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Method: EPA 353.2

Description: 353.2 Nitrogen, NO₂/NO₃ pres.

Client: Town of Southampton

Date: November 22, 2022

General Information:

1 sample was analyzed for EPA 353.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 280302

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70235222001,70235228002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1417570)
- Nitrate-Nitrite (as N)

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Method: EPA 353.2

Description: 353.2 Nitrogen, NO₂

Client: Town of Southampton

Date: November 22, 2022

General Information:

11 samples were analyzed for EPA 353.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Method: SM22 4500 NH3 H

Description: 4500 Ammonia Water

Client: Town of Southampton

Date: November 22, 2022

General Information:

11 samples were analyzed for SM22 4500 NH3 H by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Method: SM22 5310B

Description: 5310B TOC as NPOC

Client: Town of Southampton

Date: November 22, 2022

General Information:

11 samples were analyzed for SM22 5310B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Method: EPA 9014 Total Cyanide

Description: 9014 Cyanide, Total

Client: Town of Southampton

Date: November 22, 2022

General Information:

11 samples were analyzed for EPA 9014 Total Cyanide by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 9010C with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: 1A		Lab ID: 70234792001		Collected: 10/26/22 12:10		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 15:55	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/01/22 09:23	11/01/22 15:55	7440-43-9		
Calcium	60000	ug/L	200	1	11/01/22 09:23	11/01/22 15:55	7440-70-2		
Iron	393	ug/L	100	1	11/01/22 09:23	11/01/22 15:55	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/01/22 09:23	11/01/22 15:55	7439-92-1		
Magnesium	20300	ug/L	200	1	11/01/22 09:23	11/01/22 15:55	7439-95-4		
Manganese	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 15:55	7439-96-5		
Potassium	13500	ug/L	5000	1	11/01/22 09:23	11/01/22 15:55	7440-09-7		
Sodium	19900	ug/L	5000	1	11/01/22 09:23	11/01/22 15:55	7440-23-5		
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	6.0	units	5.0	1		10/27/22 21:35			
pH	6.5	Std. Units	0.10	1		10/27/22 21:35			
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	142	mg/L	1.0	1		11/09/22 11:51			
2340C Hardness, Total		Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	273	mg/L	5.0	1		11/09/22 18:34			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	342	mg/L	10.0	1		11/01/22 19:09		D6	
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/27/22 22:29	18540-29-9	H1	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	20.8	mg/L	10.0	1	11/09/22 05:15	11/09/22 12:49			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/28/22 09:13	11/02/22 09:32			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/11/22 21:18	24959-67-9		
Chloride	39.0	mg/L	2.0	1		11/11/22 21:18	16887-00-6		
Sulfate	87.3	mg/L	5.0	1		11/11/22 21:18	14808-79-8		

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: 1A		Lab ID: 70234792001		Collected: 10/26/22 12:10		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	<0.10	mg/L	0.10	1	11/09/22 05:34	11/09/22 13:11	7727-37-9		
353.2 Nitrogen, NO2/NO3 pres.		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate-Nitrite (as N)	10.7	mg/L	0.25	5		11/02/22 17:04	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/27/22 23:57	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	<0.10	mg/L	0.10	1		10/31/22 14:12	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	5.1	mg/L	1.0	1		11/04/22 03:02	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/09/22 12:45	11/09/22 16:49	57-12-5		

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: 1B		Lab ID: 70234792002		Collected: 10/26/22 12:50		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 15:58	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/01/22 09:23	11/01/22 15:58	7440-43-9		
Calcium	4190	ug/L	200	1	11/01/22 09:23	11/01/22 15:58	7440-70-2		
Iron	237	ug/L	100	1	11/01/22 09:23	11/01/22 15:58	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/01/22 09:23	11/01/22 15:58	7439-92-1		
Magnesium	2160	ug/L	200	1	11/01/22 09:23	11/01/22 15:58	7439-95-4		
Manganese	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 15:58	7439-96-5		
Potassium	<5000	ug/L	5000	1	11/01/22 09:23	11/01/22 15:58	7440-09-7		
Sodium	7150	ug/L	5000	1	11/01/22 09:23	11/01/22 15:58	7440-23-5		
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	7.0	units	5.0	1		10/27/22 21:36			
pH	6.4	Std. Units	0.10	1		10/27/22 21:36			
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	14.7	mg/L	1.0	1		11/09/22 11:57			
2340C Hardness, Total		Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	20.0	mg/L	5.0	1		11/09/22 18:36			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	93.0	mg/L	10.0	1		11/01/22 19:11			
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/27/22 22:29	18540-29-9	H1	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	<10.0	mg/L	10.0	1	11/09/22 05:15	11/09/22 12:49			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/28/22 09:17	11/02/22 09:34			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/11/22 21:32	24959-67-9		
Chloride	12.1	mg/L	2.0	1		11/11/22 21:32	16887-00-6		
Sulfate	9.4	mg/L	5.0	1		11/11/22 21:32	14808-79-8		

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: 1B		Lab ID: 70234792002		Collected: 10/26/22 12:50		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	0.17	mg/L	0.10	1	11/09/22 05:34	11/09/22 12:52	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	0.070	mg/L	0.050	1		10/28/22 02:13	14797-55-8		
Nitrate-Nitrite (as N)	0.073	mg/L	0.050	1		10/28/22 02:13	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/28/22 00:03	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	<0.10	mg/L	0.10	1		10/31/22 14:13	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	<1.0	mg/L	1.0	1		11/04/22 03:13	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/09/22 12:45	11/09/22 16:50	57-12-5		

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: 1C		Lab ID: 70234792003		Collected: 10/26/22 13:30		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:00	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/01/22 09:23	11/01/22 16:00	7440-43-9		
Calcium	4550	ug/L	200	1	11/01/22 09:23	11/01/22 16:00	7440-70-2		
Iron	<100	ug/L	100	1	11/01/22 09:23	11/01/22 16:00	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/01/22 09:23	11/01/22 16:00	7439-92-1		
Magnesium	2310	ug/L	200	1	11/01/22 09:23	11/01/22 16:00	7439-95-4		
Manganese	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:00	7439-96-5		
Potassium	<5000	ug/L	5000	1	11/01/22 09:23	11/01/22 16:00	7440-09-7		
Sodium	7590	ug/L	5000	1	11/01/22 09:23	11/01/22 16:00	7440-23-5		
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	<5.0	units	5.0	1		10/27/22 21:38			
pH	6.4	Std. Units	0.10	1		10/27/22 21:38			
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	16.8	mg/L	1.0	1		11/09/22 12:03			
2340C Hardness, Total		Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	22.0	mg/L	5.0	1		11/09/22 18:38			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	78.0	mg/L	10.0	1		11/01/22 19:21			
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/27/22 22:30	18540-29-9	H1	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	<10.0	mg/L	10.0	1	11/09/22 05:15	11/09/22 12:49			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/28/22 09:20	11/02/22 09:36			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/11/22 21:45	24959-67-9		
Chloride	11.1	mg/L	2.0	1		11/11/22 21:45	16887-00-6		
Sulfate	10.6	mg/L	5.0	1		11/11/22 21:45	14808-79-8		

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: 1C		Lab ID: 70234792003		Collected: 10/26/22 13:30		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	0.12	mg/L	0.10	1	11/09/22 05:34	11/09/22 12:53	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	0.20	mg/L	0.050	1		10/28/22 02:22	14797-55-8		
Nitrate-Nitrite (as N)	0.20	mg/L	0.050	1		10/28/22 02:22	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/28/22 00:12	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	<0.10	mg/L	0.10	1		10/31/22 14:17	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	<1.0	mg/L	1.0	1		11/01/22 15:01	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/09/22 12:45	11/09/22 16:51	57-12-5		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: 6AR		Lab ID: 70234792004		Collected: 10/26/22 10:30		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:03	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/01/22 09:23	11/01/22 16:03	7440-43-9		
Calcium	6930	ug/L	200	1	11/01/22 09:23	11/01/22 16:03	7440-70-2		
Iron	<100	ug/L	100	1	11/01/22 09:23	11/01/22 16:03	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/01/22 09:23	11/01/22 16:03	7439-92-1		
Magnesium	2600	ug/L	200	1	11/01/22 09:23	11/01/22 16:03	7439-95-4		
Manganese	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:03	7439-96-5		
Potassium	<5000	ug/L	5000	1	11/01/22 09:23	11/01/22 16:03	7440-09-7		
Sodium	7430	ug/L	5000	1	11/01/22 09:23	11/01/22 16:03	7440-23-5		
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	<5.0	units	5.0	1		10/27/22 21:33			
pH	6.2	Std. Units	0.10	1		10/27/22 21:33			
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	17.8	mg/L	1.0	1		11/09/22 12:10			
2340C Hardness, Total		Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	24.0	mg/L	5.0	1		11/09/22 18:40			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	82.0	mg/L	20.0	1		11/01/22 19:23			
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/27/22 22:28	18540-29-9	H3	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	<10.0	mg/L	10.0	1	11/09/22 05:15	11/09/22 12:49			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/28/22 09:23	11/02/22 09:39			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/14/22 11:25	24959-67-9		
Chloride	16.0	mg/L	2.0	1		11/14/22 11:25	16887-00-6		
Sulfate	7.4	mg/L	5.0	1		11/14/22 11:25	14808-79-8		

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: 6AR		Lab ID: 70234792004		Collected: 10/26/22 10:30		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	0.20	mg/L	0.10	1	11/09/22 05:34	11/09/22 12:54	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	0.21	mg/L	0.050	1		10/28/22 01:59	14797-55-8		
Nitrate-Nitrite (as N)	0.21	mg/L	0.050	1		10/28/22 01:59	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/27/22 23:50	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	<0.10	mg/L	0.10	1		10/31/22 14:18	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	<1.0	mg/L	1.0	1		11/01/22 15:12	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/09/22 12:45	11/09/22 16:52	57-12-5		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: 6B		Lab ID: 70234792005		Collected: 10/26/22 11:20		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:06	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/01/22 09:23	11/01/22 16:06	7440-43-9		
Calcium	4080	ug/L	200	1	11/01/22 09:23	11/01/22 16:06	7440-70-2		
Iron	150	ug/L	100	1	11/01/22 09:23	11/01/22 16:06	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/01/22 09:23	11/01/22 16:06	7439-92-1		
Magnesium	2290	ug/L	200	1	11/01/22 09:23	11/01/22 16:06	7439-95-4		
Manganese	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:06	7439-96-5		
Potassium	<5000	ug/L	5000	1	11/01/22 09:23	11/01/22 16:06	7440-09-7		
Sodium	7760	ug/L	5000	1	11/01/22 09:23	11/01/22 16:06	7440-23-5		
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	<5.0	units	5.0	1		10/27/22 21:34			
pH	6.2	Std. Units	0.10	1		10/27/22 21:34			
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	12.3	mg/L	1.0	1		11/09/22 12:15			
2340C Hardness, Total		Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	22.0	mg/L	5.0	1		11/09/22 18:43			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	64.0	mg/L	10.0	1		11/01/22 19:33			
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/27/22 22:29	18540-29-9	H3	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	<10.0	mg/L	10.0	1	11/09/22 05:15	11/09/22 12:49			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/28/22 09:26	11/02/22 09:42			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/14/22 11:38	24959-67-9		
Chloride	12.9	mg/L	2.0	1		11/14/22 11:38	16887-00-6		
Sulfate	8.7	mg/L	5.0	1		11/14/22 11:38	14808-79-8		

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: 6B		Lab ID: 70234792005		Collected: 10/26/22 11:20		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	0.53	mg/L	0.10	1	11/09/22 05:34	11/09/22 12:57	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	0.16	mg/L	0.050	1		10/28/22 02:01	14797-55-8		
Nitrate-Nitrite (as N)	0.16	mg/L	0.050	1		10/28/22 02:01	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/27/22 23:51	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	0.33	mg/L	0.10	1		10/31/22 14:19	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	<1.0	mg/L	1.0	1		11/01/22 15:23	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/09/22 12:45	11/09/22 16:53	57-12-5		

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: 8		Lab ID: 70234792006		Collected: 10/26/22 14:45		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:08	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/01/22 09:23	11/01/22 16:08	7440-43-9		
Calcium	7410	ug/L	200	1	11/01/22 09:23	11/01/22 16:08	7440-70-2		
Iron	221	ug/L	100	1	11/01/22 09:23	11/01/22 16:08	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/01/22 09:23	11/01/22 16:08	7439-92-1		
Magnesium	3130	ug/L	200	1	11/01/22 09:23	11/01/22 16:08	7439-95-4		
Manganese	20.2	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:08	7439-96-5		
Potassium	<5000	ug/L	5000	1	11/01/22 09:23	11/01/22 16:08	7440-09-7		
Sodium	7380	ug/L	5000	1	11/01/22 09:23	11/01/22 16:08	7440-23-5		
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	12.0	units	5.0	1		10/27/22 21:40			
pH	6.0	Std. Units	0.10	1		10/27/22 21:40			
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	25.7	mg/L	1.0	1		11/09/22 12:35			
2340C Hardness, Total		Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	34.0	mg/L	5.0	1		11/09/22 18:45			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	87.0	mg/L	10.0	1		11/01/22 19:33		D6	
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/27/22 22:32	18540-29-9	H1	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	<10.0	mg/L	10.0	1	11/09/22 05:15	11/09/22 12:49			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/28/22 09:29	11/02/22 09:45			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/14/22 11:52	24959-67-9	M1	
Chloride	10.7	mg/L	2.0	1		11/14/22 11:52	16887-00-6	M1	
Sulfate	10	mg/L	5.0	1		11/14/22 11:52	14808-79-8	M1	

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: 8		Lab ID: 70234792006		Collected: 10/26/22 14:45		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	<0.10	mg/L	0.10	1	11/09/22 05:34	11/09/22 13:12	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	0.67	mg/L	0.050	1		10/28/22 02:33	14797-55-8		
Nitrate-Nitrite (as N)	0.67	mg/L	0.050	1		10/28/22 02:33	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/28/22 00:20	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	<0.10	mg/L	0.10	1		10/31/22 14:21	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	<1.0	mg/L	1.0	1		11/01/22 15:34	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/09/22 12:45	11/09/22 16:54	57-12-5		

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: 9		Lab ID: 70234792007		Collected: 10/26/22 15:15		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:27	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/01/22 09:23	11/01/22 16:27	7440-43-9		
Calcium	3540	ug/L	200	1	11/01/22 09:23	11/01/22 16:27	7440-70-2		
Iron	423	ug/L	100	1	11/01/22 09:23	11/01/22 16:27	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/01/22 09:23	11/01/22 16:27	7439-92-1		
Magnesium	1740	ug/L	200	1	11/01/22 09:23	11/01/22 16:27	7439-95-4		
Manganese	29.1	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:27	7439-96-5		
Potassium	<5000	ug/L	5000	1	11/01/22 09:23	11/01/22 16:27	7440-09-7		
Sodium	6630	ug/L	5000	1	11/01/22 09:23	11/01/22 16:27	7440-23-5		
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	6.0	units	5.0	1		10/27/22 21:41			
pH	5.6	Std. Units	0.10	1		10/27/22 21:41			
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	12.2	mg/L	1.0	1		11/09/22 12:54			
2340C Hardness, Total		Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	22.0	mg/L	5.0	1		11/09/22 18:53			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	62.0	mg/L	10.0	1		11/01/22 19:35			
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/27/22 22:34	18540-29-9	H1	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	<10.0	mg/L	10.0	1	11/09/22 05:15	11/09/22 12:49			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/28/22 09:37	11/02/22 09:49			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/14/22 12:33	24959-67-9		
Chloride	11.4	mg/L	2.0	1		11/14/22 12:33	16887-00-6		
Sulfate	7.5	mg/L	5.0	1		11/14/22 12:33	14808-79-8		

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: 9		Lab ID: 70234792007		Collected: 10/26/22 15:15		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	<0.10	mg/L	0.10	1	11/09/22 05:34	11/09/22 13:00	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	0.19	mg/L	0.050	1		10/28/22 02:25	14797-55-8		
Nitrate-Nitrite (as N)	0.19	mg/L	0.050	1		10/28/22 02:25	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/28/22 00:16	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	<0.10	mg/L	0.10	1		10/31/22 14:24	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	<1.0	mg/L	1.0	1		11/01/22 16:44	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/09/22 12:45	11/09/22 16:58	57-12-5		

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: 11A		Lab ID: 70234792008		Collected: 10/26/22 15:50		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:30	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/01/22 09:23	11/01/22 16:30	7440-43-9		
Calcium	17300	ug/L	200	1	11/01/22 09:23	11/01/22 16:30	7440-70-2		
Iron	34900	ug/L	100	1	11/01/22 09:23	11/01/22 16:30	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/01/22 09:23	11/01/22 16:30	7439-92-1		
Magnesium	6910	ug/L	200	1	11/01/22 09:23	11/01/22 16:30	7439-95-4		
Manganese	1900	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:30	7439-96-5		
Potassium	<5000	ug/L	5000	1	11/01/22 09:23	11/01/22 16:30	7440-09-7		
Sodium	7320	ug/L	5000	1	11/01/22 09:23	11/01/22 16:30	7440-23-5		
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	130	units	50.0	10		10/27/22 21:43			
pH	6.0	Std. Units	0.10	10		10/27/22 21:43			
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	58.5	mg/L	1.0	1		11/09/22 13:01			
2340C Hardness, Total		Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	86.7	mg/L	5.0	1		11/09/22 18:55			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	120	mg/L	20.0	1		11/01/22 19:36			
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/27/22 22:34	18540-29-9	H1	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	23.0	mg/L	10.0	1	11/09/22 05:15	11/09/22 12:49			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/28/22 15:48	11/02/22 12:28			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/14/22 12:46	24959-67-9		
Chloride	14.5	mg/L	2.0	1		11/14/22 12:46	16887-00-6		
Sulfate	25.6	mg/L	5.0	1		11/14/22 12:46	14808-79-8		

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: 11A		Lab ID: 70234792008		Collected: 10/26/22 15:50		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	0.49	mg/L	0.10	1	11/09/22 05:34	11/09/22 13:01	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	0.20	mg/L	0.050	1		10/28/22 02:26	14797-55-8		
Nitrate-Nitrite (as N)	0.21	mg/L	0.050	1		10/28/22 02:26	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/28/22 00:18	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	0.12	mg/L	0.10	1		10/31/22 14:25	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	2.5	mg/L	1.0	1		11/01/22 16:57	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/09/22 12:45	11/09/22 16:59	57-12-5		

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: 11B		Lab ID: 70234792009		Collected: 10/26/22 16:30		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:32	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/01/22 09:23	11/01/22 16:32	7440-43-9		
Calcium	17900	ug/L	200	1	11/01/22 09:23	11/01/22 16:32	7440-70-2		
Iron	9070	ug/L	100	1	11/01/22 09:23	11/01/22 16:32	7439-89-6		
Lead	6.2	ug/L	5.0	1	11/01/22 09:23	11/01/22 16:32	7439-92-1		
Magnesium	2870	ug/L	200	1	11/01/22 09:23	11/01/22 16:32	7439-95-4		
Manganese	134	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:32	7439-96-5		
Potassium	5400	ug/L	5000	1	11/01/22 09:23	11/01/22 16:32	7440-09-7		
Sodium	8470	ug/L	5000	1	11/01/22 09:23	11/01/22 16:32	7440-23-5		
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	130	units	50.0	10		10/27/22 21:46			
pH	6.5	Std. Units	0.10	10		10/27/22 21:46			
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	31.4	mg/L	1.0	1		11/09/22 13:07			
2340C Hardness, Total		Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	66.7	mg/L	5.0	1		11/09/22 18:58			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	110	mg/L	20.0	1		11/01/22 19:46			
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/27/22 22:35	18540-29-9	H1	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	75.8	mg/L	10.0	1	11/09/22 05:15	11/09/22 12:49			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/28/22 15:51	11/02/22 12:31			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/14/22 13:00	24959-67-9		
Chloride	11.5	mg/L	2.0	1		11/14/22 13:00	16887-00-6		
Sulfate	11.4	mg/L	5.0	1		11/14/22 13:00	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: 11B		Lab ID: 70234792009		Collected: 10/26/22 16:30		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	1.5	mg/L	0.10	1	11/09/22 05:34	11/09/22 13:02	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	0.33	mg/L	0.050	1		10/28/22 02:27	14797-55-8		
Nitrate-Nitrite (as N)	0.34	mg/L	0.050	1		10/28/22 02:27	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/28/22 00:19	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	0.40	mg/L	0.10	1		10/31/22 14:27	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	4.0	mg/L	1.0	1		11/01/22 17:09	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/09/22 12:45	11/09/22 16:59	57-12-5		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: LEA-PRIMARY		Lab ID: 70234792010		Collected: 10/26/22 08:10		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	10.2	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:35	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/01/22 09:23	11/01/22 16:35	7440-43-9		
Calcium	89600	ug/L	200	1	11/01/22 09:23	11/01/22 16:35	7440-70-2		
Iron	1380	ug/L	100	1	11/01/22 09:23	11/01/22 16:35	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/01/22 09:23	11/01/22 16:35	7439-92-1		
Magnesium	22100	ug/L	200	1	11/01/22 09:23	11/01/22 16:35	7439-95-4		
Manganese	172	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:35	7439-96-5		
Potassium	68000	ug/L	5000	1	11/01/22 09:23	11/01/22 16:35	7440-09-7		
Sodium	39800	ug/L	5000	1	11/01/22 09:23	11/01/22 16:35	7440-23-5		
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	660	units	250	50		10/27/22 21:30			
pH	7.9	Std. Units	0.10	50		10/27/22 21:30			
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	347	mg/L	1.0	1		11/09/22 13:24			
2340C Hardness, Total		Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	327	mg/L	5.0	1		11/09/22 19:01			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	970	mg/L	100	1		11/01/22 19:46			
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/27/22 22:27	18540-29-9	H3	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	296	mg/L	10.0	1	11/09/22 05:15	11/09/22 12:49			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/28/22 09:40	11/02/22 09:51		H2	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/22/22 09:36	24959-67-9		
Sulfate	31.6	mg/L	5.0	1		11/22/22 09:36	14808-79-8		

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: LEA-PRIMARY		Lab ID: 70234792010		Collected: 10/26/22 08:10		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	5.1	mg/L	0.50	1	11/09/22 05:34	11/09/22 13:03	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	0.42	mg/L	0.050	1		10/28/22 01:42	14797-55-8		
Nitrate-Nitrite (as N)	0.48	mg/L	0.050	1		10/28/22 01:42	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	0.067	mg/L	0.050	1		10/27/22 23:35	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	1.0	mg/L	0.10	1		10/31/22 14:30	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	<1.0	mg/L	1.0	1		11/04/22 19:05	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/09/22 12:45	11/09/22 17:00	57-12-5		

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: LEA-SECONDARY		Lab ID: 70234792011		Collected: 10/26/22 08:30		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:38	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/01/22 09:23	11/01/22 16:38	7440-43-9		
Calcium	66700	ug/L	200	1	11/01/22 09:23	11/01/22 16:38	7440-70-2		
Iron	<100	ug/L	100	1	11/01/22 09:23	11/01/22 16:38	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/01/22 09:23	11/01/22 16:38	7439-92-1		
Magnesium	8810	ug/L	200	1	11/01/22 09:23	11/01/22 16:38	7439-95-4		
Manganese	20.6	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:38	7439-96-5		
Potassium	17900	ug/L	5000	1	11/01/22 09:23	11/01/22 16:38	7440-09-7		
Sodium	10900	ug/L	5000	1	11/01/22 09:23	11/01/22 16:38	7440-23-5		
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	180	units	50.0	10		10/27/22 21:32			
pH	7.6	Std. Units	0.10	10		10/27/22 21:32			
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	189	mg/L	1.0	1		11/09/22 13:34			
2340C Hardness, Total		Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	193	mg/L	5.0	1		11/09/22 19:03			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	440	mg/L	100	1		11/01/22 19:47			
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/27/22 22:28	18540-29-9	H3	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	93.4	mg/L	10.0	1	11/09/22 05:15	11/09/22 12:49			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/28/22 09:43	11/02/22 09:54		H2	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/22/22 10:03	24959-67-9		
Chloride	22.0	mg/L	2.0	1		11/22/22 10:03	16887-00-6		
Sulfate	28.0	mg/L	5.0	1		11/22/22 10:03	14808-79-8		

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ANALYTICAL RESULTS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Sample: LEA-SECONDARY		Lab ID: 70234792011		Collected: 10/26/22 08:30		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	2.1	mg/L	0.50	1	11/09/22 05:34	11/09/22 13:04	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	1.7	mg/L	0.050	1		10/28/22 01:46	14797-55-8		
Nitrate-Nitrite (as N)	1.7	mg/L	0.050	1		10/28/22 01:46	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/27/22 23:38	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	<0.10	mg/L	0.10	1		10/31/22 14:31	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	26.1	mg/L	1.0	1		11/01/22 22:35	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/09/22 12:45	11/09/22 17:01	57-12-5		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch:	280111	Analysis Method:	EPA 6010C
QC Batch Method:	EPA 3005A	Analysis Description:	6010 MET Water
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

METHOD BLANK:	1415989	Matrix:	Water
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<10.0	10.0	11/01/22 15:47	
Cadmium	ug/L	<2.5	2.5	11/01/22 15:47	
Calcium	ug/L	<200	200	11/01/22 15:47	
Iron	ug/L	<100	100	11/01/22 15:47	
Lead	ug/L	<5.0	5.0	11/01/22 15:47	
Magnesium	ug/L	<200	200	11/01/22 15:47	
Manganese	ug/L	<10.0	10.0	11/01/22 15:47	
Potassium	ug/L	<5000	5000	11/01/22 15:47	
Sodium	ug/L	<5000	5000	11/01/22 15:47	

LABORATORY CONTROL SAMPLE: 1415990

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	494	99	80-120	
Cadmium	ug/L	500	499	100	80-120	
Calcium	ug/L	25000	25000	100	80-120	
Iron	ug/L	12500	12500	100	80-120	
Lead	ug/L	500	506	101	80-120	
Magnesium	ug/L	25000	25100	100	80-120	
Manganese	ug/L	500	497	99	80-120	
Potassium	ug/L	25000	25200	101	80-120	
Sodium	ug/L	25000	25800	103	80-120	

MATRIX SPIKE SAMPLE: 1415992

Parameter	Units	70234792006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	<10.0	500	473	94	75-125	
Cadmium	ug/L	<2.5	500	476	95	75-125	
Calcium	ug/L	7410	25000	31300	96	75-125	
Iron	ug/L	221	12500	12100	95	75-125	
Lead	ug/L	<5.0	500	476	95	75-125	
Magnesium	ug/L	3130	25000	26900	95	75-125	
Manganese	ug/L	20.2	500	506	97	75-125	
Potassium	ug/L	<5000	25000	25300	98	75-125	
Sodium	ug/L	7380	25000	32400	100	75-125	

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

SAMPLE DUPLICATE: 1415991

Parameter	Units	70234792006 Result	Dup Result	RPD	Qualifiers
Arsenic	ug/L	<10.0	<10.0		
Cadmium	ug/L	<2.5	<2.5		
Calcium	ug/L	7410	7230	2	
Iron	ug/L	221	220	0	
Lead	ug/L	<5.0	<5.0		
Magnesium	ug/L	3130	3040	3	
Manganese	ug/L	20.2	18.7	8	
Potassium	ug/L	<5000	<5000		
Sodium	ug/L	7380	7080	4	

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch:	279688	Analysis Method:	SM22 2120B
QC Batch Method:	SM22 2120B	Analysis Description:	2120B Color
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

METHOD BLANK:	1414148	Matrix:	Water
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Apparent Color	units	<5.0	5.0	10/27/22 21:29	

LABORATORY CONTROL SAMPLE: 1414149						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Apparent Color	units	40	40.0	100	90-110	

SAMPLE DUPLICATE: 1414150

Parameter	Units	70234792006 Result	Dup Result	RPD	Qualifiers
Apparent Color	units	12.0	12.0	0	
pH	Std. Units	6.0	6.0	0	

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch:	281354	Analysis Method:	SM22 2320B
QC Batch Method:	SM22 2320B	Analysis Description:	2320B Alkalinity
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

METHOD BLANK:	1422282	Matrix:	Water
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	<1.0	1.0	11/09/22 10:54	

LABORATORY CONTROL SAMPLE:	1422283					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	25	23.7	95	85-115	

MATRIX SPIKE SAMPLE:	1422285						
Parameter	Units	70234792006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	25.7	50	74.9	98	75-125	

SAMPLE DUPLICATE: 1422284					
Parameter	Units	70234792006 Result	Dup Result	RPD	Qualifiers
Alkalinity, Total as CaCO3	ma/L	25.7	26.6	3	

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch:	281434	Analysis Method:	SM22 2340C
QC Batch Method:	SM22 2340C	Analysis Description:	2340C Hardness, Total
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

METHOD BLANK:	1422678	Matrix:	Water
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	<2.5	2.5	11/09/22 18:15	

LABORATORY CONTROL SAMPLE:	1422679					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	100	100	100	90-110	

MATRIX SPIKE SAMPLE:	1422680						
		70234696001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Tot Hardness asCaCO3 (SM 2340B	ma/L	63.3	333	393	99	75-125	

MATRIX SPIKE SAMPLE:	1422682						
		70234792006	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Tot Hardness asCaCO3 (SM 2340B	ma/L	34.0	200	230	98	75-125	

SAMPLE DUPLICATE: 1422681					
Parameter	Units	70234696001 Result	Dup Result	RPD	Qualifiers
Tot Hardness asCaCO3 (SM 2340B	ma/L	63.3	63.3	0	

SAMPLE DUPLICATE: 1422683					
Parameter	Units	70234792006 Result	Dup Result	RPD	Qualifiers
Tot Hardness asCaCO3 (SM 2340B	mg/L	34.0	30.0	12	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch:	280248	Analysis Method:	SM22 2540C
QC Batch Method:	SM22 2540C	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70234792001, 70234792002, 70234792003

METHOD BLANK: 1416497 Matrix: Water

Associated Lab Samples: 70234792001, 70234792002, 70234792003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	11/01/22 18:06	

LABORATORY CONTROL SAMPLE: 1416498

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	500	566	113	85-115	

MATRIX SPIKE SAMPLE: 1416500

Parameter	Units	70234596001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	71.0	300	319	83	75-125	

MATRIX SPIKE SAMPLE: 1416502

Parameter	Units	70234792001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	342	300	616	91	75-125	

SAMPLE DUPLICATE: 1416499

Parameter	Units	70234596001 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	71.0	75.0	5	

SAMPLE DUPLICATE: 1416501

Parameter	Units	70234792001 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	342	376	9 D6	

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch:	280249	Analysis Method:	SM22 2540C
QC Batch Method:	SM22 2540C	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

METHOD BLANK:	1416505	Matrix:	Water
Associated Lab Samples:	70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	11/01/22 19:22	

LABORATORY CONTROL SAMPLE:	1416506					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	500	504	101	85-115	

MATRIX SPIKE SAMPLE:		1416509					
		70234792004	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Total Dissolved Solids	mg/L	82.0	600	608	88	75-125	

MATRIX SPIKE SAMPLE:		1416511					
		70234792006	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Total Dissolved Solids	mg/L	87.0	300	340	84	75-125	

SAMPLE DUPLICATE: 1416507					
Parameter	Units	70234792004 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	82.0	86.0	5	

SAMPLE DUPLICATE: 1416510					
Parameter	Units	70234792006 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	87.0	82.0	6	D6

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch:	279687	Analysis Method:	SM22 3500-Cr B
QC Batch Method:	SM22 3500-Cr B	Analysis Description:	Chromium, Hexavalent by 3500
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

METHOD BLANK:	1414144	Matrix:	Water
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium, Hexavalent	mg/L	<0.020	0.020	10/27/22 22:25	

LABORATORY CONTROL SAMPLE:	1414145					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/L	0.2	0.19	95	85-115	

MATRIX SPIKE SAMPLE:	1414193						
		70234792006	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Chromium, Hexavalent	mg/L	<0.020	0.2	0.20	99	75-125	H1

SAMPLE DUPLICATE: 1414194					
Parameter	Units	70234792006 Result	Dup Result	RPD	Qualifiers
Chromium, Hexavalent	mg/L	<0.020	<0.020		H1

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch:	281327	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

METHOD BLANK:	1422193	Matrix:	Water
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<10.0	10.0	11/09/22 12:49	

LABORATORY CONTROL SAMPLE:	1422194					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	500	520	104	90-110	

MATRIX SPIKE SAMPLE:		1422195					
		70234792006	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Chemical Oxygen Demand	mg/L	<10.0	1000	1030	102	90-110	

MATRIX SPIKE SAMPLE:		1422197					
		70234853001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Chemical Oxygen Demand	mg/L	51.6	1000	1050	100	90-110	

SAMPLE DUPLICATE: 1422196					
		70234792006	Dup		
Parameter	Units	Result	Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	<10.0	<10.0		

SAMPLE DUPLICATE: 1422198					
Parameter	Units	70234853001 Result	Dup Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	51.6	40.6	24	D6

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch:	279754	Analysis Method:	SM22 5210B
QC Batch Method:	SM22 5210B	Analysis Description:	5210B BOD, 5 day
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792010, 70234792011		

METHOD BLANK:	1414389	Matrix:	Water
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792010, 70234792011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	<1.0	1.0	11/02/22 09:07	

LABORATORY CONTROL SAMPLE: 1414390						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	210	106	84.5-115.4	

SAMPLE DUPLICATE: 1414391					
Parameter	Units	70234792006 Result	Dup Result	RPD	Qualifiers
BOD, 5 day	mg/L	<2.0	<2.0		

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch: 279842

Analysis Method: SM22 5210B

QC Batch Method: SM22 5210B

Analysis Description: 5210B BOD, 5 day

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234792008, 70234792009

METHOD BLANK: 1414701

Matrix: Water

Associated Lab Samples: 70234792008, 70234792009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	<1.0	1.0	11/02/22 10:24	

LABORATORY CONTROL SAMPLE: 1414702

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	179	91	84.5-115.4	

SAMPLE DUPLICATE: 1414704

Parameter	Units	70234798001 Result	Dup Result	RPD	Qualifiers
BOD, 5 day	mg/L	93.2	86.6	7	

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch:	280155	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70234792001, 70234792002, 70234792003

METHOD BLANK: 1416123 Matrix: Water

Associated Lab Samples: 70234792001, 70234792002, 70234792003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromide	mg/L	<0.50	0.50	11/11/22 14:45	
Chloride	mg/L	<2.0	2.0	11/11/22 14:45	
Sulfate	mg/L	<5.0	5.0	11/11/22 14:45	

LABORATORY CONTROL SAMPLE: 1416124

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	1.0	102	90-110	
Chloride	mg/L	10	10.5	105	90-110	
Sulfate	mg/L	10	10.6	106	90-110	

MATRIX SPIKE SAMPLE: 1416125

Parameter	Units	70234863001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	<0.50	1	1.2	118	90-110	M1
Chloride	mg/L	29.0	10	41.6	127	90-110	M1
Sulfate	mg/L	29.6	10	42.5	129	90-110	M1

MATRIX SPIKE SAMPLE: 1416127

Parameter	Units	70234863002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	<0.50	1	1.2	119	90-110	M1
Chloride	mg/L	25.9	10	38.7	128	90-110	M1
Sulfate	mg/L	23.0	10	35.9	129	90-110	M1

SAMPLE DUPLICATE: 1416126

Parameter	Units	70234863001 Result	Dup Result	RPD	Qualifiers
Bromide	mg/L	<0.50	<0.50		
Chloride	mg/L	29.0	29.4	1	
Sulfate	mg/L	29.6	30.0	1	

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

SAMPLE DUPLICATE: 1416128

Parameter	Units	70234863002 Result	Dup Result	RPD	Qualifiers
Bromide	mg/L	<0.50	<0.50		
Chloride	mg/L	25.9	25.7	1	
Sulfate	mg/L	23.0	23.0	0	

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch:	280662	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009

METHOD BLANK: 1418861 Matrix: Water

Associated Lab Samples: 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromide	mg/L	<0.50	0.50	11/14/22 10:58	
Chloride	mg/L	<2.0	2.0	11/14/22 10:58	
Sulfate	mg/L	<5.0	5.0	11/14/22 10:58	

LABORATORY CONTROL SAMPLE: 1418862

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	0.99	99	90-110	
Chloride	mg/L	10	9.9	99	90-110	
Sulfate	mg/L	10	10	100	90-110	

MATRIX SPIKE SAMPLE: 1418863

Parameter	Units	70234792006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	<0.50	1	1.1	112	90-110	M1
Chloride	mg/L	10.7	10	22.0	113	90-110	M1
Sulfate	mg/L	10	10	21.5	115	90-110	M1

MATRIX SPIKE SAMPLE: 1418865

Parameter	Units	70235213001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	<0.50	1	1.3	128	90-110	M1
Chloride	mg/L	7.2	10	18.9	116	90-110	M1
Sulfate	mg/L	21.3	10	32.9	116	90-110	M1

SAMPLE DUPLICATE: 1418864

Parameter	Units	70234792006 Result	Dup Result	RPD	Qualifiers
Bromide	mg/L	<0.50	<0.50		
Chloride	mg/L	10.7	10.7	1	
Sulfate	mg/L	10	10.0	0	

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

SAMPLE DUPLICATE: 1418866

Parameter	Units	70235213001 Result	Dup Result	RPD	Qualifiers
Bromide	mg/L	<0.50	<0.50		
Chloride	mg/L	7.2	7.2	1	
Sulfate	mg/L	21.3	21.1	1	

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch: 282458

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234792010, 70234792011

METHOD BLANK: 1427714

Matrix: Water

Associated Lab Samples: 70234792010, 70234792011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromide	mg/L	<0.50	0.50	11/22/22 09:09	
Chloride	mg/L	<2.0	2.0	11/22/22 09:09	
Sulfate	mg/L	<5.0	5.0	11/22/22 09:09	

LABORATORY CONTROL SAMPLE: 1427715

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	1.0	102	90-110	
Chloride	mg/L	10	10	100	90-110	
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE SAMPLE: 1427716

Parameter	Units	70234908002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	0.061	1	1.3	126	90-110	M1
Chloride	mg/L		50	113	112	90-110	
Sulfate	mg/L	11.9	10	24.0	120	90-110	M1

SAMPLE DUPLICATE: 1427717

Parameter	Units	70234908002 Result	Dup Result	RPD	Qualifiers
Bromide	mg/L	0.061	<0.50		
Chloride	mg/L		58.8	4	
Sulfate	mg/L	11.9	12.1	1	

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch:	281329	Analysis Method:	EPA 351.2
QC Batch Method:	EPA 351.2	Analysis Description:	351.2 TKN
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

METHOD BLANK:	1422205	Matrix:	Water
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.094	0.094	11/09/22 12:40	

LABORATORY CONTROL SAMPLE:	1422206					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4	4.0	100	90-110	

MATRIX SPIKE SAMPLE:		1422207					
		70235887002	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	7.8	4	11.4	88	90-110	M1

MATRIX SPIKE SAMPLE:		1422209					
		70234792006	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.10	4	3.9	96	90-110	

SAMPLE DUPLICATE: 1422208					
Parameter	Units	70235887002 Result	Dup Result	RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	7.8	7.3	7	

SAMPLE DUPLICATE: 1422210					
Parameter	Units	70234792006 Result	Dup Result	RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.10	<0.10		

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch: 279690

Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2

Analysis Description: 353.2 Nitrite, Unpres.

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234792001, 70234792004, 70234792005, 70234792010, 70234792011

METHOD BLANK: 1414213

Matrix: Water

Associated Lab Samples: 70234792001, 70234792004, 70234792005, 70234792010, 70234792011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrite as N	mg/L	<0.027	0.027	10/27/22 23:25	

LABORATORY CONTROL SAMPLE: 1414214

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	1	0.99	99	90-110	

MATRIX SPIKE SAMPLE: 1414215

Parameter	Units	70234714002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	0.27	0.5	0.80	106	90-110	

MATRIX SPIKE SAMPLE: 1414217

Parameter	Units	70234671002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	<0.050	0.5	0.53	102	90-110	

SAMPLE DUPLICATE: 1414216

Parameter	Units	70234714002 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	0.27	0.27	1	

SAMPLE DUPLICATE: 1414218

Parameter	Units	70234671002 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	<0.050	<0.050		

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch:	279691	Analysis Method:	EPA 353.2
QC Batch Method:	EPA 353.2	Analysis Description:	353.2 Nitrite, Unpres.
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70234792002, 70234792003, 70234792006, 70234792007, 70234792008, 70234792009

METHOD BLANK:	1414219	Matrix:	Water
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Associated Lab Samples: 70234792002, 70234792003, 70234792006, 70234792007, 70234792008, 70234792009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrite as N	mg/L	<0.027	0.027	10/28/22 00:01	

LABORATORY CONTROL SAMPLE: 1414220

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	1	1.0	101	90-110	

MATRIX SPIKE SAMPLE: 1414221

Parameter	Units	70234792002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	<0.050	0.5	0.51	101	90-110	

MATRIX SPIKE SAMPLE: 1414223

Parameter	Units	70234792006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	<0.050	0.5	0.52	104	90-110	

SAMPLE DUPLICATE: 1414222

Parameter	Units	70234792002 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	<0.050	<0.050		

SAMPLE DUPLICATE: 1414224

Parameter	Units	70234792006 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	<0.050	<0.050		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch: 280302

Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2

Analysis Description: 353.2 Nitrate + Nitrite, preserved

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234792001

METHOD BLANK: 1417029

Matrix: Water

Associated Lab Samples: 70234792001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.037	0.037	11/02/22 16:30	

LABORATORY CONTROL SAMPLE: 1417030

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	1.1	109	90-110	

MATRIX SPIKE SAMPLE: 1417031

Parameter	Units	70235222001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1.8	0.5	2.4	110	90-110	

MATRIX SPIKE SAMPLE: 1417570

Parameter	Units	70235228002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	2.0	0.5	2.4	69	90-110	M1

SAMPLE DUPLICATE: 1417032

Parameter	Units	70235222001 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1.8	1.9	1	

SAMPLE DUPLICATE: 1417571

Parameter	Units	70235228002 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	2.0	2.0	0	

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch:	279694	Analysis Method:	EPA 353.2
QC Batch Method:	EPA 353.2	Analysis Description:	353.2 Nitrate, Unpres.
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70234792004, 70234792005, 70234792010, 70234792011

METHOD BLANK: 1414233 Matrix: Water

Associated Lab Samples: 70234792004, 70234792005, 70234792010, 70234792011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.037	0.037	10/28/22 01:34	

LABORATORY CONTROL SAMPLE: 1414234

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	1.0	103	90-110	

MATRIX SPIKE SAMPLE: 1414235

Parameter	Units	70234668001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	4.7	2.5	7.2	102	90-110	

MATRIX SPIKE SAMPLE: 1414237

Parameter	Units	70234818003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	3.0	2.5	5.5	102	90-110	

SAMPLE DUPLICATE: 1414236

Parameter	Units	70234668001 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	4.7	4.7	0	

SAMPLE DUPLICATE: 1414238

Parameter	Units	70234818003 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	3.0	2.9	2	

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch: 279695

Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2

Analysis Description: 353.2 Nitrate, Unpres.

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234792002, 70234792003, 70234792006, 70234792007, 70234792008, 70234792009

METHOD BLANK: 1414239

Matrix: Water

Associated Lab Samples: 70234792002, 70234792003, 70234792006, 70234792007, 70234792008, 70234792009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.037	0.037	10/28/22 02:11	

LABORATORY CONTROL SAMPLE: 1414240

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	1.0	103	90-110	

MATRIX SPIKE SAMPLE: 1414241

Parameter	Units	70234792002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.073	0.5	0.55	96	90-110	

MATRIX SPIKE SAMPLE: 1414243

Parameter	Units	70234792006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.67	0.5	1.2	108	90-110	

SAMPLE DUPLICATE: 1414242

Parameter	Units	70234792002 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.073	<0.050		

SAMPLE DUPLICATE: 1414244

Parameter	Units	70234792006 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.67	0.67	0	

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch:	279982	Analysis Method:	SM22 4500 NH3 H
QC Batch Method:	SM22 4500 NH3 H	Analysis Description:	4500 Ammonia
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

METHOD BLANK:	1415330	Matrix:	Water
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	<0.050	0.050	10/31/22 14:05	

LABORATORY CONTROL SAMPLE: 1415331						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	0.97	97	90-110	

MATRIX SPIKE SAMPLE:	1415332						
		70234792006	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Nitrogen, Ammonia	mg/L	<0.10	1	0.91	87	75-125	

SAMPLE DUPLICATE: 1415333

Parameter	Units	70234792006 Result	Dup Result	RPD	Qualifiers
Nitrogen, Ammonia	mg/L	<0.10	<0.10		

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch: 279960

Analysis Method: SM22 5310B

QC Batch Method: SM22 5310B

Analysis Description: 5310B TOC

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234792001, 70234792002

METHOD BLANK: 1415261

Matrix: Water

Associated Lab Samples: 70234792001, 70234792002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.50	0.50	11/03/22 22:13	

LABORATORY CONTROL SAMPLE: 1415262

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.6	96	85-115	

MATRIX SPIKE SAMPLE: 1415264

Parameter	Units	70234847004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	13.4	10	22.6	92	75-125	

SAMPLE DUPLICATE: 1415263

Parameter	Units	70234847004 Result	Dup Result	RPD	Qualifiers
Total Organic Carbon	mg/L	13.4	12.9	4	

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch: 280126

Analysis Method: SM22 5310B

QC Batch Method: SM22 5310B

Analysis Description: 5310B TOC

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009

METHOD BLANK: 1416036

Matrix: Water

Associated Lab Samples: 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.50	0.50	11/01/22 14:04	

LABORATORY CONTROL SAMPLE: 1416037

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.5	95	85-115	

MATRIX SPIKE SAMPLE: 1416039

Parameter	Units	70234792006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	<1.0	10	9.5	94	75-125	

SAMPLE DUPLICATE: 1416038

Parameter	Units	70234792006 Result	Dup Result	RPD	Qualifiers
Total Organic Carbon	mg/L	<1.0	<1.0		

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch: 280128

Analysis Method: SM22 5310B

QC Batch Method: SM22 5310B

Analysis Description: 5310B TOC

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234792010, 70234792011

METHOD BLANK: 1416044

Matrix: Water

Associated Lab Samples: 70234792010, 70234792011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.50	0.50	11/01/22 19:49	

LABORATORY CONTROL SAMPLE: 1416045

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.3	93	85-115	

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QUALITY CONTROL DATA

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

QC Batch:	281356	Analysis Method:	EPA 9014 Total Cyanide
QC Batch Method:	EPA 9010C	Analysis Description:	9014 Cyanide, Total
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

METHOD BLANK:	1422290	Matrix:	Water
Associated Lab Samples:	70234792001, 70234792002, 70234792003, 70234792004, 70234792005, 70234792006, 70234792007, 70234792008, 70234792009, 70234792010, 70234792011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	ug/L	<10.0	10.0	11/09/22 16:45	

LABORATORY CONTROL SAMPLE:	1422291					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	ug/L	75	80.6	107	85-115	

MATRIX SPIKE SAMPLE:	1422292						
Parameter	Units	70234792006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide	ug/L	<10.0	100	101	98	75-125	

SAMPLE DUPLICATE: 1422293					
Parameter	Units	70234792006 Result	Dup Result	RPD	Qualifiers
Cyanide	ug/L	<10.0	<10.0		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

H1 Analysis conducted outside the EPA method holding time.

H2 Extraction or preparation conducted outside EPA method holding time.

H3 Sample was received or analysis requested beyond the recognized method holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70234792001	1A	EPA 3005A	280111	EPA 6010C	280181
70234792002	1B	EPA 3005A	280111	EPA 6010C	280181
70234792003	1C	EPA 3005A	280111	EPA 6010C	280181
70234792004	6AR	EPA 3005A	280111	EPA 6010C	280181
70234792005	6B	EPA 3005A	280111	EPA 6010C	280181
70234792006	8	EPA 3005A	280111	EPA 6010C	280181
70234792007	9	EPA 3005A	280111	EPA 6010C	280181
70234792008	11A	EPA 3005A	280111	EPA 6010C	280181
70234792009	11B	EPA 3005A	280111	EPA 6010C	280181
70234792010	LEA-PRIMARY	EPA 3005A	280111	EPA 6010C	280181
70234792011	LEA-SECONDARY	EPA 3005A	280111	EPA 6010C	280181
70234792001	1A	SM22 2120B	279688		
70234792002	1B	SM22 2120B	279688		
70234792003	1C	SM22 2120B	279688		
70234792004	6AR	SM22 2120B	279688		
70234792005	6B	SM22 2120B	279688		
70234792006	8	SM22 2120B	279688		
70234792007	9	SM22 2120B	279688		
70234792008	11A	SM22 2120B	279688		
70234792009	11B	SM22 2120B	279688		
70234792010	LEA-PRIMARY	SM22 2120B	279688		
70234792011	LEA-SECONDARY	SM22 2120B	279688		
70234792001	1A	SM22 2320B	281354		
70234792002	1B	SM22 2320B	281354		
70234792003	1C	SM22 2320B	281354		
70234792004	6AR	SM22 2320B	281354		
70234792005	6B	SM22 2320B	281354		
70234792006	8	SM22 2320B	281354		
70234792007	9	SM22 2320B	281354		
70234792008	11A	SM22 2320B	281354		
70234792009	11B	SM22 2320B	281354		
70234792010	LEA-PRIMARY	SM22 2320B	281354		
70234792011	LEA-SECONDARY	SM22 2320B	281354		
70234792001	1A	SM22 2340C	281434		
70234792002	1B	SM22 2340C	281434		
70234792003	1C	SM22 2340C	281434		
70234792004	6AR	SM22 2340C	281434		
70234792005	6B	SM22 2340C	281434		
70234792006	8	SM22 2340C	281434		
70234792007	9	SM22 2340C	281434		
70234792008	11A	SM22 2340C	281434		
70234792009	11B	SM22 2340C	281434		
70234792010	LEA-PRIMARY	SM22 2340C	281434		
70234792011	LEA-SECONDARY	SM22 2340C	281434		
70234792001	1A	SM22 2540C	280248		
70234792002	1B	SM22 2540C	280248		
70234792003	1C	SM22 2540C	280248		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70234792004	6AR	SM22 2540C	280249		
70234792005	6B	SM22 2540C	280249		
70234792006	8	SM22 2540C	280249		
70234792007	9	SM22 2540C	280249		
70234792008	11A	SM22 2540C	280249		
70234792009	11B	SM22 2540C	280249		
70234792010	LEA-PRIMARY	SM22 2540C	280249		
70234792011	LEA-SECONDARY	SM22 2540C	280249		
70234792001	1A	SM22 3500-Cr B	279687		
70234792002	1B	SM22 3500-Cr B	279687		
70234792003	1C	SM22 3500-Cr B	279687		
70234792004	6AR	SM22 3500-Cr B	279687		
70234792005	6B	SM22 3500-Cr B	279687		
70234792006	8	SM22 3500-Cr B	279687		
70234792007	9	SM22 3500-Cr B	279687		
70234792008	11A	SM22 3500-Cr B	279687		
70234792009	11B	SM22 3500-Cr B	279687		
70234792010	LEA-PRIMARY	SM22 3500-Cr B	279687		
70234792011	LEA-SECONDARY	SM22 3500-Cr B	279687		
70234792001	1A	EPA 410.4	281327	EPA 410.4	281404
70234792002	1B	EPA 410.4	281327	EPA 410.4	281404
70234792003	1C	EPA 410.4	281327	EPA 410.4	281404
70234792004	6AR	EPA 410.4	281327	EPA 410.4	281404
70234792005	6B	EPA 410.4	281327	EPA 410.4	281404
70234792006	8	EPA 410.4	281327	EPA 410.4	281404
70234792007	9	EPA 410.4	281327	EPA 410.4	281404
70234792008	11A	EPA 410.4	281327	EPA 410.4	281404
70234792009	11B	EPA 410.4	281327	EPA 410.4	281404
70234792010	LEA-PRIMARY	EPA 410.4	281327	EPA 410.4	281404
70234792011	LEA-SECONDARY	EPA 410.4	281327	EPA 410.4	281404
70234792001	1A	SM22 5210B	279754	SM22 5210B	280628
70234792002	1B	SM22 5210B	279754	SM22 5210B	280628
70234792003	1C	SM22 5210B	279754	SM22 5210B	280628
70234792004	6AR	SM22 5210B	279754	SM22 5210B	280628
70234792005	6B	SM22 5210B	279754	SM22 5210B	280628
70234792006	8	SM22 5210B	279754	SM22 5210B	280628
70234792007	9	SM22 5210B	279754	SM22 5210B	280628
70234792008	11A	SM22 5210B	279842	SM22 5210B	280631
70234792009	11B	SM22 5210B	279842	SM22 5210B	280631
70234792010	LEA-PRIMARY	SM22 5210B	279754	SM22 5210B	280628
70234792011	LEA-SECONDARY	SM22 5210B	279754	SM22 5210B	280628
70234792001	1A	EPA 300.0	280155		
70234792002	1B	EPA 300.0	280155		
70234792003	1C	EPA 300.0	280155		
70234792004	6AR	EPA 300.0	280662		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70234792005	6B	EPA 300.0	280662		
70234792006	8	EPA 300.0	280662		
70234792007	9	EPA 300.0	280662		
70234792008	11A	EPA 300.0	280662		
70234792009	11B	EPA 300.0	280662		
70234792010	LEA-PRIMARY	EPA 300.0	282458		
70234792011	LEA-SECONDARY	EPA 300.0	282458		
70234792001	1A	EPA 351.2	281329	EPA 351.2	281331
70234792002	1B	EPA 351.2	281329	EPA 351.2	281331
70234792003	1C	EPA 351.2	281329	EPA 351.2	281331
70234792004	6AR	EPA 351.2	281329	EPA 351.2	281331
70234792005	6B	EPA 351.2	281329	EPA 351.2	281331
70234792006	8	EPA 351.2	281329	EPA 351.2	281331
70234792007	9	EPA 351.2	281329	EPA 351.2	281331
70234792008	11A	EPA 351.2	281329	EPA 351.2	281331
70234792009	11B	EPA 351.2	281329	EPA 351.2	281331
70234792010	LEA-PRIMARY	EPA 351.2	281329	EPA 351.2	281331
70234792011	LEA-SECONDARY	EPA 351.2	281329	EPA 351.2	281331
70234792002	1B	EPA 353.2	279695		
70234792003	1C	EPA 353.2	279695		
70234792004	6AR	EPA 353.2	279694		
70234792005	6B	EPA 353.2	279694		
70234792006	8	EPA 353.2	279695		
70234792007	9	EPA 353.2	279695		
70234792008	11A	EPA 353.2	279695		
70234792009	11B	EPA 353.2	279695		
70234792010	LEA-PRIMARY	EPA 353.2	279694		
70234792011	LEA-SECONDARY	EPA 353.2	279694		
70234792001	1A	EPA 353.2	280302		
70234792001	1A	EPA 353.2	279690		
70234792002	1B	EPA 353.2	279691		
70234792003	1C	EPA 353.2	279691		
70234792004	6AR	EPA 353.2	279690		
70234792005	6B	EPA 353.2	279690		
70234792006	8	EPA 353.2	279691		
70234792007	9	EPA 353.2	279691		
70234792008	11A	EPA 353.2	279691		
70234792009	11B	EPA 353.2	279691		
70234792010	LEA-PRIMARY	EPA 353.2	279690		
70234792011	LEA-SECONDARY	EPA 353.2	279690		
70234792001	1A	SM22 4500 NH3 H	279982		
70234792002	1B	SM22 4500 NH3 H	279982		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NORTH SEA LANDFILL 10/26

Pace Project No.: 70234792

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70234792003	1C	SM22 4500 NH3 H	279982		
70234792004	6AR	SM22 4500 NH3 H	279982		
70234792005	6B	SM22 4500 NH3 H	279982		
70234792006	8	SM22 4500 NH3 H	279982		
70234792007	9	SM22 4500 NH3 H	279982		
70234792008	11A	SM22 4500 NH3 H	279982		
70234792009	11B	SM22 4500 NH3 H	279982		
70234792010	LEA-PRIMARY	SM22 4500 NH3 H	279982		
70234792011	LEA-SECONDARY	SM22 4500 NH3 H	279982		
70234792001	1A	SM22 5310B	279960		
70234792002	1B	SM22 5310B	279960		
70234792003	1C	SM22 5310B	280126		
70234792004	6AR	SM22 5310B	280126		
70234792005	6B	SM22 5310B	280126		
70234792006	8	SM22 5310B	280126		
70234792007	9	SM22 5310B	280126		
70234792008	11A	SM22 5310B	280126		
70234792009	11B	SM22 5310B	280126		
70234792010	LEA-PRIMARY	SM22 5310B	280128		
70234792011	LEA-SECONDARY	SM22 5310B	280128		
70234792001	1A	EPA 9010C	281356	EPA 9014 Total Cyanide	281474
70234792002	1B	EPA 9010C	281356	EPA 9014 Total Cyanide	281474
70234792003	1C	EPA 9010C	281356	EPA 9014 Total Cyanide	281474
70234792004	6AR	EPA 9010C	281356	EPA 9014 Total Cyanide	281474
70234792005	6B	EPA 9010C	281356	EPA 9014 Total Cyanide	281474
70234792006	8	EPA 9010C	281356	EPA 9014 Total Cyanide	281474
70234792007	9	EPA 9010C	281356	EPA 9014 Total Cyanide	281474
70234792008	11A	EPA 9010C	281356	EPA 9014 Total Cyanide	281474
70234792009	11B	EPA 9010C	281356	EPA 9014 Total Cyanide	281474
70234792010	LEA-PRIMARY	EPA 9010C	281356	EPA 9014 Total Cyanide	281474
70234792011	LEA-SECONDARY	EPA 9010C	281356	EPA 9014 Total Cyanide	281474

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical

The Chain-of-Custody is a LEGAL DOCUMENT. All

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions four

WO#: 70234792



70234792

Section A

Required Client Information:

Company:	Town of Southampton	
Address:	Waste Management Division	
	Southampton, NY 11968	
Email:	c.fellen@southamptontownny.gov	
Phone:	(631)283-5210	Fax:
Requested Due Date:		

Section B

Required Project Information:

Report To:	Fellen, Christine
Copy To:	
Purchase Order #:	
Project Name:	North Sea Landfill
Project #:	

Section C

Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	kimberley.mack@pacelabs.com
Pace Profile #:	5479 Line 3

Of 2

Regulatory Agency

State / Location

NY

[illegible]

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Part 360 ROUTINE	Johs Day JCC JCC	10-27-10 10-27	10:10 1130	[Signature]	10-27-10	1010	

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples intact (Y/N)
PRINT Name of SAMPLER:					
SIGNATURE of SAMPLER:	DATE Signed:				

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>

Section A

Section B

Section C

Required Client Information:

Required Project Information:

Invoice Information:

Page : 2 Of 2

Company:	Town of Southampton	Report To:	Fetten, Christine	Attention:	
Address:	Waste Management Division	Copy To:		Company Name:	
	Southampton, NY 11968			Address:	
Email:	c.fetten@southamptontownny.gov	Purchase Order #:		Pace Quote:	
Phone:	(631)283-5210	Fax		Pace Project Manager:	kimberley.mack@pacelabs.com,
Requested Due Date:		Project Name:	North Sea Landfill	Project #:	5479 Line 3

Regulatory Agency

State / Location

NY

[illegible]

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Part 360 ROUTINE	Milut Pecoud PWGC	10/27/23	10:10	[Signature]	10-27-24	10:10	
Add Arsenal to LEA-Primary + LEA-Secondary	[Signature]	10/27	11:30				

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:					
SIGNATURE of SAMPLER:	DATE Signed:				



Sample Condition Upon Re

WO#: 70234792

Client Name:

Pro

PM: KMM

Due Date: 11/10/22

CLIENT: TOS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☐ Yes ☐ No Seals intact: ☐ Yes ☐ No ☐ N/APacking Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ Ziploc ☐ None ☐ Other

Thermometer Used: TH148

Correction Factor: +0.1

Cooler Temperature(°C): 4.2

Cooler Temperature Corrected(°C): 4.3

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☒ N/A, water sample)

Date and Initials of person examining contents: JH 113

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ Yes ☐ NoDid samples originate from a foreign source including Hawaii and Puerto Rico? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

Chain of Custody Present:		COMMENTS:	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.		
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.		
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.		
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.		
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.		
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6.		
<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.		
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.		
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.		
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	Note if sediment is visible in the dissolved container.	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12.		
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.	<input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl	
pH paper Lot # 11293055		Sample #	
All containers needing preservation are found to be in compliance with method recommendation? (HNO ₃ , H ₂ SO ₄ , HCl, NaOH>9 Sulfide, NaOH>12 Cyanide)			
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water).			
Per Method, VOA pH is checked after analysis			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.	Initial when completed: Lot # of added preservative: Date/Time preservative added:	
KI starch test strips Lot # 14-840			
Residual chlorine strips Lot # 500TR		Positive for Res. Chlorine? Y <input checked="" type="checkbox"/> N	
SM 4500 CN samples checked for sulfide?	15.	Positive for Sulfide? Y <input checked="" type="checkbox"/> N	
Lead Acetate Strips Lot # 560125			
Headspace in VOA Vials (>6mm):	16.		
<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17.		
Trip Blank Present:			
Trip Blank Custody Seals Present			
Pace Trip Blank Lot # (if applicable):			

Client Notification/ Resolution:

Field Data Required?

