P.W. GROSSER CONSULTING

July 19, 2013

Ms. Cynthia Whitfield, P.E.
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 11th Floor, Cell 083
Albany, NY 12233

RE: North Sea Landfill, Southampton, New York
1st - Semi-Annual Post-Closure Groundwater Monitoring Report 2013

Dear Ms. Whitfield:

On behalf of the Town of Southampton, P.W. Grosser Consulting, Inc has enclosed the Semi-Annual Post-Closure Groundwater Monitoring Report that documents our findings at the North Sea Landfill for the first half of 2013. If you have any questions or comments, please do not hesitate to contact me.

Very truly yours,

P.W. GROSSER CONSULTING
ENGINEER & HYDROGEOLOGIST, PC

Derek Ersbak
Project Manager

JUL 22 2013

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Senior Vice President

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NORTH SEA LANDFILL
1370 MAJORS PATH
SOUTHAMPTON, NEW YORK

1st - Semi-Annual Post-Closure Groundwater Monitoring Report 2013

Submitted To:

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 11th Floor, Cell 083
Albany, New York 12233

Prepared For:

Town of Southampton
1370 Majors Path
Southampton, New York 11968

Prepared By:

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PWGC Project Number: SHP1301

JULY 2013

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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, NY. This report is intended to satisfy 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 first half of 2013.

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.

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 North Sea 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 reduction of number of wells sampled and sampling frequency to semi-annual as detailed in the table below:

1st Half Semi-Annual Sampling (April)		2nd 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, & 12C	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 NTUs.

Appendix D includes list of analytes for 6 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;
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-1, MW-3, MW-4, MW-6, MW-7, MW-8, MW-9, MW-11, and MW-12) 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).

Thirteen groundwater monitoring wells, as well as the primary and secondary leachate collection systems were sampled on April 15 and 16, 2013 as part of the First Half 2013 sampling event. Samples collected as part of the First Half 2013 sampling event were delivered to H2M Labs, Inc. of Melville, New York and analyzed for the baseline 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 year. Compounds that exceed current 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 First Half 2013 sampling event, PWGC conducted an assessment of 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. No 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, or equivalent, submersible pump and temperature, specific conductivity, pH, dissolved oxygen and turbidity measurements were collected and recorded. Groundwater sampling logs are included in **Appendix C**. Groundwater samples were collected using disposable polyethylene bailers and a dedicated polyethylene line. 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 nephelometric turbidity units (NTUs) for laboratory filtering of metals. This included groundwater monitoring wells MW-11A, MW-11B and MW-12A.

2.6 Decontamination and Quality Assurance Quality Control Procedures

All non-disposable sampling equipment (i.e. submersible pump) was 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 First Half 2013 (April) groundwater sampling event, samples from thirteen groundwater monitoring wells were collected and submitted for analysis of baseline parameters. The inorganic portion of the analysis includes metals, nutrients, and the physical properties of the sample. Specific conductivity, temperature 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).

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 – April 2013

Long Island groundwater generally has a low pH and is typically measured below the NYSDEC standard range of 6.5 to 8.5. Two samples had a measured pH level below 6.5 with the largest deviation seen in sample MW-4A where the pH level measured 6.04. Historically, low pH values have been evident in both up-gradient and down-gradient wells documenting that it is not being influenced by landfill leachate.

Ammonia was detected above method detection limits in six groundwater samples. Ammonia was detected in three of the thirteen groundwater samples (MW-3B, MW-4B and MW-12B) at a concentration exceeding the NYSDEC groundwater standard (2.0 mg/L) indicating that leachate is present. The highest concentration of ammonia, 3.95 mg/L, was measured in sample MW-4B. The leachate plume has been observed to reach its deepest point at the MW-3B depth and discharge into fish cove where the MW-4 cluster well is located.

Chromium was detected above method detection limits in each of the groundwater samples. Chromium was detected in two of the thirteen groundwater samples (MW-3A and MW-4C) at a concentration exceeding the groundwater standard of 0.05 mg/L for chromium. Filtered metals analysis was not performed on these wells as turbidity was below 50 NTUs. Concentrations of chromium ranged from 0.0014 mg/L to 0.187 mg/L. Chromium adheres to soil particles and concentrations are significantly reduced by filtering samples to remove suspended particulates. Chromium concentrations in the filtered samples were significantly reduced when compared to the unfiltered results as observed in MW-11A, MW-11B and MW-12A.