Y / N

Person Contacted:

Date/Time:

Comments/ Resolution:



Microbac Laboratories Inc., - Marietta, OH

Client Project ID:

70234792

For:

LATOYA SOBRATIE

Pace Analytical Melville

575 BROAD HOLLOW RD

MELVILLE, NY 11747

Project State of Origin: New York

Project Requested Certification:

Microbac Laboratories Inc., - Marietta, OH

10861

NY State Department of Health

All test results meet the requirements of the QAPP and other applicable contract terms and conditions. Any exceptions are attached to this cover page or addressed in the method narratives presented in the report. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. The reported results are related only to the samples analyzed as received. This laboratory report may be released as a hardcopy and in computer-readable form submitted electronically or on diskette. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories, Inc.

Laboratory Project Manager:

Michelle Taylor

Project Manager

Michelle.Taylor@microbac.com

Authorized By:

Michelle Taylor

Project Manager

Issued: 11/15/2022

Microbac Laboratories, Inc.

158 Starlite Drive | Marietta, OH 45750 | 800.373.4071 p | www.microbac.com



Laboratory Report Number: M2K0078
Client Project ID: 70234792

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 0.2°C

Cooler Inspection Checklist

Ice Present or not required?	Yes
Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes
Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes
Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes
Sample type identified on COC?	Yes
Correct type of Containers Received	Yes
Correct number of containers listed on COC?	Yes
Containers Intact?	Yes
COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes
Sample labels match COC (Name, Date & Time?)	No
Samples arrived within hold time?	Yes
Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes
Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes



Laboratory Report Number: M2K0078

Client Project ID: 70234792

Case Narrative

Received extra containers for sample 8. The client confirmed the extra containers should be used for MS/MSD.



Laboratory Report Number: M2K0078

Client Project ID: 70234792

Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

Client ID: 1A		Collection Date: 10/26/2022 12:10				
Laboratory ID: M2K0078-01		Prep Date: 11/11/2022 12:12				
Matrix: Aqueous		Analyzed: 11/14/2022 13:20				
Batch / Sequence: B2K0680 /		Analytical Method: EPA 420.1		Calibration: NA		
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0680_2		
Analyst: EPT		Dilution: 1.1		21114021007.xls		

Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total	TOTPHEN	0.0059	0.0028	0.0055		



Laboratory Report Number: M2K0078

Client Project ID: 70234792

Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

Client ID: 1B		Collection Date: 10/26/2022 12:50				
Laboratory ID: M2K0078-02		Prep Date: 11/11/2022 12:12				
Matrix: Aqueous		Analyzed: 11/14/2022 13:20				
Batch / Sequence: B2K0680 /		Analytical Method: EPA 420.1		Calibration: NA		
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0680_2		
Analyst: EPT		Dilution: 1.1		21114021007.xls		
Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total	TOTPHEN	ND	0.0028	0.0055	U	



Laboratory Report Number: M2K0078

Client Project ID: 70234792

Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

Client ID: 1C			Collection Date: 10/26/2022 13:30			
Laboratory ID: M2K0078-03			Prep Date: 11/11/2022 12:12			
Matrix: Aqueous			Analyzed: 11/14/2022 13:20			
Batch / Sequence: B2K0680 /		Analytical Method: EPA 420.1		Calibration: NA		
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0680_2		
Analyst: EPT		Dilution: 1.1		21114021007.xls		
Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total	TOTPHEN	ND	0.0028	0.0055	U	



Laboratory Report Number: M2K0078

Client Project ID: 70234792

Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

Client ID: 6AR		Collection Date: 10/26/2022 10:30				
Laboratory ID: M2K0078-04		Prep Date: 11/11/2022 12:12				
Matrix: Aqueous		Analyzed: 11/14/2022 13:20				
Batch / Sequence: B2K0680 /		Analytical Method: EPA 420.1		Calibration: NA		
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0680_2		
Analyst: EPT		Dilution: 1.1		21114021007.xls		
Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total	TOTPHEN	ND	0.0028	0.0055	U	



Laboratory Report Number: M2K0078

Client Project ID: 70234792

Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

Client ID: 6B		Collection Date: 10/26/2022 11:20				
Laboratory ID: M2K0078-05		Prep Date: 11/09/2022 11:56				
Matrix: Aqueous		Analyzed: 11/10/2022 16:55				
Batch / Sequence: B2K0511 /		Analytical Method: EPA 420.1		Calibration: NA		
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0511_2		
Analyst: EPT		Dilution: 1.1		21110032422.xls		
Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total	TOTPHEN	ND	0.0028	0.0055	U	



Laboratory Report Number: M2K0078

Client Project ID: 70234792

Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

Client ID: 8	Collection Date: 10/26/2022 14:45
Laboratory ID: M2K0078-06	Prep Date: 11/09/2022 11:56
Matrix: Aqueous	Analyzed: 11/10/2022 16:55
Batch / Sequence: B2K0511 /	Calibration: NA
Instrument: UV-2600	File ID: Phenols_UV2600-2022-10-18_B2K0511_2
Analyst: EPT	21110032422.xls
Analytical Method: EPA 420.1	
Units: mg/L	
Dilution: 1.1	

Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total	TOTPHEN	0.0038	0.0028	0.0055	J	



Laboratory Report Number: M2K0078

Client Project ID: 70234792

Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

Client ID: 9			Collection Date: 10/26/2022 15:15			
Laboratory ID: M2K0078-07			Prep Date: 11/09/2022 11:56			
Matrix: Aqueous			Analyzed: 11/10/2022 16:55			
Batch / Sequence: B2K0511 /		Analytical Method: EPA 420.1		Calibration: NA		
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0511_2		
Analyst: EPT		Dilution: 1.1		21110032422.xls		
Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total	TOTPHEN	ND	0.0028	0.0055	U	



Laboratory Report Number: M2K0078

Client Project ID: 70234792

Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

Client ID: 11A			Collection Date: 10/26/2022 15:50			
Laboratory ID: M2K0078-08			Prep Date: 11/09/2022 11:56			
Matrix: Aqueous			Analyzed: 11/10/2022 16:55			
Batch / Sequence: B2K0511 /		Analytical Method: EPA 420.1		Calibration: NA		
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0511_2		
Analyst: EPT		Dilution: 1.1		21110032422.xls		
Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total	TOTPHEN	ND	0.0028	0.0055	U	



Laboratory Report Number: M2K0078

Client Project ID: 70234792

Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

Client ID: 11B		Collection Date: 10/26/2022 16:30				
Laboratory ID: M2K0078-09		Prep Date: 11/09/2022 11:56				
Matrix: Aqueous		Analyzed: 11/10/2022 16:55				
Batch / Sequence: B2K0511 /		Analytical Method: EPA 420.1		Calibration: NA		
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0511_2		
Analyst: EPT		Dilution: 1.1		21110032422.xls		
Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total	TOTPHEN	0.0030	0.0028	0.0055	J	



Laboratory Report Number: M2K0078

Client Project ID: 70234792

Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

Client ID: LEA-PRIMARY		Collection Date: 10/26/2022 08:10				
Laboratory ID: M2K0078-10		Prep Date: 11/09/2022 11:56				
Matrix: Aqueous		Analyzed: 11/10/2022 16:55				
Batch / Sequence: B2K0511 /		Analytical Method: EPA 420.1		Calibration: NA		
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0511_2		
Analyst: EPT		Dilution: 1.1		21110032422.xls		
Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total	TOTPHEN	0.0132	0.0028	0.0055		



Laboratory Report Number: M2K0078

Client Project ID: 70234792

Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

Client ID: LEA-SECONDARY			Collection Date: 10/26/2022 08:30			
Laboratory ID: M2K0078-11			Prep Date: 11/09/2022 11:56			
Matrix: Aqueous			Analyzed: 11/10/2022 16:55			
Batch / Sequence: B2K0511 /		Analytical Method: EPA 420.1		Calibration: NA		
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0511_2		
Analyst: EPT		Dilution: 1.1		21110032422.xls		
Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total	TOTPHEN	0.0128	0.0028	0.0055		



Laboratory Report Number: M2K0078

Client Project ID: 70234792

Notes and Definitions

J: The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

mg/L: Milligrams per Liter

U: The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

MDL: Method Detection Limit

RL: Reporting Limit

Chain of Custody

PASI New York Laboratory



Workorder: 70234792

Workorder Name: NORTH SEA LANDFILL 10/26

Results Requested By: 11/10/2022

Report / Invoice To		Subcontract To		Requested Analysis												LAB USE ONLY									
Kimberley M. Mack Pace Analytical Melville 575 Broad Hollow Road Melville, NY 11747 Phone (631)694-3040 Email: kimberley.mack@pacelabs.com		P.O. 70234792KMM Microbac Laboratories, Inc. 158 Starlite Drive Marietta, OH 45750																							
State of Sample Origin: NY				Preserved Containers								Phenols													
Item	Sample ID	Collect Date/Time	Lab ID	Matrix	H2SO4																				
1	1A	10/26/2022 12:10	70234792001	Water														X							
2	1B	10/26/2022 12:50	70234792002	Water														X							
3	1C	10/26/2022 13:30	70234792003	Water														X							
4	6AR	10/26/2022 10:30	70234792004	Water														X							
5	6B	10/26/2022 11:20	70234792005	Water														X							
6	8	10/26/2022 14:45	70234792006	Water														X							
7	9	10/26/2022 15:15	70234792007	Water														X							
8	11A	10/26/2022 15:50	70234792008	Water														X							
9	11B	10/26/2022 16:30	70234792009	Water														X							
10	LEA-PRIMARY	10/26/2022 08:10	70234792010	Water														X							
11	LEA-SECONDARY	10/26/2022 08:30	70234792011	Water														X							
12																									
13																									
14																									
15																									



M 2 K 0 0 7 8

Pace Analytical - Melville, NY

Rec'd: 11/01/2022 09:46

By: Brenda Gregory

Temp: 0.2

(Signature)

					Comments
Transfers	Released By	Date/Time	Received By	Date/Time	
1	<i>[Signature]</i>	10/31/22	Blenda Guey	11/1/22	946
2					
3					
Cooler Temperature on Receipt		0.7 °C	Custody Seal Y or N	Received on Ice Y or N	Samples Intact Y or N

[illegible]

pH Lot # HC241540

pH **Exceptions**

[illegible]

PRESERVATIVE
EXCEPTIONS

~~SECRET~~

AS NOTED

11/01/2022 Sm

Document Control # 1957
Last 04-10-2019

Issued to: Document Master File



Microbac Laboratories Inc., - Marietta, OH

Level IV QA/QC Data Package

Laboratory Report Number:

M2K0078

Client Project ID:

70234792

For:

LATOYA SOBRATIE

Pace Analytical Melville

575 BROAD HOLLOW RD

MELVILLE, NY 11747

Project Requested Certification:

Microbac Laboratories Inc., - Marietta, OH

10861

NY State Department of Health

Project State of Origin: New York

All test results meet the requirements of the QAPP and other applicable contract terms and conditions. Any exceptions are attached to this cover page or addressed in the method narratives presented in the report. I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Laboratory Project Manager:

Michelle Taylor

Project Manager

Michelle.Taylor@microbac.com

Authorized By:

Michelle Taylor

Project Manager

Issued: 11/15/2022

Microbac Laboratories, Inc.

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Laboratory Report Number: M2K0078

Client Project ID: 70234792

Microbac Laboratories Inc., - Marietta, OH

Cooler Receipt Log

Cooler ID: Default Cooler

Temp: 0.2°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	No
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Case Narrative

Received extra containers for sample 8. The client confirmed the extra containers should be used for MS/MSD.

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Sample Summary

Sample Summary

Laboratory Report Number: M2K0078

Client Project ID: 70234792

Microbac Laboratories Inc., - Marietta, OH

Client Sample ID:	Lab Sample ID:	Sampled:
1A	M2K0078-01	10/26/22 12:10
1B	M2K0078-02	10/26/22 12:50
1C	M2K0078-03	10/26/22 13:30
6AR	M2K0078-04	10/26/22 10:30
6B	M2K0078-05	10/26/22 11:20
8	M2K0078-06	10/26/22 14:45
9	M2K0078-07	10/26/22 15:15
11A	M2K0078-08	10/26/22 15:50
11B	M2K0078-09	10/26/22 16:30
LEA-PRIMARY	M2K0078-10	10/26/22 08:10
LEA-SECONDARY	M2K0078-11	10/26/22 08:30

Holding Time Summary



Specific Method: EPA 420.1

Hold Time

Laboratory Report Number: M2K0078

Matrix: Aqueous

Client Project ID: 70234792

Microbac Laboratories Inc., - Marietta, OH

Laboratory ID	Date Collected	Date Received	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
1A	10/26/22 12:10	11/01/22 09:46	11/14/22 13:20	19.05	28.00	
1B	10/26/22 12:50	11/01/22 09:46	11/14/22 13:20	19.02	28.00	
1C	10/26/22 13:30	11/01/22 09:46	11/14/22 13:20	18.99	28.00	
6AR	10/26/22 10:30	11/01/22 09:46	11/14/22 13:20	19.12	28.00	
6B	10/26/22 11:20	11/01/22 09:46	11/10/22 16:55	15.23	28.00	
8	10/26/22 14:45	11/01/22 09:46	11/10/22 16:55	15.09	28.00	
9	10/26/22 15:15	11/01/22 09:46	11/10/22 16:55	15.07	28.00	
11A	10/26/22 15:50	11/01/22 09:46	11/10/22 16:55	15.05	28.00	
11B	10/26/22 16:30	11/01/22 09:46	11/10/22 16:55	15.02	28.00	
LEA-PRIMARY	10/26/22 08:10	11/01/22 09:46	11/10/22 16:55	15.36	28.00	
LEA-SECONDARY	10/26/22 08:30	11/01/22 09:46	11/10/22 16:55	15.35	28.00	

* - Holding time exceeded.

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Analysis Class

Wet Chemistry

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Wet Chemistry - Class Narrative and Notes

All test results meet the requirements of the QAPP and other applicable contract terms and conditions . Any exceptions are listed below in the sample and qc notes sections. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request.

QC Sample Notes

M2

Matrix spike recovery is outside of acceptance limits, biased low.

EPA 420.1

Phenolics, Total

B2K0511-MS1	Matrix Spike	B2K0511-MSD1	Matrix Spike Dup
-------------	--------------	--------------	------------------

R1

Duplicate RPD is outside of acceptance limits.

EPA 420.1

Phenolics, Total

B2K0511-MSD1	Matrix Spike Dup
--------------	------------------



Wet Chemistry EPA 420.1



FORM I: Wet Chemistry EPA 420.1 RESULTS SUMMARY



Laboratory Report Number: M2K0078

CERTIFICATE OF ANALYSIS

Client Project ID: 70234792

FORM I

Microbac Laboratories Inc., - Marietta, OH

Inorganics Total

Client ID: 1A		Collection Date: 10/26/2022 12:10					
Laboratory ID: M2K0078-01		Prep Date: 11/11/2022 12:12					
Matrix: Aqueous		Analyzed: 11/14/2022 13:20					
Batch / Sequence: B2K0680 /		Analytical Method: EPA 420.1		Calibration: NA			
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0680_2 21114021007.xls			
Analyst: EPT		Dilution: 1.1					
Analyte		CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total		TOTPHEN	0.0059	0.0028	0.0055		

Notes and Definitions

MDL: Method Detection Limit

RL: Reporting Limit

mg/L: Milligrams per Liter

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Laboratory Report Number: M2K0078

CERTIFICATE OF ANALYSIS

Client Project ID: 70234792

FORM I

Microbac Laboratories Inc., - Marietta, OH

Inorganics Total

Client ID: 1B		Collection Date: 10/26/2022 12:50				
Laboratory ID: M2K0078-02		Prep Date: 11/11/2022 12:12				
Matrix: Aqueous		Analyzed: 11/14/2022 13:20				
Batch / Sequence: B2K0680 /		Analytical Method: EPA 420.1		Calibration: NA		
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0680_2		
Analyst: EPT		Dilution: 1.1		21114021007.xls		
Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total	TOTPHEN	ND	0.0028	0.0055	U	

Notes and Definitions

MDL: Method Detection Limit

RL: Reporting Limit

mg/L: Milligrams per Liter

U: The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

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Laboratory Report Number: M2K0078

CERTIFICATE OF ANALYSIS

Client Project ID: 70234792

FORM I

Microbac Laboratories Inc., - Marietta, OH

Inorganics Total

Client ID: 1C		Collection Date: 10/26/2022 13:30				
Laboratory ID: M2K0078-03		Prep Date: 11/11/2022 12:12				
Matrix: Aqueous		Analyzed: 11/14/2022 13:20				
Batch / Sequence: B2K0680 /		Analytical Method: EPA 420.1		Calibration: NA		
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0680_2		
Analyst: EPT		Dilution: 1.1		21114021007.xls		
Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total	TOTPHEN	ND	0.0028	0.0055	U	

Notes and Definitions

MDL: Method Detection Limit

RL: Reporting Limit

mg/L: Milligrams per Liter

U: The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

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Laboratory Report Number: M2K0078

Client Project ID: 70234792

Microbac Laboratories Inc., - Marietta, OH

Inorganics Total

CERTIFICATE OF ANALYSIS

FORM I

Client ID: 6AR		Collection Date: 10/26/2022 10:30					
Laboratory ID: M2K0078-04		Prep Date: 11/11/2022 12:12					
Matrix: Aqueous		Analyzed: 11/14/2022 13:20					
Batch / Sequence: B2K0680 /		Analytical Method: EPA 420.1		Calibration: NA			
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0680_2 21114021007.xls			
Analyst: EPT		Dilution: 1.1					
Analyte		CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total		TOTPHEN	ND	0.0028	0.0055	U	

Notes and Definitions

MDL: Method Detection Limit

RL: Reporting Limit

mg/L: Milligrams per Liter

U: The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

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Laboratory Report Number: M2K0078

CERTIFICATE OF ANALYSIS

Client Project ID: 70234792

FORM I

Microbac Laboratories Inc., - Marietta, OH

Inorganics Total

Client ID: 6B		Collection Date: 10/26/2022 11:20				
Laboratory ID: M2K0078-05		Prep Date: 11/09/2022 11:56				
Matrix: Aqueous		Analyzed: 11/10/2022 16:55				
Batch / Sequence: B2K0511 /		Analytical Method: EPA 420.1		Calibration: NA		
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0511_2		
Analyst: EPT		Dilution: 1.1		21110032422.xls		
Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total	TOTPHEN	ND	0.0028	0.0055	U	

Notes and Definitions

MDL: Method Detection Limit

RL: Reporting Limit

mg/L: Milligrams per Liter

U: The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

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Laboratory Report Number: M2K0078

CERTIFICATE OF ANALYSIS

Client Project ID: 70234792

FORM I

Microbac Laboratories Inc., - Marietta, OH

Inorganics Total

Client ID: 8		Collection Date: 10/26/2022 14:45					
Laboratory ID: M2K0078-06		Prep Date: 11/09/2022 11:56					
Matrix: Aqueous		Analyzed: 11/10/2022 16:55					
Batch / Sequence: B2K0511 /		Analytical Method: EPA 420.1		Calibration: NA			
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0511_2 21110032422.xls			
Analyst: EPT		Dilution: 1.1					
Analyte		CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total		TOTPHEN	0.0038	0.0028	0.0055	J	

Notes and Definitions

MDL: Method Detection Limit

RL: Reporting Limit

J: The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

mg/L: Milligrams per Liter

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Laboratory Report Number: M2K0078

CERTIFICATE OF ANALYSIS

Client Project ID: 70234792

FORM I

Microbac Laboratories Inc., - Marietta, OH

Inorganics Total

Client ID: 9		Collection Date: 10/26/2022 15:15				
Laboratory ID: M2K0078-07		Prep Date: 11/09/2022 11:56				
Matrix: Aqueous		Analyzed: 11/10/2022 16:55				
Batch / Sequence: B2K0511 /		Analytical Method: EPA 420.1		Calibration: NA		
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0511_2		
Analyst: EPT		Dilution: 1.1		21110032422.xls		
Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total	TOTPHEN	ND	0.0028	0.0055	U	

Notes and Definitions

MDL: Method Detection Limit

RL: Reporting Limit

mg/L: Milligrams per Liter

U: The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

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Laboratory Report Number: M2K0078

Client Project ID: 70234792

Microbac Laboratories Inc., - Marietta, OH

Inorganics Total

CERTIFICATE OF ANALYSIS

FORM I

Client ID: 11A		Collection Date: 10/26/2022 15:50				
Laboratory ID: M2K0078-08		Prep Date: 11/09/2022 11:56				
Matrix: Aqueous		Analyzed: 11/10/2022 16:55				
Batch / Sequence: B2K0511 /		Analytical Method: EPA 420.1		Calibration: NA		
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0511_2		
Analyst: EPT		Dilution: 1.1		21110032422.xls		
Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total	TOTPHEN	ND	0.0028	0.0055	U	

Notes and Definitions

MDL: Method Detection Limit

RL: Reporting Limit

mg/L: Milligrams per Liter

U: The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

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Laboratory Report Number: M2K0078

CERTIFICATE OF ANALYSIS

Client Project ID: 70234792

FORM I

Microbac Laboratories Inc., - Marietta, OH

Inorganics Total

Client ID: 11B		Collection Date: 10/26/2022 16:30				
Laboratory ID: M2K0078-09		Prep Date: 11/09/2022 11:56				
Matrix: Aqueous		Analyzed: 11/10/2022 16:55				
Batch / Sequence: B2K0511 /		Analytical Method: EPA 420.1		Calibration: NA		
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0511_2		
Analyst: EPT		Dilution: 1.1		21110032422.xls		
Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total	TOTPHEN	0.0030	0.0028	0.0055	J	

Notes and Definitions

MDL: Method Detection Limit

RL: Reporting Limit

J: The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

mg/L: Milligrams per Liter

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Laboratory Report Number: M2K0078

CERTIFICATE OF ANALYSIS

Client Project ID: 70234792

FORM I

Microbac Laboratories Inc., - Marietta, OH

Inorganics Total

Client ID: LEA-PRIMARY		Collection Date: 10/26/2022 08:10				
Laboratory ID: M2K0078-10		Prep Date: 11/09/2022 11:56				
Matrix: Aqueous		Analyzed: 11/10/2022 16:55				
Batch / Sequence: B2K0511 /		Analytical Method: EPA 420.1		Calibration: NA		
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0511_2		
Analyst: EPT		Dilution: 1.1		21110032422.xls		
Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total	TOTPHEN	0.0132	0.0028	0.0055		

Notes and Definitions

MDL: Method Detection Limit

RL: Reporting Limit

mg/L: Milligrams per Liter

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Laboratory Report Number: M2K0078

Client Project ID: 70234792

Microbac Laboratories Inc., - Marietta, OH

Inorganics Total

CERTIFICATE OF ANALYSIS

FORM I

Client ID: LEA-SECONDARY		Collection Date: 10/26/2022 08:30				
Laboratory ID: M2K0078-11		Prep Date: 11/09/2022 11:56				
Matrix: Aqueous		Analyzed: 11/10/2022 16:55				
Batch / Sequence: B2K0511 /		Analytical Method: EPA 420.1		Calibration: NA		
Instrument: UV-2600		Units: mg/L		File ID: Phenols_UV2600-2022-10-18_B2K0511_2		
Analyst: EPT		Dilution: 1.1		21110032422.xls		
Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Phenolics, Total	TOTPHEN	0.0128	0.0028	0.0055		

Notes and Definitions

MDL: Method Detection Limit

RL: Reporting Limit

mg/L: Milligrams per Liter

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FORM II: Wet Chemistry EPA 420.1 ICV/CCV SUMMARY



Laboratory Report Number: M2K0078

Client Project ID: 70234792

**INITIAL AND CONTINUING CALIBRATION CHECK
FORM II**

Instrument: UV-2600 Sequence: Control Limit: +/- 10.00%				Method: EPA 420.1 Calibration: File ID: Phenols_UV2600-2022-10-18_B2 Analyst: EPT			
Lab Sample ID	Analyte	True	Found	%R	Units	Date/Time	Q
B2K0511-CCV1	Phenolics, Total	0.0300	0.0298	99.3	mg/L	11/10/22 16:55	
B2K0511-CCV3	Phenolics, Total	0.0300	0.0275	91.6	mg/L	11/10/22 16:55	
B2K0680-CCV1	Phenolics, Total	0.0300	0.0271	90.3	mg/L	11/14/22 13:20	
B2K0680-CCV3	Phenolics, Total	0.0300	0.0282	94.1	mg/L	11/14/22 13:20	

* Values outside of QC limits



FORM III: Wet Chemistry EPA 420.1 ICB/CCB/PREP BLANK SUMMARY



Laboratory Report Number: M2K0078

METHOD BLANK SUMMARY

Client Project ID: 70234792

FORM IIIA

Blank ID: B2K0511-BLK1
 Blank File ID: Phenols_UV2600-2022-10-18
 Prepared: 11/09/2022 11:56
 Analyzed: 11/10/2022 16:55

Batch: B2K0511
 Instrument: UV-2600
 Method: EPA 420.1
 Analyst: EPT

This Method Blank Applies To The Following Samples:

Client Sample ID	Laboratory Sample ID	Lab File ID	Time Analyzed
Blank	B2K0511-BLK1	600-2022-10-18_B2K0511_221	11/10/2022 16:55
LCS	B2K0511-BS1	600-2022-10-18_B2K0511_221	11/10/2022 16:55
Calibration Check	B2K0511-CCV1	600-2022-10-18_B2K0511_221	11/10/2022 16:55
Calibration Check	B2K0511-CCV3	600-2022-10-18_B2K0511_221	11/10/2022 16:55
Matrix Spike	B2K0511-MS1	600-2022-10-18_B2K0511_221	11/10/2022 16:55
Matrix Spike Dup	B2K0511-MSD1	600-2022-10-18_B2K0511_221	11/10/2022 16:55
6B	M2K0078-05	600-2022-10-18_B2K0511_221	11/10/2022 16:55
8	M2K0078-06	600-2022-10-18_B2K0511_221	11/10/2022 16:55
9	M2K0078-07	600-2022-10-18_B2K0511_221	11/10/2022 16:55
11A	M2K0078-08	600-2022-10-18_B2K0511_221	11/10/2022 16:55
11B	M2K0078-09	600-2022-10-18_B2K0511_221	11/10/2022 16:55
LEA-PRIMARY	M2K0078-10	600-2022-10-18_B2K0511_221	11/10/2022 16:55
LEA-SECONDARY	M2K0078-11	600-2022-10-18_B2K0511_221	11/10/2022 16:55



Laboratory Report Number: M2K0078

METHOD BLANK SUMMARY

Client Project ID: 70234792

FORM IIIA

Blank ID: B2K0680-BLK1
 Blank File ID: Phenols_UV2600-2022-10-18
 Prepared: 11/11/2022 12:12
 Analyzed: 11/14/2022 13:20

Batch: B2K0680
 Instrument: UV-2600
 Method: EPA 420.1
 Analyst: EPT

This Method Blank Applies To The Following Samples:

Client Sample ID	Laboratory Sample ID	Lab File ID	Time Analyzed
Blank	B2K0680-BLK1	600-2022-10-18_B2K0680_221	11/14/2022 13:20
LCS	B2K0680-BS1	600-2022-10-18_B2K0680_221	11/14/2022 13:20
Calibration Check	B2K0680-CCV1	600-2022-10-18_B2K0680_221	11/14/2022 13:20
Calibration Check	B2K0680-CCV3	600-2022-10-18_B2K0680_221	11/14/2022 13:20
1A	M2K0078-01	600-2022-10-18_B2K0680_221	11/14/2022 13:20
1B	M2K0078-02	600-2022-10-18_B2K0680_221	11/14/2022 13:20
1C	M2K0078-03	600-2022-10-18_B2K0680_221	11/14/2022 13:20
6AR	M2K0078-04	600-2022-10-18_B2K0680_221	11/14/2022 13:20



Laboratory Report Number: M2K0078

METHOD BLANK
FORM IIIB

Client Project ID: 70234792

Sample ID: B2K0511-BLK1	Prep Date: 11/09/22 11:56	Matrix: Aqueous
Instrument: UV-2600	Analyzed: 11/10/22 16:55	Method: EPA 420.1
File ID: Phenols_UV2600-2022	Sequence:	Analyst: EPT
Batch: B2K0511	Units: mg/L	Calibration:

Analyte	Result	MDL	RL	Dilution	Flag	Q
Phenolics, Total	0.0025	0.0025	0.0050	1	U	

Notes and Definitions* - Detected in the associated method Blank at a concentration \geq RL

U: The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

Sample ID: B2K0680-BLK1	Prep Date: 11/11/22 12:12	Matrix: Aqueous
Instrument: UV-2600	Analyzed: 11/14/22 13:20	Method: EPA 420.1
File ID: Phenols_UV2600-2022	Sequence:	Analyst: EPT
Batch: B2K0680	Units: mg/L	Calibration:

Analyte	Result	MDL	RL	Dilution	Flag	Q
Phenolics, Total	0.0025	0.0025	0.0050	1	U	

Notes and Definitions* - Detected in the associated method Blank at a concentration \geq RL

U: The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.



FORM V: Wet Chemistry EPA 420.1 MS/MSD



Laboratory Report Number: M2K0078

Matrix Spike/Duplicate (MS/MSD)

Client Project ID: 70234792

FORM VA

Method: EPA 420.1	Parent				Spike			Duplicate			
Batch: B2K0511	Sample ID: M2K0078-06				B2K0511-MS1			B2K0511-MSD1			
Matrix: Aqueous	Prepared: 11/09/2022 11:56				11/09/22 11:56			11/09/22 11:56			
Units: mg/L	Analyzed: 11/10/2022 16:55				11/10/22 16:55			11/10/22 16:55			
Instrument: UV-2600	File ID: Phenols_UV2600-2022-10-				Phenols_UV2600-2022-10-			Phenols_UV2600-2022-10-			
Calibration:	Dilution: 1				1			1			
Analyst: EPT											

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limts	RPD Limit	Q
Phenolics, Total	0.0038	0.0500	0.0396	71.5	0.0500	0.0068	5.96	141	80 - 120	20	# *

* - Exceeds %Rec Limit

- Exceeds RPD Limit

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FORM VII: Wet Chemistry EPA 420.1 LCS/LCSD



Laboratory Report Number: M2K0078

Client Project ID: 70234792

BLANK SPIKE (BS)

FORM VII

Method: EPA 420.1 Batch: B2K0511 Analyst: EPT Matrix: Aqueous Units: mg/L Instrument: UV-2600 Calibration:					
Blank Spike Spike ID: B2K0511-BS1 Prepared: 11/09/22 11:56 Analyzed: 11/10/22 16:55 File ID: Phenols_UV2600-2022-10-18_B2 Initial/Final: 50mL/50mL					
Analyte	BS Spiked	BS Found	BS %Rec	%Rec Limts	Q
Phenolics, Total	0.0500	0.0522	104	80 - 120	

* - Does not meet %Rec acceptance criteria.

- Does not meet RPD acceptance criteria.

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Laboratory Report Number: M2K0078

Client Project ID: 70234792

BLANK SPIKE (BS)

FORM VII

Method: EPA 420.1 Batch: B2K0680 Analyst: EPT Matrix: Aqueous Units: mg/L Instrument: UV-2600 Calibration:					
Blank Spike Spike ID: B2K0680-BS1 Prepared: 11/11/22 12:12 Analyzed: 11/14/22 13:20 File ID: Phenols_UV2600-2022-10-18_B2 Initial/Final: 50mL/50mL					
Analyte	BS Spiked	BS Found	BS %Rec	%Rec Limits	Q
Phenolics, Total	0.0500	0.0507	101	80 - 120	

* - Does not meet %Rec acceptance criteria.

- Does not meet RPD acceptance criteria.

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Section A: Wet Chemistry EPA 420.1 Batch / Sequence Raw Data

Method:	EPA 420.1
Batch:	B2K0680
SOP:	K4201 rev 21
Instrument:	UV-2600
Balance ID:	

Analyst	Date	Time	Temp °C	Block
EPT	11/11/2022	16:20		IN
				OUT
EPT	11/14/2022	13:20	NA	Spec. Run

Curve ID:	2022-10-18 A	2022-10-18 APH
Range:	Low	High
Slope:	2.58365	0.104458
Y Intercept:	0.00103	0.00667

Calculation: Result = [(Absorbance-Intercept)/Slope] * Final Vol./Initial Vol.*Instrument Dilution

[illegible]

Linear Calibration Model

Phenols - Low

$$y = mx + b$$

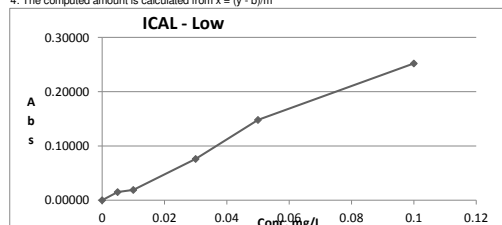
Instrument:	UV-2600
Curve ID:	2022-10-18 APH
ICV (Abs):	0.1170
ICV Conc (mg/L):	0.04489
ICV %REC	90%

ICV Standard ID:	2000387/1010213
ICV Initial Volume:	50
ICV Final Volume:	50
ICV Working Conc:	0.05
Cell Size (cm):	1
Wavelength (nm):	460

Concentration (x)	Absorbance (OD) (y)	Calculated Amount	% Relative Error	Response Factor	Standard ID
0	0.00000	-0.00040			
0.005	0.01500	0.00541	-8.1314	3.00000	
0.01	0.01900	0.00695	30.4523	1.90000	
0.03	0.07600	0.02902	3.2781	2.53333	
0.05	0.14800	0.05688	-13.7682	2.96000	
0.1	0.25200	0.09714	2.8628	2.52000	
		-0.00040		#DIV/0!	

CCV (r):	0.99543	Must be > 0.995
SLOPE (m):	2.58365	
y - INTERCEPT (b)	0.00103	
INTERCEPT TEST:	14.54469	Ratio should be > 5
% RELATIVE ERROR TEST:	-8.13139	Should be less than two times CCV criteria

1. R is the coefficient of correlation
2. The intercept test is the ratio of the response (y) of the low standard to the intercept (b):
3. Relative Error (%RE) = $(\bar{x}_i - X_i / X_i) \cdot 100$. Where X_i = True value for the calibration standard \bar{X}_i = Measured concentration of the calibration standard.
4. The computed amount is calculated from $x = (y - b)/m$



Linear Calibration Model

Phenols - High

$$y = mx + b$$

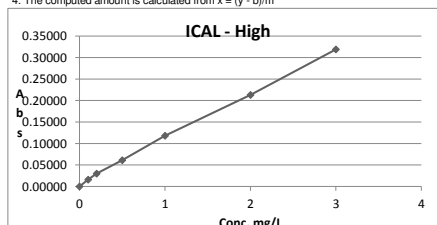
Instrument:	UV-2600
Curve ID:	2022-10-18 APH
ICV (Abs):	0.0540
ICV Conc (mg/L):	0.4531
ICV %REC	91%

ICV Standard ID:	2000387/1010213
ICV Initial Volume:	50
ICV Final Volume:	50
ICV Working Conc:	0.50
Cell Size (cm):	1
Wavelength (nm):	510

Concentration (x)	Absorbance (OD) (y)	Calculated Amount	% Relative Error	Response Factor	Standard ID
0	0.00000	-0.06385		#DIV/0!	
0.1	0.01600	0.08932	10.6770	0.16000	
0.2	0.03000	0.22335	-11.6742	0.15000	
0.5	0.06100	0.52012	-4.0237	0.12200	
1	0.11800	1.06579	-6.5793	0.11800	
2	0.21300	1.97525	1.2374	0.10650	
3	0.31900	2.99001	0.3329	0.10633	

COC (r):	0.99934	Must be > 0.995
SLOPE (m):	0.10446	
y - INTERCEPT (b)	0.00667	
INTERCEPT TEST:	2.39898	Ratio should be > 5
% RELATIVE ERROR TEST:	10.67702	Should be less than two times CCV criteria

1. R is the coefficient of correlation
2. The intercept test is the ratio of the response (y) of the low standard to the intercept (b):
3. Relative Error (%RE) = $(X_i - \bar{X}_i) / \bar{X}_i \times 100$. Where X_i = True value for the calibration standard \bar{X}_i = Measured concentration of the calibration standard.
4. The computed amount is calculated from $x = (y - b)/m$





Laboratory Report Number: M2K0078

Client Project ID: 70234792

BATCH LOG SUMMARY
SECTION A1

Batch: B2K0511

Prepared: 11/9/2022 11:56:00AM

Matrix: Aqueous

Prepared By: EPT

Method: EPA 420.1

Laboratory ID	Client / Source ID	Initial	Final						Spike(s)
B2K0511-MS1	M2K0078-06	50.0 mL	50.0 mL						2007329 2.5µL
M2K0078-09	11B	50.0 mL	50.0 mL						
M2K0078-05	6B	50.0 mL	50.0 mL						
M2K0078-06	8	50.0 mL	50.0 mL						
M2K0078-07	9	50.0 mL	50.0 mL						
B2K0511-BLK1		50.0 mL	50.0 mL						
B2K0511-CCV1		50.0 mL	50.0 mL						2000387 1.5µL
B2K0511-CCV3		50.0 mL	50.0 mL						2000387 1.5µL
B2K0511-BS1		50.0 mL	50.0 mL						2007329 2.5µL
M2K0078-08	11A	50.0 mL	50.0 mL						
M2K0078-11	LEA-SECONDARY	50.0 mL	50.0 mL						
B2K0511-MSD1	M2K0078-06	50.0 mL	50.0 mL						2007329 2.5µL
M2K0078-10	LEA-PRIMARY	50.0 mL	50.0 mL						

Standards used in the batch:

Standard ID	Description	Date Prepared	Prepared By
2000387	Phenol Calibration Standard (1000 mg/L)	1/19/2022 8:27:26AM	** Vendor **
2007329	Phenol BS/ICV Stock, 1000 ppm or mg/L Lot M061-2	9/2/2022 8:52:16AM	** Vendor **

Reagents used in the batch:

Reagent ID	Description	Prepared	Prepared By
2006232	Phenol Copper Sulfate Solution	7/27/2022 9:21:13AM	Andrew Hout
2008297	Chloroform Lot # 219451	10/6/2022 10:24:25AM	** Vendor **
2008657	Ammonia Buffer Solution (Phenol)	10/18/2022 11:37:29AM	Andrew Hout

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Laboratory Report Number: M2K0078

Client Project ID: 70234792

**BATCH LOG SUMMARY
SECTION A1**

Batch: B2K0680

Matrix: Aqueous

Method: EPA 420.1

Prepared: 11/11/2022 12:12:00PM

Prepared By: EPT

Laboratory ID	Client / Source ID	Initial	Final						Spike(s)
B2K0680-BS1		50.0 mL	50.0 mL						2007329 2.5µL
M2K0078-01	1A	50.0 mL	50.0 mL						
M2K0078-02	1B	50.0 mL	50.0 mL						
M2K0078-03	1C	50.0 mL	50.0 mL						
M2K0078-04	6AR	50.0 mL	50.0 mL						
B2K0680-BLK1		50.0 mL	50.0 mL						
B2K0680-CCV1		50.0 mL	50.0 mL						2000387 1.5µL
B2K0680-CCV3		50.0 mL	50.0 mL						2000387 1.5µL

Standards used in the batch:

Standard ID	Description	Date Prepared	Prepared By
2000387	Phenol Calibration Standard (1000 mg/L)	1/19/2022 8:27:26AM	** Vendor **
2007329	Phenol BS/ICV Stock, 1000 ppm or mg/L Lot M061-2	9/2/2022 8:52:16AM	** Vendor **

Reagents used in the batch:

Reagent ID	Description	Prepared	Prepared By
2006232	Phenol Copper Sulfate Solution	7/27/2022 9:21:13AM	Andrew Hout
2008297	Chloroform Lot # 219451	10/6/2022 10:24:25AM	** Vendor **
2008657	Ammonia Buffer Solution (Phenol)	10/18/2022 11:37:29AM	Andrew Hout

					Comments
Transfers	Released By	Date/Time	Received By	Date/Time	
1	<i>[Signature]</i>	10/31/22	Blenda Guey	11/1/22	946
2					
3					
Cooler Temperature on Receipt 0.7 °C		Custody Seal Y or N		Received on Ice Y or N	
Samples Intact Y or N					



Work Order #
42K0078

COOLER TEMP >6° C LOG

[illegible]

pH Lot # HC241540

pH **Exceptions**

[illegible]

PRESERVATIVE
EXCEPTIONS

~~SECRET~~

AS NOTED

Document Control # 1957
Last 04-10-2019

11/01/2022 Sm

Issued to: Document Master File

November 10, 2022

Tom Houghton
Town of Southampton
116 Hampton Road
Waste Management Division
Southampton, NY 11968

RE: Project: BASELINE-NORTH SEA LANDFILL
Pace Project No.: 70234794

Dear Tom Houghton:

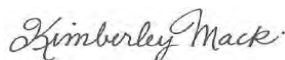
Enclosed are the analytical results for sample(s) received by the laboratory on October 27, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Melville

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kimberley M. Mack
kimberley.mack@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Kaitlyn Crosby, P.W. Grosser Engineer & Hydrogeologist
Derek Ersbak, P.W. Grosser Consulting
Richard Hodgson, Town of Southampton
Amanda Lauth, PW Grosser
Ed Thompson, Town of Southampton



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

Pace Analytical Services Long Island

575 Broad Hollow Rd, Melville, NY 11747

Connecticut Certification #: PH-0435

Delaware Certification # NY 10478

Maryland Certification #: 208

Massachusetts Certification #: M-NY026

New Hampshire Certification #: 2987

New Jersey Certification #: NY158

New York Certification #: 10478 Primary Accrediting Body

Pennsylvania Certification #: 68-00350

Rhode Island Certification #: LAO00340

Virginia Certification # 460302

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

Method: EPA 6010C

Description: 6010 MET ICP

Client: Town of Southampton

Date: November 10, 2022

General Information:

4 samples were analyzed for EPA 6010C by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 280111

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70234792006

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1415992)
 - Barium
 - Silver

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

Method: EPA 6010C

Description: 6010 MET ICP, Dissolved

Client: Town of Southampton

Date: November 10, 2022

General Information:

1 sample was analyzed for EPA 6010C by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 279787

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70234794003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1414476)
 - Barium, Dissolved
 - Silver, Dissolved

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

Method: EPA 7470A

Description: 7470 Mercury

Client: Town of Southampton

Date: November 10, 2022

General Information:

4 samples were analyzed for EPA 7470A by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

Method: EPA 7470A

Description: 7470 Mercury, Dissolved

Client: Town of Southampton

Date: November 10, 2022

General Information:

1 sample was analyzed for EPA 7470A by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

Sample: 6AR		Lab ID: 70234794001		Collected: 10/26/22 10:30		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Aluminum	<200	ug/L	200	1	11/01/22 09:23	11/01/22 16:41	7429-90-5		
Antimony	<60.0	ug/L	60.0	1	11/01/22 09:23	11/01/22 16:41	7440-36-0		
Arsenic	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:41	7440-38-2		
Barium	<200	ug/L	200	1	11/01/22 09:23	11/01/22 16:41	7440-39-3		
Beryllium	<5.0	ug/L	5.0	1	11/01/22 09:23	11/01/22 16:41	7440-41-7		
Boron	<50.0	ug/L	50.0	1	11/01/22 09:23	11/01/22 16:41	7440-42-8		
Cadmium	<2.5	ug/L	2.5	1	11/01/22 09:23	11/01/22 16:41	7440-43-9		
Calcium	7180	ug/L	200	1	11/01/22 09:23	11/01/22 16:41	7440-70-2		
Chromium	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:41	7440-47-3		
Cobalt	<50.0	ug/L	50.0	1	11/01/22 09:23	11/01/22 16:41	7440-48-4		
Copper	<25.0	ug/L	25.0	1	11/01/22 09:23	11/01/22 16:41	7440-50-8		
Iron	<100	ug/L	100	1	11/01/22 09:23	11/01/22 16:41	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/01/22 09:23	11/01/22 16:41	7439-92-1		
Magnesium	2680	ug/L	200	1	11/01/22 09:23	11/01/22 16:41	7439-95-4		
Manganese	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:41	7439-96-5		
Nickel	<40.0	ug/L	40.0	1	11/01/22 09:23	11/01/22 16:41	7440-02-0		
Potassium	<5000	ug/L	5000	1	11/01/22 09:23	11/01/22 16:41	7440-09-7		
Selenium	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:41	7782-49-2		
Silver	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:41	7440-22-4		
Sodium	7680	ug/L	5000	1	11/01/22 09:23	11/01/22 16:41	7440-23-5		
Thallium	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:41	7440-28-0		
Vanadium	<50.0	ug/L	50.0	1	11/01/22 09:23	11/01/22 16:41	7440-62-2		
Zinc	<20.0	ug/L	20.0	1	11/01/22 09:23	11/01/22 16:41	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Melville							
Mercury	<0.20	ug/L	0.20	1	10/31/22 12:16	11/01/22 12:59	7439-97-6		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

Sample: 6B		Lab ID: 70234794002		Collected: 10/26/22 11:20		Received: 10/27/22 11:30		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Aluminum	<200	ug/L	200	1	11/01/22 09:23	11/01/22 16:43	7429-90-5		
Antimony	<60.0	ug/L	60.0	1	11/01/22 09:23	11/01/22 16:43	7440-36-0		
Arsenic	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:43	7440-38-2		
Barium	<200	ug/L	200	1	11/01/22 09:23	11/01/22 16:43	7440-39-3		
Beryllium	<5.0	ug/L	5.0	1	11/01/22 09:23	11/01/22 16:43	7440-41-7		
Boron	<50.0	ug/L	50.0	1	11/01/22 09:23	11/01/22 16:43	7440-42-8		
Cadmium	<2.5	ug/L	2.5	1	11/01/22 09:23	11/01/22 16:43	7440-43-9		
Calcium	4290	ug/L	200	1	11/01/22 09:23	11/01/22 16:43	7440-70-2		
Chromium	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:43	7440-47-3		
Cobalt	<50.0	ug/L	50.0	1	11/01/22 09:23	11/01/22 16:43	7440-48-4		
Copper	<25.0	ug/L	25.0	1	11/01/22 09:23	11/01/22 16:43	7440-50-8		
Iron	<100	ug/L	100	1	11/01/22 09:23	11/01/22 16:43	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/01/22 09:23	11/01/22 16:43	7439-92-1		
Magnesium	2390	ug/L	200	1	11/01/22 09:23	11/01/22 16:43	7439-95-4		
Manganese	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:43	7439-96-5		
Nickel	<40.0	ug/L	40.0	1	11/01/22 09:23	11/01/22 16:43	7440-02-0		
Potassium	<5000	ug/L	5000	1	11/01/22 09:23	11/01/22 16:43	7440-09-7		
Selenium	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:43	7782-49-2		
Silver	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:43	7440-22-4		
Sodium	8000	ug/L	5000	1	11/01/22 09:23	11/01/22 16:43	7440-23-5		
Thallium	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:43	7440-28-0		
Vanadium	<50.0	ug/L	50.0	1	11/01/22 09:23	11/01/22 16:43	7440-62-2		
Zinc	<20.0	ug/L	20.0	1	11/01/22 09:23	11/01/22 16:43	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Melville							
Mercury	<0.20	ug/L	0.20	1	10/31/22 12:16	11/01/22 13:00	7439-97-6		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

Sample: 11A		Lab ID: 70234794003		Collected: 10/26/22 15:50		Received: 10/27/22 11:30		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Aluminum	<200	ug/L	200	1	11/01/22 09:23	11/01/22 16:53	7429-90-5		
Antimony	<60.0	ug/L	60.0	1	11/01/22 09:23	11/01/22 16:53	7440-36-0		
Arsenic	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:53	7440-38-2		
Barium	<200	ug/L	200	1	11/01/22 09:23	11/01/22 16:53	7440-39-3		
Beryllium	<5.0	ug/L	5.0	1	11/01/22 09:23	11/01/22 16:53	7440-41-7		
Boron	<50.0	ug/L	50.0	1	11/01/22 09:23	11/01/22 16:53	7440-42-8		
Cadmium	<2.5	ug/L	2.5	1	11/01/22 09:23	11/01/22 16:53	7440-43-9		
Calcium	17300	ug/L	200	1	11/01/22 09:23	11/01/22 16:53	7440-70-2		
Chromium	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:53	7440-47-3		
Cobalt	<50.0	ug/L	50.0	1	11/01/22 09:23	11/01/22 16:53	7440-48-4		
Copper	<25.0	ug/L	25.0	1	11/01/22 09:23	11/01/22 16:53	7440-50-8		
Iron	37100	ug/L	100	1	11/01/22 09:23	11/01/22 16:53	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/01/22 09:23	11/01/22 16:53	7439-92-1		
Magnesium	6890	ug/L	200	1	11/01/22 09:23	11/01/22 16:53	7439-95-4		
Manganese	2040	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:53	7439-96-5		
Nickel	<40.0	ug/L	40.0	1	11/01/22 09:23	11/01/22 16:53	7440-02-0		
Potassium	<5000	ug/L	5000	1	11/01/22 09:23	11/01/22 16:53	7440-09-7		
Selenium	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:53	7782-49-2		
Silver	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:53	7440-22-4		
Sodium	7230	ug/L	5000	1	11/01/22 09:23	11/01/22 16:53	7440-23-5		
Thallium	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:53	7440-28-0		
Vanadium	<50.0	ug/L	50.0	1	11/01/22 09:23	11/01/22 16:53	7440-62-2		
Zinc	60.4	ug/L	20.0	1	11/01/22 09:23	11/01/22 16:53	7440-66-6		
6010 MET ICP, Dissolved		Analytical Method: EPA 6010C Pace Analytical Services - Melville							
Aluminum, Dissolved	<200	ug/L	200	1		10/28/22 15:25	7429-90-5		
Antimony, Dissolved	<60.0	ug/L	60.0	1		10/28/22 15:25	7440-36-0		
Arsenic, Dissolved	<10.0	ug/L	10.0	1		10/28/22 15:25	7440-38-2		
Barium, Dissolved	<200	ug/L	200	1		10/28/22 15:25	7440-39-3		M1
Beryllium, Dissolved	<5.0	ug/L	5.0	1		10/28/22 15:25	7440-41-7		
Boron, Dissolved	<50.0	ug/L	50.0	1		10/28/22 15:25	7440-42-8		
Cadmium, Dissolved	<2.5	ug/L	2.5	1		10/28/22 15:25	7440-43-9		
Calcium, Dissolved	17600	ug/L	200	1		10/28/22 15:25	7440-70-2		
Chromium, Dissolved	<10.0	ug/L	10.0	1		10/28/22 15:25	7440-47-3		
Cobalt, Dissolved	<50.0	ug/L	50.0	1		10/28/22 15:25	7440-48-4		
Copper, Dissolved	<25.0	ug/L	25.0	1		10/28/22 15:25	7440-50-8		
Iron, Dissolved	601	ug/L	100	1		10/28/22 15:25	7439-89-6		
Lead, Dissolved	<5.0	ug/L	5.0	1		10/28/22 15:25	7439-92-1		
Magnesium, Dissolved	7000	ug/L	200	1		10/28/22 15:25	7439-95-4		
Manganese, Dissolved	1160	ug/L	10.0	1		10/28/22 15:25	7439-96-5		
Nickel, Dissolved	<40.0	ug/L	40.0	1		10/28/22 15:25	7440-02-0		
Potassium, Dissolved	<5000	ug/L	5000	1		10/28/22 15:25	7440-09-7		
Selenium, Dissolved	<10.0	ug/L	10.0	1		10/28/22 15:25	7782-49-2		
Silver, Dissolved	<10.0	ug/L	10.0	1		10/28/22 15:25	7440-22-4		M1
Sodium, Dissolved	7510	ug/L	5000	1		10/28/22 15:25	7440-23-5		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

Sample: 11A		Lab ID: 70234794003		Collected: 10/26/22 15:50		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010C								
	Pace Analytical Services - Melville								
	Thallium, Dissolved	<10.0	ug/L	10.0	1		10/28/22 15:25	7440-28-0	
	Vanadium, Dissolved	<50.0	ug/L	50.0	1		10/28/22 15:25	7440-62-2	
Zinc, Dissolved	29.2	ug/L	20.0	1		10/28/22 15:25	7440-66-6		
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
	Pace Analytical Services - Melville								
Mercury	<0.20	ug/L	0.20	1	10/31/22 12:16	11/01/22 13:02	7439-97-6		
7470 Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
	Pace Analytical Services - Melville								
Mercury, Dissolved	<0.20	ug/L	0.20	1	11/10/22 07:50	11/10/22 13:48	7439-97-6		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

Sample: 11B		Lab ID: 70234794004		Collected: 10/26/22 16:30		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Aluminum	1530	ug/L	200	1	11/01/22 09:23	11/01/22 16:55	7429-90-5		
Antimony	<60.0	ug/L	60.0	1	11/01/22 09:23	11/01/22 16:55	7440-36-0		
Arsenic	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:55	7440-38-2		
Barium	<200	ug/L	200	1	11/01/22 09:23	11/01/22 16:55	7440-39-3		
Beryllium	<5.0	ug/L	5.0	1	11/01/22 09:23	11/01/22 16:55	7440-41-7		
Boron	<50.0	ug/L	50.0	1	11/01/22 09:23	11/01/22 16:55	7440-42-8		
Cadmium	<2.5	ug/L	2.5	1	11/01/22 09:23	11/01/22 16:55	7440-43-9		
Calcium	17700	ug/L	200	1	11/01/22 09:23	11/01/22 16:55	7440-70-2		
Chromium	57.7	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:55	7440-47-3		
Cobalt	<50.0	ug/L	50.0	1	11/01/22 09:23	11/01/22 16:55	7440-48-4		
Copper	<25.0	ug/L	25.0	1	11/01/22 09:23	11/01/22 16:55	7440-50-8		
Iron	12300	ug/L	100	1	11/01/22 09:23	11/01/22 16:55	7439-89-6		
Lead	8.8	ug/L	5.0	1	11/01/22 09:23	11/01/22 16:55	7439-92-1		
Magnesium	3000	ug/L	200	1	11/01/22 09:23	11/01/22 16:55	7439-95-4		
Manganese	192	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:55	7439-96-5		
Nickel	55.9	ug/L	40.0	1	11/01/22 09:23	11/01/22 16:55	7440-02-0		
Potassium	5010	ug/L	5000	1	11/01/22 09:23	11/01/22 16:55	7440-09-7		
Selenium	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:55	7782-49-2		
Silver	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:55	7440-22-4		
Sodium	7980	ug/L	5000	1	11/01/22 09:23	11/01/22 16:55	7440-23-5		
Thallium	<10.0	ug/L	10.0	1	11/01/22 09:23	11/01/22 16:55	7440-28-0		
Vanadium	<50.0	ug/L	50.0	1	11/01/22 09:23	11/01/22 16:55	7440-62-2		
Zinc	22.7	ug/L	20.0	1	11/01/22 09:23	11/01/22 16:55	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Melville							
Mercury	<0.20	ug/L	0.20	1	11/02/22 12:00	11/02/22 14:34	7439-97-6		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

QC Batch:	279787	Analysis Method:	EPA 6010C
QC Batch Method:	EPA 6010C	Analysis Description:	6010 MET Dissolved
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70234794003

METHOD BLANK: 1414473 Matrix: Water

Associated Lab Samples: 70234794003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	<200	200	10/28/22 15:14	
Antimony, Dissolved	ug/L	<60.0	60.0	10/28/22 15:14	
Arsenic, Dissolved	ug/L	<10.0	10.0	10/28/22 15:14	
Barium, Dissolved	ug/L	<200	200	10/28/22 15:14	
Beryllium, Dissolved	ug/L	<5.0	5.0	10/28/22 15:14	
Boron, Dissolved	ug/L	<50.0	50.0	10/28/22 15:14	
Cadmium, Dissolved	ug/L	<2.5	2.5	10/28/22 15:14	
Calcium, Dissolved	ug/L	<200	200	10/28/22 15:14	
Chromium, Dissolved	ug/L	<10.0	10.0	10/28/22 15:14	
Cobalt, Dissolved	ug/L	<50.0	50.0	10/28/22 15:14	
Copper, Dissolved	ug/L	<25.0	25.0	10/28/22 15:14	
Iron, Dissolved	ug/L	<100	100	10/28/22 15:14	
Lead, Dissolved	ug/L	<5.0	5.0	10/28/22 15:14	
Magnesium, Dissolved	ug/L	<200	200	10/28/22 15:14	
Manganese, Dissolved	ug/L	<10.0	10.0	10/28/22 15:14	
Nickel, Dissolved	ug/L	<40.0	40.0	10/28/22 15:14	
Potassium, Dissolved	ug/L	<5000	5000	10/28/22 15:14	
Selenium, Dissolved	ug/L	<10.0	10.0	10/28/22 15:14	
Silver, Dissolved	ug/L	<10.0	10.0	10/28/22 15:14	
Sodium, Dissolved	ug/L	<5000	5000	10/28/22 15:14	
Thallium, Dissolved	ug/L	<10.0	10.0	10/28/22 15:14	
Vanadium, Dissolved	ug/L	<50.0	50.0	10/28/22 15:14	
Zinc, Dissolved	ug/L	<20.0	20.0	10/28/22 15:14	

LABORATORY CONTROL SAMPLE: 1414474

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	25000	24900	100	80-120	
Antimony, Dissolved	ug/L	1000	992	99	80-120	
Arsenic, Dissolved	ug/L	500	497	99	80-120	
Barium, Dissolved	ug/L	500	490	98	80-120	
Beryllium, Dissolved	ug/L	500	506	101	80-120	
Boron, Dissolved	ug/L	1000	984	98	80-120	
Cadmium, Dissolved	ug/L	500	497	99	80-120	
Calcium, Dissolved	ug/L	25000	25100	100	80-120	
Chromium, Dissolved	ug/L	500	493	99	80-120	
Cobalt, Dissolved	ug/L	500	499	100	80-120	
Copper, Dissolved	ug/L	500	488	98	80-120	
Iron, Dissolved	ug/L	12500	12400	99	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

LABORATORY CONTROL SAMPLE: 1414474

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead, Dissolved	ug/L	500	504	101	80-120	
Magnesium, Dissolved	ug/L	25000	24600	98	80-120	
Manganese, Dissolved	ug/L	500	496	99	80-120	
Nickel, Dissolved	ug/L	500	500	100	80-120	
Potassium, Dissolved	ug/L	25000	25000	100	80-120	
Selenium, Dissolved	ug/L	500	492	98	80-120	
Silver, Dissolved	ug/L	250	239	96	80-120	
Sodium, Dissolved	ug/L	25000	26100	104	80-120	
Thallium, Dissolved	ug/L	250	249	100	80-120	
Vanadium, Dissolved	ug/L	500	480	96	80-120	
Zinc, Dissolved	ug/L	500	499	100	80-120	

MATRIX SPIKE SAMPLE: 1414476

Parameter	Units	70234794003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	<200	25000	28200	113	75-125	
Antimony, Dissolved	ug/L	<60.0	1000	1120	112	75-125	
Arsenic, Dissolved	ug/L	<10.0	500	576	115	75-125	
Barium, Dissolved	ug/L	<200	500	464	72	75-125	M1
Beryllium, Dissolved	ug/L	<5.0	500	569	114	75-125	
Boron, Dissolved	ug/L	<50.0	1000	1130	110	75-125	
Cadmium, Dissolved	ug/L	<2.5	500	569	114	75-125	
Calcium, Dissolved	ug/L	17600	25000	44100	106	75-125	
Chromium, Dissolved	ug/L	<10.0	500	564	113	75-125	
Cobalt, Dissolved	ug/L	<50.0	500	577	113	75-125	
Copper, Dissolved	ug/L	<25.0	500	551	110	75-125	
Iron, Dissolved	ug/L	601	12500	14500	112	75-125	
Lead, Dissolved	ug/L	<5.0	500	563	113	75-125	
Magnesium, Dissolved	ug/L	7000	25000	33800	107	75-125	
Manganese, Dissolved	ug/L	1160	500	1620	92	75-125	
Nickel, Dissolved	ug/L	<40.0	500	584	113	75-125	
Potassium, Dissolved	ug/L	<5000	25000	31400	114	75-125	
Selenium, Dissolved	ug/L	<10.0	500	597	119	75-125	
Silver, Dissolved	ug/L	<10.0	250	187	74	75-125	M1
Sodium, Dissolved	ug/L	7510	25000	37000	118	75-125	
Thallium, Dissolved	ug/L	<10.0	250	283	112	75-125	
Vanadium, Dissolved	ug/L	<50.0	500	549	110	75-125	
Zinc, Dissolved	ug/L	29.2	500	603	115	75-125	

SAMPLE DUPLICATE: 1414475

Parameter	Units	70234794003 Result	Dup Result	RPD	Qualifiers
Aluminum, Dissolved	ug/L	<200	<200		
Antimony, Dissolved	ug/L	<60.0	<60.0		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

SAMPLE DUPLICATE: 1414475

Parameter	Units	70234794003 Result	Dup Result	RPD	Qualifiers
Arsenic, Dissolved	ug/L	<10.0	<10.0		
Barium, Dissolved	ug/L	<200	<200		
Beryllium, Dissolved	ug/L	<5.0	<5.0		
Boron, Dissolved	ug/L	<50.0	<50.0		
Cadmium, Dissolved	ug/L	<2.5	<2.5		
Calcium, Dissolved	ug/L	17600	17800	1	
Chromium, Dissolved	ug/L	<10.0	<10.0		
Cobalt, Dissolved	ug/L	<50.0	<50.0		
Copper, Dissolved	ug/L	<25.0	<25.0		
Iron, Dissolved	ug/L	601	711	17	
Lead, Dissolved	ug/L	<5.0	<5.0		
Magnesium, Dissolved	ug/L	7000	6990	0	
Manganese, Dissolved	ug/L	1160	1160	0	
Nickel, Dissolved	ug/L	<40.0	<40.0		
Potassium, Dissolved	ug/L	<5000	<5000		
Selenium, Dissolved	ug/L	<10.0	<10.0		
Silver, Dissolved	ug/L	<10.0	<10.0		
Sodium, Dissolved	ug/L	7510	7440	1	
Thallium, Dissolved	ug/L	<10.0	<10.0		
Vanadium, Dissolved	ug/L	<50.0	<50.0		
Zinc, Dissolved	ug/L	29.2	29.7	2	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

QC Batch: 279942

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234794001, 70234794002, 70234794003

METHOD BLANK: 1415202

Matrix: Water

Associated Lab Samples: 70234794001, 70234794002, 70234794003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.20	0.20	11/01/22 12:24	

LABORATORY CONTROL SAMPLE: 1415203

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	1	0.90	90	80-120	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

QC Batch: 280290

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234794004

METHOD BLANK: 1416989

Matrix: Water

Associated Lab Samples: 70234794004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.20	0.20	11/02/22 14:12	

LABORATORY CONTROL SAMPLE: 1416990

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	1	0.97	97	80-120	

MATRIX SPIKE SAMPLE: 1416991

Parameter	Units	70231628003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	<0.20	1	0.83	83	75-125	H1

SAMPLE DUPLICATE: 1416992

Parameter	Units	70231628003 Result	Dup Result	RPD	Qualifiers
Mercury	ug/L	<0.20	<0.20		H1

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

QC Batch: 281509

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury Dissolved

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234794003

METHOD BLANK: 1423202

Matrix: Water

Associated Lab Samples: 70234794003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.20	0.20	11/10/22 13:45	

LABORATORY CONTROL SAMPLE: 1423203

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	1	1.0	100	80-120	

MATRIX SPIKE SAMPLE: 1423204

Parameter	Units	70234794003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	<0.20	1	1.0	98	75-125	

SAMPLE DUPLICATE: 1423205

Parameter	Units	70234794003 Result	Dup Result	RPD	Qualifiers
Mercury, Dissolved	ug/L	<0.20	<0.20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

QC Batch:	280111	Analysis Method:	EPA 6010C
QC Batch Method:	EPA 3005A	Analysis Description:	6010 MET Water
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70234794001, 70234794002, 70234794003, 70234794004

METHOD BLANK: 1415989 Matrix: Water

Associated Lab Samples: 70234794001, 70234794002, 70234794003, 70234794004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	<200	200	11/01/22 15:47	
Antimony	ug/L	<60.0	60.0	11/01/22 15:47	
Arsenic	ug/L	<10.0	10.0	11/01/22 15:47	
Barium	ug/L	<200	200	11/01/22 15:47	
Beryllium	ug/L	<5.0	5.0	11/01/22 15:47	
Boron	ug/L	<50.0	50.0	11/01/22 15:47	
Cadmium	ug/L	<2.5	2.5	11/01/22 15:47	
Calcium	ug/L	<200	200	11/01/22 15:47	
Chromium	ug/L	<10.0	10.0	11/01/22 15:47	
Cobalt	ug/L	<50.0	50.0	11/01/22 15:47	
Copper	ug/L	<25.0	25.0	11/01/22 15:47	
Iron	ug/L	<100	100	11/01/22 15:47	
Lead	ug/L	<5.0	5.0	11/01/22 15:47	
Magnesium	ug/L	<200	200	11/01/22 15:47	
Manganese	ug/L	<10.0	10.0	11/01/22 15:47	
Nickel	ug/L	<40.0	40.0	11/01/22 15:47	
Potassium	ug/L	<5000	5000	11/01/22 15:47	
Selenium	ug/L	<10.0	10.0	11/01/22 15:47	
Silver	ug/L	<10.0	10.0	11/01/22 15:47	
Sodium	ug/L	<5000	5000	11/01/22 15:47	
Thallium	ug/L	<10.0	10.0	11/01/22 15:47	
Vanadium	ug/L	<50.0	50.0	11/01/22 15:47	
Zinc	ug/L	<20.0	20.0	11/01/22 15:47	

LABORATORY CONTROL SAMPLE: 1415990

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	25000	25100	100	80-120	
Antimony	ug/L	1000	996	100	80-120	
Arsenic	ug/L	500	494	99	80-120	
Barium	ug/L	500	498	100	80-120	
Beryllium	ug/L	500	501	100	80-120	
Boron	ug/L	1000	1010	101	80-120	
Cadmium	ug/L	500	499	100	80-120	
Calcium	ug/L	25000	25000	100	80-120	
Chromium	ug/L	500	501	100	80-120	
Cobalt	ug/L	500	498	100	80-120	
Copper	ug/L	500	504	101	80-120	
Iron	ug/L	12500	12500	100	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

LABORATORY CONTROL SAMPLE: 1415990

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	506	101	80-120	
Magnesium	ug/L	25000	25100	100	80-120	
Manganese	ug/L	500	497	99	80-120	
Nickel	ug/L	500	501	100	80-120	
Potassium	ug/L	25000	25200	101	80-120	
Selenium	ug/L	500	494	99	80-120	
Silver	ug/L	250	254	102	80-120	
Sodium	ug/L	25000	25800	103	80-120	
Thallium	ug/L	250	252	101	80-120	
Vanadium	ug/L	500	502	100	80-120	
Zinc	ug/L	500	503	101	80-120	

MATRIX SPIKE SAMPLE: 1415992

Parameter	Units	70234792006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	<200	25000	24200	96	75-125	
Antimony	ug/L	<60.0	1000	940	94	75-125	
Arsenic	ug/L	<10.0	500	473	94	75-125	
Barium	ug/L	<200	500	313	58	75-125	M1
Beryllium	ug/L	<5.0	500	485	97	75-125	
Boron	ug/L	<50.0	1000	953	94	75-125	
Cadmium	ug/L	<2.5	500	476	95	75-125	
Calcium	ug/L	7410	25000	31300	96	75-125	
Chromium	ug/L	<10.0	500	482	96	75-125	
Cobalt	ug/L	<50.0	500	481	96	75-125	
Copper	ug/L	<25.0	500	480	96	75-125	
Iron	ug/L	221	12500	12100	95	75-125	
Lead	ug/L	<5.0	500	476	95	75-125	
Magnesium	ug/L	3130	25000	26900	95	75-125	
Manganese	ug/L	20.2	500	506	97	75-125	
Nickel	ug/L	<40.0	500	493	96	75-125	
Potassium	ug/L	<5000	25000	25300	98	75-125	
Selenium	ug/L	<10.0	500	472	94	75-125	
Silver	ug/L	<10.0	250	186	74	75-125	M1
Sodium	ug/L	7380	25000	32400	100	75-125	
Thallium	ug/L	<10.0	250	243	97	75-125	
Vanadium	ug/L	<50.0	500	486	97	75-125	
Zinc	ug/L	<20.0	500	487	97	75-125	

SAMPLE DUPLICATE: 1415991

Parameter	Units	70234792006 Result	Dup Result	RPD	Qualifiers
Aluminum	ug/L	<200	<200		
Antimony	ug/L	<60.0	<60.0		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

SAMPLE DUPLICATE: 1415991

Parameter	Units	70234792006 Result	Dup Result	RPD	Qualifiers
Arsenic	ug/L	<10.0	<10.0		
Barium	ug/L	<200	<200		
Beryllium	ug/L	<5.0	<5.0		
Boron	ug/L	<50.0	<50.0		
Cadmium	ug/L	<2.5	<2.5		
Calcium	ug/L	7410	7230	2	
Chromium	ug/L	<10.0	<10.0		
Cobalt	ug/L	<50.0	<50.0		
Copper	ug/L	<25.0	<25.0		
Iron	ug/L	221	220	0	
Lead	ug/L	<5.0	<5.0		
Magnesium	ug/L	3130	3040	3	
Manganese	ug/L	20.2	18.7	8	
Nickel	ug/L	<40.0	<40.0		
Potassium	ug/L	<5000	<5000		
Selenium	ug/L	<10.0	<10.0		
Silver	ug/L	<10.0	<10.0		
Sodium	ug/L	7380	7080	4	
Thallium	ug/L	<10.0	<10.0		
Vanadium	ug/L	<50.0	<50.0		
Zinc	ug/L	<20.0	<20.0		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

H1 Analysis conducted outside the EPA method holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234794

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70234794001	6AR	EPA 3005A	280111	EPA 6010C	280181
70234794002	6B	EPA 3005A	280111	EPA 6010C	280181
70234794003	11A	EPA 3005A	280111	EPA 6010C	280181
70234794004	11B	EPA 3005A	280111	EPA 6010C	280181
70234794003	11A	EPA 6010C	279787		
70234794001	6AR	EPA 7470A	279942	EPA 7470A	280020
70234794002	6B	EPA 7470A	279942	EPA 7470A	280020
70234794003	11A	EPA 7470A	279942	EPA 7470A	280020
70234794004	11B	EPA 7470A	280290	EPA 7470A	280408
70234794003	11A	EPA 7470A	281509	EPA 7470A	281541

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / An

The Chain-of-Custody is a LEGAL DOCUMENT

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Co

WO#: 70234794



70234794

Section A

Required Client Information:

Company: Town of Southampton

Address:	Waste Management Division
----------	---------------------------

Southampton, NY 11968

Email c.fetten@southamptontownny.gov

Phone: (631)283-5210

Requested Due Date:

Section B

Required Project Information:

Report To	Fetten, Christine
-----------	-------------------

Copy To:	
----------	--

Purchase Order #:

Project Name:	Baseline-North Sea Landfill
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Project #	Project Name	Project Manager	Project Status	Project Start Date	Project End Date	Project Budget	Project Progress	Project Risks	Project Issues	Project Comments
1	Project A	John Doe	Completed	2023-01-01	2023-03-31	\$100,000	100%	Low	None	Project completed successfully.
2	Project B	Jane Smith	In Progress	2023-04-01	2023-06-30	\$200,000	75%	Medium	Minor delays in resource allocation.	Project is on track.
3	Project C	Mike Johnson	On Hold	2023-07-01	2023-09-30	\$150,000	0%	High	Significant budget cuts and resource shortages.	Project is on hold.
4	Project D	Sarah Brown	Planned	2023-10-01	2023-12-31	\$120,000	0%	Low	None	Project is planned.

Section C

Invoice Information:

Attention:

Company Name:

Address:

Pace Quote:

Pace Project Manager: kimberley.mack@pacelabs.com.

Pace Profile #: 5479

1 Of

Regulatory Agency

State / Location

NY

[illegible]

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER:

DATE Signed: _____

TEMP in C

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Custody
(Y/N)Sealed
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Examples
Contact
(Y/N)



Sample Condition Upon Re

WO#: 70234794

Client Name:

Proj

PM: KMM

Due Date: 11/10/22

CLIENT: TOS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☒ Yes ☐ No Seals intact: ☐ Yes ☐ No ☐ N/APacking Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ Ziploc ☐ None ☐ Other

Thermometer Used: FH148

Correction Factor: + 0.1

Cooler Temperature(°C): 4.2

Cooler Temperature Corrected(°C): 4.3

Temp should be above freezing to 6.0°C

USDA Regulated Soil ☒ N/A, water sample

Date and Initials of person examining contents: JK 11/30

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC,

NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ Yes ☒ No

Did samples originate from a foreign source

including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

		COMMENTS:
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume: (Triple volume provided for)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12.
-Includes date/time/ID, Matrix: SL WT OIL		
All containers needing preservation have been checked?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
pH paper Lot # 4293085		Sample #
All containers needing preservation are found to be in compliance with method recommendation?		
(HNO ₃ , H ₂ SO ₄ , HCl, NaOH>9 Sulfide, NAOH>12 Cyanide)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 [water].		
Per Method, VOA pH is checked after analysis		Initial when completed: Lot # of added preservative: Date/Time preservative added:
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
KI starch test strips Lot #		
Residual chlorine strips Lot #		Positive for Res. Chlorine? Y N
SM 4500 CN samples checked for sulfide?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Lead Acetate Strips Lot #		Positive for Sulfide? Y N
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	17.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if applicable):		

Client Notification/ Resolution:

Field Data Required?

Y / N

Person Contacted:

Date/Time:

Comments/ Resolution:

December 16, 2022

Tom Houghton
Town of Southampton
116 Hampton Road
Waste Management Division
Southampton, NY 11968

RE: Project: BASELINE-NORTH SEA LANDFILL
Pace Project No.: 70234795

Dear Tom Houghton:

Enclosed are the analytical results for sample(s) received by the laboratory between October 27, 2022 and October 28, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses were subcontracted outside of the Pace Network. The test report from the external subcontractor is attached to this report in its entirety.

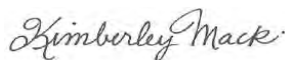
The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Melville

REVISION#1: Report re-issued 12/16/22 to update chloride results.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kimberley M. Mack
kimberley.mack@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Kaitlyn Crosby, P.W. Grosser Engineer & Hydrogeologist
Derek Ersbak, P.W. Grosser Consulting
Richard Hodgson, Town of Southampton
Amanda Lauth, PW Grosser
Ed Thompson, Town of Southampton



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Pace Analytical Services Long Island

575 Broad Hollow Rd, Melville, NY 11747

Connecticut Certification #: PH-0435

Delaware Certification # NY 10478

Maryland Certification #: 208

Massachusetts Certification #: M-NY026

New Hampshire Certification #: 2987

New Jersey Certification #: NY158

New York Certification #: 10478 Primary Accrediting Body

Pennsylvania Certification #: 68-00350

Rhode Island Certification #: LAO00340

Virginia Certification # 460302

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: EPA 6010C

Description: 6010 MET ICP

Client: Town of Southampton

Date: December 16, 2022

General Information:

10 samples were analyzed for EPA 6010C by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 280951

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70234886005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1420290)
- Calcium

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: EPA 6010C

Description: 6010 MET ICP, Dissolved

Client: Town of Southampton

Date: December 16, 2022

General Information:

1 sample was analyzed for EPA 6010C by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: EPA 8260C/5030C

Description: 8260C Volatile Organics

Client: Town of Southampton

Date: December 16, 2022

General Information:

3 samples were analyzed for EPA 8260C/5030C by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

QC Batch: 279850

IH: This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.

- LCS (Lab ID: 1414732)
 - 2-Butanone (MEK)
- MS (Lab ID: 1415187)
 - 2-Butanone (MEK)

QC Batch: 280925

IH: This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.

- LCS (Lab ID: 1420208)
 - 2-Butanone (MEK)
- MS (Lab ID: 1420230)
 - 2-Butanone (MEK)
- MSD (Lab ID: 1420231)
 - 2-Butanone (MEK)

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

QC Batch: 279850

v1: The continuing calibration verification was above the method acceptance limit. Any detection for the analyte in the associated samples may have a high bias.

- 11B (Lab ID: 70234795002)
 - Acetone
- LCS (Lab ID: 1414732)
 - 2-Butanone (MEK)
 - Acetone
- MS (Lab ID: 1415187)
 - 2-Butanone (MEK)
 - Acetone

v3: The continuing calibration verification was below the method acceptance limit. Any detection for the analyte in the associated samples may have a low bias.

- 11A (Lab ID: 70234795001)
 - Carbon disulfide

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: EPA 8260C/5030C

Description: 8260C Volatile Organics

Client: Town of Southampton

Date: December 16, 2022

QC Batch: 279850

v3: The continuing calibration verification was below the method acceptance limit. Any detection for the analyte in the associated samples may have a low bias.

- Chloromethane
- Vinyl chloride
- trans-1,4-Dichloro-2-butene
- 11B (Lab ID: 70234795002)
 - Carbon disulfide
 - Chloromethane
 - Vinyl chloride
 - trans-1,4-Dichloro-2-butene
- BLANK (Lab ID: 1414731)
 - Carbon disulfide
 - Chloromethane
 - Vinyl chloride
 - trans-1,4-Dichloro-2-butene
- DUP (Lab ID: 1415186)
 - Carbon disulfide
 - Chloromethane
 - Vinyl chloride
 - trans-1,4-Dichloro-2-butene
- LCS (Lab ID: 1414732)
 - Carbon disulfide
 - Chloromethane
 - Vinyl chloride
 - trans-1,4-Dichloro-2-butene
- MS (Lab ID: 1415187)
 - Carbon disulfide
 - Chloromethane
 - Vinyl chloride
 - trans-1,4-Dichloro-2-butene

QC Batch: 280925

v1: The continuing calibration verification was above the method acceptance limit. Any detection for the analyte in the associated samples may have a high bias.

- LCS (Lab ID: 1420208)
 - Chloroethane
 - Trichlorofluoromethane
- MS (Lab ID: 1420230)
 - Chloroethane
 - Trichlorofluoromethane
- MSD (Lab ID: 1420231)
 - Chloroethane
 - Trichlorofluoromethane

v3: The continuing calibration verification was below the method acceptance limit. Any detection for the analyte in the associated samples may have a low bias.

- BLANK (Lab ID: 1420207)

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: EPA 8260C/5030C

Description: 8260C Volatile Organics

Client: Town of Southampton

Date: December 16, 2022

QC Batch: 280925

v3: The continuing calibration verification was below the method acceptance limit. Any detection for the analyte in the associated samples may have a low bias.

- Vinyl acetate
- EB001 (Lab ID: 70234795012)
 - Vinyl acetate
- LCS (Lab ID: 1420208)
 - Vinyl acetate
- MS (Lab ID: 1420230)
 - Vinyl acetate
- MSD (Lab ID: 1420231)
 - Vinyl acetate

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 280925

L1: Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

- LCS (Lab ID: 1420208)
 - Acetone
 - Trichlorofluoromethane

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 280925

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70235441001

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 1420230)
 - Trichlorofluoromethane
- MSD (Lab ID: 1420231)
 - Trichlorofluoromethane

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: EPA 8260C/5030C

Description: 8260C Volatile Organics

Client: Town of Southampton

Date: December 16, 2022

Additional Comments:

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: EPA 8260

Description: TIC MSV Water

Client: Town of Southampton

Date: December 16, 2022

General Information:

1 sample was analyzed for EPA 8260 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: SM22 2120B

Description: 2120B W Apparent Color

Client: Town of Southampton

Date: December 16, 2022

General Information:

10 samples were analyzed for SM22 2120B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

H1: Analysis conducted outside the EPA method holding time.

- 12A (Lab ID: 70234795009)
- 12B (Lab ID: 70234795010)
- 3A (Lab ID: 70234795003)
- 3B (Lab ID: 70234795004)
- 3C (Lab ID: 70234795005)
- 4A (Lab ID: 70234795006)
- 4B (Lab ID: 70234795007)
- 4C (Lab ID: 70234795008)
- DUP001 (Lab ID: 70234795011)
- EB001 (Lab ID: 70234795012)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: SM22 2320B

Description: 2320B Alkalinity

Client: Town of Southampton

Date: December 16, 2022

General Information:

10 samples were analyzed for SM22 2320B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: SM22 2340C

Description: 2340C Hardness, Total

Client: Town of Southampton

Date: December 16, 2022

General Information:

9 samples were analyzed for SM22 2340C by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: SM22 2540C

Description: 2540C Total Dissolved Solids

Client: Town of Southampton

Date: December 16, 2022

General Information:

10 samples were analyzed for SM22 2540C by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 280457

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 1417652)
- Total Dissolved Solids

QC Batch: 280458

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 1417656)
- Total Dissolved Solids

QC Batch: 280682

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 1418979)
- Total Dissolved Solids

Additional Comments:

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: SM22 3500-Cr B

Description: Chromium, Hexavalent

Client: Town of Southampton

Date: December 16, 2022

General Information:

10 samples were analyzed for SM22 3500-Cr B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

H1: Analysis conducted outside the EPA method holding time.

- 4A (Lab ID: 70234795006)
- 4B (Lab ID: 70234795007)
- 4C (Lab ID: 70234795008)
- EB001 (Lab ID: 70234795012)

H3: Sample was received or analysis requested beyond the recognized method holding time.

- 12A (Lab ID: 70234795009)
- 12B (Lab ID: 70234795010)
- 3A (Lab ID: 70234795003)
- 3B (Lab ID: 70234795004)
- 3C (Lab ID: 70234795005)
- DUP001 (Lab ID: 70234795011)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: EPA 410.4

Description: 410.4 COD

Client: Town of Southampton

Date: December 16, 2022

General Information:

10 samples were analyzed for EPA 410.4 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: SM22 5210B

Description: 5210B BOD, 5 day

Client: Town of Southampton

Date: December 16, 2022

General Information:

10 samples were analyzed for SM22 5210B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

H2: Extraction or preparation conducted outside EPA method holding time.

- DUP001 (Lab ID: 70234795011)

Sample Preparation:

The samples were prepared in accordance with SM22 5210B with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: EPA 300.0

Description: 300.0 IC Anions 28 Days

Client: Town of Southampton

Date: December 16, 2022

General Information:

10 samples were analyzed for EPA 300.0 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 280955

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70235291001,70235291002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1420305)
 - Bromide
 - Sulfate
- MS (Lab ID: 1420307)
 - Bromide
 - Sulfate

QC Batch: 282458

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70234908002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1427716)
 - Bromide
 - Sulfate

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: EPA 351.2

Description: 351.2 Total Kjeldahl Nitrogen

Client: Town of Southampton

Date: December 16, 2022

General Information:

10 samples were analyzed for EPA 351.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 351.2 with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: EPA 353.2

Description: 353.2 Nitrogen, NO₂/NO₃ unpres

Client: Town of Southampton

Date: December 16, 2022

General Information:

10 samples were analyzed for EPA 353.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: EPA 353.2

Description: 353.2 Nitrogen, NO₂

Client: Town of Southampton

Date: December 16, 2022

General Information:

10 samples were analyzed for EPA 353.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: SM22 4500 NH3 H

Description: 4500 Ammonia Water

Client: Town of Southampton

Date: December 16, 2022

General Information:

10 samples were analyzed for SM22 4500 NH3 H by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: SM22 5310B

Description: 5310B TOC as NPOC

Client: Town of Southampton

Date: December 16, 2022

General Information:

10 samples were analyzed for SM22 5310B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Method: EPA 9014 Total Cyanide

Description: 9014 Cyanide, Total

Client: Town of Southampton

Date: December 16, 2022

General Information:

10 samples were analyzed for EPA 9014 Total Cyanide by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 9010C with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 11A		Lab ID: 70234795001	Collected: 10/26/22 15:50	Received: 10/27/22 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics		Analytical Method: EPA 8260C/5030C Pace Analytical Services - Melville						
Acetone	<5.0	ug/L	5.0	1		10/29/22 00:15	67-64-1	
Acrylonitrile	<5.0	ug/L	5.0	1		10/29/22 00:15	107-13-1	
Benzene	<5.0	ug/L	5.0	1		10/29/22 00:15	71-43-2	
Bromochloromethane	<5.0	ug/L	5.0	1		10/29/22 00:15	74-97-5	
Bromodichloromethane	<5.0	ug/L	5.0	1		10/29/22 00:15	75-27-4	
Bromoform	<5.0	ug/L	5.0	1		10/29/22 00:15	75-25-2	
Bromomethane	<5.0	ug/L	5.0	1		10/29/22 00:15	74-83-9	
2-Butanone (MEK)	<5.0	ug/L	5.0	1		10/29/22 00:15	78-93-3	
Carbon disulfide	<5.0	ug/L	5.0	1		10/29/22 00:15	75-15-0	v3
Carbon tetrachloride	<5.0	ug/L	5.0	1		10/29/22 00:15	56-23-5	
Chlorobenzene	<5.0	ug/L	5.0	1		10/29/22 00:15	108-90-7	
Chloroethane	<5.0	ug/L	5.0	1		10/29/22 00:15	75-00-3	
Chloroform	5.0	ug/L	5.0	1		10/29/22 00:15	67-66-3	
Chloromethane	<5.0	ug/L	5.0	1		10/29/22 00:15	74-87-3	v3
1,2-Dibromo-3-chloropropane	<5.0	ug/L	5.0	1		10/29/22 00:15	96-12-8	
Dibromochloromethane	<5.0	ug/L	5.0	1		10/29/22 00:15	124-48-1	
1,2-Dibromoethane (EDB)	<5.0	ug/L	5.0	1		10/29/22 00:15	106-93-4	
Dibromomethane	<5.0	ug/L	5.0	1		10/29/22 00:15	74-95-3	
1,2-Dichlorobenzene	<5.0	ug/L	5.0	1		10/29/22 00:15	95-50-1	
1,4-Dichlorobenzene	<5.0	ug/L	5.0	1		10/29/22 00:15	106-46-7	
trans-1,4-Dichloro-2-butene	<5.0	ug/L	5.0	1		10/29/22 00:15	110-57-6	v3
1,1-Dichloroethane	<5.0	ug/L	5.0	1		10/29/22 00:15	75-34-3	
1,2-Dichloroethane	<5.0	ug/L	5.0	1		10/29/22 00:15	107-06-2	
1,1-Dichloroethene	<5.0	ug/L	5.0	1		10/29/22 00:15	75-35-4	
cis-1,2-Dichloroethene	<5.0	ug/L	5.0	1		10/29/22 00:15	156-59-2	
trans-1,2-Dichloroethene	<5.0	ug/L	5.0	1		10/29/22 00:15	156-60-5	
1,2-Dichloropropane	<5.0	ug/L	5.0	1		10/29/22 00:15	78-87-5	
cis-1,3-Dichloropropene	<5.0	ug/L	5.0	1		10/29/22 00:15	10061-01-5	
trans-1,3-Dichloropropene	<5.0	ug/L	5.0	1		10/29/22 00:15	10061-02-6	
Ethylbenzene	<5.0	ug/L	5.0	1		10/29/22 00:15	100-41-4	
2-Hexanone	<5.0	ug/L	5.0	1		10/29/22 00:15	591-78-6	
Iodomethane	<5.0	ug/L	5.0	1		10/29/22 00:15	74-88-4	
Methylene Chloride	<5.0	ug/L	5.0	1		10/29/22 00:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	<5.0	ug/L	5.0	1		10/29/22 00:15	108-10-1	
Styrene	<5.0	ug/L	5.0	1		10/29/22 00:15	100-42-5	
1,1,1,2-Tetrachloroethane	<5.0	ug/L	5.0	1		10/29/22 00:15	630-20-6	
1,1,2,2-Tetrachloroethane	<5.0	ug/L	5.0	1		10/29/22 00:15	79-34-5	
Tetrachloroethene	<5.0	ug/L	5.0	1		10/29/22 00:15	127-18-4	
Toluene	<5.0	ug/L	5.0	1		10/29/22 00:15	108-88-3	
1,1,1-Trichloroethane	<5.0	ug/L	5.0	1		10/29/22 00:15	71-55-6	
1,1,2-Trichloroethane	<5.0	ug/L	5.0	1		10/29/22 00:15	79-00-5	
Trichloroethene	<5.0	ug/L	5.0	1		10/29/22 00:15	79-01-6	
Trichlorofluoromethane	<5.0	ug/L	5.0	1		10/29/22 00:15	75-69-4	
1,2,3-Trichloropropane	<5.0	ug/L	5.0	1		10/29/22 00:15	96-18-4	
Vinyl acetate	<5.0	ug/L	5.0	1		10/29/22 00:15	108-05-4	
Vinyl chloride	<5.0	ug/L	5.0	1		10/29/22 00:15	75-01-4	v3

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 11A		Lab ID: 70234795001	Collected: 10/26/22 15:50	Received: 10/27/22 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics		Analytical Method: EPA 8260C/5030C Pace Analytical Services - Melville						
Xylene (Total)	<5.0	ug/L	5.0	1		10/29/22 00:15	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	108	%	81-122	1		10/29/22 00:15	17060-07-0	
4-Bromofluorobenzene (S)	90	%	79-118	1		10/29/22 00:15	460-00-4	
Toluene-d8 (S)	97	%	82-122	1		10/29/22 00:15	2037-26-5	

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 11B		Lab ID: 70234795002		Collected: 10/26/22 16:30		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
	Pace Analytical Services - Melville								
Acetone	<5.0	ug/L	5.0	1		10/29/22 00:38	67-64-1	v1	
Acrylonitrile	<5.0	ug/L	5.0	1		10/29/22 00:38	107-13-1		
Benzene	<5.0	ug/L	5.0	1		10/29/22 00:38	71-43-2		
Bromochloromethane	<5.0	ug/L	5.0	1		10/29/22 00:38	74-97-5		
Bromodichloromethane	<5.0	ug/L	5.0	1		10/29/22 00:38	75-27-4		
Bromoform	<5.0	ug/L	5.0	1		10/29/22 00:38	75-25-2		
Bromomethane	<5.0	ug/L	5.0	1		10/29/22 00:38	74-83-9		
2-Butanone (MEK)	<5.0	ug/L	5.0	1		10/29/22 00:38	78-93-3		
Carbon disulfide	<5.0	ug/L	5.0	1		10/29/22 00:38	75-15-0	v3	
Carbon tetrachloride	<5.0	ug/L	5.0	1		10/29/22 00:38	56-23-5		
Chlorobenzene	<5.0	ug/L	5.0	1		10/29/22 00:38	108-90-7		
Chloroethane	<5.0	ug/L	5.0	1		10/29/22 00:38	75-00-3		
Chloroform	5.0	ug/L	5.0	1		10/29/22 00:38	67-66-3		
Chloromethane	<5.0	ug/L	5.0	1		10/29/22 00:38	74-87-3	v3	
1,2-Dibromo-3-chloropropane	<5.0	ug/L	5.0	1		10/29/22 00:38	96-12-8		
Dibromochloromethane	<5.0	ug/L	5.0	1		10/29/22 00:38	124-48-1		
1,2-Dibromoethane (EDB)	<5.0	ug/L	5.0	1		10/29/22 00:38	106-93-4		
Dibromomethane	<5.0	ug/L	5.0	1		10/29/22 00:38	74-95-3		
1,2-Dichlorobenzene	<5.0	ug/L	5.0	1		10/29/22 00:38	95-50-1		
1,4-Dichlorobenzene	<5.0	ug/L	5.0	1		10/29/22 00:38	106-46-7		
trans-1,4-Dichloro-2-butene	<5.0	ug/L	5.0	1		10/29/22 00:38	110-57-6	v3	
1,1-Dichloroethane	<5.0	ug/L	5.0	1		10/29/22 00:38	75-34-3		
1,2-Dichloroethane	<5.0	ug/L	5.0	1		10/29/22 00:38	107-06-2		
1,1-Dichloroethene	<5.0	ug/L	5.0	1		10/29/22 00:38	75-35-4		
cis-1,2-Dichloroethene	<5.0	ug/L	5.0	1		10/29/22 00:38	156-59-2		
trans-1,2-Dichloroethene	<5.0	ug/L	5.0	1		10/29/22 00:38	156-60-5		
1,2-Dichloropropane	<5.0	ug/L	5.0	1		10/29/22 00:38	78-87-5		
cis-1,3-Dichloropropene	<5.0	ug/L	5.0	1		10/29/22 00:38	10061-01-5		
trans-1,3-Dichloropropene	<5.0	ug/L	5.0	1		10/29/22 00:38	10061-02-6		
Ethylbenzene	<5.0	ug/L	5.0	1		10/29/22 00:38	100-41-4		
2-Hexanone	<5.0	ug/L	5.0	1		10/29/22 00:38	591-78-6		
Iodomethane	<5.0	ug/L	5.0	1		10/29/22 00:38	74-88-4		
Methylene Chloride	<5.0	ug/L	5.0	1		10/29/22 00:38	75-09-2		
4-Methyl-2-pentanone (MIBK)	<5.0	ug/L	5.0	1		10/29/22 00:38	108-10-1		
Styrene	<5.0	ug/L	5.0	1		10/29/22 00:38	100-42-5		
1,1,1,2-Tetrachloroethane	<5.0	ug/L	5.0	1		10/29/22 00:38	630-20-6		
1,1,2,2-Tetrachloroethane	<5.0	ug/L	5.0	1		10/29/22 00:38	79-34-5		
Tetrachloroethene	<5.0	ug/L	5.0	1		10/29/22 00:38	127-18-4		
Toluene	<5.0	ug/L	5.0	1		10/29/22 00:38	108-88-3		
1,1,1-Trichloroethane	<5.0	ug/L	5.0	1		10/29/22 00:38	71-55-6		
1,1,2-Trichloroethane	<5.0	ug/L	5.0	1		10/29/22 00:38	79-00-5		
Trichloroethene	<5.0	ug/L	5.0	1		10/29/22 00:38	79-01-6		
Trichlorofluoromethane	<5.0	ug/L	5.0	1		10/29/22 00:38	75-69-4		
1,2,3-Trichloropropane	<5.0	ug/L	5.0	1		10/29/22 00:38	96-18-4		
Vinyl acetate	<5.0	ug/L	5.0	1		10/29/22 00:38	108-05-4		
Vinyl chloride	<5.0	ug/L	5.0	1		10/29/22 00:38	75-01-4	v3	

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 11B		Lab ID: 70234795002		Collected: 10/26/22 16:30		Received: 10/27/22 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260C Volatile Organics		Analytical Method: EPA 8260C/5030C Pace Analytical Services - Melville							
Xylene (Total)	<5.0	ug/L	5.0	1		10/29/22 00:38	1330-20-7		
Surrogates									
1,2-Dichloroethane-d4 (S)	107	%	81-122	1		10/29/22 00:38	17060-07-0		
4-Bromofluorobenzene (S)	92	%	79-118	1		10/29/22 00:38	460-00-4		
Toluene-d8 (S)	98	%	82-122	1		10/29/22 00:38	2037-26-5		

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 3A		Lab ID: 70234795003		Collected: 10/27/22 09:55		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	<10.0	ug/L	10.0	1	11/04/22 10:28	11/05/22 14:03	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/04/22 10:28	11/05/22 14:03	7440-43-9		
Calcium	20600	ug/L	200	1	11/04/22 10:28	11/05/22 14:03	7440-70-2		
Iron	5170	ug/L	100	1	11/04/22 10:28	11/05/22 14:03	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/04/22 10:28	11/05/22 14:03	7439-92-1		
Magnesium	6010	ug/L	200	1	11/04/22 10:28	11/05/22 14:03	7439-95-4		
Manganese	1880	ug/L	10.0	1	11/04/22 10:28	11/05/22 14:03	7439-96-5		
Potassium	11300	ug/L	5000	1	11/04/22 10:28	11/05/22 14:03	7440-09-7		
Sodium	34600	ug/L	5000	1	11/04/22 10:28	11/05/22 14:03	7440-23-5		
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	140	units	50.0	10		10/31/22 13:45		H1	
pH	6.5	Std. Units	0.10	10		10/31/22 13:45		H1	
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	97.8	mg/L	1.0	1		11/10/22 14:33			
2340C Hardness, Total		Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	73.3	mg/L	5.0	1		11/10/22 18:09			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	268	mg/L	20.0	1		11/02/22 20:26			
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/31/22 12:05	18540-29-9	H3	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	23.0	mg/L	10.0	1	11/11/22 05:35	11/11/22 07:47			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/29/22 06:21	11/03/22 10:47			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/15/22 01:04	24959-67-9		
Chloride	51.8	mg/L	10.0	5		11/15/22 10:36	16887-00-6		
Sulfate	15.4	mg/L	5.0	1		11/15/22 01:04	14808-79-8		

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 3A		Lab ID: 70234795003		Collected: 10/27/22 09:55		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	0.42	mg/L	0.10	1	11/14/22 05:42	11/14/22 12:15	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	0.17	mg/L	0.050	1		10/29/22 00:04	14797-55-8		
Nitrate-Nitrite (as N)	0.18	mg/L	0.050	1		10/29/22 00:04	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/28/22 22:09	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	<0.10	mg/L	0.10	1		11/01/22 11:45	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	4.5	mg/L	1.0	1		11/02/22 19:47	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/10/22 13:07	11/10/22 15:02	57-12-5		

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 3B		Lab ID: 70234795004		Collected: 10/27/22 10:40		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	<10.0	ug/L	10.0	1	11/04/22 10:28	11/05/22 14:06	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/04/22 10:28	11/05/22 14:06	7440-43-9		
Calcium	18400	ug/L	200	1	11/04/22 10:28	11/05/22 14:06	7440-70-2		
Iron	4140	ug/L	100	1	11/04/22 10:28	11/05/22 14:06	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/04/22 10:28	11/05/22 14:06	7439-92-1		
Magnesium	6370	ug/L	200	1	11/04/22 10:28	11/05/22 14:06	7439-95-4		
Manganese	1640	ug/L	10.0	1	11/04/22 10:28	11/05/22 14:06	7439-96-5		
Potassium	5930	ug/L	5000	1	11/04/22 10:28	11/05/22 14:06	7440-09-7		
Sodium	19500	ug/L	5000	1	11/04/22 10:28	11/05/22 14:06	7440-23-5		
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	100	units	10.0	2		10/31/22 13:48		H1	
pH	6.4	Std. Units	0.10	2		10/31/22 13:48		H1	
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	90.6	mg/L	1.0	1		11/10/22 14:41			
2340C Hardness, Total		Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	66.7	mg/L	5.0	1		11/10/22 18:12			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	184	mg/L	20.0	1		11/02/22 20:26			
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/31/22 12:07	18540-29-9	H3	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	18.7	mg/L	10.0	1	11/11/22 05:35	11/11/22 07:47			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/29/22 06:24	11/03/22 10:49			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/15/22 01:18	24959-67-9		
Chloride	37.3	mg/L	2.0	1		11/15/22 01:18	16887-00-6		
Sulfate	12.8	mg/L	5.0	1		11/15/22 01:18	14808-79-8		

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 3B		Lab ID: 70234795004		Collected: 10/27/22 10:40		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	3.4	mg/L	0.10	1	11/14/22 05:42	11/14/22 12:18	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	0.098	mg/L	0.050	1		10/29/22 00:10	14797-55-8		
Nitrate-Nitrite (as N)	0.10	mg/L	0.050	1		10/29/22 00:10	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/28/22 22:15	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	3.4	mg/L	0.10	1		11/01/22 11:47	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	3.7	mg/L	1.0	1		11/02/22 20:00	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/10/22 13:07	11/10/22 15:03	57-12-5		

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 3C		Lab ID: 70234795005		Collected: 10/27/22 11:15		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	<10.0	ug/L	10.0	1	11/04/22 10:28	11/05/22 14:09	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/04/22 10:28	11/05/22 14:09	7440-43-9		
Calcium	8630	ug/L	200	1	11/04/22 10:28	11/05/22 14:09	7440-70-2		
Iron	<100	ug/L	100	1	11/04/22 10:28	11/05/22 14:09	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/04/22 10:28	11/05/22 14:09	7439-92-1		
Magnesium	3890	ug/L	200	1	11/04/22 10:28	11/05/22 14:09	7439-95-4		
Manganese	<10.0	ug/L	10.0	1	11/04/22 10:28	11/05/22 14:09	7439-96-5		
Potassium	<5000	ug/L	5000	1	11/04/22 10:28	11/05/22 14:09	7440-09-7		
Sodium	10700	ug/L	5000	1	11/04/22 10:28	11/05/22 14:09	7440-23-5		
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	<5.0	units	5.0	1		10/31/22 13:50		H1	
pH	6.8	Std. Units	0.10	1		10/31/22 13:50		H1	
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	45.7	mg/L	1.0	1		11/10/22 15:43			
2340C Hardness, Total		Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	36.0	mg/L	5.0	1		11/10/22 18:04			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	106	mg/L	10.0	1		11/02/22 20:27			
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/31/22 12:07	18540-29-9	H3	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	<10.0	mg/L	10.0	1	11/11/22 05:35	11/11/22 07:47			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/29/22 06:26	11/03/22 10:51			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/16/22 11:10	24959-67-9		
Chloride	13.2	mg/L	2.0	1		11/16/22 11:10	16887-00-6		
Sulfate	5.8	mg/L	5.0	1		11/16/22 11:10	14808-79-8		

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 3C		Lab ID: 70234795005		Collected: 10/27/22 11:15		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	<0.10	mg/L	0.10	1	11/14/22 05:42	11/14/22 12:19	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	0.20	mg/L	0.050	1		10/29/22 00:16	14797-55-8		
Nitrate-Nitrite (as N)	0.20	mg/L	0.050	1		10/29/22 00:16	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/28/22 22:19	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	0.20	mg/L	0.10	1		11/01/22 11:48	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	<1.0	mg/L	1.0	1		11/02/22 20:10	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/10/22 13:07	11/10/22 15:04	57-12-5		

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 4A	Lab ID: 70234795006	Collected: 10/27/22 14:20	Received: 10/28/22 12:25	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	<10.0	ug/L	10.0	1	11/04/22 10:28	11/05/22 14:12	7440-38-2	
Cadmium	<2.5	ug/L	2.5	1	11/04/22 10:28	11/05/22 14:12	7440-43-9	
Calcium	12500	ug/L	200	1	11/04/22 10:28	11/05/22 14:12	7440-70-2	
Iron	135	ug/L	100	1	11/04/22 10:28	11/05/22 14:12	7439-89-6	
Lead	<5.0	ug/L	5.0	1	11/04/22 10:28	11/05/22 14:12	7439-92-1	
Magnesium	4410	ug/L	200	1	11/04/22 10:28	11/05/22 14:12	7439-95-4	
Manganese	21.7	ug/L	10.0	1	11/04/22 10:28	11/05/22 14:12	7439-96-5	
Potassium	<5000	ug/L	5000	1	11/04/22 10:28	11/05/22 14:12	7440-09-7	
Sodium	20000	ug/L	5000	1	11/04/22 10:28	11/05/22 14:12	7440-23-5	
2120B W Apparent Color	Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	<5.0	units	5.0	1		10/31/22 13:57		H1
pH	6.1	Std. Units	0.10	1		10/31/22 13:57		H1
2320B Alkalinity	Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	16.6	mg/L	1.0	1		11/10/22 16:06		
2340C Hardness, Total	Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	48.0	mg/L	5.0	1		11/10/22 18:16		
2540C Total Dissolved Solids	Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	127	mg/L	10.0	1		11/02/22 20:27		
Chromium, Hexavalent	Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/31/22 12:07	18540-29-9	H1
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	<10.0	mg/L	10.0	1	11/11/22 05:35	11/11/22 07:48		
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/29/22 06:28	11/03/22 10:53		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/16/22 11:24	24959-67-9	
Chloride	43.9	mg/L	2.0	1		11/16/22 11:24	16887-00-6	
Sulfate	21.6	mg/L	5.0	1		11/16/22 11:24	14808-79-8	

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 4A		Lab ID: 70234795006		Collected: 10/27/22 14:20		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	<0.10	mg/L	0.10	1	11/14/22 05:42	11/14/22 12:39	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	2.1	mg/L	0.25	5		10/29/22 00:53	14797-55-8		
Nitrate-Nitrite (as N)	2.1	mg/L	0.25	5		10/29/22 00:53	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/28/22 22:34	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	<0.10	mg/L	0.10	1		11/01/22 11:49	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	<1.0	mg/L	1.0	1		11/02/22 20:45	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/10/22 13:07	11/10/22 15:05	57-12-5		

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 4B		Lab ID: 70234795007		Collected: 10/27/22 14:00		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	<10.0	ug/L	10.0	1	11/04/22 10:28	11/05/22 14:15	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/04/22 10:28	11/05/22 14:15	7440-43-9		
Calcium	14200	ug/L	200	1	11/04/22 10:28	11/05/22 14:15	7440-70-2		
Iron	4770	ug/L	100	1	11/04/22 10:28	11/05/22 14:15	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/04/22 10:28	11/05/22 14:15	7439-92-1		
Magnesium	6830	ug/L	200	1	11/04/22 10:28	11/05/22 14:15	7439-95-4		
Manganese	1040	ug/L	10.0	1	11/04/22 10:28	11/05/22 14:15	7439-96-5		
Potassium	<5000	ug/L	5000	1	11/04/22 10:28	11/05/22 14:15	7440-09-7		
Sodium	13000	ug/L	5000	1	11/04/22 10:28	11/05/22 14:15	7440-23-5		
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	55.0	units	25.0	5		10/31/22 13:56		H1	
pH	6.8	Std. Units	0.10	5		10/31/22 13:56		H1	
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	62.5	mg/L	1.0	1		11/10/22 16:13			
2340C Hardness, Total		Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	64.0	mg/L	5.0	1		11/10/22 18:19			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	120	mg/L	20.0	1		11/02/22 20:28			
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/31/22 12:08	18540-29-9	H1	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	<10.0	mg/L	10.0	1	11/11/22 05:35	11/11/22 07:48			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/29/22 06:29	11/03/22 10:56			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/16/22 11:51	24959-67-9		
Chloride	32.4	mg/L	2.0	1		11/16/22 11:51	16887-00-6		
Sulfate	15.4	mg/L	5.0	1		11/16/22 11:51	14808-79-8		

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 4B		Lab ID: 70234795007		Collected: 10/27/22 14:00		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	1.5	mg/L	0.10	1	11/14/22 05:42	11/14/22 12:20	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	0.11	mg/L	0.050	1		10/29/22 00:31	14797-55-8		
Nitrate-Nitrite (as N)	0.12	mg/L	0.050	1		10/29/22 00:31	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/28/22 22:33	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	1.2	mg/L	0.10	1		11/01/22 12:08	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	<1.0	mg/L	1.0	1		11/02/22 21:31	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/10/22 13:07	11/10/22 15:06	57-12-5		

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 4C		Lab ID: 70234795008		Collected: 10/27/22 13:30		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	<10.0	ug/L	10.0	1	11/07/22 08:58	11/07/22 18:02	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/07/22 08:58	11/07/22 18:02	7440-43-9		
Calcium	11700	ug/L	200	1	11/07/22 08:58	11/07/22 18:02	7440-70-2		
Iron	764	ug/L	100	1	11/07/22 08:58	11/07/22 18:02	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/07/22 08:58	11/07/22 18:02	7439-92-1		
Magnesium	5220	ug/L	200	1	11/07/22 08:58	11/07/22 18:02	7439-95-4		
Manganese	20.8	ug/L	10.0	1	11/07/22 08:58	11/07/22 18:02	7439-96-5		
Potassium	<5000	ug/L	5000	1	11/07/22 08:58	11/07/22 18:02	7440-09-7		
Sodium	26500	ug/L	5000	1	11/07/22 08:58	11/07/22 18:02	7440-23-5		
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	7.0	units	5.0	1		10/31/22 13:53		H1	
pH	7.2	Std. Units	0.10	1		10/31/22 13:53		H1	
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	42.4	mg/L	1.0	1		11/10/22 16:20			
2340C Hardness, Total		Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	40.0	mg/L	5.0	1		11/10/22 18:21			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	131	mg/L	10.0	1		11/02/22 20:42			
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/31/22 12:08	18540-29-9	H1	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	<10.0	mg/L	10.0	1	11/11/22 05:35	11/11/22 07:48			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/29/22 06:31	11/03/22 10:58			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/15/22 02:53	24959-67-9		
Chloride	58.6	mg/L	10.0	5		11/19/22 04:17	16887-00-6		
Sulfate	7.8	mg/L	5.0	1		11/15/22 02:53	14808-79-8		

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 4C		Lab ID: 70234795008		Collected: 10/27/22 13:30		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	0.16	mg/L	0.10	1	11/14/22 05:42	11/14/22 12:21	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	<0.050	mg/L	0.050	1		10/29/22 00:29	14797-55-8		
Nitrate-Nitrite (as N)	<0.050	mg/L	0.050	1		10/29/22 00:29	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/28/22 22:31	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	<0.10	mg/L	0.10	1		11/01/22 12:09	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	<1.0	mg/L	1.0	1		11/02/22 21:52	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/10/22 13:07	11/10/22 15:07	57-12-5		

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 12A		Lab ID: 70234795009		Collected: 10/27/22 08:35		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	<10.0	ug/L	10.0	1	11/07/22 08:58	11/07/22 18:05	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/07/22 08:58	11/07/22 18:05	7440-43-9		
Calcium	19100	ug/L	200	1	11/07/22 08:58	11/07/22 18:05	7440-70-2		
Iron	<100	ug/L	100	1	11/07/22 08:58	11/07/22 18:05	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/07/22 08:58	11/07/22 18:05	7439-92-1		
Magnesium	6000	ug/L	200	1	11/07/22 08:58	11/07/22 18:05	7439-95-4		
Manganese	534	ug/L	10.0	1	11/07/22 08:58	11/07/22 18:05	7439-96-5		
Potassium	5570	ug/L	5000	1	11/07/22 08:58	11/07/22 18:05	7440-09-7		
Sodium	9930	ug/L	5000	1	11/07/22 08:58	11/07/22 18:05	7440-23-5		
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	<5.0	units	5.0	1		10/31/22 13:37		H1	
pH	6.3	Std. Units	0.10	1		10/31/22 13:37		H1	
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	89.5	mg/L	1.0	1		11/10/22 16:28			
2340C Hardness, Total		Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	70.0	mg/L	5.0	1		11/10/22 18:24			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	126	mg/L	10.0	1		11/02/22 20:43		D6	
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/31/22 12:09	18540-29-9	H3	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	<10.0	mg/L	10.0	1	11/11/22 05:35	11/11/22 07:48			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/29/22 06:32	11/03/22 11:02			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/22/22 10:17	24959-67-9		
Chloride	14.9	mg/L	2.0	1		11/22/22 10:17	16887-00-6		
Sulfate	16.0	mg/L	5.0	1		11/22/22 10:17	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 12A		Lab ID: 70234795009		Collected: 10/27/22 08:35		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	3.9	mg/L	0.10	1	11/14/22 05:42	11/14/22 12:22	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	0.80	mg/L	0.050	1		10/28/22 23:49	14797-55-8		
Nitrate-Nitrite (as N)	0.80	mg/L	0.050	1		10/28/22 23:49	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/28/22 21:53	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	3.8	mg/L	0.10	1		11/01/22 12:11	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	<1.0	mg/L	1.0	1		11/02/22 22:04	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/10/22 13:07	11/10/22 15:07	57-12-5		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 12B		Lab ID: 70234795010		Collected: 10/27/22 08:55		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	<10.0	ug/L	10.0	1	11/07/22 08:58	11/07/22 18:07	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/07/22 08:58	11/07/22 18:07	7440-43-9		
Calcium	17900	ug/L	200	1	11/07/22 08:58	11/07/22 18:07	7440-70-2		
Iron	<100	ug/L	100	1	11/07/22 08:58	11/07/22 18:07	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/07/22 08:58	11/07/22 18:07	7439-92-1		
Magnesium	5780	ug/L	200	1	11/07/22 08:58	11/07/22 18:07	7439-95-4		
Manganese	812	ug/L	10.0	1	11/07/22 08:58	11/07/22 18:07	7439-96-5		
Potassium	8400	ug/L	5000	1	11/07/22 08:58	11/07/22 18:07	7440-09-7		
Sodium	12500	ug/L	5000	1	11/07/22 08:58	11/07/22 18:07	7440-23-5		
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	<5.0	units	5.0	1		10/31/22 13:39		H1	
pH	6.3	Std. Units	0.10	1		10/31/22 13:39		H1	
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	78.7	mg/L	1.0	1		11/10/22 16:36			
2340C Hardness, Total		Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	66.7	mg/L	5.0	1		11/10/22 18:27			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	150	mg/L	10.0	1		11/02/22 20:53		D6	
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/31/22 12:09	18540-29-9	H3	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	<10.0	mg/L	10.0	1	11/11/22 05:35	11/11/22 07:48			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/29/22 06:33	11/03/22 11:04			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/22/22 10:44	24959-67-9		
Chloride	20.8	mg/L	10.0	5		11/22/22 10:31	16887-00-6		
Sulfate	12.2	mg/L	5.0	1		11/22/22 10:44	14808-79-8		

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: 12B		Lab ID: 70234795010		Collected: 10/27/22 08:55		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	3.5	mg/L	0.10	1	11/14/22 05:42	11/14/22 12:23	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	1.4	mg/L	0.050	1		10/28/22 23:54	14797-55-8		
Nitrate-Nitrite (as N)	1.4	mg/L	0.050	1		10/28/22 23:54	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/28/22 21:55	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	3.5	mg/L	0.10	1		11/01/22 12:12	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	1.1	mg/L	1.0	1		11/02/22 22:38	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/10/22 13:07	11/10/22 15:08	57-12-5		

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: DUP001		Lab ID: 70234795011		Collected: 10/27/22 00:00		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Melville							
Arsenic	<10.0	ug/L	10.0	1	11/07/22 08:58	11/07/22 18:10	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/07/22 08:58	11/07/22 18:10	7440-43-9		
Calcium	20000	ug/L	200	1	11/07/22 08:58	11/07/22 18:10	7440-70-2		
Iron	4130	ug/L	100	1	11/07/22 08:58	11/07/22 18:10	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/07/22 08:58	11/07/22 18:10	7439-92-1		
Magnesium	5850	ug/L	200	1	11/07/22 08:58	11/07/22 18:10	7439-95-4		
Manganese	1710	ug/L	10.0	1	11/07/22 08:58	11/07/22 18:10	7439-96-5		
Potassium	11500	ug/L	5000	1	11/07/22 08:58	11/07/22 18:10	7440-09-7		
Sodium	34400	ug/L	5000	1	11/07/22 08:58	11/07/22 18:10	7440-23-5		
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	120	units	25.0	5		10/31/22 13:20		H1	
pH	6.6	Std. Units	0.10	5		10/31/22 13:20		H1	
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	90.6	mg/L	1.0	1		11/10/22 16:44			
2340C Hardness, Total		Analytical Method: SM22 2340C Pace Analytical Services - Melville							
Tot Hardness asCaCO3 (SM 2340B	73.3	mg/L	5.0	1		11/10/22 18:29			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	220	mg/L	20.0	1		11/02/22 20:54			
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/31/22 12:09	18540-29-9	H3	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	20.8	mg/L	10.0	1	11/11/22 05:35	11/11/22 07:48			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/29/22 06:36	11/03/22 11:06		H2	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/22/22 10:58	24959-67-9		
Chloride	<2.0	mg/L	2.0	1		11/22/22 10:58	16887-00-6	B	
Sulfate	<5.0	mg/L	5.0	1		11/22/22 10:58	14808-79-8	B	

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: DUP001		Lab ID: 70234795011		Collected: 10/27/22 00:00		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	0.53	mg/L	0.10	1	11/14/22 05:42	11/14/22 12:25	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	0.24	mg/L	0.050	1		10/28/22 23:39	14797-55-8		
Nitrate-Nitrite (as N)	0.24	mg/L	0.050	1		10/28/22 23:39	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/28/22 21:38	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	<0.10	mg/L	0.10	1		11/01/22 12:13	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	4.4	mg/L	1.0	1		11/02/22 22:51	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ug/L	10.0	1	11/10/22 13:07	11/10/22 15:09	57-12-5		

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: EB001		Lab ID: 70234795012		Collected: 10/28/22 11:25		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP									
Analytical Method: EPA 6010C Preparation Method: EPA 3005A									
Pace Analytical Services - Melville									
Arsenic	<10.0	ug/L	10.0	1	11/07/22 08:58	11/07/22 18:12	7440-38-2		
Cadmium	<2.5	ug/L	2.5	1	11/07/22 08:58	11/07/22 18:12	7440-43-9		
Calcium	<200	ug/L	200	1	11/07/22 08:58	11/07/22 18:12	7440-70-2		
Iron	<100	ug/L	100	1	11/07/22 08:58	11/07/22 18:12	7439-89-6		
Lead	<5.0	ug/L	5.0	1	11/07/22 08:58	11/07/22 18:12	7439-92-1		
Magnesium	<200	ug/L	200	1	11/07/22 08:58	11/07/22 18:12	7439-95-4		
Manganese	<10.0	ug/L	10.0	1	11/07/22 08:58	11/07/22 18:12	7439-96-5		
Potassium	<5000	ug/L	5000	1	11/07/22 08:58	11/07/22 18:12	7440-09-7		
Sodium	<5000	ug/L	5000	1	11/07/22 08:58	11/07/22 18:12	7440-23-5		
6010 MET ICP, Dissolved									
Analytical Method: EPA 6010C									
Pace Analytical Services - Melville									
Cadmium, Dissolved	<2.5	ug/L	2.5	1		10/31/22 14:06	7440-43-9		
Calcium, Dissolved	<200	ug/L	200	1		10/31/22 14:06	7440-70-2		
Iron, Dissolved	<100	ug/L	100	1		10/31/22 14:06	7439-89-6		
Lead, Dissolved	<5.0	ug/L	5.0	1		10/31/22 14:06	7439-92-1		
Magnesium, Dissolved	<200	ug/L	200	1		10/31/22 14:06	7439-95-4		
Manganese, Dissolved	<10.0	ug/L	10.0	1		10/31/22 14:06	7439-96-5		
Potassium, Dissolved	<5000	ug/L	5000	1		10/31/22 14:06	7440-09-7		
Sodium, Dissolved	<5000	ug/L	5000	1		10/31/22 14:06	7440-23-5		
8260C Volatile Organics									
Analytical Method: EPA 8260C/5030C									
Pace Analytical Services - Melville									
Acetone	<5.0	ug/L	5.0	1		11/06/22 21:40	67-64-1	L1	
Acrylonitrile	<5.0	ug/L	5.0	1		11/06/22 21:40	107-13-1		
Benzene	<5.0	ug/L	5.0	1		11/06/22 21:40	71-43-2		
Bromochloromethane	<5.0	ug/L	5.0	1		11/06/22 21:40	74-97-5		
Bromodichloromethane	<5.0	ug/L	5.0	1		11/06/22 21:40	75-27-4		
Bromoform	<5.0	ug/L	5.0	1		11/06/22 21:40	75-25-2		
Bromomethane	<5.0	ug/L	5.0	1		11/06/22 21:40	74-83-9		
2-Butanone (MEK)	<5.0	ug/L	5.0	1		11/06/22 21:40	78-93-3		
Carbon disulfide	<5.0	ug/L	5.0	1		11/06/22 21:40	75-15-0		
Carbon tetrachloride	<5.0	ug/L	5.0	1		11/06/22 21:40	56-23-5		
Chlorobenzene	<5.0	ug/L	5.0	1		11/06/22 21:40	108-90-7		
Chloroethane	<5.0	ug/L	5.0	1		11/06/22 21:40	75-00-3		
Chloroform	<5.0	ug/L	5.0	1		11/06/22 21:40	67-66-3		
Chloromethane	<5.0	ug/L	5.0	1		11/06/22 21:40	74-87-3		
1,2-Dibromo-3-chloropropane	<5.0	ug/L	5.0	1		11/06/22 21:40	96-12-8		
Dibromochloromethane	<5.0	ug/L	5.0	1		11/06/22 21:40	124-48-1		
1,2-Dibromoethane (EDB)	<5.0	ug/L	5.0	1		11/06/22 21:40	106-93-4		
Dibromomethane	<5.0	ug/L	5.0	1		11/06/22 21:40	74-95-3		
1,2-Dichlorobenzene	<5.0	ug/L	5.0	1		11/06/22 21:40	95-50-1		
1,4-Dichlorobenzene	<5.0	ug/L	5.0	1		11/06/22 21:40	106-46-7		
trans-1,4-Dichloro-2-butene	<5.0	ug/L	5.0	1		11/06/22 21:40	110-57-6		
1,1-Dichloroethane	<5.0	ug/L	5.0	1		11/06/22 21:40	75-34-3		

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: EB001		Lab ID: 70234795012		Collected: 10/28/22 11:25		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260C Volatile Organics		Analytical Method: EPA 8260C/5030C Pace Analytical Services - Melville							
1,2-Dichloroethane	<5.0	ug/L	5.0	1		11/06/22 21:40	107-06-2		
1,1-Dichloroethene	<5.0	ug/L	5.0	1		11/06/22 21:40	75-35-4		
cis-1,2-Dichloroethene	<5.0	ug/L	5.0	1		11/06/22 21:40	156-59-2		
trans-1,2-Dichloroethene	<5.0	ug/L	5.0	1		11/06/22 21:40	156-60-5		
1,2-Dichloropropane	<5.0	ug/L	5.0	1		11/06/22 21:40	78-87-5		
cis-1,3-Dichloropropene	<5.0	ug/L	5.0	1		11/06/22 21:40	10061-01-5		
trans-1,3-Dichloropropene	<5.0	ug/L	5.0	1		11/06/22 21:40	10061-02-6		
Ethylbenzene	<5.0	ug/L	5.0	1		11/06/22 21:40	100-41-4		
2-Hexanone	<5.0	ug/L	5.0	1		11/06/22 21:40	591-78-6		
Iodomethane	<5.0	ug/L	5.0	1		11/06/22 21:40	74-88-4		
Methylene Chloride	5.0	ug/L	5.0	1		11/06/22 21:40	75-09-2		
4-Methyl-2-pentanone (MIBK)	<5.0	ug/L	5.0	1		11/06/22 21:40	108-10-1		
Styrene	<5.0	ug/L	5.0	1		11/06/22 21:40	100-42-5		
1,1,1,2-Tetrachloroethane	<5.0	ug/L	5.0	1		11/06/22 21:40	630-20-6		
1,1,2,2-Tetrachloroethane	<5.0	ug/L	5.0	1		11/06/22 21:40	79-34-5		
Tetrachloroethene	<5.0	ug/L	5.0	1		11/06/22 21:40	127-18-4		
Toluene	<5.0	ug/L	5.0	1		11/06/22 21:40	108-88-3		
1,1,1-Trichloroethane	<5.0	ug/L	5.0	1		11/06/22 21:40	71-55-6		
1,1,2-Trichloroethane	<5.0	ug/L	5.0	1		11/06/22 21:40	79-00-5		
Trichloroethene	<5.0	ug/L	5.0	1		11/06/22 21:40	79-01-6		
Trichlorofluoromethane	<5.0	ug/L	5.0	1		11/06/22 21:40	75-69-4	L1	
1,2,3-Trichloropropane	<5.0	ug/L	5.0	1		11/06/22 21:40	96-18-4		
Vinyl acetate	<5.0	ug/L	5.0	1		11/06/22 21:40	108-05-4	v3	
Vinyl chloride	<5.0	ug/L	5.0	1		11/06/22 21:40	75-01-4		
Xylene (Total)	<5.0	ug/L	5.0	1		11/06/22 21:40	1330-20-7		
Surrogates									
1,2-Dichloroethane-d4 (S)	111	%	81-122	1		11/06/22 21:40	17060-07-0		
4-Bromofluorobenzene (S)	92	%	79-118	1		11/06/22 21:40	460-00-4		
Toluene-d8 (S)	104	%	82-122	1		11/06/22 21:40	2037-26-5		
TIC MSV Water		Analytical Method: EPA 8260 Pace Analytical Services - Melville							
TIC Search	No TIC's Found			1		11/07/22 18:59			
2120B W Apparent Color		Analytical Method: SM22 2120B Pace Analytical Services - Melville							
Apparent Color	<5.0	units	5.0	1		10/31/22 14:00		H1	
pH	5.6	Std. Units	0.10	1		10/31/22 14:00		H1	
2320B Alkalinity		Analytical Method: SM22 2320B Pace Analytical Services - Melville							
Alkalinity, Total as CaCO3	<1.0	mg/L	1.0	1		11/10/22 16:48			

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ANALYTICAL RESULTS

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Sample: EB001		Lab ID: 70234795012		Collected: 10/28/22 11:25		Received: 10/28/22 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
2540C Total Dissolved Solids		Analytical Method: SM22 2540C Pace Analytical Services - Melville							
Total Dissolved Solids	<10.0	mg/L	10.0	1		11/03/22 18:56			
Chromium, Hexavalent		Analytical Method: SM22 3500-Cr B Pace Analytical Services - Melville							
Chromium, Hexavalent	<0.020	mg/L	0.020	1		10/31/22 12:10	18540-29-9	H1	
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Melville							
Chemical Oxygen Demand	<10.0	mg/L	10.0	1	11/11/22 05:35	11/11/22 07:48			
5210B BOD, 5 day		Analytical Method: SM22 5210B Preparation Method: SM22 5210B Pace Analytical Services - Melville							
BOD, 5 day	<2.0	mg/L	2.0	1	10/29/22 09:03	11/03/22 11:21			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Melville							
Bromide	<0.50	mg/L	0.50	1		11/22/22 11:11	24959-67-9		
Chloride	21.3	mg/L	2.0	1		11/22/22 11:11	16887-00-6		
Sulfate	27.8	mg/L	5.0	1		11/22/22 11:11	14808-79-8		
351.2 Total Kjeldahl Nitrogen		Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville							
Nitrogen, Kjeldahl, Total	0.11	mg/L	0.10	1	11/14/22 05:42	11/14/22 12:26	7727-37-9		
353.2 Nitrogen, NO2/NO3 unpres		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrate as N	<0.050	mg/L	0.050	1		10/29/22 00:47	14797-55-8		
Nitrate-Nitrite (as N)	<0.050	mg/L	0.050	1		10/29/22 00:47	7727-37-9		
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2 Pace Analytical Services - Melville							
Nitrite as N	<0.050	mg/L	0.050	1		10/28/22 22:51	14797-65-0		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville							
Nitrogen, Ammonia	<0.10	mg/L	0.10	1		11/01/22 12:14	7664-41-7		
5310B TOC as NPOC		Analytical Method: SM22 5310B Pace Analytical Services - Melville							
Total Organic Carbon	<1.0	mg/L	1.0	1		11/02/22 23:01	7440-44-0		
9014 Cyanide, Total		Analytical Method: EPA 9014 Total Cyanide Preparation Method: EPA 9010C Pace Analytical Services - Melville							
Cyanide	<10.0	ua/L	10.0	1	11/10/22 13:07	11/10/22 15:10	57-12-5		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch:	280006	Analysis Method:	EPA 6010C
QC Batch Method:	EPA 6010C	Analysis Description:	6010 MET Dissolved
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70234795012

METHOD BLANK: 1415386 Matrix: Water

Associated Lab Samples: 70234795012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium, Dissolved	ug/L	<2.5	2.5	10/31/22 13:55	
Calcium, Dissolved	ug/L	<200	200	10/31/22 13:55	
Iron, Dissolved	ug/L	<100	100	10/31/22 13:55	
Lead, Dissolved	ug/L	<5.0	5.0	10/31/22 13:55	
Magnesium, Dissolved	ug/L	<200	200	10/31/22 13:55	
Manganese, Dissolved	ug/L	<10.0	10.0	10/31/22 13:55	
Potassium, Dissolved	ug/L	<5000	5000	10/31/22 13:55	
Sodium, Dissolved	ug/L	<5000	5000	10/31/22 13:55	

LABORATORY CONTROL SAMPLE: 1415387

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium, Dissolved	ug/L	500	511	102	80-120	
Calcium, Dissolved	ug/L	25000	26400	106	80-120	
Iron, Dissolved	ug/L	12500	12700	101	80-120	
Lead, Dissolved	ug/L	500	502	100	80-120	
Magnesium, Dissolved	ug/L	25000	25800	103	80-120	
Manganese, Dissolved	ug/L	500	501	100	80-120	
Potassium, Dissolved	ug/L	25000	24600	98	80-120	
Sodium, Dissolved	ug/L	25000	25800	103	80-120	

MATRIX SPIKE SAMPLE: 1415389

Parameter	Units	70234795012 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cadmium, Dissolved	ug/L	<2.5	500	498	100	75-125	
Calcium, Dissolved	ug/L	<200	25000	25300	101	75-125	
Iron, Dissolved	ug/L	<100	12500	12000	96	75-125	
Lead, Dissolved	ug/L	<5.0	500	473	95	75-125	
Magnesium, Dissolved	ug/L	<200	25000	24700	99	75-125	
Manganese, Dissolved	ug/L	<10.0	500	486	97	75-125	
Potassium, Dissolved	ug/L	<5000	25000	24200	94	75-125	
Sodium, Dissolved	ug/L	<5000	25000	24800	99	75-125	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

SAMPLE DUPLICATE: 1415388

Parameter	Units	70234795012 Result	Dup Result	RPD	Qualifiers
Cadmium, Dissolved	ug/L	<2.5	<2.5		
Calcium, Dissolved	ug/L	<200	<200		
Iron, Dissolved	ug/L	<100	<100		
Lead, Dissolved	ug/L	<5.0	<5.0		
Magnesium, Dissolved	ug/L	<200	<200		
Manganese, Dissolved	ug/L	<10.0	<10.0		
Potassium, Dissolved	ug/L	<5000	<5000		
Sodium, Dissolved	ug/L	<5000	<5000		

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch:	280521	Analysis Method:	EPA 6010C
QC Batch Method:	EPA 3005A	Analysis Description:	6010 MET Water
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70234795003, 70234795004, 70234795005, 70234795006, 70234795007

METHOD BLANK: 1418204

Matrix: Water

Associated Lab Samples: 70234795003, 70234795004, 70234795005, 70234795006, 70234795007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<10.0	10.0	11/05/22 12:51	
Cadmium	ug/L	<2.5	2.5	11/05/22 12:51	
Calcium	ug/L	<200	200	11/05/22 12:51	
Iron	ug/L	<100	100	11/05/22 12:51	
Lead	ug/L	<5.0	5.0	11/05/22 12:51	
Magnesium	ug/L	<200	200	11/05/22 12:51	
Manganese	ug/L	<10.0	10.0	11/05/22 12:51	
Potassium	ug/L	<5000	5000	11/05/22 12:51	
Sodium	ug/L	<5000	5000	11/05/22 12:51	

LABORATORY CONTROL SAMPLE: 1418205

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	464	93	80-120	
Cadmium	ug/L	500	489	98	80-120	
Calcium	ug/L	25000	24600	98	80-120	
Iron	ug/L	12500	12100	97	80-120	
Lead	ug/L	500	498	100	80-120	
Magnesium	ug/L	25000	24200	97	80-120	
Manganese	ug/L	500	477	95	80-120	
Potassium	ug/L	25000	22500	90	80-120	
Sodium	ug/L	25000	24500	98	80-120	

MATRIX SPIKE SAMPLE: 1419231

Parameter	Units	30528090005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	ND	500	464	91	75-125	
Cadmium	ug/L	ND	500	479	96	75-125	
Calcium	ug/L	86700	12500	101000	114	75-125	
Iron	ug/L	403	5000	5180	96	75-125	
Lead	ug/L	ND	500	490	98	75-125	
Magnesium	ug/L	11200	12500	23100	95	75-125	
Manganese	ug/L	62.0	500	533	94	75-125	
Potassium	ug/L	9880	12500	21300	91	75-125	
Sodium	ug/L	10700	12500	24700	112	75-125	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

SAMPLE DUPLICATE: 1419230

Parameter	Units	30528090005 Result	Dup Result	RPD	Qualifiers
Arsenic	ug/L	ND	<10.0		
Cadmium	ug/L	ND	<2.5		
Calcium	ug/L	86700	88800	2	
Iron	ug/L	403	399	1	
Lead	ug/L	ND	<5.0		
Magnesium	ug/L	11200	11300	1	
Manganese	ug/L	62.0	63.1	2	
Potassium	ug/L	9880	9970	1	
Sodium	ug/L	10700	10500	2	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch:	280951	Analysis Method:	EPA 6010C
QC Batch Method:	EPA 3005A	Analysis Description:	6010 MET Water
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70234795008, 70234795009, 70234795010, 70234795011, 70234795012

METHOD BLANK: 1420287

Matrix: Water

Associated Lab Samples: 70234795008, 70234795009, 70234795010, 70234795011, 70234795012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<10.0	10.0	11/07/22 17:38	
Cadmium	ug/L	<2.5	2.5	11/07/22 17:38	
Calcium	ug/L	<200	200	11/07/22 17:38	
Iron	ug/L	<100	100	11/07/22 17:38	
Lead	ug/L	<5.0	5.0	11/07/22 17:38	
Magnesium	ug/L	<200	200	11/07/22 17:38	
Manganese	ug/L	<10.0	10.0	11/07/22 17:38	
Potassium	ug/L	<5000	5000	11/07/22 17:38	
Sodium	ug/L	<5000	5000	11/07/22 17:38	

LABORATORY CONTROL SAMPLE: 1420288

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	479	96	80-120	
Cadmium	ug/L	500	491	98	80-120	
Calcium	ug/L	25000	24800	99	80-120	
Iron	ug/L	12500	11900	95	80-120	
Lead	ug/L	500	497	99	80-120	
Magnesium	ug/L	25000	24300	97	80-120	
Manganese	ug/L	500	488	98	80-120	
Potassium	ug/L	25000	23800	95	80-120	
Sodium	ug/L	25000	25100	100	80-120	

MATRIX SPIKE SAMPLE: 1420290

Parameter	Units	70234886005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	<10.0	500	499	99	75-125	
Cadmium	ug/L	<2.5	500	506	101	75-125	
Calcium	ug/L	117000	12500	144000	216	75-125	M1
Iron	ug/L	174	5000	5330	103	75-125	
Lead	ug/L	<5.0	500	506	101	75-125	
Magnesium	ug/L	20300	12500	35700	123	75-125	
Manganese	ug/L	<10.0	500	512	101	75-125	
Potassium	ug/L	<5000	12500	14600	108	75-125	
Sodium	ug/L	<5000	12500	16600	118	75-125	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

SAMPLE DUPLICATE: 1420289

Parameter	Units	70234886005 Result	Dup Result	RPD	Qualifiers
Arsenic	ug/L	<10.0	<10.0		
Cadmium	ug/L	<2.5	<2.5		
Calcium	ug/L	117000	120000	3	
Iron	ug/L	174	175	1	
Lead	ug/L	<5.0	<5.0		
Magnesium	ug/L	20300	20600	1	
Manganese	ug/L	<10.0	<10.0		
Potassium	ug/L	<5000	<5000		
Sodium	ug/L	<5000	<5000		

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL
Pace Project No.: 70234795

QC Batch:	279850	Analysis Method:	EPA 8260C/5030C
QC Batch Method:	EPA 8260C/5030C	Analysis Description:	8260 MSV
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70234795001, 70234795002

METHOD BLANK: 1414731 Matrix: Water

Associated Lab Samples: 70234795001, 70234795002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<5.0	5.0	10/28/22 15:35	
1,1,1-Trichloroethane	ug/L	<5.0	5.0	10/28/22 15:35	
1,1,2,2-Tetrachloroethane	ug/L	<5.0	5.0	10/28/22 15:35	
1,1,2-Trichloroethane	ug/L	<5.0	5.0	10/28/22 15:35	
1,1-Dichloroethane	ug/L	<5.0	5.0	10/28/22 15:35	
1,1-Dichloroethene	ug/L	<5.0	5.0	10/28/22 15:35	
1,2,3-Trichloropropane	ug/L	<5.0	5.0	10/28/22 15:35	
1,2-Dibromo-3-chloropropane	ug/L	<5.0	5.0	10/28/22 15:35	
1,2-Dibromoethane (EDB)	ug/L	<5.0	5.0	10/28/22 15:35	
1,2-Dichlorobenzene	ug/L	<5.0	5.0	10/28/22 15:35	
1,2-Dichloroethane	ug/L	<5.0	5.0	10/28/22 15:35	
1,2-Dichloropropane	ug/L	<5.0	5.0	10/28/22 15:35	
1,4-Dichlorobenzene	ug/L	<5.0	5.0	10/28/22 15:35	
2-Butanone (MEK)	ug/L	<5.0	5.0	10/28/22 15:35	
2-Hexanone	ug/L	<5.0	5.0	10/28/22 15:35	
4-Methyl-2-pentanone (MIBK)	ug/L	<5.0	5.0	10/28/22 15:35	
Acetone	ug/L	<5.0	5.0	10/28/22 15:35	
Acrylonitrile	ug/L	<5.0	5.0	10/28/22 15:35	
Benzene	ug/L	<5.0	5.0	10/28/22 15:35	
Bromochloromethane	ug/L	<5.0	5.0	10/28/22 15:35	
Bromodichloromethane	ug/L	<5.0	5.0	10/28/22 15:35	
Bromoform	ug/L	<5.0	5.0	10/28/22 15:35	
Bromomethane	ug/L	<5.0	5.0	10/28/22 15:35	
Carbon disulfide	ug/L	<5.0	5.0	10/28/22 15:35	v3
Carbon tetrachloride	ug/L	<5.0	5.0	10/28/22 15:35	
Chlorobenzene	ug/L	<5.0	5.0	10/28/22 15:35	
Chloroethane	ug/L	<5.0	5.0	10/28/22 15:35	
Chloroform	ug/L	<5.0	5.0	10/28/22 15:35	
Chloromethane	ug/L	<5.0	5.0	10/28/22 15:35	v3
cis-1,2-Dichloroethene	ug/L	<5.0	5.0	10/28/22 15:35	
cis-1,3-Dichloropropene	ug/L	<5.0	5.0	10/28/22 15:35	
Dibromochloromethane	ug/L	<5.0	5.0	10/28/22 15:35	
Dibromomethane	ug/L	<5.0	5.0	10/28/22 15:35	
Ethylbenzene	ug/L	<5.0	5.0	10/28/22 15:35	
Iodomethane	ug/L	<5.0	5.0	10/28/22 15:35	
Methylene Chloride	ug/L	<5.0	5.0	10/28/22 15:35	
Styrene	ug/L	<5.0	5.0	10/28/22 15:35	
Tetrachloroethene	ug/L	<5.0	5.0	10/28/22 15:35	
Toluene	ug/L	<5.0	5.0	10/28/22 15:35	
trans-1,2-Dichloroethene	ug/L	<5.0	5.0	10/28/22 15:35	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL
Pace Project No.: 70234795

METHOD BLANK: 1414731

Matrix: Water

Associated Lab Samples: 70234795001, 70234795002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,3-Dichloropropene	ug/L	<5.0	5.0	10/28/22 15:35	
trans-1,4-Dichloro-2-butene	ug/L	<5.0	5.0	10/28/22 15:35	v3
Trichloroethene	ug/L	<5.0	5.0	10/28/22 15:35	
Trichlorofluoromethane	ug/L	<5.0	5.0	10/28/22 15:35	
Vinyl acetate	ug/L	<5.0	5.0	10/28/22 15:35	
Vinyl chloride	ug/L	<5.0	5.0	10/28/22 15:35	v3
Xylene (Total)	ug/L	<5.0	5.0	10/28/22 15:35	
1,2-Dichloroethane-d4 (S)	%	102	81-122	10/28/22 15:35	
4-Bromofluorobenzene (S)	%	93	79-118	10/28/22 15:35	
Toluene-d8 (S)	%	99	82-122	10/28/22 15:35	

LABORATORY CONTROL SAMPLE: 1414732

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	50.9	102	75-122	
1,1,1-Trichloroethane	ug/L	50	50.9	102	72-126	
1,1,2,2-Tetrachloroethane	ug/L	50	53.1	106	70-127	
1,1,2-Trichloroethane	ug/L	50	56.8	114	81-119	
1,1-Dichloroethane	ug/L	50	49.6	99	72-126	
1,1-Dichloroethene	ug/L	50	42.7	85	66-133	
1,2,3-Trichloropropane	ug/L	50	52.0	104	69-120	
1,2-Dibromo-3-chloropropane	ug/L	50	46.1	92	47-133	
1,2-Dibromoethane (EDB)	ug/L	50	52.7	105	81-123	
1,2-Dichlorobenzene	ug/L	50	51.0	102	80-117	
1,2-Dichloroethane	ug/L	50	55.4	111	69-134	
1,2-Dichloropropane	ug/L	50	54.3	109	75-125	
1,4-Dichlorobenzene	ug/L	50	48.9	98	80-117	
2-Butanone (MEK)	ug/L	50	68.7	137	33-165 IH,v1	
2-Hexanone	ug/L	50	50.4	101	50-128	
4-Methyl-2-pentanone (MIBK)	ug/L	50	51.4	103	62-131	
Acetone	ug/L	50	47.6	95	14-156 v1	
Acrylonitrile	ug/L	50	50.5	101	60-136	
Benzene	ug/L	50	56.0	112	78-117	
Bromochloromethane	ug/L	50	47.1	94	77-122	
Bromodichloromethane	ug/L	50	57.9	116	80-123	
Bromoform	ug/L	50	56.0	112	49-138	
Bromomethane	ug/L	50	48.1	96	10-143	
Carbon disulfide	ug/L	50	38.8	78	66-133 v3	
Carbon tetrachloride	ug/L	50	48.0	96	64-135	
Chlorobenzene	ug/L	50	51.9	104	79-117	
Chloroethane	ug/L	50	51.7	103	31-156	
Chloroform	ug/L	50	52.7	105	79-123	
Chloromethane	ug/L	50	32.0	64	39-116 v3	
cis-1,2-Dichloroethene	ug/L	50	48.3	97	77-125	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

LABORATORY CONTROL SAMPLE: 1414732

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,3-Dichloropropene	ug/L	50	52.3	105	78-131	
Dibromochloromethane	ug/L	50	58.5	117	65-123	
Dibromomethane	ug/L	50	53.3	107	81-123	
Ethylbenzene	ug/L	50	50.8	102	79-115	
Iodomethane	ug/L	50	40.0	80	10-183	
Methylene Chloride	ug/L	50	45.0	90	67-123	
Styrene	ug/L	50	55.3	111	82-121	
Tetrachloroethene	ug/L	50	53.9	108	65-120	
Toluene	ug/L	50	53.4	107	80-114	
trans-1,2-Dichloroethene	ug/L	50	43.6	87	74-123	
trans-1,3-Dichloropropene	ug/L	50	50.0	100	73-135	
trans-1,4-Dichloro-2-butene	ug/L	50	38.6	77	52-137 v3	
Trichloroethene	ug/L	50	54.1	108	79-115	
Trichlorofluoromethane	ug/L	50	56.2	112	51-136	
Vinyl acetate	ug/L	50	38.8	78	49-136	
Vinyl chloride	ug/L	50	38.0	76	49-118 v3	
Xylene (Total)	ug/L	150	155	103	80-118	
1,2-Dichloroethane-d4 (S)	%			103	81-122	
4-Bromofluorobenzene (S)	%			97	79-118	
Toluene-d8 (S)	%			98	82-122	

MATRIX SPIKE SAMPLE: 1415187

Parameter	Units	70233766011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<1.0	50	49.7	99	65-122	
1,1,1-Trichloroethane	ug/L	<1.0	50	51.7	103	72-123	
1,1,2,2-Tetrachloroethane	ug/L	<1.0	50	53.4	107	64-133	
1,1,2-Trichloroethane	ug/L	<1.0	50	58.0	116	78-120	
1,1-Dichloroethane	ug/L	<1.0	50	52.7	105	70-124	
1,1-Dichloroethene	ug/L	<1.0	50	46.4	93	61-139	
1,2,3-Trichloropropane	ug/L	<1.0	50	51.7	103	64-120	
1,2-Dibromo-3-chloropropane	ug/L	<1.0	50	46.7	93	32-137	
1,2-Dibromoethane (EDB)	ug/L	<1.0	50	52.7	105	78-121	
1,2-Dichlorobenzene	ug/L	<1.0	50	52.1	104	75-120	
1,2-Dichloroethane	ug/L	<1.0	50	57.6	115	58-138	
1,2-Dichloropropane	ug/L	<1.0	50	56.5	113	74-122	
1,4-Dichlorobenzene	ug/L	<1.0	50	50.4	101	76-118	
2-Butanone (MEK)	ug/L	<5.0	50	63.8	128	33-148 IH,v1	
2-Hexanone	ug/L	<5.0	50	48.3	97	49-124	
4-Methyl-2-pentanone (MIBK)	ug/L	<5.0	50	51.6	103	60-136	
Acetone	ug/L	2.0J	50	33.6	63	35-112 v1	
Acrylonitrile	ug/L	<1.0	50	49.1	98	45-132	
Benzene	ug/L	<1.0	50	57.7	115	70-130	
Bromochloromethane	ug/L	<1.0	50	49.7	99	70-122	
Bromodichloromethane	ug/L	<1.0	50	57.1	114	74-122	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

MATRIX SPIKE SAMPLE: 1415187		70233766011	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Bromoform	ug/L	<1.0	50	51.9	104	39-139	
Bromomethane	ug/L	<1.0	50	48.4	97	10-130	
Carbon disulfide	ug/L	<1.0	50	40.5	81	60-129	v3
Carbon tetrachloride	ug/L	<1.0	50	47.3	95	56-143	
Chlorobenzene	ug/L	<1.0	50	52.8	106	74-122	
Chloroethane	ug/L	<1.0	50	60.0	120	35-146	
Chloroform	ug/L	<1.0	50	54.7	109	71-129	
Chloromethane	ug/L	<1.0	50	34.9	70	29-112	v3
cis-1,2-Dichloroethene	ug/L	<1.0	50	49.7	99	73-129	
cis-1,3-Dichloropropene	ug/L	<1.0	50	50.9	102	67-130	
Dibromochloromethane	ug/L	<1.0	50	57.2	114	55-126	
Dibromomethane	ug/L	<1.0	50	53.9	108	71-127	
Ethylbenzene	ug/L	<1.0	50	51.8	104	70-126	
Iodomethane	ug/L	<4.0	50	46.7	93	10-167	
Methylene Chloride	ug/L	<1.0	50	45.6	91	69-117	
Styrene	ug/L	<1.0	50	55.8	112	79-123	
Tetrachloroethene	ug/L	<1.0	50	53.7	107	64-124	
Toluene	ug/L	<1.0	50	54.3	109	76-123	
trans-1,2-Dichloroethene	ug/L	<1.0	50	47.4	95	69-127	
trans-1,3-Dichloropropene	ug/L	<1.0	50	47.7	95	61-130	
trans-1,4-Dichloro-2-butene	ug/L	<1.0	50	40.5	81	18-144	v3
Trichloroethene	ug/L	<1.0	50	55.2	110	73-125	
Trichlorofluoromethane	ug/L	<1.0	50	59.7	119	59-129	
Vinyl acetate	ug/L	<1.0	50	38.9	78	34-123	
Vinyl chloride	ug/L	<1.0	50	41.2	82	33-127	v3
Xylene (Total)	ug/L	<3.0	150	157	105	78-123	
1,2-Dichloroethane-d4 (S)	%				107	81-122	
4-Bromofluorobenzene (S)	%				98	79-118	
Toluene-d8 (S)	%				97	82-122	

SAMPLE DUPLICATE: 1415186

Parameter	Units	70233766013	Dup	RPD	Qualifiers
		Result	Result		
1,1,1,2-Tetrachloroethane	ug/L	<1.0	<5.0		
1,1,1-Trichloroethane	ug/L	<1.0	<5.0		
1,1,2,2-Tetrachloroethane	ug/L	<1.0	<5.0		
1,1,2-Trichloroethane	ug/L	<1.0	<5.0		
1,1-Dichloroethane	ug/L	4.2	5.0	5	
1,1-Dichloroethene	ug/L	<1.0	<5.0		
1,2,3-Trichloropropane	ug/L	<1.0	<5.0		
1,2-Dibromo-3-chloropropane	ug/L	<1.0	<5.0		
1,2-Dibromoethane (EDB)	ug/L	<1.0	<5.0		
1,2-Dichlorobenzene	ug/L	<1.0	<5.0		
1,2-Dichloroethane	ug/L	<1.0	<5.0		
1,2-Dichloropropane	ug/L	<1.0	<5.0		

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

SAMPLE DUPLICATE: 1415186

Parameter	Units	70233766013 Result	Dup Result	RPD	Qualifiers
1,4-Dichlorobenzene	ug/L	<1.0	<5.0		
2-Butanone (MEK)	ug/L	<5.0	<5.0		
2-Hexanone	ug/L	<5.0	<5.0		
4-Methyl-2-pentanone (MIBK)	ug/L	<5.0	<5.0		
Acetone	ug/L	<5.0	<5.0		
Acrylonitrile	ug/L	<1.0	<5.0		
Benzene	ug/L	<1.0	<5.0		
Bromochloromethane	ug/L	<1.0	<5.0		
Bromodichloromethane	ug/L	<1.0	<5.0		
Bromoform	ug/L	<1.0	<5.0		
Bromomethane	ug/L	<1.0	<5.0		
Carbon disulfide	ug/L	<1.0	<5.0		v3
Carbon tetrachloride	ug/L	<1.0	<5.0		
Chlorobenzene	ug/L	<1.0	<5.0		
Chloroethane	ug/L	<1.0	<5.0		
Chloroform	ug/L	<1.0	<5.0		
Chloromethane	ug/L	<1.0	<5.0		v3
cis-1,2-Dichloroethene	ug/L	4.5	5.0	7	
cis-1,3-Dichloropropene	ug/L	<1.0	<5.0		
Dibromochloromethane	ug/L	<1.0	<5.0		
Dibromomethane	ug/L	<1.0	<5.0		
Ethylbenzene	ug/L	<1.0	<5.0		
Iodomethane	ug/L	<4.0	<5.0		
Methylene Chloride	ug/L	<1.0	<5.0		
Styrene	ug/L	<1.0	<5.0		
Tetrachloroethene	ug/L	5.5	5.4	3	
Toluene	ug/L	<1.0	<5.0		
trans-1,2-Dichloroethene	ug/L	<1.0	<5.0		
trans-1,3-Dichloropropene	ug/L	<1.0	<5.0		
trans-1,4-Dichloro-2-butene	ug/L	<1.0	<5.0		v3
Trichloroethene	ug/L	9.7	9.1	7	
Trichlorofluoromethane	ug/L	<1.0	<5.0		
Vinyl acetate	ug/L	<1.0	<5.0		
Vinyl chloride	ug/L	<1.0	<5.0		v3
Xylene (Total)	ug/L	<3.0	<5.0		
1,2-Dichloroethane-d4 (S)	%	106	105		
4-Bromofluorobenzene (S)	%	92	91		
Toluene-d8 (S)	%	97	96		

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch: 280925

Analysis Method: EPA 8260C/5030C

QC Batch Method: EPA 8260C/5030C

Analysis Description: 8260 MSV

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234795012

METHOD BLANK: 1420207

Matrix: Water

Associated Lab Samples: 70234795012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<5.0	5.0	11/06/22 12:58	
1,1,1-Trichloroethane	ug/L	<5.0	5.0	11/06/22 12:58	
1,1,2,2-Tetrachloroethane	ug/L	<5.0	5.0	11/06/22 12:58	
1,1,2-Trichloroethane	ug/L	<5.0	5.0	11/06/22 12:58	
1,1-Dichloroethane	ug/L	<5.0	5.0	11/06/22 12:58	
1,1-Dichloroethene	ug/L	<5.0	5.0	11/06/22 12:58	
1,2,3-Trichloropropane	ug/L	<5.0	5.0	11/06/22 12:58	
1,2-Dibromo-3-chloropropane	ug/L	<5.0	5.0	11/06/22 12:58	
1,2-Dibromoethane (EDB)	ug/L	<5.0	5.0	11/06/22 12:58	
1,2-Dichlorobenzene	ug/L	<5.0	5.0	11/06/22 12:58	
1,2-Dichloroethane	ug/L	<5.0	5.0	11/06/22 12:58	
1,2-Dichloropropane	ug/L	<5.0	5.0	11/06/22 12:58	
1,4-Dichlorobenzene	ug/L	<5.0	5.0	11/06/22 12:58	
2-Butanone (MEK)	ug/L	<5.0	5.0	11/06/22 12:58	
2-Hexanone	ug/L	<5.0	5.0	11/06/22 12:58	
4-Methyl-2-pentanone (MIBK)	ug/L	<5.0	5.0	11/06/22 12:58	
Acetone	ug/L	<5.0	5.0	11/06/22 12:58	
Acrylonitrile	ug/L	<5.0	5.0	11/06/22 12:58	
Benzene	ug/L	<5.0	5.0	11/06/22 12:58	
Bromochloromethane	ug/L	<5.0	5.0	11/06/22 12:58	
Bromodichloromethane	ug/L	<5.0	5.0	11/06/22 12:58	
Bromoform	ug/L	<5.0	5.0	11/06/22 12:58	
Bromomethane	ug/L	<5.0	5.0	11/06/22 12:58	
Carbon disulfide	ug/L	<5.0	5.0	11/06/22 12:58	
Carbon tetrachloride	ug/L	<5.0	5.0	11/06/22 12:58	
Chlorobenzene	ug/L	<5.0	5.0	11/06/22 12:58	
Chloroethane	ug/L	<5.0	5.0	11/06/22 12:58	
Chloroform	ug/L	<5.0	5.0	11/06/22 12:58	
Chloromethane	ug/L	<5.0	5.0	11/06/22 12:58	
cis-1,2-Dichloroethene	ug/L	<5.0	5.0	11/06/22 12:58	
cis-1,3-Dichloropropene	ug/L	<5.0	5.0	11/06/22 12:58	
Dibromochloromethane	ug/L	<5.0	5.0	11/06/22 12:58	
Dibromomethane	ug/L	<5.0	5.0	11/06/22 12:58	
Ethylbenzene	ug/L	<5.0	5.0	11/06/22 12:58	
Iodomethane	ug/L	<5.0	5.0	11/06/22 12:58	
Methylene Chloride	ug/L	<5.0	5.0	11/06/22 12:58	
Styrene	ug/L	<5.0	5.0	11/06/22 12:58	
Tetrachloroethene	ug/L	<5.0	5.0	11/06/22 12:58	
Toluene	ug/L	<5.0	5.0	11/06/22 12:58	
trans-1,2-Dichloroethene	ug/L	<5.0	5.0	11/06/22 12:58	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

METHOD BLANK: 1420207

Matrix: Water

Associated Lab Samples: 70234795012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,3-Dichloropropene	ug/L	<5.0	5.0	11/06/22 12:58	
trans-1,4-Dichloro-2-butene	ug/L	<5.0	5.0	11/06/22 12:58	
Trichloroethene	ug/L	<5.0	5.0	11/06/22 12:58	
Trichlorofluoromethane	ug/L	<5.0	5.0	11/06/22 12:58	
Vinyl acetate	ug/L	<5.0	5.0	11/06/22 12:58	v3
Vinyl chloride	ug/L	<5.0	5.0	11/06/22 12:58	
Xylene (Total)	ug/L	<5.0	5.0	11/06/22 12:58	
1,2-Dichloroethane-d4 (S)	%	104	81-122	11/06/22 12:58	
4-Bromofluorobenzene (S)	%	91	79-118	11/06/22 12:58	
Toluene-d8 (S)	%	106	82-122	11/06/22 12:58	

LABORATORY CONTROL SAMPLE: 1420208

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	50.3	101	75-122	
1,1,1-Trichloroethane	ug/L	50	43.0	86	72-126	
1,1,2,2-Tetrachloroethane	ug/L	50	51.4	103	70-127	
1,1,2-Trichloroethane	ug/L	50	52.0	104	81-119	
1,1-Dichloroethane	ug/L	50	41.4	83	72-126	
1,1-Dichloroethene	ug/L	50	51.9	104	66-133	
1,2,3-Trichloropropane	ug/L	50	53.3	107	69-120	
1,2-Dibromo-3-chloropropane	ug/L	50	39.4	79	47-133	
1,2-Dibromoethane (EDB)	ug/L	50	49.2	98	81-123	
1,2-Dichlorobenzene	ug/L	50	50.5	101	80-117	
1,2-Dichloroethane	ug/L	50	47.4	95	69-134	
1,2-Dichloropropane	ug/L	50	47.5	95	75-125	
1,4-Dichlorobenzene	ug/L	50	48.8	98	80-117	
2-Butanone (MEK)	ug/L	50	51.1	102	33-165	IH
2-Hexanone	ug/L	50	55.0	110	50-128	
4-Methyl-2-pentanone (MIBK)	ug/L	50	48.1	96	62-131	
Acetone	ug/L	50	78.3	157	14-156	L1
Acrylonitrile	ug/L	50	43.6	87	60-136	
Benzene	ug/L	50	48.3	97	78-117	
Bromochloromethane	ug/L	50	45.4	91	77-122	
Bromodichloromethane	ug/L	50	50.5	101	80-123	
Bromoform	ug/L	50	55.3	111	49-138	
Bromomethane	ug/L	50	53.8	108	10-143	
Carbon disulfide	ug/L	50	50.5	101	66-133	
Carbon tetrachloride	ug/L	50	41.6	83	64-135	
Chlorobenzene	ug/L	50	50.6	101	79-117	
Chloroethane	ug/L	50	56.9	114	31-156	v1
Chloroform	ug/L	50	46.3	93	79-123	
Chloromethane	ug/L	50	37.2	74	39-116	
cis-1,2-Dichloroethene	ug/L	50	42.4	85	77-125	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

LABORATORY CONTROL SAMPLE: 1420208

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,3-Dichloropropene	ug/L	50	44.6	89	78-131	
Dibromochloromethane	ug/L	50	59.0	118	65-123	
Dibromomethane	ug/L	50	51.9	104	81-123	
Ethylbenzene	ug/L	50	47.9	96	79-115	
Iodomethane	ug/L	50	58.0	116	10-183	
Methylene Chloride	ug/L	50	50.2	100	67-123	
Styrene	ug/L	50	51.7	103	82-121	
Tetrachloroethene	ug/L	50	52.1	104	65-120	
Toluene	ug/L	50	47.6	95	80-114	
trans-1,2-Dichloroethene	ug/L	50	53.0	106	74-123	
trans-1,3-Dichloropropene	ug/L	50	42.1	84	73-135	
trans-1,4-Dichloro-2-butene	ug/L	50	41.3	83	52-137	
Trichloroethene	ug/L	50	46.7	93	79-115	
Trichlorofluoromethane	ug/L	50	70.0	140	51-136 L1,v1	
Vinyl acetate	ug/L	50	40.8	82	49-136 v3	
Vinyl chloride	ug/L	50	38.4	77	49-118	
Xylene (Total)	ug/L	150	147	98	80-118	
1,2-Dichloroethane-d4 (S)	%			107	81-122	
4-Bromofluorobenzene (S)	%			102	79-118	
Toluene-d8 (S)	%			108	82-122	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1420230 1420231

Parameter	Units	70235441001		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.							
1,1,1,2-Tetrachloroethane	ug/L	ND	50	50	50	47.1	44.5	94	89	65-122	6	
1,1,1-Trichloroethane	ug/L	ND	50	50	50	43.9	42.3	88	85	72-123	4	
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	50	47.8	49.9	96	100	64-133	4	
1,1,2-Trichloroethane	ug/L	ND	50	50	50	51.7	48.4	103	97	78-120	7	
1,1-Dichloroethane	ug/L	ND	50	50	50	43.7	41.3	87	83	70-124	6	
1,1-Dichloroethene	ug/L	ND	50	50	50	44.5	41.4	89	83	61-139	7	
1,2,3-Trichloropropane	ug/L	ND	50	50	50	50.9	50.2	102	100	64-120	1	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	50	37.4	37.1	75	74	32-137	1	
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	50	48.1	44.7	96	89	78-121	7	
1,2-Dichlorobenzene	ug/L	ND	50	50	50	47.9	46.8	96	94	75-120	2	
1,2-Dichloroethane	ug/L	ND	50	50	50	47.5	46.3	95	93	58-138	3	
1,2-Dichloropropane	ug/L	ND	50	50	50	46.1	43.9	92	88	74-122	5	
1,4-Dichlorobenzene	ug/L	ND	50	50	50	46.6	45.5	93	91	76-118	2	
2-Butanone (MEK)	ug/L	ND	50	50	50	38.7	39.7	77	79	33-148	3 IH	
2-Hexanone	ug/L	ND	50	50	50	39.8	40.4	80	81	49-124	1	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	50	50	50	41.9	42.7	84	85	60-136	2	
Acetone	ug/L	ND	50	50	50	27.9	28.4	56	57	35-112	2	
Acrylonitrile	ug/L	ND	50	50	50	39.8	36.8	80	74	45-132	8	
Benzene	ug/L	ND	50	50	50	49.6	46.5	99	93	70-130	6	
Bromochloromethane	ug/L	ND	50	50	50	46.5	43.7	93	87	70-122	6	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1420230 1420231											
Parameter	Units	70235441001		MS	MSD	MS	MSD	MS	MSD	% Rec	RPD
		Result	Conc.	Spike	Spike						
				Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	Qual
Bromodichloromethane	ug/L	ND	50	50	50	49.8	47.9	100	96	74-122	4
Bromoform	ug/L	ND	50	50	50	48.0	51.0	96	102	39-139	6
Bromomethane	ug/L	ND	50	50	50	56.7	55.4	113	111	10-130	2
Carbon disulfide	ug/L	ND	50	50	50	43.2	40.3	86	81	60-129	7
Carbon tetrachloride	ug/L	ND	50	50	50	43.4	43.4	87	87	56-143	0
Chlorobenzene	ug/L	ND	50	50	50	48.1	46.5	96	93	74-122	4
Chloroethane	ug/L	ND	50	50	50	63.1	59.7	126	119	35-146	6 v1
Chloroform	ug/L	ND	50	50	50	48.0	45.9	96	92	71-129	4
Chloromethane	ug/L	ND	50	50	50	37.7	35.2	75	70	29-112	7
cis-1,2-Dichloroethene	ug/L	ND	50	50	50	44.4	43.0	89	86	73-129	3
cis-1,3-Dichloropropene	ug/L	ND	50	50	50	41.8	40.5	84	81	67-130	3
Dibromochloromethane	ug/L	ND	50	50	50	53.5	53.1	107	106	55-126	1
Dibromomethane	ug/L	ND	50	50	50	49.1	47.4	98	95	71-127	4
Ethylbenzene	ug/L	ND	50	50	50	47.0	44.8	94	90	70-126	5
Iodomethane	ug/L	ND	50	50	50	44.9	42.4	90	85	10-167	6
Methylene Chloride	ug/L	ND	50	50	50	41.1	39.7	82	79	69-117	4
Styrene	ug/L	ND	50	50	50	49.5	48.0	99	96	79-123	3
Tetrachloroethene	ug/L	ND	50	50	50	50.5	47.2	101	94	64-124	7
Toluene	ug/L	ND	50	50	50	48.2	45.5	96	91	76-123	6
trans-1,2-Dichloroethene	ug/L	ND	50	50	50	45.5	42.3	91	85	69-127	7
trans-1,3-Dichloropropene	ug/L	ND	50	50	50	39.0	39.5	78	79	61-130	1
trans-1,4-Dichloro-2-butene	ug/L	ND	50	50	50	36.4	36.5	73	73	18-144	0
Trichloroethene	ug/L	ND	50	50	50	47.7	45.5	95	91	73-125	5
Trichlorofluoromethane	ug/L	ND	50	50	50	75.3	67.2	151	134	59-129	11 M0,v1
Vinyl acetate	ug/L	ND	50	50	50	30.1	36.6	60	73	34-123	19 v3
Vinyl chloride	ug/L	ND	50	50	50	43.7	39.6	87	79	33-127	10
Xylene (Total)	ug/L	ND	150	150	150	144	136	96	91	78-123	6
1,2-Dichloroethane-d4 (S)	%							108	106	81-122	
4-Bromofluorobenzene (S)	%							97	97	79-118	
Toluene-d8 (S)	%							107	106	82-122	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch:	280025	Analysis Method:	SM22 2120B
QC Batch Method:	SM22 2120B	Analysis Description:	2120B Color
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011, 70234795012		

METHOD BLANK:	1415454	Matrix:	Water
Associated Lab Samples:	70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011, 70234795012		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Apparent Color	units	<5.0	5.0	10/31/22 13:16	

LABORATORY CONTROL SAMPLE: 1415455						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Apparent Color	units	40	40.0	100	90-110	

SAMPLE DUPLICATE: 1415456					
		70234795011	Dup		
Parameter	Units	Result	Result	RPD	Qualifiers
Apparent Color	units	120	110	9	H1
pH	Std. Units	6.6	6.5	0	H1

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch: 281536

Analysis Method: SM22 2320B

QC Batch Method: SM22 2320B

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234795003, 70234795004

METHOD BLANK: 1423271

Matrix: Water

Associated Lab Samples: 70234795003, 70234795004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	<1.0	1.0	11/10/22 10:38	

LABORATORY CONTROL SAMPLE: 1423272

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	25	23.8	95	85-115	

MATRIX SPIKE SAMPLE: 1423274

Parameter	Units	70234698001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	58.9	50	109	100	75-125	

SAMPLE DUPLICATE: 1423273

Parameter	Units	70234698001 Result	Dup Result	RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	58.9	59.4	1	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch:	281538	Analysis Method:	SM22 2320B
QC Batch Method:	SM22 2320B	Analysis Description:	2320B Alkalinity
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234795005, 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011, 70234795012		

METHOD BLANK:	1423279	Matrix:	Water
Associated Lab Samples:	70234795005, 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011, 70234795012		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	<1.0	1.0	11/10/22 15:27	

LABORATORY CONTROL SAMPLE:	1423280					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	25	25.8	103	85-115	

MATRIX SPIKE SAMPLE:	1423282						
Parameter	Units	70234795005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	45.7	50	91.0	91	75-125	

SAMPLE DUPLICATE: 1423281					
Parameter	Units	70234795005 Result	Dup Result	RPD	Qualifiers
Alkalinity, Total as CaCO3	ma/L	45.7	46.0	1	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch:	281560	Analysis Method:	SM22 2340C
QC Batch Method:	SM22 2340C	Analysis Description:	2340C Hardness, Total
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011		

METHOD BLANK:	1423379	Matrix:	Water
Associated Lab Samples:	70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Tot Hardness asCaCO3 (SM 2340B	mg/L	<2.5	2.5	11/10/22 17:33	

LABORATORY CONTROL SAMPLE:	1423380					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tot Hardness asCaCO3 (SM 2340B	mg/L	100	100	100	90-110	

MATRIX SPIKE SAMPLE:	1423381						
		70234853001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Tot Hardness asCaCO3 (SM 2340B	ma/L	16.0	200	216	100	75-125	

MATRIX SPIKE SAMPLE:	1423383						
		70234886001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Tot Hardness asCaCO3 (SM 2340B	ma/L	267	667	920	98	75-125	

SAMPLE DUPLICATE: 1423382					
Parameter	Units	70234853001 Result	Dup Result	RPD	Qualifiers
Tot Hardness asCaCO3 (SM 2340B	ma/L	16.0	18.0	12	

SAMPLE DUPLICATE: 1423384					
Parameter	Units	70234886001 Result	Dup Result	RPD	Qualifiers
Tot Hardness asCaCO3 (SM 2340B	ma/L	267	253	5	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch:	280457	Analysis Method:	SM22 2540C
QC Batch Method:	SM22 2540C	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples: 70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008, 70234795009			

METHOD BLANK: 1417648 Matrix: Water
Associated Lab Samples: 70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008, 70234795009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	11/02/22 19:32	

LABORATORY CONTROL SAMPLE: 1417649

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	500	496	99	85-115	

MATRIX SPIKE SAMPLE: 1417651

Parameter	Units	70234875001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	834	600	1320	81	75-125	

MATRIX SPIKE SAMPLE: 1417653

Parameter	Units	70234795009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	126	300	422	99	75-125	

SAMPLE DUPLICATE: 1417650

Parameter	Units	70234875001 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	834	880	5	

SAMPLE DUPLICATE: 1417652

Parameter	Units	70234795009 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	126	145	14 D6	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch: 280458

Analysis Method: SM22 2540C

QC Batch Method: SM22 2540C

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234795010, 70234795011

METHOD BLANK: 1417654

Matrix: Water

Associated Lab Samples: 70234795010, 70234795011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	11/02/22 20:44	

LABORATORY CONTROL SAMPLE: 1417655

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	500	476	95	85-115	

MATRIX SPIKE SAMPLE: 1417657

Parameter	Units	70234795010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	150	300	427	92	75-125	

MATRIX SPIKE SAMPLE: 1417659

Parameter	Units	70234464015 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	128	300	387	86	75-125	

SAMPLE DUPLICATE: 1417656

Parameter	Units	70234795010 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	150	161	7	D6

SAMPLE DUPLICATE: 1417658

Parameter	Units	70234464015 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	128	124	3	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL
Pace Project No.: 70234795

QC Batch:	280682	Analysis Method:	SM22 2540C
QC Batch Method:	SM22 2540C	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70234795012

METHOD BLANK: 1418977 Matrix: Water

Associated Lab Samples: 70234795012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	11/03/22 18:42	

LABORATORY CONTROL SAMPLE: 1418978

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	500	492	98	85-115	

MATRIX SPIKE SAMPLE: 1418980

Parameter	Units	70234828001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	312	600	838	88	75-125	

MATRIX SPIKE SAMPLE: 1418982

Parameter	Units	70234795012 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	<10.0	300	255	84	75-125	

SAMPLE DUPLICATE: 1418979

Parameter	Units	70234828001 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	312	334	7	D6

SAMPLE DUPLICATE: 1418981

Parameter	Units	70234795012 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	<10.0	<10.0		

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch:	279977	Analysis Method:	SM22 3500-Cr B
QC Batch Method:	SM22 3500-Cr B	Analysis Description:	Chromium, Hexavalent by 3500
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011, 70234795012		

METHOD BLANK:	1415311	Matrix:	Water
Associated Lab Samples:	70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011, 70234795012		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium, Hexavalent	mg/L	<0.020	0.020	10/31/22 12:02	

LABORATORY CONTROL SAMPLE: 1415312						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/L	0.2	0.21	103	85-115	

MATRIX SPIKE SAMPLE:		1415313					
		70234795003	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Chromium, Hexavalent	mg/L	<0.020	0.2	0.21	99	75-125	H3

SAMPLE DUPLICATE: 1415314					
Parameter	Units	70234795004 Result	Dup Result	RPD	Qualifiers
Chromium, Hexavalent	mg/L	<0.020	<0.020		H3

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch:	281729	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011, 70234795012		

METHOD BLANK:	1424245	Matrix:	Water
Associated Lab Samples:	70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011, 70234795012		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<10.0	10.0	11/11/22 07:47	

LABORATORY CONTROL SAMPLE:	1424246					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	500	520	104	90-110	

MATRIX SPIKE SAMPLE:		1424247					
		70234795003	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Chemical Oxygen Demand	mg/L	23.0	1000	1080	106	90-110	

MATRIX SPIKE SAMPLE:		1424249					
		70235492001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Chemical Oxygen Demand	mg/L	928	1000	1890	96	90-110	

SAMPLE DUPLICATE: 1424248					
Parameter	Units	70234795003 Result	Dup Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	23.0	25.2	9	

SAMPLE DUPLICATE: 1424250					
		70235492001	Dup		
Parameter	Units	Result	Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	928	928	0	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch:	279888	Analysis Method:	SM22 5210B
QC Batch Method:	SM22 5210B	Analysis Description:	5210B BOD, 5 day
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011		

METHOD BLANK:	1415016	Matrix:	Water
Associated Lab Samples:	70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	<1.0	1.0	11/03/22 09:45	

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	188	95	84.5-115.4	

Parameter	Units	70234881001 Result	Dup Result	RPD	Qualifiers
BOD, 5 day	mg/L	139	140	1	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch: 279890

Analysis Method: SM22 5210B

QC Batch Method: SM22 5210B

Analysis Description: 5210B BOD, 5 day

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234795012

METHOD BLANK: 1415023

Matrix: Water

Associated Lab Samples: 70234795012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	<1.0	1.0	11/03/22 11:08	

LABORATORY CONTROL SAMPLE: 1415024

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	190	96	84.5-115.4	

SAMPLE DUPLICATE: 1415025

Parameter	Units	70234850001 Result	Dup Result	RPD	Qualifiers
BOD, 5 day	mg/L	445	442	1	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch:	280955	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples: 70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008			

METHOD BLANK:	1420303	Matrix:	Water
Associated Lab Samples: 70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008			

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromide	mg/L	<0.50	0.50	11/09/22 04:09	
Chloride	mg/L	<2.0	2.0	11/09/22 04:09	
Sulfate	mg/L	<5.0	5.0	11/09/22 04:09	

LABORATORY CONTROL SAMPLE: 1420304						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	1.0	104	90-110	
Chloride	mg/L	10	10.6	106	90-110	
Sulfate	mg/L	10	10.3	103	90-110	

MATRIX SPIKE SAMPLE: 1420305							
Parameter	Units	70235291001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	ND	1	1.3	130	90-110	M1
Chloride	mg/L	83.7	50	125	82	90-110	
Sulfate	mg/L	45.9	10	58.2	123	90-110	M1

MATRIX SPIKE SAMPLE: 1420307							
Parameter	Units	70235291002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	ND	1	1.3	131	90-110	M1
Chloride	mg/L	71.4	50	116	89	90-110	
Sulfate	mg/L	47.5	10	59.6	121	90-110	M1

SAMPLE DUPLICATE: 1420306					
Parameter	Units	70235291001 Result	Dup Result	RPD	Qualifiers
Bromide	mg/L	ND	<2.5		
Chloride	mg/L	83.7	83.9	0	
Sulfate	mg/L	45.9	46.1	0	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

SAMPLE DUPLICATE: 1420308

Parameter	Units	70235291002 Result	Dup Result	RPD	Qualifiers
Bromide	mg/L	ND	<2.5		
Chloride	mg/L	71.4	70.1	2	
Sulfate	mg/L	47.5	46.5	2	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch:	282458	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70234795009, 70234795010, 70234795011, 70234795012

METHOD BLANK: 1427714 Matrix: Water

Associated Lab Samples: 70234795009, 70234795010, 70234795011, 70234795012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromide	mg/L	<0.50	0.50	11/22/22 09:09	
Chloride	mg/L	<2.0	2.0	11/22/22 09:09	
Sulfate	mg/L	<5.0	5.0	11/22/22 09:09	

LABORATORY CONTROL SAMPLE: 1427715

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	1.0	102	90-110	
Chloride	mg/L	10	10	100	90-110	
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE SAMPLE: 1427716

Parameter	Units	70234908002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	0.061	1	1.3	126	90-110	M1
Chloride	mg/L	56.6	50	113	112	90-110	
Sulfate	mg/L	11.9	10	24.0	120	90-110	M1

SAMPLE DUPLICATE: 1427717

Parameter	Units	70234908002 Result	Dup Result	RPD	Qualifiers
Bromide	mg/L	0.061	<0.50		
Chloride	mg/L	56.6	58.8	4	
Sulfate	mg/L	11.9	12.1	1	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL
Pace Project No.: 70234795

QC Batch:	281952	Analysis Method:	EPA 351.2
QC Batch Method:	EPA 351.2	Analysis Description:	351.2 TKN
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011, 70234795012		

METHOD BLANK: 1425234 Matrix: Water
Associated Lab Samples: 70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011, 70234795012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.094	0.094	11/14/22 12:13	

LABORATORY CONTROL SAMPLE: 1425235

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4	4.2	105	90-110	

MATRIX SPIKE SAMPLE: 1425236

Parameter	Units	70234795003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.42	4	4.6	105	90-110	

MATRIX SPIKE SAMPLE: 1425238

Parameter	Units	70235414002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.3	4	5.4	101	90-110	

SAMPLE DUPLICATE: 1425237

Parameter	Units	70234795003 Result	Dup Result	RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.42	0.46	9	

SAMPLE DUPLICATE: 1425239

Parameter	Units	70235414002 Result	Dup Result	RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.3	1.3	1	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch: 279874

Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2

Analysis Description: 353.2 Nitrite, Unpres.

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234795009, 70234795010, 70234795011

METHOD BLANK: 1414927

Matrix: Water

Associated Lab Samples: 70234795009, 70234795010, 70234795011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrite as N	mg/L	<0.027	0.027	10/28/22 21:28	

LABORATORY CONTROL SAMPLE: 1414928

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	1	1.1	108	90-110	

MATRIX SPIKE SAMPLE: 1414929

Parameter	Units	70234886001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	<0.050	0.5	0.51	101	90-110	H1

MATRIX SPIKE SAMPLE: 1414931

Parameter	Units	70234867003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	<0.050	0.5	0.50	100	90-110	

SAMPLE DUPLICATE: 1414930

Parameter	Units	70234886001 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	<0.050	<0.050		H1

SAMPLE DUPLICATE: 1414932

Parameter	Units	70234867003 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	<0.050	<0.050		

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL
Pace Project No.: 70234795

QC Batch: 279875 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrite, Unpres.
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008

METHOD BLANK: 1414933 Matrix: Water
Associated Lab Samples: 70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrite as N	mg/L	<0.027	0.027	10/28/22 22:03	

LABORATORY CONTROL SAMPLE: 1414934

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	1	1.1	109	90-110	

MATRIX SPIKE SAMPLE: 1414935

Parameter	Units	70234867006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	<0.050	0.5	0.50	99	90-110	

MATRIX SPIKE SAMPLE: 1414937

Parameter	Units	70234855006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	<0.050	0.5	0.53	101	90-110	

SAMPLE DUPLICATE: 1414936

Parameter	Units	70234867006 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	<0.050	<0.050		

SAMPLE DUPLICATE: 1414938

Parameter	Units	70234855006 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	<0.050	<0.050		

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch: 279876

Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2

Analysis Description: 353.2 Nitrite, Unpres.

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234795012

METHOD BLANK: 1414939

Matrix: Water

Associated Lab Samples: 70234795012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrite as N	mg/L	<0.027	0.027	10/28/22 22:42	

LABORATORY CONTROL SAMPLE: 1414940

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	1	1.1	109	90-110	

MATRIX SPIKE SAMPLE: 1414941

Parameter	Units	70234896004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	<0.050	0.5	0.53	104	90-110	

SAMPLE DUPLICATE: 1414942

Parameter	Units	70234896004 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	<0.050	<0.050		

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch: 279880

Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2

Analysis Description: 353.2 Nitrate, Unpres.

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234795003, 70234795004, 70234795009, 70234795010, 70234795011

METHOD BLANK: 1414994

Matrix: Water

Associated Lab Samples: 70234795003, 70234795004, 70234795009, 70234795010, 70234795011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.037	0.037	10/28/22 23:37	

LABORATORY CONTROL SAMPLE: 1414995

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	1.0	100	90-110	

MATRIX SPIKE SAMPLE: 1414996

Parameter	Units	70234795011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.24	0.5	0.77	105	90-110	

MATRIX SPIKE SAMPLE: 1414998

Parameter	Units	70234867004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.46	0.5	0.98	105	90-110	

SAMPLE DUPLICATE: 1414997

Parameter	Units	70234795011 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.24	0.24	0	

SAMPLE DUPLICATE: 1414999

Parameter	Units	70234867004 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.46	0.45	0	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch:	279881	Analysis Method:	EPA 353.2
QC Batch Method:	EPA 353.2	Analysis Description:	353.2 Nitrate, Unpres.
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70234795005, 70234795006, 70234795007, 70234795008, 70234795012

METHOD BLANK: 1415000 Matrix: Water

Associated Lab Samples: 70234795005, 70234795006, 70234795007, 70234795008, 70234795012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.037	0.037	10/29/22 00:14	

LABORATORY CONTROL SAMPLE: 1415001

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	0.96	96	90-110	

MATRIX SPIKE SAMPLE: 1415002

Parameter	Units	70234795005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.20	0.5	0.69	99	90-110	

MATRIX SPIKE SAMPLE: 1415004

Parameter	Units	70234896009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	0.5	0.42	77	90-110	

SAMPLE DUPLICATE: 1415003

Parameter	Units	70234795005 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.20	0.20	1	

SAMPLE DUPLICATE: 1415005

Parameter	Units	70234896009 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	<0.050		

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch:	280105	Analysis Method:	SM22 4500 NH3 H
QC Batch Method:	SM22 4500 NH3 H	Analysis Description:	4500 Ammonia
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011, 70234795012		

METHOD BLANK:	1415970	Matrix:	Water
Associated Lab Samples:	70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011, 70234795012		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	<0.050	0.050	11/01/22 11:41	

LABORATORY CONTROL SAMPLE: 1415971						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.0	100	90-110	

MATRIX SPIKE SAMPLE:		1415972					
		70234888001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Nitrogen, Ammonia	mg/L	29.8	10	38.0	83	75-125	

SAMPLE DUPLICATE: 1415973					
Parameter	Units	70234888001 Result	Dup Result	RPD	Qualifiers
Nitrogen, Ammonia	mg/L	29.8	29.0	3	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch: 280377

Analysis Method: SM22 5310B

QC Batch Method: SM22 5310B

Analysis Description: 5310B TOC

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234795003, 70234795004, 70234795005

METHOD BLANK: 1417212

Matrix: Water

Associated Lab Samples: 70234795003, 70234795004, 70234795005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.50	0.50	11/02/22 16:50	

LABORATORY CONTROL SAMPLE: 1417213

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.0	90	85-115	

MATRIX SPIKE SAMPLE: 1417215

Parameter	Units	70234855011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	9.8	10	18.7	89	75-125	

SAMPLE DUPLICATE: 1417214

Parameter	Units	70234855011 Result	Dup Result	RPD	Qualifiers
Total Organic Carbon	mg/L	9.8	9.6	2	

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch: 280378

Analysis Method: SM22 5310B

QC Batch Method: SM22 5310B

Analysis Description: 5310B TOC

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011, 70234795012

METHOD BLANK: 1417219

Matrix: Water

Associated Lab Samples: 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011, 70234795012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.50	0.50	11/02/22 20:21	

LABORATORY CONTROL SAMPLE: 1417220

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.1	91	85-115	

MATRIX SPIKE SAMPLE: 1417222

Parameter	Units	70234795006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	<1.0	10	11.1	103	75-125	

SAMPLE DUPLICATE: 1417221

Parameter	Units	70234795006 Result	Dup Result	RPD	Qualifiers
Total Organic Carbon	mg/L	<1.0	<1.0		

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QUALITY CONTROL DATA

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

QC Batch:	281526	Analysis Method:	EPA 9014 Total Cyanide
QC Batch Method:	EPA 9010C	Analysis Description:	9014 Cyanide, Total
		Laboratory:	Pace Analytical Services - Melville
Associated Lab Samples:	70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011, 70234795012		

METHOD BLANK:	1423230	Matrix:	Water
Associated Lab Samples:	70234795003, 70234795004, 70234795005, 70234795006, 70234795007, 70234795008, 70234795009, 70234795010, 70234795011, 70234795012		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	ug/L	<10.0	10.0	11/10/22 15:01	

LABORATORY CONTROL SAMPLE:	1423231					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	ug/L	75	75.5	101	85-115	

MATRIX SPIKE SAMPLE:	1423232						
Parameter	Units	70235432004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide	ug/L	<10.0	100	103	103	75-125	

SAMPLE DUPLICATE: 1423233					
		70235432004	Dup		
Parameter	Units	Result	Result	RPD	Qualifiers
Cyanide	ug/L	<10.0	<10.0		

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QUALIFIERS

Project: BASELINE-NORTH SEA LANDFILL
Pace Project No.: 70234795

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above adjusted reporting limit.
TNTC - Too Numerous To Count
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
PQL - Practical Quantitation Limit.
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
H1	Analysis conducted outside the EPA method holding time.
H2	Extraction or preparation conducted outside EPA method holding time.
H3	Sample was received or analysis requested beyond the recognized method holding time.
IH	This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
v1	The continuing calibration verification was above the method acceptance limit. Any detection for the analyte in the associated samples may have a high bias.
v3	The continuing calibration verification was below the method acceptance limit. Any detection for the analyte in the associated samples may have a low bias.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70234795003	3A	EPA 3005A	280521	EPA 6010C	280824
70234795004	3B	EPA 3005A	280521	EPA 6010C	280824
70234795005	3C	EPA 3005A	280521	EPA 6010C	280824
70234795006	4A	EPA 3005A	280521	EPA 6010C	280824
70234795007	4B	EPA 3005A	280521	EPA 6010C	280824
70234795008	4C	EPA 3005A	280951	EPA 6010C	281041
70234795009	12A	EPA 3005A	280951	EPA 6010C	281041
70234795010	12B	EPA 3005A	280951	EPA 6010C	281041
70234795011	DUP001	EPA 3005A	280951	EPA 6010C	281041
70234795012	EB001	EPA 3005A	280951	EPA 6010C	281041
70234795012	EB001	EPA 6010C	280006		
70234795001	11A	EPA 8260C/5030C	279850		
70234795002	11B	EPA 8260C/5030C	279850		
70234795012	EB001	EPA 8260C/5030C	280925		
70234795012	EB001	EPA 8260			
70234795003	3A	SM22 2120B	280025		
70234795004	3B	SM22 2120B	280025		
70234795005	3C	SM22 2120B	280025		
70234795006	4A	SM22 2120B	280025		
70234795007	4B	SM22 2120B	280025		
70234795008	4C	SM22 2120B	280025		
70234795009	12A	SM22 2120B	280025		
70234795010	12B	SM22 2120B	280025		
70234795011	DUP001	SM22 2120B	280025		
70234795012	EB001	SM22 2120B	280025		
70234795003	3A	SM22 2320B	281536		
70234795004	3B	SM22 2320B	281536		
70234795005	3C	SM22 2320B	281538		
70234795006	4A	SM22 2320B	281538		
70234795007	4B	SM22 2320B	281538		
70234795008	4C	SM22 2320B	281538		
70234795009	12A	SM22 2320B	281538		
70234795010	12B	SM22 2320B	281538		
70234795011	DUP001	SM22 2320B	281538		
70234795012	EB001	SM22 2320B	281538		
70234795003	3A	SM22 2340C	281560		
70234795004	3B	SM22 2340C	281560		
70234795005	3C	SM22 2340C	281560		
70234795006	4A	SM22 2340C	281560		
70234795007	4B	SM22 2340C	281560		
70234795008	4C	SM22 2340C	281560		
70234795009	12A	SM22 2340C	281560		
70234795010	12B	SM22 2340C	281560		
70234795011	DUP001	SM22 2340C	281560		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70234795003	3A	SM22 2540C	280457		
70234795004	3B	SM22 2540C	280457		
70234795005	3C	SM22 2540C	280457		
70234795006	4A	SM22 2540C	280457		
70234795007	4B	SM22 2540C	280457		
70234795008	4C	SM22 2540C	280457		
70234795009	12A	SM22 2540C	280457		
70234795010	12B	SM22 2540C	280458		
70234795011	DUP001	SM22 2540C	280458		
70234795012	EB001	SM22 2540C	280682		
70234795003	3A	SM22 3500-Cr B	279977		
70234795004	3B	SM22 3500-Cr B	279977		
70234795005	3C	SM22 3500-Cr B	279977		
70234795006	4A	SM22 3500-Cr B	279977		
70234795007	4B	SM22 3500-Cr B	279977		
70234795008	4C	SM22 3500-Cr B	279977		
70234795009	12A	SM22 3500-Cr B	279977		
70234795010	12B	SM22 3500-Cr B	279977		
70234795011	DUP001	SM22 3500-Cr B	279977		
70234795012	EB001	SM22 3500-Cr B	279977		
70234795003	3A	EPA 410.4	281729	EPA 410.4	281740
70234795004	3B	EPA 410.4	281729	EPA 410.4	281740
70234795005	3C	EPA 410.4	281729	EPA 410.4	281740
70234795006	4A	EPA 410.4	281729	EPA 410.4	281740
70234795007	4B	EPA 410.4	281729	EPA 410.4	281740
70234795008	4C	EPA 410.4	281729	EPA 410.4	281740
70234795009	12A	EPA 410.4	281729	EPA 410.4	281740
70234795010	12B	EPA 410.4	281729	EPA 410.4	281740
70234795011	DUP001	EPA 410.4	281729	EPA 410.4	281740
70234795012	EB001	EPA 410.4	281729	EPA 410.4	281740
70234795003	3A	SM22 5210B	279888	SM22 5210B	280842
70234795004	3B	SM22 5210B	279888	SM22 5210B	280842
70234795005	3C	SM22 5210B	279888	SM22 5210B	280842
70234795006	4A	SM22 5210B	279888	SM22 5210B	280842
70234795007	4B	SM22 5210B	279888	SM22 5210B	280842
70234795008	4C	SM22 5210B	279888	SM22 5210B	280842
70234795009	12A	SM22 5210B	279888	SM22 5210B	280842
70234795010	12B	SM22 5210B	279888	SM22 5210B	280842
70234795011	DUP001	SM22 5210B	279888	SM22 5210B	280842
70234795012	EB001	SM22 5210B	279890	SM22 5210B	280844
70234795003	3A	EPA 300.0	280955		
70234795004	3B	EPA 300.0	280955		
70234795005	3C	EPA 300.0	280955		
70234795006	4A	EPA 300.0	280955		
70234795007	4B	EPA 300.0	280955		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70234795008	4C	EPA 300.0	280955		
70234795009	12A	EPA 300.0	282458		
70234795010	12B	EPA 300.0	282458		
70234795011	DUP001	EPA 300.0	282458		
70234795012	EB001	EPA 300.0	282458		
70234795003	3A	EPA 351.2	281952	EPA 351.2	281955
70234795004	3B	EPA 351.2	281952	EPA 351.2	281955
70234795005	3C	EPA 351.2	281952	EPA 351.2	281955
70234795006	4A	EPA 351.2	281952	EPA 351.2	281955
70234795007	4B	EPA 351.2	281952	EPA 351.2	281955
70234795008	4C	EPA 351.2	281952	EPA 351.2	281955
70234795009	12A	EPA 351.2	281952	EPA 351.2	281955
70234795010	12B	EPA 351.2	281952	EPA 351.2	281955
70234795011	DUP001	EPA 351.2	281952	EPA 351.2	281955
70234795012	EB001	EPA 351.2	281952	EPA 351.2	281955
70234795003	3A	EPA 353.2	279880		
70234795004	3B	EPA 353.2	279880		
70234795005	3C	EPA 353.2	279881		
70234795006	4A	EPA 353.2	279881		
70234795007	4B	EPA 353.2	279881		
70234795008	4C	EPA 353.2	279881		
70234795009	12A	EPA 353.2	279880		
70234795010	12B	EPA 353.2	279880		
70234795011	DUP001	EPA 353.2	279880		
70234795012	EB001	EPA 353.2	279881		
70234795003	3A	EPA 353.2	279875		
70234795004	3B	EPA 353.2	279875		
70234795005	3C	EPA 353.2	279875		
70234795006	4A	EPA 353.2	279875		
70234795007	4B	EPA 353.2	279875		
70234795008	4C	EPA 353.2	279875		
70234795009	12A	EPA 353.2	279874		
70234795010	12B	EPA 353.2	279874		
70234795011	DUP001	EPA 353.2	279874		
70234795012	EB001	EPA 353.2	279876		
70234795003	3A	SM22 4500 NH3 H	280105		
70234795004	3B	SM22 4500 NH3 H	280105		
70234795005	3C	SM22 4500 NH3 H	280105		
70234795006	4A	SM22 4500 NH3 H	280105		
70234795007	4B	SM22 4500 NH3 H	280105		
70234795008	4C	SM22 4500 NH3 H	280105		
70234795009	12A	SM22 4500 NH3 H	280105		
70234795010	12B	SM22 4500 NH3 H	280105		
70234795011	DUP001	SM22 4500 NH3 H	280105		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BASELINE-NORTH SEA LANDFILL

Pace Project No.: 70234795

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70234795012	EB001	SM22 4500 NH3 H	280105		
70234795003	3A	SM22 5310B	280377		
70234795004	3B	SM22 5310B	280377		
70234795005	3C	SM22 5310B	280377		
70234795006	4A	SM22 5310B	280378		
70234795007	4B	SM22 5310B	280378		
70234795008	4C	SM22 5310B	280378		
70234795009	12A	SM22 5310B	280378		
70234795010	12B	SM22 5310B	280378		
70234795011	DUP001	SM22 5310B	280378		
70234795012	EB001	SM22 5310B	280378		
70234795003	3A	EPA 9010C	281526	EPA 9014 Total Cyanide	281605
70234795004	3B	EPA 9010C	281526	EPA 9014 Total Cyanide	281605
70234795005	3C	EPA 9010C	281526	EPA 9014 Total Cyanide	281605
70234795006	4A	EPA 9010C	281526	EPA 9014 Total Cyanide	281605
70234795007	4B	EPA 9010C	281526	EPA 9014 Total Cyanide	281605
70234795008	4C	EPA 9010C	281526	EPA 9014 Total Cyanide	281605
70234795009	12A	EPA 9010C	281526	EPA 9014 Total Cyanide	281605
70234795010	12B	EPA 9010C	281526	EPA 9014 Total Cyanide	281605
70234795011	DUP001	EPA 9010C	281526	EPA 9014 Total Cyanide	281605
70234795012	EB001	EPA 9010C	281526	EPA 9014 Total Cyanide	281605

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant information must be recorded.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at https://www.pacelabs.com/terms-and-conditions

WO#: 70234795



70234795

2

Section A

Required Client Information:

Company: Town of Southampton
Address: Waste Management Division
Southampton, NY 11968
Email: c.fetten@southamptontownny.gov
Phone: (631)283-5210 Fax:
Requested Due Date:

Section B

Required Project Information:

Report To: Fellen, Christine
Copy To:
Purchase Order #:
Project Name: North Sea Landfill
Project #:

Section C

Invoice Information:

Attention:
Company Name:
Address:
Pace Quote:
Pace Project Manager: kimberley.mack@pacelabs.com
Pace Profile #: 5479 Line 3

Regulatory Agency

State / Location

NY

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX Drinking Water Water Waste Water Product Soil/Solid Oil Wipe Air Other Tissue	CODE DW WT WW P SL OL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Y/N	Requested Analysis Filtered (Y/N)												Residual Chlorine (Y/N)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
						START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other		BOD, Br, Cl, SO4, Color, Cr6	Alk, NO2, TDS	COD, NH3, NO3, TKN, Phenol	TOC	Cyanide	TAL Metals+B & Hardness	Dissolved Metals																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Part 360 ROUTINE Add NaOH preservative to 4A, 4B, 4C, to 250ml unpreserved bottle	Mind King PWGC G. Duran LI	10/20		G. Duran PWGC LI	10-28	1225	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER:

DATE Signed:

TEMP in C

Received on
Ice
(Y/N)Custody
Sealed
(Y/N)Cooler
(Y/N)Samples
Intact
(Y/N)

CHAIN-OF-CUSTODY / Analytical Request

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant field

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pace.com/terms-and-conditions>.

Section A

Section B

Section C

Required Client Information:

Required Project Information:

Invoice Information:

Company: Town of Southampton		Report To: Fetten, Christine		Invoice Information:	
Address: Waste Management Division		Copy To:		Attention:	
Southampton, NY 11968				Company Name:	
Email: c.fetten@southamptontownny.gov		Purchase Order #:		Address:	
Phone: (631)283-5210		Project Name: North Sea Landfill		Pace Quote:	
Fax:				Pace Project Manager: kimberley.mack@pacelabs.com,	
Requested Due Date:		Project #:		Pace Profile #: 5479 Line 3	
				Regulatory Agency	
				State / Location	
				NY	

[illegible]

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Part 360 ROUTINE	Mint <i>[Signature]</i> PWGC	10/28		<i>[Signature]</i> PWGC	10/28	1056	
Add NaOH preservative to EB01	<i>[Signature]</i> Pace, L.T.	10/28	1225				
250 mL unpreserved bottle							

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on the _____ (Y/N)	Custody Sealed Cooler (Y/N)	Samples intact (Y/N)
PRINT Name of SAMPLER:					
SIGNATURE of SAMPLER:	DATE Signed:				



Sample Condition Upon Receipt

WO#: 70234795

Client Name:

TOS

Project

PM: KMM

Due Date: 11/10/22

CLIENT: TOS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☐ Yes ☒ No Seals intact: ☐ Yes ☐ No ☒ N/APacking Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ Ziploc ☒ None ☐ Other

Thermometer Used: TH148 Correction Factor: + 0.1

Cooler Temperature(°C): 2.0 Cooler Temperature Corrected(°C): 2.1

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☒ N/A, water sample)

Date and Initials of person examining contents:

KJ 10/24/22

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC,

Did samples originate from a foreign source

NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ Yes ☐ Noincluding Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		5.
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		7.
Sufficient Volume: (Triple volume provided for)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Containers Intact:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		12.
-Includes date/time/ID, Matrix: SL WT OIL				
All containers needing preservation have been checked?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
pH paper Lot # K1293088				Sample #
All containers needing preservation are found to be in compliance with method recommendation?				
(HNO ₃ , H ₂ SO ₄ , HCl, NaOH>9 Sulfide, NaOH>12 Cyanide)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water).				
Per Method, VOA pH is checked after analysis				
Samples checked for dechlorination:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	14. Initial when completed: Lot # of added preservative: Date/Time preservative added:
KI starch test strips Lot #				
Residual chlorine strips Lot #				Positive for Res. Chlorine? Y N
SM 4500 CN samples checked for sulfide?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	15. Positive for Sulfide? Y N
Lead Acetate Strips Lot #				
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	16.
Trip Blank Present:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	17.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if applicable):				

Client Notification/ Resolution:

Field Data Required?

Y / N

Person Contacted:

Date/Time:

Comments/ Resolution:



Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

M2K0066

Project Description

70234795

For:

LATOYA SOBRATIE

Pace Analytical Melville

575 BROAD HOLLOW RD

MELVILLE, NY 11747

Project Manager

Michelle Taylor

Tuesday, November 15, 2022

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories Inc., - Marietta, OH. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

Microbac Laboratories, Inc.

158 Starlite Drive | Marietta, OH 45750 | 800.373.4071 p | www.microbac.com



Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

M2K0066

Pace Analytical Melville

Project Name: 70234795

LATOYA SOBRATIE
575 BROAD HOLLOW RD
MELVILLE, NY 11747

Project / PO Number: N/A
Received: 11/01/2022
Reported: 11/15/2022

Sample Summary Report

<u>Sample Name</u>	<u>Laboratory ID</u>	<u>Client Matrix</u>	<u>Sample Type</u>	<u>Sample Begin</u>	<u>Sample Taken</u>	<u>Lab Received</u>
3A	M2K0066-01	Aqueous			10/27/22 09:55	11/01/22 09:46
3B	M2K0066-02	Aqueous			10/27/22 10:40	11/01/22 09:46
3C	M2K0066-03	Aqueous			10/27/22 11:15	11/01/22 09:46
4A	M2K0066-04	Aqueous			10/27/22 14:20	11/01/22 09:46
4B	M2K0066-05	Aqueous			10/27/22 14:00	11/01/22 09:46
4C	M2K0066-06	Aqueous			10/27/22 13:30	11/01/22 09:46
12A	M2K0066-07	Aqueous			10/27/22 08:35	11/01/22 09:46
12B	M2K0066-08	Aqueous			10/27/22 08:55	11/01/22 09:46
DUP001	M2K0066-09	Aqueous			10/27/22 00:00	11/01/22 09:46
EB001	M2K0066-10	Aqueous			10/28/22 11:25	11/01/22 09:46



Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

M2K0066

Analytical Testing Parameters

Client Sample ID: 3A
Sample Matrix: Aqueous
Lab Sample ID: M2K0066-01
Collection Date: 10/27/2022 9:55

Inorganics Total	Result	MDL	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Method: EPA 420.1									
Phenolics, Total	<0.0028	0.0028	0.0055	mg/L	1	U	11/14/22 0909	11/15/22 1605	APH

Client Sample ID: 3B
Sample Matrix: Aqueous
Lab Sample ID: M2K0066-02
Collection Date: 10/27/2022 10:40

Inorganics Total	Result	MDL	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Method: EPA 420.1									
Phenolics, Total	<0.0028	0.0028	0.0055	mg/L	1	U	11/14/22 0909	11/15/22 1605	APH

Client Sample ID: 3C
Sample Matrix: Aqueous
Lab Sample ID: M2K0066-03
Collection Date: 10/27/2022 11:15

Inorganics Total	Result	MDL	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Method: EPA 420.1									
Phenolics, Total	<0.0028	0.0028	0.0055	mg/L	1	U	11/14/22 0909	11/15/22 1605	APH

Client Sample ID: 4A
Sample Matrix: Aqueous
Lab Sample ID: M2K0066-04
Collection Date: 10/27/2022 14:20

Inorganics Total	Result	MDL	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Method: EPA 420.1									
Phenolics, Total	0.0030	0.0028	0.0055	mg/L	1	J	11/14/22 0909	11/15/22 1605	APH

Client Sample ID: 4B
Sample Matrix: Aqueous
Lab Sample ID: M2K0066-05
Collection Date: 10/27/2022 14:00

Inorganics Total	Result	MDL	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Method: EPA 420.1									
Phenolics, Total	<0.0028	0.0028	0.0055	mg/L	1	U	11/14/22 0909	11/15/22 1605	APH



Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

M2K0066

Client Sample ID: 4C
Sample Matrix: Aqueous
Lab Sample ID: M2K0066-06

Collection Date: 10/27/2022 13:30

Inorganics Total	Result	MDL	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Method: EPA 420.1									
Phenolics, Total	<0.0028	0.0028	0.0055	mg/L	1	U	11/14/22 0909	11/15/22 1605	APH

Client Sample ID: 12A
Sample Matrix: Aqueous
Lab Sample ID: M2K0066-07

Collection Date: 10/27/2022 8:35

Inorganics Total	Result	MDL	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Method: EPA 420.1									
Phenolics, Total	<0.0028	0.0028	0.0055	mg/L	1	U	11/14/22 0909	11/15/22 1605	APH

Client Sample ID: 12B
Sample Matrix: Aqueous
Lab Sample ID: M2K0066-08

Collection Date: 10/27/2022 8:55

Inorganics Total	Result	MDL	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Method: EPA 420.1									
Phenolics, Total	<0.0028	0.0028	0.0055	mg/L	1	U	11/14/22 0909	11/15/22 1605	APH

Client Sample ID: DUP001
Sample Matrix: Aqueous
Lab Sample ID: M2K0066-09

Collection Date: 10/27/2022

Inorganics Total	Result	MDL	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Method: EPA 420.1									
Phenolics, Total	<0.0028	0.0028	0.0055	mg/L	1	U	11/14/22 0909	11/15/22 1605	APH

Client Sample ID: EB001
Sample Matrix: Aqueous
Lab Sample ID: M2K0066-10

Collection Date: 10/28/2022 11:25

Inorganics Total	Result	MDL	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Method: EPA 420.1									
Phenolics, Total	<0.0028	0.0028	0.0055	mg/L	1	U	11/11/22 1212	11/14/22 1320	EPT



Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

M2K0066

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 420.1	B2K0680	B2K0680-CCV1 B2K0680-CCV3 M2K0066-10 B2K0680-BS1 B2K0680-BLK1	EB001
Method	Batch	Laboratory ID	Client / Source ID
EPA 420.1	B2K0751	M2K0066-05 M2K0066-07 M2K0066-08 M2K0066-01 M2K0066-02 M2K0066-04 B2K0751-BS2 M2K0066-06 B2K0751-BLK1 B2K0751-CCV1 B2K0751-CCV2 B2K0751-CCV3 B2K0751-CCV4 M2K0066-09 B2K0751-BS1 M2K0066-03	4B 12A 12B 3A 3B 4A 4C DUP001 3C

Batch Quality Control Summary: Microbac Laboratories Inc., - Marietta, OH

Inorganics Total	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2K0680 - Wet Chem-Method Prep - EPA 420.1											
Blank (B2K0680-BLK1)					Prepared: 11/11/2022 Analyzed: 11/14/2022						
Phenolics, Total	<0.0025	0.0025	0.0050	mg/L							U
LCS (B2K0680-BS1)					Prepared: 11/11/2022 Analyzed: 11/14/2022						
Phenolics, Total	0.0507	0.0025	0.0050	mg/L	0.0500		101	80-120			
Batch B2K0751 - Wet Chem-Method Prep - EPA 420.1											
Blank (B2K0751-BLK1)					Prepared: 11/14/2022 Analyzed: 11/15/2022						
Phenolics, Total	<0.0025	0.0025	0.0050	mg/L							U
LCS (B2K0751-BS1)					Prepared: 11/14/2022 Analyzed: 11/15/2022						
Phenolics, Total	0.482	0.0025	0.0050	mg/L	0.500		96.4	80-120			
LCS (B2K0751-BS2)					Prepared: 11/14/2022 Analyzed: 11/15/2022						
Phenolics, Total	0.0519	0.0025	0.0050	mg/L	0.0500		104	80-120			

Microbac Laboratories, Inc.

158 Starlite Drive | Marietta, OH 45750 | 800.373.4071 p | www.microbac.com



Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

M2K0066

Definitions

DF:	Dilution Factor representing the amount the sample was diluted during analysis and may not represent preparation factors.
J:	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
MDL:	Minimum Detection Limit
mg/L:	Milligrams per Liter
RL:	Reporting Limit
U:	The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 0.2°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories Inc., - Marietta, OH
10861

NY State Department of Health

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

Michelle Taylor

Michelle Taylor
Project Manager
Reported: 11/15/2022 17:09

Microbac Laboratories, Inc.

158 Starlite Drive | Marietta, OH 45750 | 800.373.4071 p | www.microbac.com

[illegible]

Results Requested By: 11/10/2022

[illegible]

Temp: 0.2

(Signature

					Comments
Transfers	Released By	Date/Time	Received By	Date/Time	
1	<i>[Signature]</i>	10/31/22 1800	Brenda Gregory	11/1/22 c	946
2					
3					
Cooler Temperature on Receipt 0.8 °C		Custody Seal Y or N		Received on Ice Y or N	
Samples Intact Y or N					



Work Order #

M2K0066

COOLER TEMP >6° C LOG

[illegible]

pH Lot # HC291540

pH

Exceptions

[illegible]

PRESERVATIVE EXCEPTIONS

~~SECRET~~

AS NOTED

11/01/2022 Sm

Document Control # 1957
Last 04-10-2019

Issued to: Document Master File



APPENDIX B WELL INSPECTION CHECKLIST

SHP2201 – 2nd SEMI-ANNUAL POST-CLOSURE GROUNDWATER MONITORING REPORT 2022

P.W. GROSSER CONSULTING, INC.
P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, P.C.

PHONE: 631.589.6353 630 JOHNSON AVENUE, STE 7
PWGROSSER.COM BOHEMIA, NY 11716

LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SHELTON



WELL INSPECTION CHECKLIST

Well No.	<u>1A</u>	Date	<u>10/26/2022</u>
Inspected By	<u>MPP/JU</u>	Weather Conditions	<u>Fog, 62-65 F</u>

WELL EXTERIOR CONDITIONS

	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
CONCRETE PAD			
Intact:	<u>X</u>	<u> </u>	<u> </u>
Cracked:	<u> </u>	<u>X</u>	<u> </u>
Missing:	<u> </u>	<u>X</u>	<u> </u>
PONDING OF WATER AROUND WELL	<u> </u>	<u>X</u>	<u> </u>
PROTECTIVE CASING/MANHOLE/LOCK	<u> </u>	<u> </u>	<u> </u>
Casing/Manhole - Intact:	<u>X</u>	<u> </u>	<u> </u>
Lock - Intact:	<u>X</u>	<u> </u>	<u> </u>
WELL CASING (STICKUP) STRAIGHT	<u>X</u>	<u> </u>	<u> </u>
DESIGNATED MEASURING POINT	<u>X</u>	<u> </u>	<u>Top of Casing</u>
WELL IS PROTECTED	<u>X</u>	<u> </u>	<u> </u>
WELL IS CLEARLY MARKED	<u>X</u>	<u> </u>	<u> </u>

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>104.12</u>
DEPTH TO BOTTOM (FEET)	<u>113.35</u>
PID (ppm)	<u>0.0</u>



WELL INSPECTION CHECKLIST

Well No.	<u>1B</u>	Date	<u>10/26/2022</u>
Inspected By	<u>MPP/JU</u>	Weather Conditions	<u>Fog, 62-65 F</u>

WELL EXTERIOR CONDITIONS

	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
CONCRETE PAD			
Intact:	<u>X</u>	<u> </u>	<u> </u>
Cracked:	<u> </u>	<u>X</u>	<u> </u>
Missing:	<u> </u>	<u>X</u>	<u> </u>
PONDING OF WATER AROUND WELL	<u> </u>	<u>X</u>	<u> </u>
PROTECTIVE CASING/MANHOLE/LOCK	<u> </u>	<u> </u>	<u> </u>
Casing/Manhole - Intact:	<u>X</u>	<u> </u>	<u> </u>
Lock - Intact:	<u>X</u>	<u> </u>	<u> </u>
WELL CASING (STICKUP) STRAIGHT	<u>X</u>	<u> </u>	<u>Top of Casing</u>
DESIGNATED MEASURING POINT	<u>X</u>	<u> </u>	<u> </u>
WELL IS PROTECTED	<u>X</u>	<u> </u>	<u> </u>
WELL IS CLEARLY MARKED	<u>X</u>	<u> </u>	<u> </u>

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>106.39</u>
DEPTH TO BOTTOM (FEET)	<u>169.51</u>
PID (ppm)	<u>0.0</u>



WELL INSPECTION CHECKLIST

Well No.	<u>1C</u>	Date	<u>10/26/2022</u>
Inspected By	<u>MPP/JU</u>	Weather Conditions	<u>Fog, 62-65 F</u>

WELL EXTERIOR CONDITIONS

	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
CONCRETE PAD			
Intact:	<u>X</u>	<u> </u>	<u> </u>
Cracked:	<u> </u>	<u>X</u>	<u> </u>
Missing:	<u> </u>	<u>X</u>	<u> </u>
PONDING OF WATER AROUND WELL	<u> </u>	<u>X</u>	<u> </u>
PROTECTIVE CASING/MANHOLE/LOCK	<u> </u>	<u> </u>	<u> </u>
Casing/Manhole - Intact:	<u>X</u>	<u> </u>	<u> </u>
Lock - Intact:	<u>X</u>	<u> </u>	<u> </u>
WELL CASING (STICKUP) STRAIGHT	<u>X</u>	<u> </u>	<u> </u>
DESIGNATED MEASURING POINT	<u>X</u>	<u> </u>	<u>Top of Casing</u>
WELL IS PROTECTED	<u>X</u>	<u> </u>	<u> </u>
WELL IS CLEARLY MARKED	<u>X</u>	<u> </u>	<u> </u>

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>107.18</u>
DEPTH TO BOTTOM (FEET)	<u>155.59</u>
PID (ppm)	<u>0.0</u>



WELL INSPECTION CHECKLIST

Well No.	<u>3A/DUP001</u>	Date	<u>10/27/2022</u>
Inspected By	<u>MPP/JU</u>	Weather Conditions	<u>Clear, 60-64 F</u>

WELL EXTERIOR CONDITIONS

CONCRETE PAD	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
Intact:	<u>X</u>	<u> </u>	<u> </u>
Cracked:	<u> </u>	<u>X</u>	<u> </u>
Missing:	<u> </u>	<u>X</u>	<u> </u>
PONDING OF WATER AROUND WELL	<u> </u>	<u>X</u>	<u> </u>
PROTECTIVE CASING/MANHOLE/LOCK	<u> </u>	<u> </u>	<u> </u>
Casing/Manhole - Intact:	<u>X</u>	<u> </u>	<u> </u>
Lock - Intact:	<u>X</u>	<u> </u>	<u> </u>
WELL CASING (STICKUP) STRAIGHT	<u>X</u>	<u> </u>	<u> </u>
DESIGNATED MEASURING POINT	<u>X</u>	<u> </u>	<u>Top of Casing</u>
WELL IS PROTECTED	<u>X</u>	<u> </u>	<u> </u>
WELL IS CLEARLY MARKED	<u>X</u>	<u> </u>	<u> </u>

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>48.88</u>
DEPTH TO BOTTOM (FEET)	<u>62.74</u>
PID (ppm)	<u>0.0</u>



WELL INSPECTION CHECKLIST

Well No.	<u>3B</u>	Date	<u>10/27/2022</u>
Inspected By	<u>MPP/JU</u>	Weather Conditions	<u>Clear, 60-64 F</u>

WELL EXTERIOR CONDITIONS

	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
CONCRETE PAD			
Intact:	<u>X</u>	<u> </u>	<u> </u>
Cracked:	<u> </u>	<u>X</u>	<u> </u>
Missing:	<u> </u>	<u>X</u>	<u> </u>
PONDING OF WATER AROUND WELL	<u> </u>	<u>X</u>	<u> </u>
PROTECTIVE CASING/MANHOLE/LOCK			
Casing/Manhole - Intact:	<u>X</u>	<u> </u>	<u> </u>
Lock - Intact:	<u>X</u>	<u> </u>	<u> </u>
WELL CASING (STICKUP) STRAIGHT	<u>X</u>	<u> </u>	<u> </u>
DESIGNATED MEASURING POINT	<u>X</u>	<u> </u>	<u>Top of Casing</u>
WELL IS PROTECTED	<u>X</u>	<u> </u>	<u> </u>
WELL IS CLEARLY MARKED	<u>X</u>	<u> </u>	<u> </u>

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>45.57</u>
DEPTH TO BOTTOM (FEET)	<u>116.74</u>
PID (ppm)	<u>0.0</u>



WELL INSPECTION CHECKLIST

Well No.	<u>3C</u>	Date	<u>10/27/2022</u>
Inspected By	<u>MPP/JU</u>	Weather Conditions	<u>Clear, 60-64 F</u>

WELL EXTERIOR CONDITIONS

	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
CONCRETE PAD			
Intact:	<u>X</u>	<u> </u>	<u> </u>
Cracked:	<u> </u>	<u>X</u>	<u> </u>
Missing:	<u> </u>	<u>X</u>	<u> </u>
PONDING OF WATER AROUND WELL	<u> </u>	<u>X</u>	<u> </u>
PROTECTIVE CASING/MANHOLE/LOCK			
Casing/Manhole - Intact:	<u>X</u>	<u> </u>	<u> </u>
Lock - Intact:	<u>X</u>	<u> </u>	<u> </u>
WELL CASING (STICKUP) STRAIGHT	<u>X</u>	<u> </u>	<u> </u>
DESIGNATED MEASURING POINT	<u>X</u>	<u> </u>	<u>Top of Casing</u>
WELL IS PROTECTED	<u>X</u>	<u> </u>	<u> </u>
WELL IS CLEARLY MARKED	<u>X</u>	<u> </u>	<u> </u>

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>45.08</u>
DEPTH TO BOTTOM (FEET)	<u>115.16</u>
PID (ppm)	<u>0.0</u>



WELL INSPECTION CHECKLIST

Well No.	<u>4A</u>	Date	<u>10/27/2022</u>
Inspected By	<u>MPP/JU</u>	Weather Conditions	<u>Clear, 60-64 F</u>

WELL EXTERIOR CONDITIONS

CONCRETE PAD	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
Intact:	<u>X</u>	<u> </u>	<u> </u>
Cracked:	<u> </u>	<u>X</u>	<u> </u>
Missing:	<u> </u>	<u>X</u>	<u> </u>
PONDING OF WATER AROUND WELL	<u> </u>	<u>X</u>	<u> </u>
PROTECTIVE CASING/MANHOLE/LOCK	<u> </u>	<u> </u>	<u> </u>
Casing/Manhole - Intact:	<u>X</u>	<u> </u>	<u> </u>
Lock - Intact:	<u>X</u>	<u> </u>	<u> </u>
WELL CASING (STICKUP) STRAIGHT	<u>X</u>	<u> </u>	<u> </u>
DESIGNATED MEASURING POINT	<u>X</u>	<u> </u>	<u>Top of Casing</u>
WELL IS PROTECTED	<u>X</u>	<u> </u>	<u> </u>
WELL IS CLEARLY MARKED	<u>X</u>	<u> </u>	<u> </u>

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>13.49</u>
DEPTH TO BOTTOM (FEET)	<u>31.22</u>
PID (ppm)	<u>0.0</u>



WELL INSPECTION CHECKLIST

Well No.	<u>4B</u>	Date	<u>10/27/2022</u>
Inspected By	MPP/JU	Weather Conditions	Clear, 60-64 F

WELL EXTERIOR CONDITIONS

	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
CONCRETE PAD			
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK			
Casing/Manhole - Intact:	X		
Lock - Intact:	X		
WELL CASING (STICKUP) STRAIGHT	X		
DESIGNATED MEASURING POINT	X		Top of Casing
WELL IS PROTECTED	X		
WELL IS CLEARLY MARKED	X		

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>13.40</u>
DEPTH TO BOTTOM (FEET)	<u>82.09</u>
PID (ppm)	0.0



WELL INSPECTION CHECKLIST

Well No.	<u>4C</u>	Date	<u>10/27/2022</u>
Inspected By	<u>MPP/JU</u>	Weather Conditions	<u>Clear, 60-64 F</u>

WELL EXTERIOR CONDITIONS

CONCRETE PAD	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
Intact:	<u>X</u>	<u> </u>	<u> </u>
Cracked:	<u> </u>	<u>X</u>	<u> </u>
Missing:	<u> </u>	<u>X</u>	<u> </u>
PONDING OF WATER AROUND WELL	<u> </u>	<u>X</u>	<u> </u>
PROTECTIVE CASING/MANHOLE/LOCK	<u> </u>	<u> </u>	<u> </u>
Casing/Manhole - Intact:	<u>X</u>	<u> </u>	<u> </u>
Lock - Intact:	<u>X</u>	<u> </u>	<u> </u>
WELL CASING (STICKUP) STRAIGHT	<u>X</u>	<u> </u>	<u> </u>
DESIGNATED MEASURING POINT	<u>X</u>	<u> </u>	<u>Top of Casing</u>
WELL IS PROTECTED	<u>X</u>	<u> </u>	<u> </u>
WELL IS CLEARLY MARKED	<u>X</u>	<u> </u>	<u> </u>

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>10.01</u>
DEPTH TO BOTTOM (FEET)	<u>138.26</u>
PID (ppm)	<u>0.0</u>



WELL INSPECTION CHECKLIST

Well No.	<u>6AR</u>	Date	<u>10/26/2022</u>
Inspected By	<u>MPP/JU</u>	Weather Conditions	<u>Fog, 62-65 F</u>

WELL EXTERIOR CONDITIONS

	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
CONCRETE PAD			
Intact:	<u>X</u>	<u> </u>	<u> </u>
Cracked:	<u> </u>	<u>X</u>	<u> </u>
Missing:	<u> </u>	<u>X</u>	<u> </u>
PONDING OF WATER AROUND WELL	<u> </u>	<u>X</u>	<u> </u>
PROTECTIVE CASING/MANHOLE/LOCK	<u> </u>	<u> </u>	<u> </u>
Casing/Manhole - Intact:	<u>X</u>	<u> </u>	<u> </u>
Lock - Intact:	<u>X</u>	<u> </u>	<u> </u>
WELL CASING (STICKUP) STRAIGHT	<u>X</u>	<u> </u>	<u> </u>
DESIGNATED MEASURING POINT	<u>X</u>	<u> </u>	<u>Top of Casing</u>
WELL IS PROTECTED	<u>X</u>	<u> </u>	<u> </u>
WELL IS CLEARLY MARKED	<u>X</u>	<u> </u>	<u> </u>

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>93.84</u>
DEPTH TO BOTTOM (FEET)	<u>113.36</u>
PID (ppm)	<u>0.0</u>



WELL INSPECTION CHECKLIST

Well No.	<u>6B</u>	Date	<u>10/26/2022</u>
Inspected By	<u>MPP/JU</u>	Weather Conditions	<u>Fog, 62-65 F</u>

WELL EXTERIOR CONDITIONS

	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
CONCRETE PAD			
Intact:	<u>X</u>	<u> </u>	<u> </u>
Cracked:	<u> </u>	<u>X</u>	<u> </u>
Missing:	<u> </u>	<u>X</u>	<u> </u>
PONDING OF WATER AROUND WELL	<u> </u>	<u>X</u>	<u> </u>
PROTECTIVE CASING/MANHOLE/LOCK	<u> </u>	<u> </u>	<u> </u>
Casing/Manhole - Intact:	<u>X</u>	<u> </u>	<u> </u>
Lock - Intact:	<u>X</u>	<u> </u>	<u> </u>
WELL CASING (STICKUP) STRAIGHT	<u>X</u>	<u> </u>	<u> </u>
DESIGNATED MEASURING POINT	<u>X</u>	<u> </u>	<u>Top of Casing</u>
WELL IS PROTECTED	<u>X</u>	<u> </u>	<u> </u>
WELL IS CLEARLY MARKED	<u>X</u>	<u> </u>	<u> </u>

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>95.14</u>
DEPTH TO BOTTOM (FEET)	<u>148.80</u>
PID (ppm)	<u>0.0</u>



WELL INSPECTION CHECKLIST

Well No.	<u>7A</u>	Date	<u>10/26/2022</u>
Inspected By	<u>MPP/JU</u>	Weather Conditions	<u>Fog, 62-65 F</u>

WELL EXTERIOR CONDITIONS

	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
CONCRETE PAD			
Intact:	<u>X</u>	<u> </u>	<u> </u>
Cracked:	<u> </u>	<u>X</u>	<u> </u>
Missing:	<u> </u>	<u>X</u>	<u> </u>
PONDING OF WATER AROUND WELL	<u> </u>	<u>X</u>	<u> </u>
PROTECTIVE CASING/MANHOLE/LOCK	<u> </u>	<u> </u>	<u> </u>
Casing/Manhole - Intact:	<u>X</u>	<u> </u>	<u> </u>
Lock - Intact:	<u>X</u>	<u> </u>	<u> </u>
WELL CASING (STICKUP) STRAIGHT	<u>X</u>	<u> </u>	<u> </u>
DESIGNATED MEASURING POINT	<u>X</u>	<u> </u>	<u>Top of Casing</u>
WELL IS PROTECTED	<u>X</u>	<u> </u>	<u> </u>
WELL IS CLEARLY MARKED	<u>X</u>	<u> </u>	<u> </u>

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>84.88</u>
DEPTH TO BOTTOM (FEET)	<u>99.48</u>
PID (ppm)	<u>0.0</u>



WELL INSPECTION CHECKLIST

Well No.	<u>7B</u>	Date	<u>10/26/2022</u>
Inspected By	MPP/JU	Weather Conditions	Fog, 62-65 F

WELL EXTERIOR CONDITIONS

CONCRETE PAD	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK			
Casing/Manhole - Intact:	X		
Lock - Intact:	X		
WELL CASING (STICKUP) STRAIGHT	X		
DESIGNATED MEASURING POINT	X		
WELL IS PROTECTED	X		
WELL IS CLEARLY MARKED	X		

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>84.67</u>
DEPTH TO BOTTOM (FEET)	<u>113.22</u>
PID (ppm)	0.0



WELL INSPECTION CHECKLIST

Well No.	<u>7C</u>	Date	<u>10/26/2022</u>
Inspected By	<u>MPP/JU</u>	Weather Conditions	<u>Fog, 62-65 F</u>

WELL EXTERIOR CONDITIONS

	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
CONCRETE PAD			
Intact:	<u>X</u>	<u> </u>	<u> </u>
Cracked:	<u> </u>	<u>X</u>	<u> </u>
Missing:	<u> </u>	<u>X</u>	<u> </u>
PONDING OF WATER AROUND WELL	<u> </u>	<u>X</u>	<u> </u>
PROTECTIVE CASING/MANHOLE/LOCK	<u> </u>	<u> </u>	<u> </u>
Casing/Manhole - Intact:	<u>X</u>	<u> </u>	<u> </u>
Lock - Intact:	<u>X</u>	<u> </u>	<u> </u>
WELL CASING (STICKUP) STRAIGHT	<u>X</u>	<u> </u>	<u> </u>
DESIGNATED MEASURING POINT	<u>X</u>	<u> </u>	<u>Top of Casing</u>
WELL IS PROTECTED	<u>X</u>	<u> </u>	<u> </u>
WELL IS CLEARLY MARKED	<u>X</u>	<u> </u>	<u> </u>

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>86.18</u>
DEPTH TO BOTTOM (FEET)	<u>185.64</u>
PID (ppm)	<u>0.0</u>



WELL INSPECTION CHECKLIST

Well No.	<u>8</u>	Date	<u>10/26/2022</u>
Inspected By	<u>MPP/JU</u>	Weather Conditions	<u>Fog, 62-65 F</u>

WELL EXTERIOR CONDITIONS

	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
CONCRETE PAD			
Intact:	<u>X</u>	<u> </u>	<u> </u>
Cracked:	<u> </u>	<u>X</u>	<u> </u>
Missing:	<u> </u>	<u>X</u>	<u> </u>
PONDING OF WATER AROUND WELL	<u>X</u>	<u> </u>	<u> </u>
PROTECTIVE CASING/MANHOLE/LOCK	<u> </u>	<u> </u>	<u> </u>
Casing/Manhole - Intact:	<u>X</u>	<u> </u>	<u> </u>
Lock - Intact:	<u>X</u>	<u> </u>	<u> </u>
WELL CASING (STICKUP) STRAIGHT	<u>X</u>	<u> </u>	<u> </u>
DESIGNATED MEASURING POINT	<u>X</u>	<u> </u>	<u>Top of Casing</u>
WELL IS PROTECTED	<u>X</u>	<u> </u>	<u> </u>
WELL IS CLEARLY MARKED	<u>X</u>	<u> </u>	<u> </u>

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>77.69</u>
DEPTH TO BOTTOM (FEET)	<u>90.14</u>
PID (ppm)	<u>0.0</u>



WELL INSPECTION CHECKLIST

Well No.	<u>9</u>	Date	<u>10/26/2022</u>
Inspected By	<u>MPP/JU</u>	Weather Conditions	<u>Fog, 62-65 F</u>

WELL EXTERIOR CONDITIONS

	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
CONCRETE PAD			
Intact:	<u>X</u>	<u> </u>	<u> </u>
Cracked:	<u> </u>	<u>X</u>	<u> </u>
Missing:	<u> </u>	<u>X</u>	<u> </u>
PONDING OF WATER AROUND WELL	<u> </u>	<u>X</u>	<u> </u>
PROTECTIVE CASING/MANHOLE/LOCK	<u> </u>	<u> </u>	<u> </u>
Casing/Manhole - Intact:	<u>X</u>	<u> </u>	<u> </u>
Lock - Intact:	<u>X</u>	<u> </u>	<u> </u>
WELL CASING (STICKUP) STRAIGHT	<u>X</u>	<u> </u>	<u> </u>
DESIGNATED MEASURING POINT	<u>X</u>	<u> </u>	<u>Top of Casing</u>
WELL IS PROTECTED	<u>X</u>	<u> </u>	<u> </u>
WELL IS CLEARLY MARKED	<u>X</u>	<u> </u>	<u> </u>

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>74.40</u>
DEPTH TO BOTTOM (FEET)	<u>91.53</u>
PID (ppm)	<u>0.0</u>



WELL INSPECTION CHECKLIST

Well No.	<u>11A</u>	Date	<u>10/26/2022</u>
Inspected By	<u>MPP/JU</u>	Weather Conditions	<u>Fog, 62-65 F</u>

WELL EXTERIOR CONDITIONS

	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
CONCRETE PAD			
Intact:	<u>X</u>	<u> </u>	<u> </u>
Cracked:	<u> </u>	<u>X</u>	<u> </u>
Missing:	<u> </u>	<u>X</u>	<u> </u>
PONDING OF WATER AROUND WELL	<u> </u>	<u>X</u>	<u> </u>
PROTECTIVE CASING/MANHOLE/LOCK	<u> </u>	<u> </u>	<u> </u>
Casing/Manhole - Intact:	<u>X</u>	<u> </u>	<u> </u>
Lock - Intact:	<u>X</u>	<u> </u>	<u> </u>
WELL CASING (STICKUP) STRAIGHT	<u>X</u>	<u> </u>	<u> </u>
DESIGNATED MEASURING POINT	<u>X</u>	<u> </u>	<u>Top of Casing</u>
WELL IS PROTECTED	<u>X</u>	<u> </u>	<u> </u>
WELL IS CLEARLY MARKED	<u>X</u>	<u> </u>	<u> </u>

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>72.88</u>
DEPTH TO BOTTOM (FEET)	<u>81.44</u>
PID (ppm)	<u>0.0</u>



WELL INSPECTION CHECKLIST

Well No.	<u>11B</u>	Date	<u>10/26/2022</u>
Inspected By	<u>MPP/JU</u>	Weather Conditions	<u>Fog, 62-65 F</u>

WELL EXTERIOR CONDITIONS

CONCRETE PAD	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
Intact:	<u>X</u>	<u> </u>	<u> </u>
Cracked:	<u> </u>	<u>X</u>	<u> </u>
Missing:	<u> </u>	<u>X</u>	<u> </u>
PONDING OF WATER AROUND WELL	<u> </u>	<u>X</u>	<u> </u>
PROTECTIVE CASING/MANHOLE/LOCK	<u> </u>	<u> </u>	<u> </u>
Casing/Manhole - Intact:	<u>X</u>	<u> </u>	<u> </u>
Lock - Intact:	<u>X</u>	<u> </u>	<u>Lock rusted; hard to open</u>
WELL CASING (STICKUP) STRAIGHT	<u>X</u>	<u> </u>	<u> </u>
DESIGNATED MEASURING POINT	<u>X</u>	<u> </u>	<u>Top of Casing</u>
WELL IS PROTECTED	<u>X</u>	<u> </u>	<u> </u>
WELL IS CLEARLY MARKED	<u>X</u>	<u> </u>	<u> </u>

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>74.38</u>
DEPTH TO BOTTOM (FEET)	<u>97.57</u>
PID (ppm)	<u>0.0</u>



WELL INSPECTION CHECKLIST

Well No.	<u>12A</u>	Date	<u>10/27/2022</u>
Inspected By	MPP/JU	Weather Conditions	Clear, 60-64 F

WELL EXTERIOR CONDITIONS

	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
CONCRETE PAD			
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK			
Casing/Manhole - Intact:	X		
Lock - Intact:	X		
WELL CASING (STICKUP) STRAIGHT	X		
DESIGNATED MEASURING POINT	X		Top of Casing
WELL IS PROTECTED	X		
WELL IS CLEARLY MARKED	X		

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>80.19</u>
DEPTH TO BOTTOM (FEET)	<u>94.63</u>
PID (ppm)	0.0



WELL INSPECTION CHECKLIST

Well No.	<u>12B</u>	Date	<u>10/27/2022</u>
Inspected By	<u>MPP/JU</u>	Weather Conditions	<u>Clear, 60-64 F</u>

WELL EXTERIOR CONDITIONS

CONCRETE PAD	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
Intact:	<u>X</u>	<u> </u>	<u> </u>
Cracked:	<u> </u>	<u>X</u>	<u> </u>
Missing:	<u> </u>	<u>X</u>	<u> </u>
PONDING OF WATER AROUND WELL	<u> </u>	<u>X</u>	<u> </u>
PROTECTIVE CASING/MANHOLE/LOCK	<u> </u>	<u> </u>	<u> </u>
Casing/Manhole - Intact:	<u>X</u>	<u> </u>	<u> </u>
Lock - Intact:	<u>X</u>	<u> </u>	<u> </u>
WELL CASING (STICKUP) STRAIGHT	<u>X</u>	<u> </u>	<u> </u>
DESIGNATED MEASURING POINT	<u>X</u>	<u> </u>	<u>Top of Casing</u>
WELL IS PROTECTED	<u>X</u>	<u> </u>	<u> </u>
WELL IS CLEARLY MARKED	<u>X</u>	<u> </u>	<u> </u>

INTERIOR WELL CONDITIONS

DEPTH TO WATER (FEET)	<u>81.70</u>
DEPTH TO BOTTOM (FEET)	<u>96.95</u>
PID (ppm)	<u>0.0</u>



APPENDIX C

MONITORING WELL SAMPLING LOGS

SHP2201 – 2nd SEMI-ANNUAL POST-CLOSURE GROUNDWATER MONITORING REPORT 2022

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WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southampton / SHP2201		
WELL No./OWNER	1A / Town of Southampton		
SAMPLE I.D.	MW-1A		
SAMPLING POINT	TOC	SAMPLED BY	MPP/JU
DATE SAMPLED	10/26/2022	TIME SAMPLED	12:10
WELL USE	Monitoring		
STATIC WATER ELEVATION	104.12	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4	Inches	
TOTAL WELL DEPTH	113.35	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Submersible Pump
PURGE RATE	5 GPM	PURGE TIME	3.5
CASING VOLUMES REMOVED	3	GALLONS	17.5
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	Rotting Material
PID (ppm)	0.0		
ANALYSIS	Routine	DATE SHIPPED	10/27/2022

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre-sampling
pH	6.75	6.69	6.64	6.59	6.60
COND	0.570	0.570	0.562	0.599	0.578
T	13.25	13.33	13.39	13.44	13.45
ORP	148	152	154	157	157
TURB	0.0	0.0	0.0	0.0	0.0
D.O.	12.65	11.87	11.34	10.85	10.70



WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP2201		
WELL No./OWNER	1B / Town of Southhampton		
SAMPLE I.D.	MW-1B		
SAMPLING POINT	TOC	SAMPLED BY	MPP/JU
DATE SAMPLED	10/26/2022	TIME SAMPLED	12:50
WELL USE	Monitoring		
STATIC WATER ELEVATION	106.39	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4	Inches	
TOTAL WELL DEPTH	169.51	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Submersible Pump
PURGE RATE	5 GPM	PURGE TIME	24.00
CASING VOLUMES REMOVED	3	GALLONS	122.00
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	None
PID (ppm)	0.0		
ANALYSIS	Routine	DATE SHIPPED	10/27/2022

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre-sampling
pH	6.13	6.16	6.23	6.36	6.56
COND	0.083	0.083	0.083	0.082	0.082
T	12.44	12.57	12.70	12.68	12.70
ORP	149	153	158	160	153
TURB	0.0	0.0	0.0	0.0	0.0
D.O.	14.19	12.04	10.40	9.96	9.31



WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southampton / SHP2201		
WELL No./OWNER	1C / Town of Southampton		
SAMPLE I.D.	MW-1C		
SAMPLING POINT	TOC	SAMPLED BY	MPP/JU
DATE SAMPLED	10/26/2022	TIME SAMPLED	13:30
WELL USE	Monitoring		
STATIC WATER ELEVATION	107.18	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4	Inches	
TOTAL WELL DEPTH	155.59	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Submersible Pump
PURGE RATE	5 GPM	PURGE TIME	19.00
CASING VOLUMES REMOVED	3	GALLONS	93.60
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	None
PID (ppm)	0.0		
ANALYSIS	Routine	DATE SHIPPED	10/27/2022

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre-sampling
pH	6.56	6.26	6.38	6.56	6.90
COND	0.085	0.085	0.087	0.086	0.086
T	12.31	12.51	12.49	12.46	12.44
ORP	145	168	166	158	142
TURB	0.0	0.0	0.0	0.0	0.0
D.O.	17.69	10.81	9.96	9.73	9.71



WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southampton / SHP2201		
WELL No./OWNER	3A / Town of Southampton		
SAMPLE I.D.	MW-3A/DUP001		
SAMPLING POINT	TOC	SAMPLED BY	MPP/JU
DATE SAMPLED	10/27/2022	TIME SAMPLED	9:55
WELL USE	Monitoring		
STATIC WATER ELEVATION	48.88	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4	Inches	
TOTAL WELL DEPTH	62.74	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Submersive Pump
PURGE RATE	5 GPM	PURGE TIME	9.00
CASING VOLUMES REMOVED	3	GALLONS	45.00
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	None
PID (ppm)	0.0		
ANALYSIS	Routine	DATE SHIPPED	10/28/2022

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre-sampling
pH	6.97	6.87	6.76	6.76	6.65
COND	0.430	0.401	0.382	0.381	0.375
T	10.92	10.63	10.58	10.56	10.54
ORP	164	177	185	185	190
TURB	200	241	79.9	32.1	24.5
D.O.	15.54	11.06	9.04	8.64	8.33



WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP2201		
WELL No./OWNER	3B / Town of Southhampton		
SAMPLE I.D.	MW-3B		
SAMPLING POINT	TOC	SAMPLED BY	MPP/JU
DATE SAMPLED	10/27/2022	TIME SAMPLED	10:40
WELL USE	Monitoring		
STATIC WATER ELEVATION	45.57	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4	Inches	
TOTAL WELL DEPTH	116.74	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Submersible Pump
PURGE RATE	5 GPM	PURGE TIME	28
CASING VOLUMES REMOVED	3	GALLONS	139.00
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	None
PID (ppm)	0.0		
ANALYSIS	Routine	DATE SHIPPED	10/28/2022

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre-sampling
pH	6.54	6.56	6.57	6.64	6.64
COND	0.275	0.270	0.298	0.298	0.300
T	11.44	11.36	11.42	11.43	11.38
ORP	77	13	1	-17	-3
TURB	25.2	11.0	0.0	0.0	0.0
D.O.	8.82	7.56	7.42	7.42	7.39



WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP2201		
WELL No./OWNER	3C / Town of Southhampton		
SAMPLE I.D.	MW-3C		
SAMPLING POINT	TOC	SAMPLED BY	MPP/JU
DATE SAMPLED	10/27/2022	TIME SAMPLED	11:15
WELL USE	Monitoring		
STATIC WATER ELEVATION	45.08	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4	Inches	
TOTAL WELL DEPTH	115.16	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Submersible Pump
PURGE RATE	5 GPM	PURGE TIME	28
CASING VOLUMES REMOVED	3	GALLONS	136.500
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	None
PID (ppm)	0.0		
ANALYSIS	Routine	DATE SHIPPED	10/28/2022

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre-sampling
pH	6.70	6.68	6.77	6.77	6.77
COND	0.135	0.134	0.139	0.129	0.129
T	11.14	12.12	12.22	12.21	12.19
ORP	-31	-19	-7	12	20
TURB	0.00	0.00	0.00	0.00	0.00
D.O.	12.52	6.99	7.06	7.13	7.11



WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP2201		
WELL No./OWNER	4A / Town of Southhampton		
SAMPLE I.D.	MW-4A		
SAMPLING POINT	TOC	SAMPLED BY	MPP/JU
DATE SAMPLED	10/28/2022	TIME SAMPLED	14:20
WELL USE	Monitoring		
STATIC WATER ELEVATION	13.49	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4	Inches	
TOTAL WELL DEPTH	31.22	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Submersible Pump
PURGE RATE	5 GPM	PURGE TIME	7.00
CASING VOLUMES REMOVED	3	GALLONS	35.00
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	None
PID (ppm)	0.0		
ANALYSIS	Routine	DATE SHIPPED	10/28/2022

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre-sampling
pH	6.78	6.79	6.70	6.65	6.68
COND	0.290	0.239	0.234	0.230	0.227
T	12.39	12.72	12.64	12.66	12.65
ORP	-1	40	62	81	87
TURB	0.0	0.0	0.0	0.0	0.0
D.O.	10.77	7.71	7.46	7.31	7.22



WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP2201		
WELL No./OWNER	4B / Town of Southhampton		
SAMPLE I.D.	MW-4B		
SAMPLING POINT	TOC	SAMPLED BY	MPP/JU
DATE SAMPLED	10/27/2022	TIME SAMPLED	14:00
WELL USE	Monitoring		
STATIC WATER ELEVATION	13.4	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4	Inches	
TOTAL WELL DEPTH	82.09	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Submersible Pump
PURGE RATE	5 GPM	PURGE TIME	27.0
CASING VOLUMES REMOVED	3	GALLONS	134.0
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	None
PID (ppm)	0.0		
ANALYSIS	Routine	DATE SHIPPED	10/28/2022

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre-sampling
pH	6.53	6.48	6.74	6.64	6.68
COND	0.145	0.167	0.212	0.231	0.233
T	12.94	12.96	12.95	12.93	12.89
ORP	83	89	38	-5	-6
TURB	0.0	0.0	0.0	0.0	0.0
D.O.	11.88	7.80	7.40	7.30	7.30



WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP2201		
WELL No./OWNER	4C / Town of Southhampton		
SAMPLE I.D.	MW-4C		
SAMPLING POINT	TOC	SAMPLED BY	MPP/JU
DATE SAMPLED	10/27/2022	TIME SAMPLED	13:30
WELL USE	Monitoring		
STATIC WATER ELEVATION	10.01	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4	Inches	
TOTAL WELL DEPTH	138.3	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Submersible Pump
PURGE RATE	5 GPM	PURGE TIME	50
CASING VOLUMES REMOVED	3	GALLONS	250.00
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	None
PID (ppm)	0.0		
ANALYSIS	Routine	DATE SHIPPED	10/28/2022

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre-sampling
pH	6.95	6.81	6.70	6.62	6.55
COND	0.334	0.263	0.264	0.261	0.257
T	13.13	13.12	13.13	13.06	13.03
ORP	143	139	120	90	86
TURB	110	41.3	0.0	0.0	0.0
D.O.	16.95	8.04	7.83	7.68	7.68



WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP2201		
WELL No./OWNER	6AR / Town of Southhampton		
SAMPLE I.D.	MW-6AR		
SAMPLING POINT	TOC	SAMPLED BY	MPP/JU
DATE SAMPLED	10/26/2022	TIME SAMPLED	10:30
WELL USE	Monitoring		
STATIC WATER ELEVATION	93.84	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	2	Inches	
TOTAL WELL DEPTH	113.4	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Submersible Pump
PURGE RATE	5 GPM	PURGE TIME	2
CASING VOLUMES REMOVED	3	GALLONS	9.60
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	None
PID (ppm)	0.0		
ANALYSIS	Routine + Baseline Metals	DATE SHIPPED	10/27/2022

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre-sampling
pH	6.73	6.49	6.34	6.16	6.30
COND	0.111	0.107	0.107	0.106	0.106
T	13.71	13.17	13.10	13.09	13.10
ORP	103	127	142	154	149
TURB	23.9	0.0	0.0	0.0	0.0
D.O.	17.88	13.62	11.87	11.13	10.84



WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP2201		
WELL No./OWNER	6B / Town of Southhampton		
SAMPLE I.D.	MW-6B		
SAMPLING POINT	TOC	SAMPLED BY	MPP/JU
DATE SAMPLED	10/26/2022	TIME SAMPLED	11:20
WELL USE	Monitoring		
STATIC WATER ELEVATION	95.14	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4	Inches	
TOTAL WELL DEPTH	148.8	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Submersible Pump
PURGE RATE	5 GPM	PURGE TIME	21
CASING VOLUMES REMOVED	3	GALLONS	103.00
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	None
PID (ppm)	0.0		
ANALYSIS	Routine + Baseline Metals	DATE SHIPPED	10/27/2022

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre-sampling
pH	6.40	6.27	6.28	5.99	6.16
COND	0.088	0.085	0.089	0.089	0.089
T	12.26	12.43	12.50	12.49	12.47
ORP	137	141	135	148	140
TURB	0.0	0.0	0.0	0.0	0.0
D.O.	10.74	9.89	9.55	9.47	9.41



WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southampton / SHP2201		
WELL No./OWNER	8 / Town of Southampton		
SAMPLE I.D.	MW-8 (MS/MSD)		
SAMPLING POINT	TOC	SAMPLED BY	MPP/JU
DATE SAMPLED	10/26/2022	TIME SAMPLED	14:45
WELL USE	Monitoring		
STATIC WATER ELEVATION	77.69	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4	Inches	
TOTAL WELL DEPTH	90.1	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Submersible Pump
PURGE RATE	5 GPM	PURGE TIME	5
CASING VOLUMES REMOVED	3	GALLONS	25.00
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	None
PID (ppm)	0.0		
ANALYSIS	Routine	DATE SHIPPED	10/27/2022

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre-sampling
pH	6.33	6.34	6.25	6.29	6.26
COND	0.107	0.107	0.108	0.112	0.112
T	13.65	12.60	12.61	12.61	12.61
ORP	163	182	191	192	194
TURB	21.8	15.9	5.6	0.0	0.0
D.O.	26.40	14.14	12.51	11.96	11.56



WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP2201		
WELL No./OWNER	9 / Town of Southhampton		
SAMPLE I.D.	MW-9		
SAMPLING POINT	TOC	SAMPLED BY	MP/JU
DATE SAMPLED	10/26/2022	TIME SAMPLED	15:15
WELL USE	Monitoring		
STATIC WATER ELEVATION	74.4	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4	Inches	
TOTAL WELL DEPTH	91.5	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Submersible Pump
PURGE RATE	5 GPM	PURGE TIME	6
CASING VOLUMES REMOVED	3	GALLONS	27.30
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	None
PID (ppm)	0.0		
ANALYSIS	Routine	DATE SHIPPED	10/27/2022

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre-sampling
pH	6.64	6.71	6.67	6.63	6.56
COND	0.072	0.074	0.074	0.074	0.057
T	14.06	12.94	13.05	13.15	13.17
ORP	161	172	179	186	192
TURB	5.0	2.6	0.0	0.0	0.0
D.O.	22.25	14.17	12.54	11.55	15.69



WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southampton / SHP2201		
WELL No./OWNER	11A / Town of Southampton		
SAMPLE I.D.	MW-11A		
SAMPLING POINT	TOC	SAMPLED BY	MPP/JU
DATE SAMPLED	10/26/2022	TIME SAMPLED	15:50
WELL USE	Monitoring		
STATIC WATER ELEVATION	72.88	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4	Inches	
TOTAL WELL DEPTH	81.44	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Submersible Pump
PURGE RATE	5 GPM	PURGE TIME	3.5
CASING VOLUMES REMOVED	3	GALLONS	17.55
SAMPLE APPEARANCE	Red/Turbid	ODORS OBSERVED	None
PID (ppm)	0.0		
ANALYSIS	Routine+Baseline VOCs/Metals	DATE SHIPPED	10/27/2022

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre-sampling
pH	7.02	6.93	6.90	6.75	6.77
COND	0.231	0.225	0.220	2.130	0.212
T	15.07	13.96	13.78	13.75	13.67
ORP	144	99	81	79	77
TURB	1000	1000	364	330	191
D.O.	10.15	10.02	9.44	8.95	8.54



WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southampton / SHP2201		
WELL No./OWNER	11B / Town of Southampton		
SAMPLE I.D.	MW-11B		
SAMPLING POINT	TOC	SAMPLED BY	MPP/JU
DATE SAMPLED	10/26/2022	TIME SAMPLED	16:30
WELL USE	Monitoring		
STATIC WATER ELEVATION	74.38	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4	Inches	
TOTAL WELL DEPTH	97.6	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Submersible Pump
PURGE RATE	5 GPM	PURGE TIME	9
CASING VOLUMES REMOVED	3	GALLONS	44.85
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	None
PID (ppm)	0.0		
ANALYSIS	Routine+Baseline VOCs/Metals	DATE SHIPPED	10/27/2022

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre-sampling
pH	6.65	6.70	6.61	6.63	6.58
COND	0.420	0.425	0.429	0.427	0.305
T	13.27	13.01	12.83	12.83	12.76
ORP	61	50	56	44	26
TURB	0.0	0.0	0.0	0.0	0.0
D.O.	6.73	6.65	6.58	6.49	6.44



WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP2201		
WELL No./OWNER	12A / Town of Southhampton		
SAMPLE I.D.	MW-12A		
SAMPLING POINT	TOC	SAMPLED BY	MPP/JU
DATE SAMPLED	10/27/2022	TIME SAMPLED	8:35
WELL USE	Monitoring		
STATIC WATER ELEVATION	80.19	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4	Inches	
TOTAL WELL DEPTH	94.63	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Submersible Pump
PURGE RATE	5 GPM	PURGE TIME	6
CASING VOLUMES REMOVED	3	GALLONS	30
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	None
PID (ppm)	0.0		
ANALYSIS	Routine	DATE SHIPPED	10/28/2022

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre-sampling
pH	6.85	6.73	6.68	6.70	6.63
COND	0.227	0.232	0.238	0.238	0.241
T	12.59	12.72	12.77	12.78	12.79
ORP	142	167	178	182	187
TURB	0.0	0.0	0.0	0.0	0.0
D.O.	12.39	10.05	9.00	8.44	8.18



WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southampton / SHP2201		
WELL No./OWNER	12B / Town of Southampton		
SAMPLE I.D.	MW-12B		
SAMPLING POINT	TOC	SAMPLED BY	MPP/JU
DATE SAMPLED	10/27/2022	TIME SAMPLED	8:55
WELL USE	Monitoring		
STATIC WATER ELEVATION	81.70	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4	Inches	
TOTAL WELL DEPTH	96.95	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Submersible Pump
PURGE RATE	5 GPM	PURGE TIME	6.5
CASING VOLUMES REMOVED	3	GALLONS	31
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	None
PID (ppm)	0.0		
ANALYSIS	Routine	DATE SHIPPED	10/28/2022

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre-sampling
pH	6.54	6.55	6.63	6.65	6.66
COND	0.172	0.253	0.274	0.267	0.262
T	12.48	12.51	12.53	12.55	12.55
ORP	195	196	187	182	181
TURB	0.0	0.0	0.0	0.0	0.0
D.O.	9.46	7.91	7.53	7.25	7.09



WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southampton / SHP2201		
WELL No./OWNER	LEA-PRI / Town of Southampton		
SAMPLE I.D.	LEA-PRI		
SAMPLING POINT	TOC	SAMPLED BY	MPP/JU
DATE SAMPLED	10/26/2022	TIME SAMPLED	8:10
WELL USE	NA		
STATIC WATER ELEVATION	NA	FT. BELOW MEASURING POINT	NA
WELL DIAMETER	NA	Inches	
TOTAL WELL DEPTH	NA	FT. BELOW MEASURING POINT	NA

SAMPLING INFORMATION

PURGE METHOD	NA	SAMPLE METHOD	Bailer
PURGE RATE	NA	PURGE TIME	NA
CASING VOLUMES REMOVED	NA	GALLONS	NA
SAMPLE APPEARANCE		ODORS OBSERVED	None
PID (ppm)	0.0		
ANALYSIS	Routine Parameters + Arsenic	DATE SHIPPED	10/27/2022

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre-sampling
pH	-	-	-	-	6.24
COND	-	-	-	-	0.895
T	-	-	-	-	17.82
ORP	-	-	-	-	101
TURB	-	-	-	-	0.0
D.O.	-	-	-	-	13.26



WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southampton / SHP2201		
WELL No./OWNER	LEA-SEC / Town of Southampton		
SAMPLE I.D.	LEA-SEC		
SAMPLING POINT	TOC	SAMPLED BY	MPP/JU
DATE SAMPLED	10/26/2022	TIME SAMPLED	8:30
WELL USE	NA		
STATIC WATER ELEVATION	NA	FT. BELOW MEASURING POINT	NA
WELL DIAMETER	NA	Inches	
TOTAL WELL DEPTH	NA	FT. BELOW MEASURING POINT	NA

SAMPLING INFORMATION

PURGE METHOD	NA	SAMPLE METHOD	Bailer
PURGE RATE	NA	PURGE TIME	NA
CASING VOLUMES REMOVED	NA	GALLONS	NA
SAMPLE APPEARANCE		ODORS OBSERVED	None
PID (ppm)	0.0		
ANALYSIS	Routine Parameters + Arsenic	DATE SHIPPED	10/27/2022

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre-sampling
pH	-	-	-	-	6.1
COND	-	-	-	-	0.485
T	-	-	-	-	17.56
ORP	-	-	-	-	45
TURB	-	-	-	-	0.0
D.O.	-	-	-	-	15.51



APPENDIX D

6 NYCRR PART 360-2: LANDFILLS

SHP2201 – 2nd SEMI-ANNUAL POST-CLOSURE GROUNDWATER MONITORING REPORT 2022

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DEC

Division of Solid & Hazardous Materials

6 NYCRR Part 360
Solid Waste Management Facilities
Title 6 of the
Official Compilation of Codes,
Rules and Regulations
Revised November 24, 1999

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New York State Department of Environmental Conservation

George E. Pataki, Governor

Erin M. Crotty, Acting Commissioner

6 NYCRR PART 360

SOLID WASTE MANAGEMENT FACILITIES

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PREFACE

Organization and Numbering of Statutes and Regulations

The Environmental Conservation Law (ECL) is Chapter 43-B of the Consolidated Laws of New York.

Numbering system in the ECL:

Example

Article 25

Title 19

Section 25-1910

subdivision 25-1910.5

paragraph 25-1910.5(a)

This may be written as ECL 25-1910.5(a)

The regulations of the department are Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (NYCRR).

Numbering system in the department's regulations:

Example

Title 6

Part 360

Subpart 360-2

section 360-2.13

subdivision 360-2.13(k)

paragraph 360-2.13(k)(3)

subparagraph 360-2.13(k)(3)(iii)

clause 360-2.13(k)(3)(iii)(b)

subclause 360-2.13(k)(3)(iii)(b)(1)

item 360-2.13(k)(3)(iii)(b)(1)(i)

This may be written as 6 NYCRR Part 360-2.13(k)(3)(iii)(b)(1)(i)

This numbering system is described in the preface to the department's regulations, and in the regulations of the Department of State (19 NYCRR 261.4(b)).

service area under local laws or ordinances adopted or to be adopted under section 120-aa of the General Municipal Law.

(e) Supervision and certification of construction. The construction of a solid waste management facility and each stage of one must be undertaken under the supervision of an individual licensed to practice engineering in the State of New York. Upon completion of construction, that individual must certify in writing that the construction is in accordance with the terms of the applicable permit and tested in accordance with generally accepted engineering practices. Except as specified elsewhere in this Part, this certification must be submitted to the department within three months after completion of construction and must include as-built plans. The operator must notify the department, in writing, of the date when solid waste will be first received at the facility.

(f) Cessation of construction or operation activities. If construction or operation activities started under a permit issued pursuant to this Part cease for a period of 12 consecutive months, the permit automatically expires on the last day of the 12th month following cessation of activities. There is no automatic expiration when the cessation of construction or operation is caused by factors beyond the reasonable control of the permittee, as determined by the department, or when such cessation is in accordance with the provisions of the permit.

(g) Department inspection of activities. The permittee must authorize the commissioner or authorized department staff, after presentation of department credentials, to undertake inspections in accordance with subdivision 360-1.4(b) of this Part.

(h) Recyclables recovery. In the case of a permit relating to a landfill (other than one used exclusively for ash residue, clean fill or construction and demolition debris), a solid waste incinerator (other than one used exclusively to incinerate regulated medical waste), a refuse-derived fuel processing facility, a construction and demolition debris processing facility, a mixed solid waste composting facility or a transfer station (other than one used exclusively for transfer of regulated medical waste), the permit must contain a condition that the permittee must not accept at the facility solid waste which was generated within a municipality that has either not completed a comprehensive recycling analysis or is not included in another municipality's comprehensive recycling analysis satisfying the requirements of subdivision 360-1.9(f) of this Part which has been

approved by the department and implemented the recyclables recovery program determined to be feasible by the analysis.

(i) Approved design capacity. Every permit must set forth the facility's approved design capacity.

Section 360-1.12 Financial assurance.

(a) Applicability.

(1) In addition to any financial assurance requirements specifically addressed in a Subpart of this Part, the department may require a form of financial assurance, acceptable to the department, from a permit holder, and conditioned upon compliance with the terms of the permit issued to such holder pursuant to this Part.

(2) A form of financial assurance, acceptable to the department, will be required to cover the cost of having the facility properly closed for facilities where the operator and the owner are not the same person.

(3) A form of financial assurance, acceptable to the department, may be required from registered facilities.

(b) Liability coverage. A form of financial assurance for claims arising out of injury to persons or property, relative to either sudden and accidental occurrences or non-sudden and accidental occurrences, may be required for solid waste management facilities. Such financial assurance may be in the form of liability insurance, self-insurance or other form acceptable to the department. The amount of such financial assurance is to be set by the department.

(c) Forms of financial assurance. Section 373-2.8 of this Title provides guidance on the criteria and wording of financial assurance instruments that the department will consider in assessing the acceptability of financial assurance mechanisms.

Section 360-1.13 Research, development and demonstration permits.

(a) Permit. The department may issue a research, development and demonstration permit for any solid waste management facility proposing to utilize an innovative and experimental solid waste management technology or process, including a beneficial use demonstration project. The application for such

permit must clearly demonstrate adequate protection of public health and the environment and be consistent with federal and State laws and regulations and this Part. A permit issued under this section must not be for an activity of a continuing nature. The department may, at its discretion, waive or modify some or all of the application requirements for permits issued under this section.

(b) Permit application. An application for a permit issued under this section must:

(1) describe the proposed activity in detail;

(2) describe how the applicant intends to provide for the receipt and treatment or disposal by the proposed facility of only those types and quantities of solid waste necessary to determine the efficiency and performance capabilities of the technology or process and the effects of such technology or process on human health and the environment; and how the applicant intends to protect human health and the environment in the conduct of the project; and

(3) state that the applicant will provide, on a timely basis, the department with any information obtained as a result of the activity undertaken under the permit. The information must be submitted in accordance with schedules identified in the permit.

(c) Permit restrictions. The permit must:

(1) provide for the construction of facilities as necessary, and for the operation of the facility for not longer than one year (unless renewed as provided in subdivision (d) of this section);

(2) provide for the receipt and treatment or disposal by the facility of only those types and quantities of solid waste that the department determines necessary to determine, the efficiency and performance capabilities of the technology or process and the effects of such technology or process on human health and the environment;

(3) include such requirements as the department determines necessary to protect human health and the environment (including, but not limited to requirements regarding monitoring, operation, financial assurance and closure, and such requirements as the department deems necessary regarding testing and providing of information to the commissioner about the operation of the facility); and

(4) provide that the commissioner, without affording the permittee a prior opportunity for a

hearing, may order an immediate termination of all operations at the facility at any time the commissioner determines that termination is necessary to protect human health and the environment, provided that the permittee is provided an opportunity for a hearing on the termination issue no later than 10 days after the issuance of the order and a decision is rendered no more than 20 days after the close of the hearing record. Nothing in this Part shall preclude or affect the commissioner's authority to issue summary abatement orders under section 71-0301 of the ECL or to take emergency actions summarily suspending a permit under section 401.3 of the State Administrative Procedure Act.

(d) Renewal. Permits issued under this section may be renewed not more than three times, unless the permittee demonstrates to the satisfaction of the department that a longer time period is required to adequately assess the long-term environmental effects of the technology or process being studied under authority of the permit. Each renewal period will not exceed one year and will be conditioned upon compliance with this section.

Section 360-1.14 Operational requirements for all solid waste management facilities.

(a) Applicability. Except as elsewhere provided in this Part, any person who designs, constructs, maintains or operates any solid waste management facility subject to this Part must do so in conformance with the requirements of this section.

(b) Water.

(1) Solid waste must not be deposited in, and must be prevented from, entering surface waters or groundwaters.

(2) Leachate. All solid waste management facilities must be constructed, operated and closed in a manner that minimizes the generation of leachate that must be disposed of and prevent the migration of leachate into surface and groundwaters. Leachate must not be allowed to drain or discharge into surface water except pursuant to a State Pollutant Discharge Elimination System permit and must not cause or contribute to contravention of groundwater quality standards established by the department pursuant to ECL section 17-0301.

(c) Public access. Public access to facilities and receipt of solid waste may occur only when an attendant is on duty. This provision does not apply to

combustion-powered equipment used at the facility. Sound levels for such equipment must not exceed 80 decibels (A) at a distance of 50 feet from the operating equipment.

(q) Open burning. Open burning at a solid waste management facility is prohibited, except for the infrequent burning of agricultural wastes, silvicultural wastes, land clearing debris (excluding stumps), diseased trees or debris from emergency cleanup operation, pursuant to a restricted burning permit issued by the department. Measures must be taken immediately to extinguish any non-permitted open burning and the department must be notified that it has occurred.

(r) Department-approved facilities. Solid waste resulting from industrial or commercial operations, sludge, and septage must be processed, disposed, used or otherwise managed only at facilities that the department has specifically approved for such management of that specific waste.

(s) Emergency numbers. Telephone numbers to emergency response agencies such as the local police department, fire department, ambulance and hospital must be conspicuously posted in all areas where telephones are available for use at the facility.

(t) Facilities. Where operating personnel are required, certain facilities must be provided (except in the case of composting facilities using aerated static pile or windrow techniques and land application facilities). These facilities include adequately heated and lighted shelters, a safe drinking water supply, sanitary toilet facilities and radio or telephone communication.

(u) Facility operator requirements.

(1) Except as otherwise specified in a Subpart of this Part pertaining to a specific type of solid waste management facility, the facility operator, during all hours of operation, must have available for use, a copy of the permit issued pursuant to this Part, including conditions, a copy of the operation and maintenance report, the contingency plan and the most recent annual report.

(2) Operation of every landfill, and other solid waste management facilities as directed by the department, must be conducted under the direction of a facility operator. The facility operator must attend and successfully complete within 12 months from their date of employment, a course of instruction in solid

waste management procedures relevant to the facility at which the facility operator is employed. The course must be provided or approved by the department. The department will issue a certificate of attendance to each individual successfully completing the course. Attendance at a department-approved course before the effective date of this Part will adequately satisfy these training requirements.

(v) Salvaging. Salvaging, if permitted by the facility owner or operator, must be controlled by the facility owner or operator within a designated salvage area and must not interfere with facility operations or create hazards or nuisances.

(w) Closure. The owner or operator of any active or inactive solid waste management facility must, upon termination of use, properly close that facility and must monitor and maintain such closure so as to minimize the need for further maintenance or corrective actions and to prevent or remedy adverse environmental or health impacts such as, but not limited to, contravention of surface water and groundwater quality standards, gas migration, odors and vectors. Termination of use includes those situations where a facility has not received solid waste for more than one year, unless otherwise provided by permit, or if the permit has expired. Termination of use also results from permit denial or order of the commissioner or of a court. Specific closure measures which may also include corrective actions as specified in this Part are subject to approval by the department.

Section 360-1.15 Beneficial use.

(a) Applicability.

(1) This section applies to materials that, before being beneficially used (as determined by the department), were solid waste. This section does not apply to solid wastes subject to regulation under Subpart 360-4 of this Part, except in the manner identified in subdivision 360-1.15(b) of this Part.

(2) Beneficial use determinations granted by the department before the effective date of this section shall remain in effect, subject to all conditions contained therein, unless specifically addressed by subsequent department action.

(b) Solid waste cessation. The following items are not considered solid waste for the purposes of this Part when used as described in this subdivision:

(1) materials identified in subparagraphs 371.1(e)(1)(vi)-(viii) of this Title that cease to be solid waste under the conditions identified in those subparagraphs;

(2) compost and other distribution and marketing (D&M) products that satisfy the applicable requirements under Subpart 360-5 of this Part;

(3) unadulterated wood, wood chips, or bark from land clearing, logging operations, utility line clearing and maintenance operations, pulp and paper production, and wood products manufacturing, when these materials are placed in commerce for service as mulch, landscaping, animal bedding, erosion control, wood fuel production, and bulking agent at a compost facility operated in compliance with Subpart 360-5 of this Part;

(4) uncontaminated newspaper or newsprint when used as animal bedding;

(5) uncontaminated glass when used as a substitute for conventional aggregate in asphalt or subgrade applications;

(6) tire chips when used as an aggregate for road base materials or asphalt pavements in accordance with New York State Department of Transportation standard specifications, or whole tires or tire chips when used for energy recovery;

(7) uncontaminated soil which has been excavated as part of a construction project, and which is being used as a fill material, in place of soil native to the site of disposition;

(8) nonhazardous, contaminated soil which has been excavated as part of a construction project, other than a department-approved or undertaken inactive hazardous waste disposal site remediation program, and which is used as backfill for the same excavation or excavations containing similar contaminants at the same site. Excess materials on these projects are subject to the requirements of this Part. (Note: use of in-place and stockpiled soil from a site being converted to a realty subdivision, as defined by the Public Health Law (10 NYCRR 72), must be approved by the local health department.);

(9) nonhazardous petroleum contaminated soil which has been decontaminated to the satisfaction of the department and is being used in a manner acceptable to the department;

(10) solid wastes which are approved in advance, in writing, by the department for use as daily cover material or other landfill liner or final cover system components pursuant to the provisions of subdivision 360-2.13(w) of this Part when these materials are received at the landfill;

(11) recognizable, uncontaminated concrete and concrete products, asphalt pavement, brick, glass, soil and rock placed in commerce for service as a substitute for conventional aggregate;

(12) nonhazardous petroleum contaminated soil when incorporated into asphalt pavement products by a producer authorized by the department;

(13) unadulterated wood combustion bottom ash, fly ash, or combined ash when used as a soil amendment or fertilizer, provided the application rate of the wood ash is limited to the nutrient need of the crop grown on the land on which the wood ash will be applied and does not exceed 16 dry tons per acre per year;

(14) coal combustion bottom ash placed in commerce to serve as a component in the manufacture of roofing shingles or asphalt products; or as a traction agent on roadways, parking lots and other driving surfaces;

(15) coal combustion fly ash or gas scrubbing by-products placed in commerce to serve as an ingredient to produce light weight block, light weight aggregate, low strength backfill material, manufactured gypsum or manufactured calcium chloride; and

(16) coal combustion fly ash or coal combustion bottom ash placed in commerce to serve as a cement or aggregate substitute in concrete or concrete products; as raw feed in the manufacture of cement; or placed in commerce to serve as structural fill within building foundations when placed above the seasonal high groundwater table.

(c) Special reporting requirements. No later than 60 days after the first day of January following each year of operation, the generator of coal combustion ash must submit a report to the department that identifies the respective quantities of coal combustion bottom ash, fly ash, and gas scrubbing by-products it generated during the calendar year to which it pertains and, with respect to coal combustion bottom ash, how much was sent to a manufacturer of roofing shingles or asphalt products, how much was used as a traction

agent on roadways, parking lots, and other driving surfaces, how much was sent to a manufacturer of cement, concrete or concrete products, and how much was used as structural fill; and, with respect to coal combustion fly ash and to gas scrubbing by-products, how much was used to produce light weight block, light weight aggregate, low strength backfill material (flowable fill), manufactured gypsum or manufactured calcium chloride.

(d) Case-specific beneficial use determinations.

(1) The generator or proposed user of a solid waste may petition the department, in writing, for a determination that the solid waste under review in the petition may be beneficially used in a manufacturing process to make a product or as an effective substitute for a commercial product. Unless otherwise directed by the department, the department may not consider any such petition unless it provides the following:

(i) a description of the solid waste under review and its proposed use;

(ii) chemical and physical characteristics of the solid waste under review and of each type of proposed product;

(iii) a demonstration that there is a known or reasonably probable market for the intended use of the solid waste under review and of all proposed products by providing one or more of the following:

(a) a contract to purchase the proposed product or to have the solid waste under review used in the manner proposed;

(b) a description of how the proposed product will be used;

(c) a demonstration that the proposed product complies with industry standards and specifications for that product; or

(d) other documentation that a market for the proposed product or use exists; and

(iv) a demonstration that the management of the solid waste under review will not adversely affect human health and safety, the environment, and natural resources by providing:

(a) a solid waste control plan that describes the following:

(1) the source of the solid waste under review, including contractual arrangements with the supplier;

(2) procedures for periodic testing of the solid waste under review and the proposed product to ensure that the proposed product's composition has not changed significantly;

(3) the disposition of any solid waste which may result from the manufacture of the product into which the solid waste under review is intended to be incorporated;

(4) a description of the type of storage (e.g., tank or pile) and the maximum anticipated inventory of the solid waste under review (not to exceed 90 days) before being used;

(5) procedures for run-on and run-off control of the storage areas for the solid waste under review; and

(6) a program and implementation schedule of best management practices designed to minimize uncontrolled dispersion of the solid waste under review before and during all aspects of its storage as inventory and/or during beneficial use; and

(b) a contingency plan that contains the information and is prepared in accordance with subdivision 360-1.9(h) of this Part.

(2) The department will determine in writing, on a case-by-case basis, whether the proposal constitutes a beneficial use based on a showing that all of the following criteria have been met:

(i) the essential nature of the proposed use of the material constitutes a reuse rather than disposal;

(ii) the proposal is consistent with the solid waste management policy contained in section 27-0106 of the ECL;

(iii) the material under review must be intended to function or serve as an effective substitute for an analogous raw material or fuel. When used as a fuel, the material must meet the requirements of paragraph 360-3.1(c)(4) of this Part and the facility combusting the material must comply with the registration requirements in subdivision 360-3.1(c) of this Part, if appropriate;

(iv) for a material which is proposed for

incorporation into a manufacturing process, the material must not be required to be decontaminated or otherwise specially handled or processed before such incorporation, in order to minimize loss of material or to provide adequate protection, as needed, of public health, safety or welfare, the environment or natural resources;

(v) whether a market is existing or is reasonably certain to be developed for the proposed use of the material under review or the product into which the solid waste under review is proposed to be incorporated; and

(vi) other criteria as the department shall determine in its discretion to be appropriate.

(3) The department will either approve the petition, disapprove it, or allow the proposed use of the solid waste under review subject to such conditions as the department may impose. When granting a beneficial use determination, the department shall determine, on a case-by-case basis, the precise point at which the solid waste under review ceases to be solid waste. Unless otherwise determined for the particular solid waste under review, that point occurs when it is used in a manufacturing process to make a product or used as an effective substitute for a commercial product or used as a fuel for energy recovery. As part of its petition, the petitioner may request that such point occur elsewhere. In such a request, the petitioner must include a demonstration that there is little potential for improper disposal of the material or little potential for the handling, transportation, or storage of the solid waste under review to have an adverse impact upon the public health, safety or welfare, the environment or natural resources.

(4) The department may revoke any determination made under this subdivision if it finds that one or more of the matters serving as the basis for the department's determination was incorrect or is no longer valid or the department finds that there has been a violation of any condition that the department attached to such determination.

perform in the same manner as the component specified in this section. When the equivalent design involves the substitution of waste materials for components of the landfill's liner or final cover system; and where it can be demonstrated that these material substitutions are within the landfill's environmental containment system (i.e. below the upper most layer of the barrier layer of the final cover and above the secondary composite liner), such equivalency determinations are not subject to the variance requirements of this Part and this use is consistent with the beneficial use provision of paragraph 360-1.15(b)(10) of this Part. It is highly recommended that the applicant discuss equivalent component design proposals with the department in a preapplication conference.

Section 360-2.14 Industrial/commercial waste monofills and solid waste incinerator ash residue monofills.

(a) Industrial/commercial waste monofills. Monofills used solely for the disposal of solid waste resulting from industrial or commercial operations are subject to all requirements of this Subpart, unless the applicant demonstrates that specific landfill requirements in this Subpart are not necessary for the solid waste to be disposed of at the subject facility. The requirements in this Subpart may be modified on a case-specific basis. The department may impose additional or less stringent requirements on these monofills, based on the pollution potential of the waste. Pollution potential shall be based upon the volume and the physical, chemical, and biological properties of the solid waste, and, its variability. Changes in the monofill's design may include, but not be limited to, modifications to the leachate collection system, low permeability liners, and low permeability cover system designs. For those facilities where the applicant can demonstrate to the department that a specific regulatory requirement contained in either sections 360-2.13, 2.15 or 2.17 of this Subpart are not applicable as discussed in this subdivision, the need for a formal variance is waived. Alternative liner system designs for industrial waste monofills must demonstrate the following:

(1) In the case where an alternative liner system is proposed for an industrial waste monofill, a demonstration must be made as to the proposed liner's ability to adequately prevent a negative impact on groundwater and must address the following factors: the volume and physical and chemical composition of the leachate that will be generated at the disposal facility; the climatological conditions in the vicinity of the proposed site; and the hydrogeologic

characteristics of the proposed site. The demonstration must include an assessment of leachate quality and quantity, anticipated liner system leakage to the subsurface and related contaminant transport to the closest environmental monitoring point. The demonstration should focus on developing an accurate profile of leachate quality and production rates sufficient to be used in evaluating its fate and transport from the point of release to the first point of environmental monitoring in order to determine whether leachate constituents can be expected to exceed the State's groundwater quality standards. It must be demonstrated that the industrial wastes' chemical characterization be accurately defined and that there are no reasons to anticipate significant changes in the concentrations of compounds that could increase the wastes' pollution potential in the future. The demonstration must include chemical compatibility test data run on the proposed liner and/or leachate collection and removal system materials with representative waste leachate, using an appropriate permeameter test to determine potential changes in the permeability of the proposed liner. The demonstration must include an estimate of the volumetric release of leachate from the proposed liner design based on analytical approaches supported by empirical data and/or be verified from other existing operational facilities of similar design. A dilution calculation must then be modeled to evaluate the impacts of the characterized leachate on groundwater quality based upon the calculated liner system's leakage rate.

(2) Paper mill sludge monofills. The minimum components of the liner system, monofill closure, operation requirements and the environmental monitoring plan for paper mill sludge landfills must consist of the following:

(i) Components of liner system. A single composite liner system is the minimal level of containment that the department will accept for paper mill sludge monofills. The composite liner system must consist of a minimum of two components, an upper geomembrane liner placed directly above a low permeability soil layer. A leachate collection and removal system must be located over the composite liner. The construction of each of the components must be in conformance with the appropriate requirements of section 360-2.13 of this Subpart unless expressly stated otherwise in this paragraph. The department may require additional liner components to the single composite liner or other restrictions depending upon the waste expected to be produced, monitorability of the site and/or other site conditions.

(ii) The soil component of the composite

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID & HAZARDOUS MATERIALS
ACTIVE SOLID WASTE FACILITIES**

As of December 31, 2000

NYS DEC **REGION 1**

COUNTY **Suffolk**

Babylon Southern Ashfill 52A01

OWNER TYPE: Municipal
REGULATORY STATUS: Permit
OWNER: Town of Babylon
ADDRESS: 200 East Sunrise Hwy
(MAILING) Lindenhurst NY 11757
PHONE: (516) 957-3072
WASTE TYPE: RR Ash

360 PERMIT NUMBER: 1472000778000010
PERMIT ISSUED: 05/04/97
PERMIT EXPIRES: 05/03/02
CONTACT: Ronald Kluesener
ADDRESS: Gleam Street
West Babylon NY 11704
PHONE: (631) 422-7640
UTMEAST: 636645 UTMNORTH: 4510592

Brookhaven SLF Cell 5 52A03

OWNER TYPE: Municipal
REGULATORY STATUS: Permit
OWNER: Town of Brookhaven
ADDRESS: 3233 Route 112
(MAILING) Medford NY 11763
PHONE: (516) 451-6224
WASTE TYPE: RR Ash

360 PERMIT NUMBER: 1472200030000040
PERMIT ISSUED: 11/17/98
PERMIT EXPIRES: 08/31/05
CONTACT: Dennis Lynch
ADDRESS: 3233 Route 112
Medford NY 11763
PHONE: (516) 451-6224
UTMEAST: 674593 UTMNORTH: 4518097

Northern U 52A39

OWNER TYPE: Municipal
REGULATORY STATUS: Permit
OWNER: Town of Babylon
ADDRESS: 200 East Sunrise Highway
(MAILING) Lindenhurst NY 11757
PHONE: (516) 957-3072
WASTE TYPE: RR Ash

360 PERMIT NUMBER: 1472000628000010
PERMIT ISSUED: 10/19/94
PERMIT EXPIRES: 04/30/05
CONTACT: Ronald Kluesener
ADDRESS: 200 East Sunrise Highway
Lindenhurst NY 11757
PHONE: (631) 422-7640
UTMEAST: 637078 UTMNORTH: 4510803

NYS DEC **REGION 3**

COUNTY **Westchester**

Sprout Brook LF 60A20

OWNER TYPE: County
REGULATORY STATUS: Permit
OWNER: Westchester County DPW
ADDRESS: 270 North Avenue
(MAILING) New Rochelle NY 10801
PHONE: (914) 637-3000
WASTE TYPE: Bottom Ash, Fly Ash, RR Ash

360 PERMIT NUMBER: 3552200097000020
PERMIT ISSUED: 10/01/97
PERMIT EXPIRES: 10/01/02
CONTACT: mario Parise
ADDRESS: Old Albany Post Road
Peekskill NY 10601
PHONE: (914) 637-3000
UTMEAST: 590560 UTMNORTH: 4573986

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID & HAZARDOUS MATERIALS
ACTIVE SOLID WASTE FACILITIES**

As of December 31, 2000

NYS DEC REGION 3

COUNTY Orange

Central Hudson Gas & Elec	36N01	360 PERMIT NUMBER:	3334600011000018
OWNER TYPE: Private		PERMIT ISSUED:	05/09/00
REGULATORY STATUS: Permit		PERMIT EXPIRES:	05/09/05
OWNER: Central Hudson Gas & Elec		CONTACT: Mark McLean	
ADDRESS: 992 River Road		ADDRESS: 992 River Road	
(MAILING) Newburgh NY 12550		Newburgh NY 12550	
PHONE: (914) 452-2000		PHONE: (914) 563-4805	
WASTE TYPE: Coal Ash		UTMEAST: 585953 UTMNORTH: 4603521	

COUNTY Rockland

Tomkins Cove Ash Facility	44N07	360 PERMIT NUMBER:	3392800039000010
OWNER TYPE: Private		PERMIT ISSUED:	06/30/94
REGULATORY STATUS: None		PERMIT EXPIRES:	06/30/99
OWNER: Orange & Rockland Utility		CONTACT: C.A. Herbst	
ADDRESS: One Blue Hill Plaza		ADDRESS: One Blue Hill Plaza	
(MAILING) Pearl River NY 10965		Pearl River NY 10965	
PHONE: (914) 577-2582		PHONE: (914) 786 8150	
WASTE TYPE: Coal Ash, Ash Residue		UTMEAST: 585526 UTMNORTH: 4567869	

NYS DEC REGION 6

COUNTY Jefferson

Deferiet Paper	23N06	360 PERMIT NUMBER:	6224000030000000
OWNER TYPE: Private		PERMIT ISSUED:	02/15/94
REGULATORY STATUS: Permit		PERMIT EXPIRES:	11/01/03
OWNER: Deferiet Paper Company		CONTACT: Todd Furnia	
ADDRESS: 400 Anderson Avenue		ADDRESS: 400 Anderson Avenue	
(MAILING) Deferiet NY 13628		Deferiet NY 13628	
PHONE: (315) 493-3540		PHONE: (315) 493-3540	
WASTE TYPE: Coal Ash, Paper Sludge, Coal Rejects, Wood Yard Debris		UTMEAST: 439729 UTMNORTH: 4884523	

DANC Landfill	23S13	360 PERMIT NUMBER:	6225200007000006
OWNER TYPE: Municipal		PERMIT ISSUED:	02/27/96
REGULATORY STATUS: Permit		PERMIT EXPIRES:	02/27/06
OWNER: Develop. Authority N. Country		CONTACT: E. William Seifried	
ADDRESS: 317 Washington Street		ADDRESS: NYS Route 177	
(MAILING) Watertown NY 13601		Rodman NY 13682	
PHONE: (315) 785-2592		PHONE: (315) 232-3236	
WASTE TYPE: Residential, Demo, Asbestos, Indus, Coal Ash, Cont. Soil, Sludge		UTMEAST: 427037 UTMNORTH: 4852232	

NYS DEC REGION 7

COUNTY Broome

Weber Ash Disposal Site	04N08	360 PERMIT NUMBER:	7033200020000010
OWNER TYPE: Private		PERMIT ISSUED:	10/01/80
REGULATORY STATUS: Consent Order		PERMIT EXPIRES:	09/30/83
OWNER: AES Creative Resources		CONTACT: Peter Huff	
ADDRESS: 720 Riverside Dr.		ADDRESS: 720 Riverside Dr.	
(MAILING) Johnson City NY 13790		Johnson City NY 13790	
PHONE: (607) 729-6950		PHONE: (607) 729-6950	
WASTE TYPE: Coal Ash, Sludge		UTMEAST: 431941 UTMNORTH: 4673115	

COUNTY Tompkins**Cayuga****55N02**OWNER TYPE: Private
REGULATORY STATUS: PermitOWNER: AES Cayuga, L.L.C.
ADDRESS: 228 Cayuga Drive
(MAILING) Lansing NY 14882

PHONE: (607) 533-7913

WASTE TYPE: Coal Ash, Sludge

360 PERMIT NUMBER: 7503200069000010

PERMIT ISSUED: 04/17/97

PERMIT EXPIRES: 04/17/02

CONTACT: Daniel Hill

ADDRESS: Milliken Road

NY

PHONE: (607) 533-7913

UTMEAST: 366998 UTMNORTH: 4718715

NYS DEC **REGION 9****COUNTY Chautauqua****Chautauqua Landfill****07S12**OWNER TYPE: County
REGULATORY STATUS: PermitOWNER: County of Chautauqua DPW
ADDRESS: Grace Office Building
(MAILING) Mayville NY 14757

PHONE: (716) 985-4211

WASTE TYPE: Residential, C&D, Asbestos, Sludge, Industrial, Cont. Soil, Coal Ash

360 PERMIT NUMBER: 906360000600013

PERMIT ISSUED: 07/22/99

PERMIT EXPIRES: 07/23/09

CONTACT: Theodore Osborne

ADDRESS: 3889 Towerville Road

Jamestown NY 14701-9653

PHONE: (716) 985-4785

UTMEAST: 143329 UTMNORTH: 4681819

COUNTY Niagara**Niagara Recycling Inc.****32S11**OWNER TYPE: Private
REGULATORY STATUS: PermitOWNER: BFI (Allied Waste)
ADDRESS: P.O. Box 344 LPO
(MAILING) Niagara Falls NY 14304-0344

PHONE: (716) 285-3344

WASTE TYPE: Industrial, C&D, RR & Coal Ash, Sludge, Asbestos, Cont. Soil, MSW

360 PERMIT NUMBER: 9291100119000050

PERMIT ISSUED: 04/25/95

PERMIT EXPIRES: 04/30/05

CONTACT: David Hanson

ADDRESS: 56th St. & Niagara Falls Blvd.

Niagara Falls NY 14304-0344

PHONE: (716) 285-3344

UTMEAST: 175230 UTMNORTH: 4779955

Modern Landfill**32S30**OWNER TYPE: Private
REGULATORY STATUS: PermitOWNER: Modern Landfill, Inc.
ADDRESS: P.O. Box 209
(MAILING) Model City NY 14107-0209

PHONE: (716) 754-8226

WASTE TYPE: MSW, Industrial, Asbestos, Sludge, RR & Coal Ash, C&D, Cont. Soil

360 PERMIT NUMBER: 9292400016000310

PERMIT ISSUED: 12/29/95

PERMIT EXPIRES: 12/31/05

CONTACT: James Goehrig

ADDRESS: Fletcher & Harold Roads

Model City NY 14107-0209

PHONE: (716) 754-8226

UTMEAST: 176999 UTMNORTH: 4792104

DEC

FACILITY

LINER TYPE

NUMBER	FACILITY NAME	S	SC	D	DC
36N01	Central Hudson Gas & Elec	.F.	.F.	.F.	.T.
44N07	Tomkins Cove Ash Facility	.F.	.F.	.F.	.F.
23N06	Deferiet Paper	.F.	.T.	.F.	.F.
23S13	DANC Landfill	.F.	.F.	.F.	.T.
04N08	Weber Ash Disposal Site	.T.	.F.	.F.	.F.
55N02	Cayuga	.F.	.F.	.F.	.T.
07S12	Chautauqua Landfill	.F.	.F.	.F.	.T.
32S11	Niagara Recycling Inc.	.F.	.F.	.F.	.T.
32S30	Modern Landfill	.F.	.F.	.F.	.T.

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(Statutory authority: Environmental Conservation Law, Sections 1-0101, 3-0301, 8-0113, 19-0301, 19-0306, 23-2305, 23-2307, 27-0101, 27-0106, 27-0107, 27-0109, 27-0305, 27-0703, 27-0704, 27-0705, 27-0911, 27-1317, 27-1515, 52-0107, 52-0505, and 70-0107)

[Effective Date December 31, 1988]

[Amendment Dates:

Revised Effective March 27, 1990; with promulgation of new Subpart 15: Grants for Comprehensive Solid Waste Management Planning.

Revised Effective May 28, 1991; With repeal of existing Subpart 9 and promulgation of new Subpart 9: State Assistance for Municipal Landfill Closure Projects

Revised Effective January 25, 1992; With repeal of existing Subpart 10 and promulgation of new Subpart 10: Regulated Medical Waste Storage, Transfer, and Disposal, and new Subpart 17 Regulated Medical Waste Treatment Facilities.

Revised/Enhanced Effective October 9, 1993; with adoption of amendments to existing Subparts 1 through 17

Revised Effective December 14, 1994; with adoption of amendments to existing Subpart 9: State Assistance for Municipal Landfill Closure Projects

Revised Effective January 14, 1995; With repeal of existing Subpart 14 and promulgation of new Subpart 14: Used Oil.

Revised Effective November 26, 1996; With adoption of amendments to existing Subparts 1, 2, 3, 7, 11, 14, and 17

Revised Effective September 29, 1997; With adoption of amendments to existing Subpart 9

Revised Effective November 21, 1998; With adoption of amendments to existing Subpart 2

Revised Effective November 24, 1999; With adoption of amendments to existing Subparts 2, 3, 4, 5, 9, 11, 14, and 16]

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§360-2.11 Hydrogeologic report.

The hydrogeologic report must define the landfill site geology and hydrology and relate these factors to regional and local hydrogeologic patterns; define the critical stratigraphic section for the site; provide an understanding of groundwater and surface water flow at the site sufficient to determine the suitability of the site for a landfill; establish an environmental monitoring system capable of readily detecting a contaminant release from the facility and determining whether the site is contaminating surface or subsurface waters; and form the basis for design of the facility and contingency plans relating to ground or surface water contamination or gas migration as required in section 360-2.10 of this Subpart. The scope and extent of investigations necessary in the hydrogeologic report will vary based upon the hydrogeologic complexity of the site and the ability of the site to restrict contaminant migration. Additionally, the hydrogeologic report must define the engineering properties of the site as necessary for

proper design and construction of any facilities proposed to be built at the site.

(a) Requirements of the site investigation plan. The site investigation plan must clearly define all methods used in investigating the hydrogeologic conditions of the site, the scope of the intended investigation, and any specific hydrogeologic questions to be addressed. The applicant is strongly encouraged to develop a draft version of the plan for review by the department before starting the hydrogeologic investigation that begins to define the critical stratigraphic section, and to keep the department informed of the findings and subsequent investigative proposals as the study proceeds. The final version of the plan, included in the hydrogeologic report section of the permit application, must fully describe all methods of investigation used. Unless otherwise approved by the department, the plan must comply with the following:

(1) General requirements for all methods used. In obtaining the required hydrogeologic information, the applicant must employ current, standard, and generally accepted procedures. All work must be done in accordance with applicable American Society for Testing Materials standards or current and appropriate U.S. Environmental Protection Agency and department guidance documents. Alternative or innovative methodologies may be approved by the department; however, the department may initially require redundant technologies to prove the reliability of a new methodology. All procedures must be conducted under the supervision of a qualified groundwater scientist having experience in similar hydrogeologic investigations, in a manner that ensures accuracy of the data and precludes environmental degradation. The location of all installations, geophysical and geochemical surveys, and seismic lines for the proposed investigation must be shown on a map with the same scale and coordinate grid system used on the engineering plans (see section 360-1.9[e] of this Part).

(2) Literature search. A comprehensive search must be made for pertinent and reliable information concerning regional and site specific hydrogeologic conditions. The literature search must include, as available, records and reports of the New York State Department of Health, the New York State Department of Transportation, the U.S. Soil Conservation Service, and the New York State Geological Survey; basin planning reports, groundwater bulletins, water supply papers, professional papers and other open file reports of the U.S. Geological Survey; bulletins, circulars, map and chart series, memoirs and other publications of the New York State Geologic Survey; publications and bulletins of the Geological Society of America and other professional organizations; and publications of the U.S. Environmental Protection Agency and the department, college and university reports; and aerial photography or remotely sensed imagery.

(3) Surficial geologic mapping. The site must be mapped to determine the distribution of surficial deposits on and surrounding the site based upon information from the hydrogeologic investigation, field evaluations, and field confirmation of all interpretations made on the site itself.

(4) Test pits. Test pits may be used to determine shallow stratigraphy. The test pits must not create a health or safety hazard and must be logged by a geologist or geotechnical engineer with experience in similar hydrogeologic investigations. Logs must include: elevations; surface features before excavation; depth of the test pit and of all relevant horizons or features; moisture content of units; standard soil classifications (including the Unified Soil Classification System), stratigraphy, soil structure, bedrock lithology, brittle, or

secondary structures in soil and bedrock; and a sketch showing these features for each test pit constructed. Test pits must be promptly backfilled and compacted with excavated materials. The department may require that, if a test pit is dug, undisturbed soil samples be taken and tested in accordance with subparagraph (9)(ii) of this subdivision.

(5) Water well surveys. A survey of public and private water wells within one mile downgradient and one-quarter mile upgradient of the proposed site must be conducted. Surveys must obtain, where available, the location of wells, which must be shown on a map with their approximate elevation and depth, name of owner, age and usage of the well; stratigraphic unit screened; well construction; static water levels; well yield; perceived water quality; and any other relevant data which can be obtained.

(6) Geophysical and geochemical surveys. The department may require the use of geophysical and geochemical methods, such as electromagnetic, resistivity, seismic surveys, remote sensing surveys, downhole geophysics, isotope geochemistry, and soil gas analysis, where necessary to justify the interpretations and conclusions of the site investigation report and to provide information between boreholes, and aid in the siting of wells.

(7) Tracer studies. The department may require the use of tracer studies to aid in understanding groundwater flow or to otherwise assist in devising an effective environmental monitoring plan.

(i) Where sites overlie weathered limestone or dolostone bedrock or where karst environments cannot be avoided, the department may require tracer studies before finalizing the bedrock monitoring plan. Tracer studies must identify, in specific detail, areas of groundwater flow from the facility attributed to secondary permeability, recharge and discharge areas on and surrounding the site, storage of groundwater, and variations of water quality seasonally and during high and low flow periods.

(ii) Where a site is otherwise unmonitorable because of existing contamination, the department may allow the use of tracers to aid in monitoring.

(8) Monitoring wells and piezometers.

(i) Construction in general.

(a) Monitoring wells and piezometers must define the three-dimensional flow system within the critical stratigraphic section to justify the interpretations and conclusions of the hydrogeologic report.

(b) Construction techniques must be appropriate to ensure that groundwater samples and head level measurements characterize discrete stratigraphic intervals; and to prevent leakage of groundwater or contaminants along the well annulus. If leakage is detected, it must be corrected or the well abandoned.

(c) Monitoring wells and piezometers may be placed individually or as well clusters. Well clusters consist of individual wells at varying depths in close proximity, each installed in its own boring. Multiple wells placed into one large borehole are prohibited unless prior department approval in writing is obtained.

(d) Soil borings, soil samples, and rock cores must characterize each stratigraphic unit within the critical stratigraphic section to justify the interpretations and conclusions

of the hydrogeologic report.

(e) Every precaution must be taken during drilling and construction of monitoring wells to avoid introducing contaminants into a borehole. Only potable water of known chemistry may be used in drilling monitoring wells or piezometers unless otherwise approved by the department.

(f) All equipment placed into the boring must be properly decontaminated before use at the site and between boreholes. The initial cleaning at the site must ensure that no contaminants from the last site drilled will be introduced into the borings. All equipment must be steam cleaned between holes. Where possible, upgradient wells should be drilled first.

(g) Use of drilling muds is to be avoided unless prior department approval in writing is granted. If drilling muds are used, the material used must avoid the introduction of stray contaminants. Drilling muds must not be used within 10 feet of the screened interval.

(h) Air systems and drilling lubricants must not introduce contaminants into the borehole.

(i) Well borings must have an inside diameter at least two inches larger than the outside diameter of the casing and screen to ensure that a tremie may be properly used.

(j) Wells and borings must not be placed through or into waste unless prior department approval has been granted and sufficient safety precautions are employed. If waste is encountered unexpectedly during drilling, drilling of that boring must cease, the hole properly abandoned with cuttings properly disposed of and the department notified.

(ii) Construction of monitoring wells and piezometers.

(a) Well screens and risers must be constructed of materials selected to last for the required monitoring period of the facility without contributing contaminants to, or removing contaminants from, the groundwater. All materials used are subject to department approval. Joints, caps, and end plugs are to be secured by welds, threads with teflon tape, or force fittings. Solvents and glues or other adhesives are prohibited. Caps must be vented to allow for proper pressure equalization. The inside diameter of each well screen or riser pipe must be nominally two inches in diameter and must allow for proper development, survey and sampling equipment to be used within the screen and casing. A permanent mark should be made at the top of the riser pipe to provide a datum for subsequent water level measurements.

(b) Unless otherwise approved by the department, well screens are required for all wells and piezometers. All screens used must be factory constructed non-solvent welded/bonded continuous slot wire wrap screens of a material appropriate for long-term monitoring without contributing contaminants to or removing contaminants from the groundwater. The slot size of the screen must be compatible with the sand pack. Water table variations, site stratigraphy, expected contaminant behavior, and groundwater flow must be considered in determining the screen length, materials, and position. Where existing contamination is suspected or known, down hole geophysical

techniques may be required by the department to aid in selecting well screen elevations.

(c) The sand pack surrounding the well screen must consist of clean, inert, siliceous material. Grain size must be based upon a representative sieve analysis of the zone to be screened. The sand pack must minimize the amount of fine materials entering the well and must not inhibit water inflow to the well. The sand pack must be placed in the annular space around the well screen and extend two feet or 20 percent of the screen length (whichever is greater) above the top, and six inches below the bottom, of the screen. The sand pack material must be placed using the tremie method or another method approved by the department and must avoid bridging. The sand pack must be checked for proper placement. A finer grained sand pack material (100 percent passing the No. 30 sieve and less than two percent passing the No. 200 sieve) six inches thick must be placed at the top of the sand pack between the sand and the bentonite seal.

(d) Bentonite must be placed above the sand pack using the tremie or other approved method to form a seal at least three feet thick. A 6 to 12 inch fine grained sand pack must be placed above the bentonite seal to minimize grout infiltration. If pellets or chips are used, sufficient time should be allotted to allow for full hydration of the bentonite prior to emplacement of overlying materials.

(e) Grout of cement/bentonite, bentonite alone, or other suitable, low permeability material, if approved by the department, must completely fill the remaining annular space to the surface seal. The grout mixture must set up without being diluted by formation water, and must displace water in the annular space to ensure a continuous seal. The grout mixture must be placed under pressure using a tremie or other method approved by the department. Auger flights or casing must be left in the hole before grouting to prevent caving. The cement used must be appropriate for the groundwater chemistry of the site.

(f) A protective steel casing, at least two inches larger in diameter than the well casing, must be placed over the well casing or riser pipe and secured in a surface well seal to adequately protect the well casing. A distinctive, readily visible marker must be permanently affixed to the protective casing or near the well to identify the well number and ensure visibility even in periods of high snow cover. A drain hole must be drilled at the base of the protective casing. A vent hole must be located near the top of the protective casing to prevent explosive gas build up and to allow water levels to respond naturally to barometric pressure changes. The annulus of the protective casing should be filled with gravel. A locking cap must be installed with one to two inches clearance between the top of the well cap and the bottom of the locking cap when in the locked position and a weather resistant padlock must be placed on the protective casing and duplicate keys provided to the department.

(g) A concrete surface seal designed to last throughout the planned life of the monitoring well must be constructed. The surface seal must extend below the frost depth to prevent potential well damage. The top of the seal must be constructed by pouring the concrete into a pre-built form with a minimum of three foot long sides. The seal must be designed to prevent surface runoff from ponding and entering the well casing. In areas where traffic may cause damage to the well, bumperguards or other

suitable protection for the well is required. Any damaged or deteriorated surface seals must be reported to the department and repaired or replaced in an appropriate manner. The department may allow alternate designs when documentation is presented which demonstrates the intent of the regulations.

(h) Where under the circumstances of a particular situation the department believes that the methods identified in this section are inadequate, it may require that additional measures be taken to prevent migration of contaminants along the annulus of the well or to protect the well.

(i) Alternative construction methods for piezometers and wells which are not to be part of the environmental monitoring plan may be approved by the department if those methods meet the requirements set forth in clause (i)(b) of this paragraph.

(iii) Well and piezometer development. All wells and piezometers must be developed as soon as possible after installation, but not before the well seal and grout have set. Water must not be introduced into the well for development, except with approval of the department. Any contaminated water withdrawn during development must be properly managed. Development must not disturb the strata above the water-bearing zone or damage the well. The entire saturated screened interval must be developed. The department may require multiple attempts at well development to increase the likelihood that sediment free water can be obtained. Development methods should be appropriate for conditions/stratigraphy encountered. Placement of screens in a fine grained strata may require gentle development techniques to avoid pulling sediment into the well. The selected method must minimize to the greatest extent possible the amount of turbidity in the well.

(iv) Survey. The locations and elevations of all existing and abandoned test pits, soil borings, monitoring wells, and piezometers must be surveyed to obtain their precise location and plotted on a map in the hydrogeologic report. The vertical location of the ground surface and the mark made on the top of the monitoring well and piezometer risers must be accurately measured to the nearest 100th foot.

(v) Replacement of wells. All wells must be properly protected to ensure their integrity throughout the active and post-closure period of the facility. If, in the opinion of the department, water quality or other data show that the integrity of a well is lost, the well must be replaced and sampled within a time period acceptable to the department (but not to exceed 120 days) after written notification by the department. The initial sample for the replacement well must be analyzed for baseline parameters in the Water Quality Analysis Tables in this section.

(vi) Abandonment of wells. All soil borings or rock cores which are not completed as monitoring wells or piezometers and other abandoned wells must be fully sealed in a manner appropriate for the geologic conditions to prevent contaminant migration through the borehole. Generally, such sealing must include:

(a) Overboring or removal of the casing to the greatest extent possible, followed by perforation of any casing left in place. All casing and well installations in the upper five feet of the boring, or within five feet of the proposed level of excavation, must be removed.

(b) Sealing by pressure injection with cement bentonite grout, using a tremie pipe or

other method acceptable to the department, must extend the entire length of the boring to five feet below the ground surface or the proposed excavation level. The screened interval of the borehole must be sealed separately and tested to ensure its adequacy before sealing the remainder of the borehole. Where the surrounding geologic deposits are highly permeable, alternate methods of sealing may be required to prevent the migration of the grout into the surrounding geologic formation. The upper five feet must be backfilled with appropriate native materials compacted to avoid settlement.

(c) The sealed site must be restored to a safe condition. The site must be inspected periodically after sealing for settlement or other conditions which require remediation.

(9) Geologic sampling.

(i) All borings and rock cores must be sampled continuously to the base of the critical stratigraphic section. For well clusters, continuous samples must be collected from the surface to the base of the deepest well. Other wells in the cluster must be sampled at all stratigraphic changes, and at the screened interval. At sites where the geology is not of a complex nature the department may allow a reduction in the number of wells requiring continuous sampling. Soil borings must be sampled using the split spoon method and bedrock or boulders must be sampled by coring with standard size NX or larger diameter core bits. Samples must be retained in labeled glass jars or wooden core boxes. All samples must be securely stored and accessible throughout the life of the facility. The location of the storage area must be designated in the operation and maintenance plan for the facility.

(ii) A representative number of undisturbed samples must be collected from test pits and soil borings using appropriate methods to identify the soil characteristics of all cohesive soil units. Such samples must be analyzed in the laboratory for: Atterberg limits; gradation curves by sieve or hydrometer analysis or both, as appropriate; undisturbed permeabilities; and visual descriptions of undisturbed soil structures and lithologies.

(10) Logs.

(i) Complete and accurate drilling logs must be provided to the department for all soil borings. These logs must provide detailed soil classification according to the Unified Soil Classification System (USCS). The USCS visual method must be used on all samples supplemented by the USCS laboratory tests on a representative number of samples from each stratigraphic unit and each screened interval. Logs also must contain a description of matrix and clasts, mineralogy, roundness, color, appearance, odor, and behavior of materials using an appropriate descriptive system. A clear description of the system used must be included with the logs. When undisturbed samples have been taken, the interval tested and the test results must be clearly shown on the logs. All well logs must contain drilling information as observed in the field including: moisture content, location of the water table during drilling, water loss during drilling; depth to significant changes in material and rock; sample recovery measured in tenths of a foot; hammer blow counts, and other pertinent comments; the method of drilling, anomalous features such as gas in the well, and the use and description of drilling fluids or additives, including the source, and calculated and actual amounts of materials used.

(ii) Rock core logs must describe the lithology, mineralogy, degree of cementation, color, grain size, and any other physical characteristics of the rock; percent recovery and the

rock quality designation (RQD); other primary and secondary features, and contain all drilling observations and appropriate details required for soil boring logs. A clear photograph of all labeled cores must also be taken and submitted with the logs.

(iii) Well completion logs must contain a diagram of the completed well, all pertinent details on well construction, a description of the materials used, and elevations of all well features.

(iv) Copies of original field logs must be submitted to the department upon request.

(11) In situ hydraulic conductivity testing. In situ hydraulic conductivity testing must be done in all monitoring wells and piezometers, unless other methods that are approved by the department, are used. The testing method used must not introduce contaminants into the well. If contamination is known or suspected to exist, all water removed must be properly managed. Hydraulic conductivities may be determined using pump tests, slug tests, packer tests, tracer studies, isotopic geochemistry, thermal detection, or other suitable methods.

(b) Site investigation report. The site investigation report must include a final version of the site investigation plan, raw field data, analytical calculations, maps, flow nets, cross-sections, interpretations (and alternative interpretations where applicable), and conclusions. All maps, drawings and diagrams must have a minimum scale of 1:24,000, unless otherwise acceptable to the department. Such report must comprehensively describe:

(1) Regional geology. The discussion of regional geology must demonstrate how the regional geology relates to the formation of on-site geologic materials, the potential for and effects of off-site contaminant migration, and the location of nearby sensitive environments. This discussion must include available and appropriate information to describe:

(i) bedrock stratigraphy and structural features (represented on maps and columnar diagrams) constructed from field exposures and the geologic literature, describing formation and member names, geologic ages, rock types, thicknesses, the units' mineralogic and geochemical compositions and variabilities, rock fabrics, porosities and bulk permeabilities, including karst development, structural geology, including orientation and density or spacing of folds, faults, joints, and other features;

(ii) glacial geology, including a discussion of the formation, timing, stages, and distribution of glacial deposits, advances and retreats, hydrologic characteristics of the surficial deposits, such as kames, eskers, outwash moraines, etc.;

(iii) major topographic features, their origin and influence upon drainage basin characteristics; and

(iv) surface water and groundwater hydrologic features, including surface drainage patterns, recharge and discharge areas, wetlands and other sensitive environments, inferred regional groundwater flow directions, aquifers, aquitards and aquicludes, known primary water supply and principal aquifers, public water supply wells, and private water supply wells identified in the water supply well survey; any known peculiarities in surface water and groundwater geochemistry, and any other relevant features.

(2) Site-specific geology. The site investigation report must define site hydrogeologic conditions in three dimensions and their relationship to the proposed landfill. The report must define site geology, surface water and groundwater flow, and must relate site-specific conditions to the regional geology. The report must describe the potential impact the landfill

may have on surface and groundwater resources and other receptors, including future hydrogeologic conditions, which may occur with site development, and it must describe the hydrogeologic conditions in sufficient detail to construct a comprehensive understanding of groundwater flow, which can be quantified and verified through hydrologic, geochemical, and geophysical measurements. The report must provide sufficient data to specify the location and sampling frequency for environmental monitoring points; form the basis for contingency plans regarding groundwater and surface water contamination and explosive gas migration; and support the engineering design of the landfill. The site-specific hydrogeologic evaluation must specifically discuss all units in the critical stratigraphic section. Such evaluation must include maps, cross-sections, other graphical representations, and a detailed written analysis of the following:

- (i) all hydrogeologic units such as aquifers, aquitards and aquicludes, and how they relate to surface water and groundwater flow. This must include all hydrogeologic data collected during the site investigation and explain and evaluate the hydrologic and engineering properties of the site and each specific unit; and

- (ii) local groundwater recharge and discharge areas, high and low groundwater tables and potentiometric surfaces for each hydrologic unit, vertical and horizontal hydraulic gradients, groundwater flow directions and velocities, groundwater boundary conditions, surface water and groundwater interactions, and an evaluation of existing water quality.

(c) Environmental monitoring plan. The environmental monitoring plan must describe all proposed on-site and off-site monitoring, including the location of all environmental, facility, and other monitoring points, sampling schedule, analyses to be performed, statistical methods, and reporting requirements. The plan must also include a schedule for construction of the groundwater monitoring wells based on site-specific hydrogeology and the sequencing of construction of landfill cells; a schedule for initiation of the existing water quality and operational water quality monitoring programs and a contingency water quality monitoring plan which specifies trigger mechanisms for its initiation. Unless otherwise approved by the department, the plan must comply with the following:

- (1) Groundwater sampling. Groundwater monitoring wells must be capable of detecting landfill-derived groundwater contamination within the critical stratigraphic section.

- (i) Horizontal well spacing.

- (a) Horizontal spacing of wells must be based upon site-specific conditions including groundwater flow rates, estimated longitudinal and transverse dispersivity rates, proximity to or presence of sensitive environments and groundwater users, the nature of contaminants disposed of at the site, and the proposed design and size of the landfill.

- (b) In the first water-bearing unit of the critical stratigraphic section, monitoring well spacing must not exceed 500 feet along the downgradient perimeter of the facility. In sensitive environments or geologically complex environments, closer well spacing may be required. Upgradient or crossgradient well spacing must not exceed 1,500 feet and may be less in sensitive environments, or where up-gradient sources of contamination are known to exist. Subsequent water-bearing units must be monitored, as required by the department, based upon the potential for contaminant migration to that unit. Well spacing must provide at least one upgradient and three downgradient

monitoring wells or well clusters for each water-bearing unit of the critical stratigraphic section.

(c) Sensitive environments or areas where public health concerns exist may be subject to more intensive groundwater monitoring requirements. In addition, the department may require the applicant to develop acceptable computer models of contaminant plume behavior from hypothetical leaks in the liner system, if necessary to determine optimum monitoring well spacing.

(d) In areas where waterflow is irregular and unpredictable and where otherwise determined to be appropriate, the applicant may be required to conduct spring, sinkhole, or other sampling to enhance the monitoring.

(e) All downgradient monitoring wells must be located as close as practical to but not more than 50 feet from the waste boundary, unless otherwise approved by the department due to site specific conditions, to ensure early detection of any contaminant plume.

(f) All upgradient and crossgradient monitoring wells must be placed far enough from the waste boundary to avoid any facility derived impacts.

(ii) Well screen placement.

(a) Well screens must be located to readily detect groundwater contamination within the saturated thickness of the first water-bearing unit, and must be installed at a representative number of points at each subsequent permeable unit throughout the critical stratigraphic section. Well screens must not act as conduits through impermeable layers. Wells monitoring the water table should be screened to ensure that the water table can be sampled at all times.

(b) Upgradient and crossgradient wells must monitor the same hydrologic units whenever possible within the critical stratigraphic section as the downgradient monitoring wells.

(iii) Screen length. Well screens must not exceed 20 feet in length, unless otherwise approved by the department. The applicant must provide technical justification for the actual screen length chosen.

(iv) Geophysical and geochemical techniques. Where existing contamination is suspected, the department may require the use of geophysical and geochemical techniques to locate contaminated zones before selecting well locations and screen depths for environmental monitoring points.

(v) If a groundwater suppression system exists at a facility, the department may require representative sampling points to be designated as environmental monitoring points. Existing water quality monitoring at these points may not be required.

(2) Surface water and sediment sampling. The environmental monitoring plan must designate monitoring points, for use in operational or contingency monitoring or both of the facility pursuant to subparagraphs (5)(ii) and (iii) of this subdivision, for all surface water bodies that may be significantly impacted by a contaminant release from the facility. Sampling activities at these monitoring points shall be for surface water and sediment. The department may require the sampling and analysis of surface water and sediment

sampling points during a site investigation to understand site hydrogeology or existing patterns of contamination. In bodies of standing water, these points must be located at the closest point to the facility and must be included in existing water quality monitoring. In flowing water bodies, these points must include sufficient upgradient and downgradient locations to allow the facility's impact to be measured. These points, however, do not require existing water quality analysis. The detailed analysis requirements of these points must be specified in the contingency monitoring plan and the detailed sampling requirements must be specified in the site analytical plan.

(3) Leachate sampling. The environmental monitoring plan must specify the location of facility leachate sampling points and parameters to be analyzed so as to obtain a representative characterization of the leachate composition in the primary leachate collection and removal system and to determine the nature of liquids detected in the secondary leachate collection and removal system. The following must be included:

(i) Sampling points. All sampling points should be located to minimize pumping of leachate before sampling. Sampling points in the secondary leachate collection system should be adequate to sample liquids beneath each discrete leachate collection area or landfill cell.

(ii) Analysis required. Except as allowed by the department when a specific waste stream and its leachate are already well defined, analysis of the leachate in the primary and secondary leachate collection and removal systems must be performed semi-annually for expanded parameters. The department may require the use of specific analytical methods in these analyses when minimum detection levels are determined inadequate to fully characterize leachate.

(4) Water supply well sampling. If sampling and analysis of water supply wells is to be performed, the analytical requirements must be in accordance with those specified in the site analytical plan. Sampling frequency and analysis shall be at least quarterly for baseline parameters. Sampling methods must be consistently applied each time a well is sampled and before sampling any residential well, the New York State Department of Health and/or local health department must be notified.

(5) Water quality monitoring program. A water quality monitoring program must be implemented for all environmental monitoring points specified in the environmental monitoring plan. This program must be tailored to the site to establish existing water quality for the site prior to landfiling, operational water quality during operation of the site and the post-closure period, and contingency water quality, if contamination is detected at the site. These programs must meet the following minimum requirements:

(i) Existing water quality. The applicant must establish an existing water quality database to characterize the site geochemistry.

(a) The permit application must contain a preliminary evaluation of water quality, consisting of the first two rounds of sampling and analyses for a representative number of monitoring points at both upgradient and downgradient locations, in each water bearing hydrogeologic unit within the critical stratigraphic section, with a minimum of two samples taken from each well during the first round of sampling, unless otherwise approved by the department. The first round of these samples must be analyzed for the expanded parameters. The second round must be analyzed for the

baseline parameters, except as specified in clause (d) of this subparagraph. These samples should be taken in early spring and late summer, or equivalent, to approximate periods of high and low groundwater flow. The department may require sampling and analysis of additional monitoring points as necessary to define site hydrogeology and geochemistry in support of the interpretations and conclusions of the site investigation report.

(b) Before deposition of waste in the facility, all environmental monitoring points not previously sampled must be sampled and analyzed for four rounds of quarterly sampling. The first of these sampling rounds must be analyzed for expanded parameters and the other three rounds must be analyzed for baseline parameters. Those environmental monitoring points which were sampled in accordance with clause (a) of this subparagraph must be sampled and analyzed for baseline parameters for two rounds of samples. The samples shall be obtained at different times of the year than when the sampling required by clause (a) of this subparagraph was performed. If elevated contaminant levels were detected during the preliminary evaluation of water quality, then the sampling required in this clause shall be as specified in clause (d) of this subparagraph. The department may approve phased sampling, where hydrogeologic conditions warrant, as landfill cells are constructed. The sampling of these phased monitoring points shall commence at least one year prior to solid waste deposition and shall be in conformance with the requirements of clause (b) of this subparagraph or as approved by the department. As these phased monitoring points are added to the monitoring program, the procedures contained in clause (c) of this subparagraph shall be followed to reestablish existing water quality at the facility and recompute the standard deviation.

(c) Prior to facility operation, existing water quality must be established for each hydrogeologic flow regime being monitored at the site. Existing water quality for each hydrogeologic flow regime shall be the arithmetic mean, per parameter, of the analytical results of the samples obtained from those environmental monitoring points within that flow regime prior to deposition of solid waste; provided there is no reason to believe that the distribution of the analytical results was non-uniform. The standard deviation of the analytical results for each parameter within each flow regime shall also be established at that time. Should the department determine that the sampling results are non-representative of existing water quality or do not constitute a normal, uniform distribution, then the department shall specify such additional sampling and analyses as it deems necessary to confidently establish existing water quality at the site. For those facilities where solid waste has been placed previously in other than a contiguous landfill cell, the existing water quality may be based on only some of the environmental monitoring points, subject to the approval of the department.

(d) If elevated contaminant levels are detected and additional detailed information is needed to establish a complete existing water quality database, the department may require one or more rounds of baseline or expanded parameter sampling and analysis in any sampling point, using the procedure specified for contingency monitoring required in subparagraph (iii) of this paragraph when contamination is detected.

(e) Additional sampling and analysis beyond the site boundaries may be required to determine the nature and extent of contamination and the source, if possible. This evaluation may include construction, sampling, and analysis of any additional

monitoring wells, and surface water sampling points required by the department. Based upon the results of this additional data, the department may require analysis for any and all expanded parameters, to be included in quarterly or annual operational water quality sampling.

(ii) Operational water quality. The environmental monitoring plan must include a plan for operational water quality monitoring to be conducted during the operation, closure, and post-closure periods of the facility. The operational water quality monitoring plan must be able to distinguish landfill-derived contamination from the existing water quality at the site. The plan must also describe trigger mechanisms for initiating contingency water quality monitoring. The department may require modification of this plan as additional sampling data becomes available during the life of the facility. The minimum requirements for operational water quality monitoring are:

(a) Except as provided below, in each calendar year sampling and analysis must be performed at least quarterly, once for baseline parameters and three times for routine parameters. The baseline sampling event must be rotated quarterly; one round of baseline parameters to be analyzed in each calendar year will be sufficient unless a pattern of contamination exists which may require the department to change the sampling frequency. For double lined landfills, the department may allow omission of the winter sampling once a complete understanding of water chemistry has been obtained, provided that a demonstration of acceptable liner performance is made to the department. The department will require sampling and analysis on a quarterly basis, alternately analyzing for routine and baseline parameters, at all landfills which do not have a liner system constructed in accordance with section 360-2.13(f) of this Subpart.

(b) The department may approve phased sampling, where hydrogeologic conditions warrant, as landfill cells are constructed or as post-closure monitoring is completed as specified in section 360-2.15(i) of this Subpart. With department approval, sampling of specific environmental monitoring points which are not potentially impacted by the portions of the landfill already constructed, may be deferred, provided that scheduled sampling commences at least one year before landfill construction in the vicinity. The department may withdraw this approval at any time, based upon a change in facility design, operation, or performance.

(c) Operational water quality analysis must include at least those parameters specified in the Water Quality Analysis Tables for routine and baseline parameters. The department may modify these tables before granting a permit for the facility, or during the duration of the permit, if leachate composition so warrants. If subsequent leachate compositions vary or if the waste disposed of at the facility changes, the department may adjust analytical requirements accordingly.

(d) Within 90 days of completing the quarterly field sampling activities, the facility owner/operator must determine whether or not there is a significant increase from existing water quality levels established for each parameter pursuant to clause (c)(5)(i) (c) of this section.

(1) In determining whether a significant increase has occurred, the facility owner/operator must compare the groundwater quality of each parameter at each monitoring well to the existing water quality value of that parameter.

(2) A significant increase has occurred if:

(i) the groundwater quality for any parameter at any monitoring well exceeds the existing water quality value for that parameter, as established pursuant to clause (c)(5)(i)(c) of this section, by three standard deviations; or

(ii) the groundwater quality for any parameter at any monitoring well exceeds the existing water quality value for that parameter, as established pursuant to clause (c)(5)(i)(c) of this section and exceeds the water quality standards for that parameter as specified in Part 701, 702, or 703 of this Title. (e) If the owner/operator determines, pursuant to clause (d) of this subparagraph, that there is a significant increase from existing water quality levels for one or more of the parameters during field sampling for the routine parameters, excluding the field parameters, at any monitoring well, the facility owner/operator:

(1) must, within 14 days of this finding, notify the department indicating which parameters have shown significant increases from existing water quality levels; and

(2) must sample and analyze all monitoring points for the baseline parameters during the next quarterly sampling event. Subsequent sampling and analysis for baseline parameters must be conducted at least semiannually until the significant increase is determined not to be landfill-derived or the department determines such monitoring is not needed to protect public health or the environment.

(f) If the owner/operator determines, pursuant to clause (d) of this subparagraph, that there is a significant increase from existing water quality levels for one or more of the parameters during field sampling for the baseline parameters, excluding the field parameters, at any monitoring well, the facility owner/operator:

(1) must, within 14 days of this finding, notify the department indicating which parameters have shown significant increases from existing water quality levels; and

(2) must establish a contingency monitoring program meeting the requirements of subparagraph (iii) of this paragraph within 90 days except as provided for in subclause (3) of this clause.

(3) The facility owner/operator may attempt to demonstrate to the department that a source other than the facility caused the contamination or that the significant increase resulted from error in sampling, analysis, or natural variation in groundwater quality. A report documenting this demonstration must be submitted to the department for approval. If a successful demonstration is made, documented and approved by the department, the facility owner/operator may continue operational water quality monitoring as specified in this subparagraph. If, after 90 days, a successful demonstration is not made, the owner/operator must initiate a contingency monitoring program as required in subparagraph (iii) of this paragraph.

(iii) Contingency water quality. The environmental monitoring plan must include a plan for contingency water quality monitoring, as described in this subparagraph, which must be conducted when a significant increase over existing water quality has been detected pursuant to clause (c)(5)(ii)(d) of this section for one or more of the baseline parameters listed in the Water Quality Analysis Tables. All contingency water quality monitoring plans are subject to department approval, may be modified at any time by the department

when necessary to protect public health and the environment, and must include the following:

(a) Within 90 days of triggering a contingency water quality monitoring program, the facility owner/operator must sample and analyze the groundwater for the expanded parameters listed in the Water Quality Analysis Tables. A minimum of one sample from each monitoring well (upgradient and downgradient) must be collected and analyzed during this sampling. If any constituents are detected in the downgradient wells as a result of the expanded parameter analysis, a minimum of two independent samples from each well (upgradient and downgradient) must be collected within 30 days of obtaining the results of the expanded parameter analysis and analyzed for the detected constituents. These samples must be collected within two weeks of each other and then compared to the existing groundwater quality values established pursuant to subparagraph (c)(5)(i) of this section. If an increase in the existing water quality values in the upgradient wells is indicated by this comparison, the existing water quality values for these parameters shall be revised to be the arithmetic mean of the results of each parameter for which analyses were performed in the upgradient wells within each hydrogeologic flow regime. The department may delete any of the expanded parameters if it can be shown that the removed parameters are not reasonably expected to be in, or derived from, the waste contained in the landfill based on the leachate sampling being performed pursuant to paragraph (c)(3) of this section.

(b) After obtaining the results from the initial or subsequent sampling required in clause (a) of this subparagraph, the facility owner/operator must:

(1) within 14 days, notify the department to identify the expanded parameters that have been detected;

(2) within 90 days, and on a quarterly basis thereafter, resample all wells, conduct analyses for all baseline parameters, and for those expanded parameters that are detected in response to clause (a) of this subparagraph. In addition, the facility owner/operator shall sample and conduct analyses annually on all wells for the expanded parameters. At least one sample from each upgradient and downgradient well must be collected and analyzed during these sampling events. The department may reduce the requirements of this subclause based on site specific conditions; and

(3) establish groundwater protection standards for all parameters detected pursuant to clause (a) of this subparagraph. The groundwater protection standards must be established in accordance with clause (f) of this subparagraph.

(c) If the concentrations of any of the expanded parameters are shown to be at or below existing water quality values for two consecutive sampling events, the owner/operator must notify the department of this finding and, if approved by the department, may remove that parameter from the contingency water quality monitoring program. If the concentrations of all the expanded parameters are shown to be at or below existing water quality values for two consecutive sampling events, the owner/operator must notify the department and, if approved by the department, may return to operational water quality monitoring.

(d) If the concentrations of any expanded parameters are above existing water quality values, but all concentrations are below the groundwater protection standard

established under clause (f) of this subparagraph, the owner/operator must continue contingency monitoring in accordance with this subparagraph.

(e) If one or more expanded parameters are detected at significant levels above the groundwater protection standard established under clause (f) of this subparagraph in any sampling event, the facility owner/operator must, within 14 days of this finding, notify the department to identify the expanded parameters that have exceeded the groundwater protection standard, and notify all appropriate local government officials identified in the Contingency Plan, required pursuant to section 360-2.10 of this Subpart, that the notice has been sent to the department. The owner/operator must also:

(1) characterize the nature and extent of the release by installing additional monitoring wells as necessary;

(2) install at least one additional monitoring well at the facility boundary in the direction of contaminant migration, and sample this well in accordance with subparagraph (c)(5)(i) of this section;

(3) notify all persons who own the land or reside on the land that is directly over any part of the plume of contamination if contaminants have migrated off-site as indicated by sampling of wells in accordance with subclause (1) of this clause; and

(4) initiate an assessment of corrective measures as required by section 360-2.20 of this Subpart within 90 days; or

(5) demonstrate that a source other than the landfill caused the contamination, or that the significant increase resulted from error in sampling, analysis, or natural variation in groundwater quality. This report must be submitted for approval by the department. If a successful demonstration is made, the facility owner/operator must continue monitoring in accordance with the contingency water quality monitoring program pursuant to subparagraph (c)(3)(iii) of this section, and may return to operational monitoring if the expanded parameters are at or below existing water quality as specified in subparagraph (c)(5)(i) of this section. Unless and until a successful demonstration is made, the owner/operator must comply with this clause, including initiating an assessment of corrective measures.

(f) The owner/operator must establish a groundwater protection standard for each expanded parameter detected in the groundwater. The groundwater protection standard shall be:

(1) for parameters for which a maximum contaminant level (MCL) has been established in section 1412 of the Safe Drinking Water Act under 40 CFR part 141 (see section 360-1.3 of this Part) or for which standard has been established pursuant to Part 701, 702, or 703 of this Title, whichever is more stringent when the parameters are the same, the MCL or standard for that constituent;

(2) for parameters for which MCLs or standards have not been established, the existing water quality concentration for the parameter established from wells in accordance with subparagraph (c)(5)(i) of this section; or

(3) for parameters for which the existing water quality level is higher than the MCL or standard identified under subclause (1) of this clause, the existing water quality

concentration.

(iv) Reporting of data. Unless more rapid reporting is required to address an imminent environmental or public health concern, the owner or operator of the facility must report all water quality monitoring results to the department within 90 days of the conclusion of the sample collection. The report must include:

(a) A table showing the sample collection date, the analytical results (including all peaks even if below method detection limits [MDL]), designation of upgradient wells and location number for each environmental monitoring point sampled, applicable water quality standards, and groundwater protection standards if established, MDL's, and Chemical Abstracts Service (CAS) numbers on all parameters.

(b) In addition, tables or graphical representations comparing current water quality with existing water quality and with upgradient water quality must be presented. These comparisons may include Piper diagrams, Stiff diagrams, tables, or other analyses.

(c) A summary of the contraventions of State water quality standards, significant increases in concentrations above existing water quality, any exceedances of groundwater protection standards, and discussion of results, and any proposed modifications to the sampling and analysis schedule necessary to meet the requirements of subparagraphs (i) through (iii) of this paragraph.

(d) All AQA/AQC documentation must be submitted to the department in a form acceptable to the department.

(e) The annual report must contain a summary of the water quality information presented in clauses (b) and (c) of this subparagraph with special note of any changes in water quality which have occurred throughout the year.

(f) The data quality assessment report required pursuant to paragraph (d)(5) of this section.

(d) Site analytical plan. The site analytical plan must describe the method of sample collection and preservation, chain of custody documentation, analyses to be performed, analytical methods, data quality objectives, procedures for corrective actions, and procedures for data reduction, validation and reporting. The site analytical plan will pertain to existing water quality monitoring programs, operational water quality monitoring programs, and a contingency water quality monitoring program which specifies trigger mechanisms for its initiation. Unless otherwise approved by the department, the site analytical plan must comply with the following:

(1) Data quality objectives.

(i) The data quality objectives for the data generation activity must be established prior to the initiation of any sampling.

(ii) The data quality objectives shall define the goals of each phase of the water quality monitoring program, including, but not limited to, the following:

(a) reasons for the analytical program;

(b) identification of any regulatory programs and standards applicable to the analytical program; and

(c) minimum detection limits for each of the parameters listed in the Water Quality Analysis Tables.

(iii) The data quality objectives shall be the basis for the development of all other portions of the site analytical plan.

(2) Analytic quality assurance (AQA)/analytic quality control (AQC).

(i) The site analytical plan must include a discussion of the AQA/AQC for the sampling program associated with the facility and shall be sufficient to ensure that the data generated by the sampling and analysis activities are of a quality commensurate with their intended use and the requirements of the department. The discussion shall detail the AQA/AQC goals and protocols for each type of environmental monitoring to be performed at the facility. Elements must include a discussion of the quality objectives of the project, identification of the qualifications of those persons who will be performing the work and their responsibilities and authorities, enumeration of AQC procedures to be followed, and reference to the specific standard operating procedures that will be followed for all aspects of the environmental monitoring program.

(3) Field sampling procedures.

(i) All field sampling procedures shall be described in detail in the site analytical plan. All field quality control procedures shall be described including types and frequency of field quality control samples to be collected such as field blanks, trip blanks, field duplicates, reference materials and material blanks.

(ii) All samples must be collected and stored in the order of the parameter's volatilization sensitivity using methods, consistently applied, which ensure sample integrity.

(iii) All sampling equipment must be constructed of inert materials designed to obtain samples with minimal agitation and contact with the atmosphere; be cleaned and protected during transport to avoid contamination; and checked before use. Dedicated equipment must be constructed of appropriate inert materials and must be appropriate for the types of sampling to be performed.

(iv) Samples must be properly preserved and delivered to the laboratory with proper chain of custody within all appropriate holding times for the parameters to be analyzed.

(v) The sampling procedures and frequencies must be protective of human health and the environment.

(vi) Monitoring well sampling techniques. Monitoring well sampling techniques must be consistently performed each time a well is sampled, and must comply with the following:

(a) In areas where the presence of explosive or organic vapors is suspected, ambient air in the well must be checked for their presence before the well is evacuated.

(b) For wells with documented contamination, where contamination by non- aqueous phase liquids may be present, standing water in the well must be checked for immiscible layers or other contaminants that are lighter or heavier than water (floaters or sinkers). If present, floaters or sinkers must be sampled and analyzed separately by

a method described in the site analytical plan.

(c) Evacuation of the well must replace stagnant water in the well and the sand pack with fresh water representative of the formation. Evacuation methods, including pumping rate, depth of pump intake, and method of determining sufficiency of evacuation must be consistently applied each time the well is sampled. Evacuation methods must create the least possible turbidity in the well and must not lower the water in the well below the top of the sand pack whenever feasible. Evacuated water must be properly managed.

(d) After evacuation of the well, volatile organic samples must be collected.

(e) analysis must be performed after volatile organic samples have been collected, either within the borehole using a probe or from the next sample collected. All field test equipment must be calibrated at the beginning of each sampling day and checked and recalibrated according to the manufacturer's specifications. Calibration data must be reported with the analytical results.

(f) Groundwater samples shall not be filtered, unless otherwise approved by the department. If, due to site-specific conditions, sample turbidity cannot be reduced to 50 nephelometric turbidity units (NTUs) or less by good sampling technique or well redevelopment, the department may approve collection of both filtered and unfiltered samples for analyses of the inorganic parameters. All other analyses required will be on the unfiltered samples.

(vii) Surface water and sediment sampling techniques. Surface water and sediment sampling methods must be consistently applied to all samples, and must comply with the following:

(a) Surface water samples collected from shallow water should not include bottom sediment. In shallow moving water, downstream samples must be collected first to avoid disturbances from the bottom sediments.

(b) Each water body over three feet deep that is sampled must be checked for stratification, and each stratum must be checked for contamination using field parameters. Each stratum showing evidence of contamination must be separately analyzed. If no stratum shows such evidence, a composite sample having equal parts of water from each stratum must be analyzed.

(c) Sediment samples must be taken at each location from which surface water samples are taken, and should consist of the upper five centimeters of sediment.

(viii) Water supply well sampling techniques. Sampling methods must be consistently applied each time a well is sampled and must comply with the following:

(a) Samples should be collected directly from the well so as to yield water representative of the formations supplying the well. If this is not possible, samples must be collected as near to the well as possible and before the water is softened, filtered, or heated.

(b) If possible, samples must be collected before the water enters the pressure tank, otherwise the water must run long enough to flush water stored in the tank and pipes.

(c) Before sampling, water must be evacuated from the well to ensure a fresh sample

of aquifer water.

(d) If samples are collected from a tap, aerators, filters, or other devices must be removed before sampling.

(ix) Corrective action. Standard operating procedures must be established which describe the procedures used to identify and correct deficiencies in the sample collection process. The standard operating procedure shall specify that each corrective action must be documented in the sampling report submitted to the department, with a description of the deficiency, the corrective action taken, and the persons responsible for implementing the corrective action. Any alterations to the field sampling procedures shall be included as an amendment to the site analytical plan.

(4) Laboratory procedures.

(i) Laboratory analyses must be performed by a laboratory currently certified under the appropriate approval categories by the New York State Department of Health's Environmental Laboratory Approval Program (ELAP).

(ii) The site analytical plan should contain the standard operating procedures of all laboratory activities related to the environmental monitoring plan. Any revisions to these standard operating procedures must be documented. Standard operating procedures should be available for the following, at a minimum:

(a) receipt, storage and handling of samples;

(b) sample scheduling to ensure that holding time requirements are met;

(c) reagent/standard preparation;

(d) general laboratory techniques such as glassware cleaning procedures, operation of analytical balances, pipetting techniques and use of volumetric glassware;

(e) description of how analytical methods are actually to be performed including precise reference to the analytical method used; and not a simple reference to standard methods; and

(f) standard operating procedures for equipment calibration and maintenance to ensure that laboratory equipment and instrumentation are in working order, including, but not limited to procedures and schedules for calibration and maintenance in accordance with manufacturers' specifications; and

(g) for a corrective action, standard operating procedures must be established for identifying and correcting deficiencies in the laboratory procedures. The standard operating procedure shall specify that each corrective action must be documented in the sampling event report submitted to the department with a description of the deficiency, the corrective action taken, and the person responsible for implementing the corrective action. Any alterations to the laboratory procedures shall be included as an amendment to the site analytical plan.

(5) Data quality assessment. At the conclusion of each sampling event and analysis of the samples collected, data quality assessment shall occur. A data quality assessment report must be submitted with the results from each sampling event. Data quality assessment shall occur in two phases.

(i) Data validation.

(a) For those sampling events for which only routine parameters are analyzed, the data validation shall be performed by the laboratory that performed the sample analyses.

(b) For those sampling events for which baseline or expanded parameters are analyzed, the data validation shall be performed by a person other than the laboratory that performed the analyses and that is acceptable to the department.

(c) The data validation shall be performed on all analytical data for the facility at a rate acceptable to the department, but not less than five percent of the data generated, and shall consist, at a minimum, of the following:

(1) field records and analytical data are reviewed to determine whether the data are accurate and defensible. All AQA/AQC information shall be reviewed along with any corrective actions taken during that sampling event; and

(2) all data summaries shall be clearly marked to identify any data that are not representative of environmental conditions at the site, or that were not generated in accordance with the site analytical plan.

(ii) Data usability analysis.

(a) The data usability analysis shall be performed on all analytical data for the facility and shall consist of the following:

(1) an assessment to determine if the data quality objectives were met;

(2) for consistency, comparison of the analytical data with the results from previous sampling events;

(3) evaluation of field duplicate results to indicate the samples are representative;

(4) comparison of the results of all field blanks, trip blanks, equipment rinsate blanks, and method blanks with full data sets to provide information concerning contaminants that may have been introduced during sampling, shipping, or analyzing;

(5) evaluation of matrix effects to assess the performance of the analytical method with respect to the sample matrix, and determine whether the data have been biased high or low due to matrix effects;

(6) integration of the field and laboratory data with geological, hydrogeological, and meteorological data to provide information about the extent of contamination, if it occurs; and

(7) comparison of precision, accuracy, representativeness, comparability, completeness, and defensibility of the data generated with that required to meet the data quality objectives established in the site analytical plan.

(6) The following Water Quality Analysis Tables in this section list the routine, baseline, and expanded parameters for analysis of all monitoring samples.

WATER QUALITY ANALYSIS TABLES

ROUTINE PARAMETERS¹

Common Name ²	CAS RN ³	Suggested Methods	PQL ⁴ (µg/l)
Field Parameters:			
Static water level(in wells and sumps)			
Specific Conductance		9050	
Temperature			
Floater or Sinkers ⁵			
Temperature			
pH		9040	
Eh		9041	
Dissolved Oxygen ⁶			
Field Observations ⁷			
Turbidity		180.1	
Leachate Indicators:			
Total Kjeldahl Nitrogen		351.1 351.2 351.3	60
Ammonia.....	7664-41-7	351.4 350.1 350.2	200 60
Nitrate.....		350.3	100
Chemical Oxygen Demand.....		9200 410.1 410.2 410.3 410.4	50000 50000 5000 80000
Biochemical Oxygen Demand (BOD ₅).....		405.1	2000
Total Organic Carbon.....			
Total Dissolved Solids		9060	
Sulfate.....		160.1 9035	40000
Alkalinity.....		9036 9038	
Phenols.....		310.1	20000
Chloride.....	108-95-2	310.2 8040 9250	6000
Bromide.....		9251	
Total hardness as CaCO ₃		9252 320.1 130.1 130.2	2000 20000 30000
Inorganic Parameters:			
Cadmium.....	(Total)	3010 7130	40 50
Calcium.....		7131	1
Iron.....	(Total) (Total)	7140 7380	40 100
Lead.....	(Total)	7381 6010	4 400

		7420	1000
Magnesium.....		7421	10
Manganese.....	(Total)	7450	4
	(Total)	7460	40
Potassium.....		7461	0.8
Sodium.....	(Total)	7610	40
	(Total)	7770	8

The department may modify this list as necessary.

Notes

¹This list contains parameters for which possible analytical procedures are provided in EPA Report SW-846 *Test Methods for Evaluating Solid Waste*, third edition, November 1986, as revised December 1987, and *Methods for Chemical Analysis of Water and Wastes*, USEPA-600/4-79-020, March, 1979. The regulatory requirements pertain only to the list of parameters; the right hand columns (Methods and PQL) are given for informational purposes only. See also footnote 4.

²Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

³Chemical Abstracts Service Registry Number. Where "Total" is entered, all species in the groundwater that contain this element are included.

⁴Practical Quantitation Limits (PQLs) are the lowest concentrations of analytes in groundwaters that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating conditions. The PQLs listed are generally stated to one significant figure. PQLs are based on 5 ml samples for volatile organics and 1 L samples for semivolatile organics. CAUTION: The PQL values in many cases are based only on a general estimate for the method and not on a determination for individual compounds; PQLs are not a part of the regulation.

⁵Any floaters or sinkers found must be analyzed separately for baseline parameters.

⁶Surface water only.

⁷Any unusual conditions (colors, odors, surface sheens, etc.) noticed during well development, purging, or sampling must be reported.

BASELINE PARAMETERS¹

Common Name ²	CAS RN ³	Suggested Methods	PQL ⁴ (µg/l)
Field Parameters:			
Static water level..... (in wells and sumps)			
Specific Conductance.....		9050	
Temperature.....			
Floaters or Sinkers ⁵			
pH.....		9040 9041	

Eh.....			
Dissolved Oxygen6.....			
Field Observations7.....		180.1	
Turbidity.....			
Leachate Indicators:			
Total Kjeldahl Nitrogen...		351.1 351.2 351.3	60
Ammonia.....	7664-41-7	351.4 350.1 350.2	200 30
Nitrate.....		350.3	100
Chemical Oxygen Demand....		9200 410.1 410.2 410.3	50000 50000 50000
Biochemical Oxygen Demand (BOD ₅).....		410.4 405.1	80000 2000
Total Organic Carbon.....			
Total Dissolved Solids....		9060	
Sulfate.....		160.1 9035	40000
Alkalinity.....		9036 9038	
Phenols.....		310.1	20000
Chloride.....		310.2 9250	6000
Bromide.....		9251	
Total hardness as CaCO ₃ ...		9252	
Color.....		320.1 130.1 130.2 110.1 110.2 110.3	2000 20000 30000 80
Boron.....	7440-42-8		
Inorganic Parameters:			
Aluminum.....			
Antimony.....	(total) (total)	7020 6010 7040	10 300 2000
Arsenic.....	(total)	7041 6010 7060	30 500 10
Barium.....	(total)	7061 6010	20 20
Beryllium.....	(total)	7080 6010 7090	1000 3 50
Cadmium.....	(total)	7091 6010 7130	2 40 50

Calcium.....		7131	1
Chromium.....	(total) (total)	7140 6010 7190	40 70 500
Chromium(Hexavalent)*....	18540- 29-9	7191 7195 7196	10 600
Cobalt.....	(total)	7197 7198 6010	30 70
Copper.....	(total)	7200 7201 6010	500 10 60
Cyanide.....		7210	200
Iron.....	(total)	7211 9010	10 200
Lead.....	(total) (total)	7380 7381 6010	100 4 400
Magnesium.....		7420	1000
Manganese.....	(total)	7421 7450	10 4
Mercury.....	(total)	7460	40
Nickel.....	(total)	7461 7470	0.8 2
Potassium.....	(total) (total)	6010 7520 7610	150 400 40
Selenium.....	(total)	6010 7740	750 20
Silver.....	(total)	7741 6010	20 70
Sodium.....		7760	100
Thallium.....	(total) (total)	7761 7770 6010	10 8 400
Vanadium.....	(total)	7840 7841 6010	1000 10 80
Zinc.....	(total)	7910 7911 6010 7950 7951	2000 40 20 50 0.5
Organic Parameters:			
Acetone.....	67-64-1	8260	100
Acrylonitrile.....	107-13-1	8030 8260	5 200
Benzene.....	71-43-2	8020 8021 8260	2 0.1 5
Bromochloromethane.....	74-97-5	8021 8260	0.1 5
Bromodichloromethane.....	75-27-4	8010 8021	1 0.2

		8260	5
Bromoform; Tribromomethane	75-25-2	8010 8021 8260	2 15 5
Carbon disulfide.....	75-15-0	8260	100
Carbon tetrachloride.....	56-23-5	8010 8021 8260	1 0.1 10
Chlorobenzene.....	108-90-7	8010 8020 8021 8260	2 2 0.1 5
Chloroethane; Ethyl chloride.....	75-00-3	8010 8021	5 1
Chloroform; Trichloromethane.....	67-66-3	8010 8021	0.5 0.2
Dibromochloromethane; Chlorodibromomethane....	124-48-1	8260 8010 8021	5 1 0.3
1,2-Dibromo-3-chloropropane; DBCP.....	96-12-8	8260 8011 8021	5 0.1 30
1,2-Dibromoethane; Ethyl-ene dibromide; EDB.....	106-96-4	8260 8011 8021	25 0.1 10
o-Dichlorobenzene; 1,2-Dichlorobenzene.....	95-50-1	8026 8010 8020 8021 8120 8260	5 2 5 0.5 10 5
p-Dichlorobenzene; 1,4-Dichlorobenzene.....	106-46-	8270 8010 8020 8021 8120 8260	10 2 5 0.1 15 5
trans-1,4-Dichloro-2-butene.....		8270	10
1,1-Dichloroethane; Ethylidene chloride.....	110-57-6 75-34-3	8260 8010 8021	100 1 0.5
1,2-Dichloroethane; Ethylene dichloride.....	107-06-2	8260 8010 8021	8 0.5 0.3
1,1-Dichloroethylene;		8260	5
1,1-Dichloroethene;		8010	1
Vinylidene chloride.....	75-35-4	8021	0.5
cis-1,2-Dichloroethylene;		8260	5
cis-1,2-Dichloroethene..		8021	0.2
trans-1,2-Dichloroethyl-ene;	156-59-2	8260	5
trans-1,2-Dichloro-ethene.....	156-60-5	8010 8021	1 0.5
1,2-Dichloropropane;		8260	5
Propylene dichloride.....	78-87-5	8010 8021	0.5 0.05
cis-1,3-Dichloropropene...		8260	5

		8010	20
trans-1,3-Dichloropropene.	10061-01-5 10061-02-6	8260 8010 8260	10 5 10
Ethylbenzene.....	100-41-4	8020 8221 8260	2 0.05 5
2-Hexanone; Methyl butyl ketone.....	591-78-6	8260	50
Methyl bromide; Bromo- methane.....	74-83-9	8010 8021	20 10
Methyl chloride; Chloro- methane.....	74-87-3	8010 8021	1 0.3
Methylene bromide; Dibro- momethane.....	74-95-3	8010 8021	15 20
Methylene chloride; Dichloromethane....	75-09-02	8260 8010 8021	5 0.2 10
Methyl ethyl ketone; MEK; 2-Butanone....	78-93-3	8260 8010	100 40
4-Methyl-2-pentanone; Methyl isobutyl ketone..	108-10-1	8260 8015	10 5
Styrene.....	100-42-5	8260 8020 8021	100 1 0.1
1,1,1,2-Tetrachloroethane.	630-20-6	8260 8010 8021	10 5 5
1,1,2,2-Tetrachloroethane....	79-34-5	8260 8010 8021	0.5 0.1 0.05
Tetrachloroethylene; Tet- rachloroethene; Per- chloroethylene.....	127-18-4	8260 8010 8021	5 0.5 0.5
Toluene.....	108-88-3	8260 8020 8021	5 2 0.1
1,1,1-Trichloroethane; Methylchloroform.....	71-55-6	8260 8010 8021	5 0.3 0.3
1,1,2-Trichloroethane....	79-00-5	8260 8010	5 0.2
Trichloroethylene; Tri- chloroethene.....	79-01-6	8260 8010 8021	5 1 0.2
Trichlorofluoromethane; CFC-11.....	75-69-4	8260 8010 8021 8260	5 10 0.3 5
1,2,3-Trichloropropane....	96-18-4	8010 8021 8260	10 5 15
Vinyl acetate.....	108-05-4	8260	50
Vinyl chloride; Chloro- ethene.....	75-01-4	810 8021 8260	2 0.4 10
Xylenes.....	1330-20-7	8020 8021	5 0.2

The department may modify this list as necessary.

Notes

¹This list contains 47 volatile organics for which possible analytical procedures provided in EPA Report SW-846 *Test Methods for Evaluating Solid Waste*, third edition, November 1986, as revised December 1987, includes Method 8260; 25 metals for which SW-846 provides either Method 6010 or a method from the 7000 series of methods; and additional parameters for which possible procedures are provided in *Methods for Chemical Analysis of Water and Wastes*, USEPA-600/4-79-020, March, 1979. The regulatory requirements pertain only to the list of parameters; the right hand columns (Methods and PQL) are given for informational purposes only. See also footnote 4.

²Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

³Chemical Abstracts Service Registry Number. Where "Total" is entered, all species in the groundwater that contain this element are included.

⁴Practical Quantitation Limits (PQLs) are the lowest concentrations of analytes in groundwaters that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating conditions. The PQLs listed are generally stated to one significant figure. PQLs are based on 5 ml samples for volatile organics and 1 L samples for semivolatile organics. CAUTION: The PQL values in many cases are based only on a general estimate for the method and not on a determination for individual compounds; PQLs are not a part of the regulation.

⁵Any floaters or sinkers found must be analyzed separately for baseline parameters.

⁶Surface water only.

⁷Any unusual conditions (colors, odors, surface sheens, etc.) noticed during well development, purging, or sampling must be reported.

*The department may waive the requirement to analyze Hexavalent Chromium provided that Total and Hexavalent and Trivalent Chromium values do not exceed 0.05 mg/l.

EXPANDED PARAMETERS¹

Common Name ²	CAS RN ³	Suggested Methods	PQL ⁴ (µg/l)
Field Parameters:			
Static water level..... (in wells and sumps)			
Specific Conductance.....		9050	
Temperature.....			
Floaters or Sinkers ⁵			
pH.....		9040 9041	

Eh.....			
Dissolved Oxygen6.....			
Field Observations7.....		180.1	
Turbidity.....			
Leachate Indicators:			
Total Kjeldahl Nitrogen...		351.1 351.2 351.3	60
Ammonia.....	7664-41-7	351.4 350.1 350.2	200 30
Nitrate.....		350.3	100
Chemical Oxygen Demand....		9200 410.1 410.2 410.3 410.4	50000 50000 50000 80000
Biochemical Oxygen Demand (BOD ₅).....		405.1	2000
Total Organic Carbon.....			
Total Dissolved Solids....		9060	
Sulfate.....		160.1 9035	40000
Alkalinity.....		9036 9038	
Phenols.....		310.1	20000
Chloride.....	108-95-2	310.2 8040 9250	6000
Bromide.....		9251	
Total hardness as CaCO ₃ ...	24959-67-9	9252 320.1 130.1 130.2	2000 20000 30000
Color.....		110.1 110.2 110.3	80
Boron.....	7440-42-8		
Inorganic Parameters:			
Aluminum.....	(total)	7020	10
Antimony.....	(total)	6010 7040 7041	300 2000 30
Arsenic.....	(total)	6010 7060 7061	500 10 20
Barium.....	(total)	6010	20
Beryllium.....	(total)	7080 6010 7090	1000 3 50
Cadmium.....	(total)	7091 6010 7130	2 40 50

Calcium.....		7131	1
Chromium.....	(total) (total)	7140 6010 7190	40 70 500
Chromium(Hexavalent)*....	18540- 29-9	7191 7195 7196 7197	10 600 30
Cobalt.....	(total)	7198 6010 7200	70 500
Copper.....	(total)	7201 6010	10 60
Cyanide.....		7211	10
Iron.....	(total) (total)	9010 7380	200 100
Lead.....	(total)	7381 6010 7420	4 400 1000
Magnesium.....		7421	10
Manganese.....	(total) (total)	7450 7460	4 40
Mercury.....	(total)	7461 7470	0.8 2
Nickel.....	(total)	6010 7520	150 400
Potassium.....	(total)	7610	40
Selenium.....	(total)	6010 7740 7741	750 20 20
Silver.....	(total)	6010 7760 7761	70 100 10
Sodium.....	(total)	7770	8
Thallium.....	(total)	6010 7840 7841	400 1000 10
Tin.....	(total)	6010	40
Vanadium.....	(total)	6010 7910 7911	80 2000 40
Zinc.....	(total)	6010 7950 7951	20 50 0.5
Organic Parameters:			
Acenaphthene....	83-32-9	8100 8270	200 10
Acemaphthylene	208-96-8	8100 8270	200 10
Acetone.....	67-64-1	8260	100
Acetonitrile; Methyl cyanide.....	75-05-8	8015	100
Acetophenone.....	98-86-2	8270	10
2-Acetylaminofluorene; 2-AAF.....	53-96-3	8270	20

Acrolein.....	107-02-8	8030 8260	5 100
Acrylonitrile.....	107-13-1	8030 8260	5 200
Aldrin.....	309-00-2	8080 8270	10 5
Ally chloride.....	107-05-1	8010 8260	5 10
4- aminobiphenyl...	92-67-1	8270	20
Anthracene.....	120-12-7	8100 8270	200 10
Benzene.....	71-43-2	8020 8021 8260	2 0.1 5
Benzo[a]anthracene; Benzanthracene.....	56-55-3	8100 8270	200 10
Benzo[b]fluoranthene..	205-99-2	8100 8270	200 10
Benzo[k]fluoranthene..	207-08-9	8100 8270	200 10
Benzo[ghi]perylene..	191-24-2	8100 8270	200 10
Benzo[a]pyrene...	50-32-8	8100 8270	200 10
Benzyl alcohol..	100-51-6	8270	20
alpha-BHC.....	319-84-6	8080 8270	0.05 10
beta-BHC....	319-85-7	8080 8270	0.05 10
delta-BHC.....	319-86-8	8080 8270	0.1 20
gamma-BHC; Lindane...	58-89-9	8080 8270	0.05 20
Bis(2-chloroethoxy)methane	111-91-1	8110 8270	5 10
Bis(2-chloroethyl) ether; Dichloroethyl ether...	111-44-4	8110 8270	3 10
Bis-(2-chloro-1-methyl-ethyl) ether; 2,21-Di- chlorodiisopropyl ether	108-60-1	8110 8270	10 10
DCIP, See note 9.....			
Bis(2-ethylhexyl)phthalate Bromochloromethane; Chlorobromomethane....	117-81-7 74-97-5	8060 8021 8260	20 0.1 5
Bromodichloromethane; Dibromochloromethane...	75-27-4	8010 8021	1 0.2
Bromoform; Tribromomethane	75-25-2	8260 8010 8021	5 2 15
4-Bromophenyl phenyl ether	101-55-3	8260 8110	5 25
Butyl benzyl phthalate; Benzyl butyl phthalate..	85-68-7	8270 8060	10 5
Carbon disulfide.....		8270	10

Carbon tetrachloride.....	75-15-0 56-23-5	8260 8010 8021 8260	100 1 0.1 10
Chlordane.....	See Note 10	8080 8270	0.1 50
p-Chloroaniline.....	106-47-8	8270	20
Chlorobenzene.....	108-90-7	8010 8020 8021 8260	2 2 0.1 5
Chlorobenzilate.....	510-15-6	8270	10
p-Chloro-m-cresol; 4-Chloro-3-methylphenol...	59-50-7	8040 8270	5 20
Chloroethane; Ethyl chloride.....	75-00-3	8010 8021 8260	5 1 10
Chloroform; Trichloromethane.....	67-66-3	8010 8021 8260	0.5 0.2 5
2-Chloronaphthalene...	91-58-7	8120 8270	10 10
2-Chlorophenol.....	95-57-8	8040 8270	5 10
4-Chlorophenyl phenyl ether.....	7005-72-3	8110 8270	40 10
Chloroprene.....	126-99-8	8010 8260	50 20
Chrysene.....	218-01-9	8100 8270	200 10
m-Cresol; 3-methylphenol..	108-39-4	8270	10
o-Cresol; 2-methylphenol..	95-48-7	8270	10
p-Cresol; 4-methylphenol..	106-44-5	8270	10
2,4-D; 2,4-Dichlorophen- oxyacetic acid.....	94-75-7	8150	10
4,41-DDD.....	72-54-8	8080	0.1
4,41-DDE.....		8270	10
4,41-DDT.....	72-55-9	8080	0.05
Diallate.....		8270	10
Dibenz[a,h]anthracene.....	50-29-3	8080 8270	0.1 10
Dibenzofuran.....	2303-16-4	8270	10
Dibromochloromethane; Chlorodibromomethane....	53-70-3 132-64-9 124-48-1	8100 8270 8270 8010 8021 8260	200 10 10 1 0.3 5
1,2-Dibromo-3-chloro- propane; DBCP.....	96-12-8	8011 8021 8260	0.1 30 25
1,2-Dibromoethane; Ethylene dibromide; EDB....	106-93-4	8011 8021 8260	0.1 10 5

Di-n-butyl phthalate.....	84-74-2	8060	5
o-Dichlorobenzene; 1,2-Dichlorobenzene.....	95-50-1	8270 8010 8020 8021 8120 8260	10 2 5 0.5 10 5
m-Dichlorobenzene; 1,3-Dichlorobenzene.....	541-73-1	8270 8010 8020 8021 8120 8260	10 5 5 0.2 10 5
p-Dichlorobenzene; 1,4-dichlorobenzene....	106-46-7	8270 8010 8020 8021 8120 8260	10 2 5 0.1 15 5
3,31-Dichlorobenzidine....		8270	10
trans-1,4-Dichloro- 2-butene.....	91-94-1	8270	10
Dichlorodifluoromethane; CFC 12.....	110-57-6 75-71-8	8260 8021	100 0.5
1,1-Dichloroethane; Ethylidene chloride....	75-34-3	8260 8010	5 1
1,2-Dichloroethane; Ethylene dichloride....	107-06	8021 8260 8010	0.5 5 .05
1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride.....	75-35-4	8021 8260 8010	0.3 5 1
cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene..		8021 8260	0.5 5
trans-1,2-Dichloroethylene	156-59-2	8021 8260	0.2 5
trans-1,2-Dichloroethene	156-60-5	8260 8010	5 1
2,4-Dichlorophenol.....	120-83-2	8021 8260 8040 8270	0.5 5 5 10
2,6-Dichlorophenol.....	87-65-0	8270	10
1,2-Dichloropropane; Propylene dichloride....	78-87-5	8010 8021 8260	0.5 0.05 5
1,3-Dichloropropane; Trimethylene dichloride.	142-28-9	8021 8260	0.3 5
2,2-Dichloropropane; Isopropylidene chloride.	594-20-7	8021 8260	0.5 15
1,1-Dichloropropene...	563-58-6	8021	0.2
cis-1,3-Dichloropropene..	10061-01-5	8260 8010	5 20
trans-1,3-Dichloropropene	10061-02-6	8260 8010	10 5
Dieldrin.....	60-57-1	8260 8080	10 0.05
Diethyl phthalate....	84-66-2	8270	10

		8060	5
0,0-Diethyl 0-2-pyrazinyl phosphorothioate; Thionazin.....	297-97-2	8270 8141 8270	10 5 20
Dimethoate.....	60-51-5	8141	3
p-(Dimethylamino)azo- benzene.....		8270	20
7,12-Dimethylbenz[a]- anthracene.....	60-11-7	8270	10
3,31-Dimethylbenzidine....	57-97-6	8270	10
2,4-Dimethylphenol; m-Xylenol.....	199-93-7 105-67-9	8270 8040	10 5
Dimethyl phthalate...		8270	10
m-Dinitrobenzene...	131-11-3	8060	5
4,6-Dinitro-o-cresol 4,6- Dinitro-2-methylphenol..	99-65-0	8270 8270	10 20
2,4-Dinitrophenol....	534-52-1	8040 8270	150 50
2,4-Dinitrotoluene.....	51-28-5	8040 8270	150 50
2,6-Dinitrotoluene....	121-14-2	8090 8270	0.2 10
Dinoseb; DNBP; 2-sec- Butyl-4,6-dinitrophenol.	606-20-2	8090 8270	0.1 10
Di-n-octyl phthalate...	88-85-7 117-84-0	8150 8270 8060 8270	1 20 30 10
11 Diphenylamine.....	122-39-4	8270	10
Disulfoton.....	298-04-4	8140 8141	2 0.5
Endosulfan I.....	959-98-8	8270 8080	10 0.1
Endosulfan II.....	33213- 65-9	8270 8080	20 005
Endosulfan sulfate.....		8270	20
Endrin.....	1031-07- 8	8080 8270	0.5 10
Endrin aldehyde.....	72-20-8	8080	0.1
Ethylbenzene.....	7421-93- 4	8270 8080 8270	20 0.2 10
Ethyl methacrylate.....	100-41-4	8020 8021	2 0.05
Ethyl methanesulfonate....		8260	5
Famphur.....	97-63-2	8015	5
Fluoranthene.....		8260 8270	10 10
Fluorene.....	62-50-0 52-85-7	8270 8270	20 20
Heptachlor.....	206-44-0	8100 8270	200 10
Heptachlor epoxide.....	86-73-7	8100	200

		8270	10
Hexachlorobenzene.....	76-44-8	8080 8270	0.05 10
Hexachlorobutadiene.....	1024-57-3 118-74-1	8080 8270 8120	1 10 0.5
Hexachlorocyclopentadiene	87-68-3	8270 8021 8120	10 0.5 5
Hexachloroethane.....	77-47-7	8260 8270 8120	10 10 5
Hexachloropropene.....		8270	10
2-Hexanone; Methyl butyl ketone.....	67-72-1	8120 8260	0.5 10
Indeno(1,2,3-cd)pyrene...	1888-71-7 591-78-6 193-39-5	8270 8270 8260 8100 8270	10 10 50 200 10
Isobutyl alcohol....	78-83-1	8015 8240	50 100
Isodrin.....	465-73-6	8270 8260	20 10
Isophorone.....	78-59-1	8090 8270	60 10
Isosafrole.....	120-58-1	8270	10
Kepone.....	143-50-0	8270	20
Methacrylonitrile.....	126-98-7	8015 8260	5 100
Methapyrilene.....	91-80-5	8270	100
Methoxychlor....	72-43-5	8080 8270	2 10
Methyl bromide; Bromomethane...	74-83-9	8010 8021	20 10
Methyl chloride; Chloromethane...	74-87-3	8010 8021	1 0.3
3-Methylcholanthrene....	56-49-5	8270	10
Methyl ethyl ketone; MEK; 2-Butanone.....	78-93-3	8015 8260	10 100
Methyl iodide; Iodomethane	74-88-4	8010 8260	40 10
Methyl methacrylate..	80-62-6	8015 8260	2 30
Methyl methanesulfonate..	66-27-3	8270	10
2-Methylnaphthalene....	91-57-6	8270	10
Methyl parathion; Parathion methyl....	298-00-0	8140 8141 8270	0.5 1 10
4-Methyl-2-pentanone; Methyl isobutyl ketone..	108-10-1	8015 8260	5 100
Methylene bromide; Dibromomethane...	74-95-3	8010 8021 8260	15 20 10

Methylene chloride; Dichloromethane....	75-09-2	8010 8021 8260	5 0.2 10
Naphthalene.....	91-20-3	8021 8100 8260 8270	0.5 200 5 10
1,4-Naphthoquinone.....	130-15-4	8270	10
1-Naphthylamine.....	134-32-7	8270	10
2-Naphthylamine.....	91-59-8	8270	10
o-Nitroaniline; 2-Nitroaniline.....	88-74-4	8270	50
m-Nitroaniline;			
3-Nitroaniline....	99-09-2	8270	50
p-Nitroaniline; 4-Nitroaniline.....	100-01-6	8270	20
Nitrobenzene...	98-95-3	8090 8270	40 10
o-Nitrophenol; 2-Nitrophenol...	88-75-5	8040 8270	5 10
p-Nitrophenol; 4-Nitrophenol....	100-02-7	8040 8270	10 50
N-Nitrosodi-n-butylamine.	924-16-3	8270	10
N-Nitrosodiethylamine....	55-18-5	8270	20
N-Nitrosodimethylamine...	62-75-9	8070	2
N-Nitrosodiphenylamine...	86-30-6	8070	5
N-Nitrosodipropylamine; N-Nitroso-N-dipropyl- amine; Di-n-propylni- trosamine.....	621-64-7	8070	10
N-Nitrosomethylethalamine	10595-95-6	8270	10
N-Nitrosopiperidine..	100-75-4	8270	20
N-Nitrosopyrrolidine..	930-55-2	8270	40
5-Nitro-o-toluidine.....	99-55-8	8270	10
Parathion.....	56-38-2	8141 8270	0.5 10
Pentachlorobenzene.....	608-93-5	8270	10
Pentachloronitrobenzene..	82-68-8	8270	20
Pentachlorophenol.....	87-86-5	8040 8270	5 50
Phenacetin.....	62-44-2	8270	20
Phenanthrene.....	85-01-8	8100 8270	200 10
Phenol.....	108-95-2	8040	1
p-Phenylenediamine...	106-50-3	8270	10
Phorate.....	298-02-2	8140 8141 8270	2 0.5 10
Polychlorinated biphenyls; PCB's; Aroclors...	See Note 11	8080 8270	50 200
Polychlorinated dibenzo-p-dioxins; PCDD's.....	See Note 12	8280	0.01

Polychlorinated dibenzo-furans; PCDF's.....	See Note 13	8280	0.01
Pronamide.....	23950-58-8	8270	10
Propionitrile; Ethyl cyanide.....	107-12-0	8015 8260	60 150
Pyrene.....	129-00-0	8100 8270	200 10
Safrole.....	94-59-7	8270	10
Silvex; 2,4,5-TP.....	93-72-1	8150	2
Styrene.....	100-42-5	8020 8021 8260	1 0.1 10
2,4,5-T; 2,4,5-trichloro- phenoxyacetic acid.....	93-76-5	8150	2
1,2,4,5-Tetrachlorobenzene 2,3,7,8-Tetrachlorodi-benzo-p-dioxin; 2,3,7,8-TCDD.....	95-94-3 1746-01-6 630-20-6	8270 8280	10 0.005
1,1,1,2-Tetrachloroethane.	79-34-5	8010 8021 8260	5 0.05 5
1,1,2,2-Tetrachloroethane.	127-18-4	8010 8021 8260	0.5 0.1 5
Tetrachloroethylene; Tetrachloroethene; Perchloroethylene.....	58-90-2	8010 8021 8260	0.5 0.5 5
2,3,4,6-Tetrachlorophenol.	108-88-3	8270	10
Toluene.....	95-53-4	8020 8021 8260	2 01 5
o-Toluidine.....	See Note 14	8270	10
Toxaphene.....	120-82-1	8080	2
1,2,4-Trichlorobenzene....	71-55-6	8021 8120 8260 8270	0.3 0.5 10 10
1,1,1-Trichloroethane; Methylchloroform.....	79-00-5	8010 8021 8260	0.3 0.3 5
1,1,2-Trichloroethane.....	79-01-6	8010 8260	0.2 5
Trichloroethylene; Trichloroethene.....	75-69-4	8010 8021 8260	1 0.2 5
Trichlorofluoromethane; CFC-11.....	95-95-4 88-06-2	8010 8021 8260	10 0.3 5
2,4,5-Trichlorophenol...		8270	10
2,4,6-Trichlorophenol.....	96-18-4	8040 8270	5 10
1,2,3-Trichloropropane...		8010 8021 8260	10 5 15
0,0,0-Triethyl phosphoro-	126-68-1	8270	10

thioate.....			
sym-Trinitrobenzene.....	99-35-4	8270	10
Vinyl acetate.....	108-05-4	8260	50
Vinyl chloride; Chloroethene....	75-01-4	8010 8021 8260	2 0.4 10
Xylene (total).....	See Note 15	8020 8021 8260	5 0.2 5

The department may modify this list as necessary. EXPANDED PARAMETERS¹

Notes

¹The regulatory requirements pertain only to the list of substances; the right hand columns (Methods and PQL) are given for informational purposes only. See also footnotes 4 and 5.

²Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

³Chemical Abstracts Service registry number. Where "Total" is entered, all species in the groundwater that contain this element are included.

⁴Suggested Methods refer to analytical procedure numbers used in EPA Report SW-846 *Test Methods for Evaluating Solid Waste*, third edition, November 1986, as revised, December 1987 and *Methods for Chemical Analysis of Water and Wastes*, USEPA-600-4/79-020, March, 1979. CAUTION: The methods listed are representative procedures and may not always be the most suitable method(s) for monitoring an analyte under the regulations.

⁵Practical Quantitation Limits (PQLs) are the lowest concentrations of analytes in groundwaters that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating conditions. The PQLs listed are generally stated to one significant figure. PQLs are based on 5 ml samples for volatile organics and 1 L samples for semivolatile organics. CAUTION: The PQL values in many cases are based only on a general estimate for the method and not on a determination for individual compounds; PQLs are not a part of the regulation. ⁶Any floaters or sinkers found must be analyzed separately for baseline parameters.

⁷Surface water only.

⁸Any unusual conditions (colors, odors, surface sheens, etc.) noticed during well development, purging, or sampling must be reported.

⁹This substance is often called Bis(2-chloroisopropyl) ether, the name Chemical Abstracts Service applies to its noncommercial isomer, Propane, 2,2"-oxybis[2]-chloro- (CAS RN 39638-32-9).

¹⁰Chlordane: This entry includes alpha-chlordane (CAS RN 5103-71-9), beta-chlordane (CAS RN 5103-74-2), gamma-chlordane (CAS RN 5566-34-7), and constituents of chlordane (CAS RN 57-74-9 and CAS RN 12789-03-6). PQL shown is for technical chlordane. PQLs of specific isomers are about 20 µg/l by method 8270.

¹¹Polychlorinated biphenyls (CAS RN 1336-36-3): This category contains congener chemicals, including constituents of Aroclor 1016 (CAS RN 12674-11-2), Aroclor 1221 (CAS RN 11104-28-2), Aroclor 1232 (CAS RN 11141-16-5), Aroclor 1242 (CAS RN 53469-21-9), Aroclor 1248 (CAS RN 12672-29-6), Aroclor 1254 (CAS RN 11097-69-1), and Aroclor 1260 (CAS RN 11096-82-5). The PQL shown is an average value for PCB congeners.

¹²Polychlorinated dibenzo-p-dioxins: This category contains congener chemicals, including tetrachlorodibenzo-p-dioxins (see also 2,3,7,8-TCDD), pentachlorodibenzo-p-dioxins, and hexachlorodibenzo-p-dioxins. The PQL shown is an average value for PCDD congeners. Upon request of the applicant, the department may waive the requirement to analyze for dioxins, where appropriate.

¹³Polychlorinated dibenzofurans: This category contains congener chemicals, including tetrachlorodibenzofurans, pentachlorodibenzofurans, and hexachlorodibenzofurans. The PQL shown is an average value for PCDF congeners. Upon request of the applicant, the department may waive the requirement to analyze for furans, where appropriate.

¹⁴Toxaphene: This entry includes congener chemicals contained in technical toxaphene (CAS RN 8001-35-2), i.e., chlorinated camphene.

¹⁵Xylene (total): This entry includes o-xylene (CAS RN 96-47-6), m-xylene (CAS RN 108-38-3), p-xylene (CAS RN 106-42-3), and unspecified xylenes (dimethylbenzenes) (CAS RN 1330-20-7). PQLs for method 8021 are 0.2 for o-xylene and 0.1 for m- or p-xylene. The PQL for m-xylene is 2.0 µg/L by method 8020 or 8260.

*The department may waive the requirement to analyze Hexavalent Chromium provided that Total and Hexavalent and Trivalent Chromium values do not exceed 0.05 mg/l.

§360-2.12 Landfill siting.

(a) Applicability. New landfills and lateral or vertical expansions of existing active landfills must be located on a site that exhibits the following characteristics unless the requirements of subdivision (b) of this section are met. A site selection study will be required only if the applicant proposes a site that does not exhibit all of the characteristics identified in either paragraph (1) or (2) of this subdivision.

(1) In the case of new landfills and lateral or vertical expansions of existing landfills:

- (i) the site is not located in an area identified in section 360-1.7(a)(2) of this Part;
- (ii) the site complies with the siting restrictions identified in subdivision (c) of this section;
- (iii) bedrock subject to rapid or unpredictable groundwater flow must be avoided, unless it can be demonstrated that a containment failure of the facility would not result in contamination entering the bedrock system;
- (iv) the site must not be in proximity of any mines, caves or other anomalous features that may alter groundwater flow;
- (v) unconsolidated deposits underlying the proposed landfill must either exist or be constructed to be 20 feet or greater in thickness as measured from the base of the constructed liner system; and
- (vi) the upper 20 feet of the unconsolidated deposits on the site must consist

predominantly (greater than 50 percent) of soils throughout the vertical section, with a maximum in situ coefficient of permeability of 5×10^{-6} centimeters per second, with no appreciable continuous deposits having a maximum coefficient of permeability of 5×10^{-4} centimeters per second.

(2) In the case of an existing landfill active on or after November 4, 1992 operating under and in compliance with a current Part 360 permit or order on consent, the department may allow lateral or vertical expansions if the site has less than 20 feet of unconsolidated deposits provided that:

(i) the proposed landfill expansion is identified in the local solid waste management plan approved by the department under Subpart 360-15 of this Part as a component of the integrated solid waste management system for the planning unit in which the facility is located and the proposed landfill expansion must be consistent with the goals and objectives of such plan;

(ii) the unconsolidated deposits underlying the proposed landfill exist or are constructed to be 10 feet or greater in thickness as measured from the base of the constructed liner system;

(iii) the applicant demonstrates that the expansion site will have no significant adverse impact on human health, safety, or welfare, the environment, or natural resources; and

(iv) the site complies with subparagraphs (1)(i)-(iv) of this subdivision.

(3) Except in Nassau and Suffolk Counties, in the case of ash monofills for the disposal of ash treated in a manner consistent with section 360- 3.6(g)(3) of this Part, combined ash, or bottom ash, the department may allow ash monofill development at sites that have less than 20 feet of unconsolidated deposits provided that:

(i) the proposed monofill must be identified in the local solid waste management plan approved by the department under Subpart 360-15 of this Part as a component of the integrated solid waste management system for the planning unit in which the facility is located and the proposed monofill must be consistent with the goals and objectives of such plan;

(ii) the unconsolidated deposits underlying the proposed landfill on the site exist or are constructed to be 10 feet or greater in thickness as measured from the base of the constructed liner system;

(iii) the applicant demonstrates that the monofill site will have no significant adverse impact on the public health, safety or welfare, the environment or natural resources; and

(iv) the site complies with subparagraphs (1)(i)-(iv) of this subdivision.

(b) Exceptions. New landfills and lateral or vertical expansions of existing landfills may be located on sites that do not exhibit the characteristics identified in subdivision (a) of this section provided that the requirements of paragraphs (1) and (2) of this subdivision are met. The department may impose additional requirements to assure that the permitted activity will have no significant adverse impact on the public health, safety or welfare, the environment or natural resources for any site selected pursuant to this subdivision.

(1) The proposed landfill must be identified in the local solid waste management plan approved by the department under Subpart 360-15 of this Part as a component of the

integrated solid waste management system for the planning unit in which the facility is located, and the proposed landfill must be consistent with the goals and objectives of such plan.

(2) The applicant must perform a site selection study and submit a site selection report as part of a complete application. This report must describe the factors that prevent the applicant from using a site exhibiting the characteristics identified in subdivision (a) of this section. Such factors may include, but are not limited to, the proximity to receiving waters or proximity to sewer lines or POTWs to ensure proper management of leachate during the operational and post-closure period of the landfill. The site selection report must also demonstrate that the chosen site will have no significant adverse impact on public health, safety, or welfare, the environment or natural resources, and will be consistent with the provisions of the ECL.

(i) The site selection process must be comprehensive and must identify and evaluate a reasonable range of alternative sites which are feasible considering the capabilities and objectives of the applicant. All of the criteria used to eliminate and evaluate the suitability of the potential sites must be clearly defined and consistently applied. A phased approach must be used, in which a more detailed evaluation of sites occurs as the number of potential sites is reduced.

(a) The applicant must exclude inappropriate siting areas by avoiding the prohibited siting areas identified in section 360-1.7(a)(2) of this Part and applying the landfill siting restrictions identified in subdivision (c) of this section.

(b) The applicant must evaluate potential siting areas to identify alternative sites that are suitable for landfill development. When applying the siting criteria, the evaluation must include the use of the type of data listed in section 360-2.11(a)(2) of this Subpart. Field reconnaissance to confirm the published information and a morphologic evaluation of landforms must be performed to identify the areas which are likely to have thick low permeable soils available within the study area. The applicant must use the following criteria in the landfill site selection study:

(1) Unconsolidated deposits on the site must be those most likely to minimize the migration of contaminants from the landfill. In evaluating the sites, preferred sites should have the greatest possible thickness of these materials to provide a barrier to contaminant migration into bedrock;

(2) bedrock subject to rapid or unpredictable groundwater flow must be avoided unless it can be demonstrated that a containment failure of the facility would not result in contamination entering the bedrock system resulting in a contravention of groundwater standards;

(3) probable groundwater flow patterns and water quality must be considered in finding areas where containment failure would do the least environmental damage and would be easiest to correct;

(4) proximity and hydrogeologic relationship to water supply sources;

(5) natural topography and its impacts upon the proposed facility; and

(6) relationship to mines, caves, or other anomalous hydrogeologic features that might alter groundwater flow.

(c) Preliminary field investigations must be conducted at the highest ranking available site or sites, to identify any major obstacles to site development, and to provide sufficient data to differentiate among the preferred sites and support a siting decision.

(ii) The report must describe the process used to select the proposed site, including evaluation criteria, deferral (elimination) criteria, assumptions, data sources, decisionmaking means (such as numerical ranking systems) and other factors used to make the siting decisions. The report must demonstrate that, considering the capabilities and objectives of the applicant, a reasonable range of alternative sites available throughout the planning unit in which the project is proposed were evaluated and that the selected site is the most appropriate alternative. The decisionmaking process must be described to provide a clear understanding of how and why the siting decisions were made, and at a level of detail sufficient to provide for a comparative assessment of the alternatives discussed. The report must also include maps of sites and describe the results of the field investigations, the comparative advantages and disadvantages of the highest ranked sites, and the basis for selecting the proposed sites.

(c) Landfill siting restrictions. In addition to the provisions of section 360-1.7(a)(2) of this Part, the following landfill siting restrictions apply.

(1) Primary water supply, and principal aquifers:

(i) Except in Nassau and Suffolk Counties, and except as provided in subparagraph (ii) of this paragraph, no new landfill and no lateral or vertical expansion of an existing landfill may be constructed over primary water supply aquifers, principal aquifers, within a public water supply stabilized cone of depression area, or within a minimum distance of 100 feet to surface waters that are actively used as sources of municipal supply. Greater separation distances may be required in accordance with subparagraph (iii) of this paragraph.

(ii) The commissioner may allow lateral or vertical expansions of landfills, in operation pursuant to a valid Part 360 permit to operate or Order on Consent as of December 31, 1988, that are on principal aquifers, if there is a demonstrated public need for the capacity provided by the expansion that cannot be reasonably provided elsewhere, and that outweighs the potential risk of contamination to the aquifer. Additionally, the landfill expansion must promote the implementation of the State's solid waste management policy set forth in ECL 27-0106 and must be an integral part of any local solid waste management plan that may be in effect for the planning unit (as defined in ECL 27-0107) within which the facility is located; and the expansion must comply with all other requirements of this Part. However, the maximum time period allocated by the commissioner for any such expansion must not allow operation beyond December 31, 1995. In granting any expansion pursuant to this subparagraph, the department must impose specific conditions that are reasonably necessary to assure that the expansion will, to the extent practicable, have no significant adverse impact on public health or safety, welfare, the environment or natural resources, and such approval contributes to the proper management of solid waste at the earliest possible time.

(iii) The required horizontal separation between deposited solid waste, and primary water supply aquifers, principal aquifers, public water supply stabilized cone of depression areas, or surface waters that are actively used as sources of municipal supply must be sufficient (based on the rate and direction of groundwater and surface water flow, landfill

design and requirements for corrective action in the event of failure of the landfill's containment system) to preclude contravention of groundwater standards in the aquifer and surface water standards in waters that are currently used as a source of municipal drinking water supply.

(2) Floodplains. Owners or operators of new landfill units, existing landfill units, and lateral expansions located in 100-year floodplains must demonstrate that the unit will not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a hazard to human health and the environment.

(3) Aircraft safety.

(i) A landfill or landfill subcell into which putrescible solid waste is to be disposed must be located no closer than 5,000 feet from any airport runway end used by piston-powered fixed-wing aircraft and no closer than 10,000 feet from any airport runway end used by turbine-powered fixed-wing aircraft.

(ii) A landfill or landfill subcell into which putrescible solid waste is to be disposed, which is located within five miles of any airport runway end, must not, in the opinion of the Federal Aviation Administration, pose a potential bird or obstruction hazard to aircraft.

(iii) The permittee of an existing landfill or landfill subcell that is authorized to dispose of putrescible solid waste and that is located less than 10,000 feet from any airport runway end used by turbine-powered fixed-wing aircraft or less than 5,000 feet from any airport runway end used only by piston-powered fixed-wing aircraft must provide in its permit renewal application documentation that the Federal Aviation Administration believes the landfill or landfill subcell does not pose a bird hazard to aircraft.

(iv) Landfills containing only nonputrescible solid waste may be located less than 10,000 feet from any airport runway end used by turbine-powered fixed-wing aircraft or less than 5,000 feet from any airport runway end used only by piston-powered fixed-wing aircraft, if in the opinion of the Federal Aviation Administration they will not present a safety hazard to air traffic.

(v) The final elevation of a new landfill or expansion of an existing landfill must not extend more than 200 feet above the highest elevation of the land surface that existed prior to landfill development, unless the Federal Aviation Administration believes that the proposed fill height in excess of 200 feet will not present a safety hazard to air traffic.

(4) Unstable areas. A landfill must not be located in unstable areas where inadequate support for the structural components of the landfill exists or where changes in the substrate below or adjacent to the landfill are capable of impairing the integrity of some or all of the landfill structural components responsible for preventing releases from a landfill. An application for expansion of an existing landfill must demonstrate that adequate support for the structural components of the landfill exists or can be engineered to support any additional loads that may be generated by continued operation of the facility. For purposes of this paragraph:

(i) Unstable area means a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components responsible for preventing releases from a landfill. Unstable areas can

include poor foundation conditions, areas susceptible to mass movements, and karst terrains.

(ii) Structural components means liners, leachate collection systems, final covers, run-on/run-off systems, and any other component used in the construction and operation of the landfill that is necessary for protection of human health and the environment.

(iii) Poor foundation conditions means those areas where features exist which indicate that a natural or human-induced event may result in inadequate foundation support for the structural components of a landfill.

(iv) Areas susceptible to mass movement means those areas of influence (i.e., areas characterized as having an active or substantial possibility of mass movement) where the movement of earth material at, beneath, or adjacent to the landfill because of natural or human-induced events, results in the downslope transport of soil and rock material by means of gravitational influence. Areas of mass movement include, but are not limited to, landslides, avalanches, debris slides and flows, soil fluctuation, block sliding and rock fall.

(v) Karst terrains means areas where karst topography, with its characteristic surface and subterranean features, is developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in karst terrains include, but are not limited to sinkholes, sinking streams, caves, large springs and blind valleys.

(5) Unmonitorable or unremediable areas. New landfills must not be located in areas where environmental monitoring and site remediation cannot be conducted. Identification of these areas must be based upon ability to sufficiently characterize groundwater and surface water flow to locate upgradient and downgradient directions; ability to place environmental monitoring points which will detect releases from the landfill; ability to characterize and define a release from the landfill and determine what corrective actions may be necessary; and the ability to carry out those corrective actions. Lateral expansions adjacent to existing landfills which are already contaminating groundwater may be allowed by the department if the proposed expansion area can be constructed in a way that demonstrates compliance with the regulations. This may be demonstrated using remedial actions at the existing site resulting in a demonstrated improvement in groundwater quality; and any additional monitoring requirements that the department needs to ensure the integrity of the expansion area, such as leakage detection lysimeters installed beneath the new liner, statistical triggers of groundwater monitoring, tracers, additional monitoring wells surrounding the entire site, and any other monitoring methods required by the department.

(6) Fault areas. New landfills and lateral expansions shall not be located within 200 feet of a fault that has had displacement in Holocene time unless the owner or operator demonstrates to the department that an alternative setback distance of less than 200 feet will not result in damage to the structural integrity of the landfill unit and will be protective of human health and the environment.

(7) Seismic impact zones. New landfills and lateral expansions shall not be located in seismic impact zones, unless the owner or operator demonstrates to the department that all permanent containment structures, including liners, leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration

in lithified earth material for the site pursuant to the provisions of section 360-2.7(b)(7) of this Subpart.

(8) Federally regulated wetlands. For the purpose of this Subpart, federally regulated wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marsh, bogs and similar areas. New landfills and lateral expansions shall not be located in federally regulated wetlands, unless the appropriate permits are obtained from the U.S. Army Corps of Engineers, and unless the owner or operator can make the following demonstrations to the department, to the extent required under federal or State law.

(i) The presumption that a practicable alternative to the proposed landfill is available, which does not involve federally regulated wetlands, is clearly rebutted.

(ii) The construction and operation of the landfill will not:

(a) cause or contribute to violations of any applicable water quality standard;

(b) violate any applicable toxic effluent standard or prohibition;

(c) jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat; and

(d) violate any requirement for the protection of a marine sanctuary.

(iii) The landfill will not cause or contribute to significant degradation of federally regulated wetlands. The owner or operator must demonstrate the integrity of the landfill and its ability to protect ecological resources by addressing the following factors:

(a) erosion, stability and migration potential of native wetland soils, muds, and deposits used to support the landfill;

(b) erosion, stability and migration potential of dredged and fill materials used to support the landfill;

(c) the volume and chemical nature of the waste managed in the landfill;

(d) impacts from release of the solid waste on fish, wildlife, and other aquatic resources and their habitat;

(e) the potential effects on catastrophic release of waste to the federally regulated wetland and the resulting impacts on the environment; and

(f) any additional factors, as necessary, to demonstrate that ecological resources in the federally regulated wetland are sufficiently protected.

(iv) Steps have been taken to attempt to achieve no net loss of federally regulated wetlands to the extent required under federal or State law (as defined by acreage and function) by first avoiding impacts to federally regulated wetlands to the maximum extent practicable, then minimizing unavoidable impacts to the maximum extent practicable, and finally by offsetting remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions (e.g. restoration of existing degraded wetlands or creation of new wetlands).

(v) Sufficient information is available to make a reasonable determination with respect to these demonstrations.

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