Iron was detected above method detection limits in each of the thirteen groundwater samples. Seven of the thirteen groundwater samples exceeded the 0.3 mg/L NYSDEC ambient groundwater standard for iron. Iron was not detected above NTSDEC groundwater standards in the up-gradient (MW-1) well cluster. Concentrations of iron ranged from 0.0124 mg/L to 22.4 mg/L. Iron concentrations are highest in the wells where the leachate plume has been delineated indicating leachate is still present. In addition, iron adheres to fine sediment particles which are obtained as part of the sample. Iron concentrations detected are shown to be significantly reduced when the samples are filtered to remove suspended particulates as observed in MW-11A, MW-11B and MW-12A. However, iron concentrations in the filtered sample collected from MW-11A were above NYSDEC groundwater standards. The standard for iron is set based upon aesthetic considerations and is not detrimental to health. Iron concentrations in excess of 1.0 mg/L will cause an unpleasant taste in drinking water. Iron concentrations were less than 1.0 mg/L in eight of the thirteen samples collected and analyzed.

Lead was detected above method detection limits in each of the groundwater samples. Lead was detected in one of the thirteen groundwater samples at a concentration exceeding the NYSDEC groundwater standard (0.025 mg/L). The highest concentration of lead (0.0254 mg/L) was measured in the sample collected from MW-11B; however lead concentrations were below standards in the filtered sample from this well. Lead adheres to soil particles and concentrations are significantly reduced by filtering samples to remove suspended particulates as observed in MW-11A, MW-11B and MW-12A.

Manganese was detected above method detection limits in each of the thirteen groundwater samples. Four samples (MW-3B, MW-4B, MW-11A, and MW-12A) of thirteen showed concentrations of manganese equal to or above the NYSDEC groundwater standard (0.3 mg/L). Manganese concentrations in the filtered samples still exceeded groundwater standards. Elevated manganese concentrations have been detected in down-gradient wells only which indicates leachate is present. The groundwater wells where manganese has been detected have remained the same and concentrations have stabilized over time indicating plume stabilization. Manganese concentrations in excess of 1.0 mg/L produce a metallic taste to water. The highest concentration of manganese was 3.72 mg/L measured from sample MW-12A. Manganese was detected in both the unfiltered and filtered metals samples at similar concentration as shown in MW-11A, MW-11B, and MW-12A. Manganese is also aesthetically objectionable and not considered a significant health threat.

Sodium was detected above method detection limits in each of the thirteen groundwater samples. Sodium was detected in two of the thirteen groundwater samples (MW-4B and MW-4C) at a concentration equaling or exceeding the NYSDEC groundwater standard (20 mg/L). Sodium concentrations ranged from 6.28 mg/L (MW-1B) to 24.9 mg/L (MW-4C). Sodium concentrations detected are shown to be significantly reduced when the samples are filtered to remove suspended particulates as observed in MW-11A, MW-11B and MW-12A.

2.7.2 *Organic Water Quality Results – April 2013*

Groundwater samples collected from wells were analyzed for VOCs as part of the First Half 2013 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-1B, MW-1C and MW-11B, chlorobenzene in MW-4B, and 1,4-dichlorobenzene in MW-4B which was qualified as (J) estimated (**Table 2**). These detections are below NYSDEC groundwater standards.

2.7.3 *Well Cluster 4 & 11 Analysis*

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. Conductivity, total dissolved solids, and chloride have been trending upwards in MW-4C. 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.

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 and MW-11B during both sampling events. 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, manganese, and lead 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 April 2013 (**Figure 1**) was created with groundwater elevation data from eight 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 April 2013 analytical data indicate that contaminant concentrations in the leachate detection system (secondary) are diluted when compared to those of the leachate collection system (primary). Concentrations observed in both the primary and secondary leachate are lower when compared to concentrations detected during the October 2012 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

3.1 Data Validation

In accordance with the contract, five percent of the groundwater analytical results were validated by Premiere Environmental Services, Merrick, New York. As part of the data validation process, all quality control (QC) issues were reviewed. A copy of the data validation and usability report is included in Appendix A. Compliance chart, re-submission communications, and the New York State Department of Environmental Conservation (NYSDEC) laboratory sample preparation and analysis summary forms are also included.

In summary, sample processing was primarily conducted with compliance to protocol requirements and adherence to quality criteria. Sample results are usable as reported or usable with minor qualification as estimated or edited to non-detection. These issues are discussed in the following analytical section. Although only 5% of the samples underwent full validation review, recommended qualifications below are stated to include all project samples as pertains to general quality issues, and where otherwise evident.

Data Completeness
Data packages were complete as received: no additional documentation was required.

3.1.1 Metals Analyses

Review was conducted for method compliance, holding times, calibration analysis, ICP CRDL standard, ICP interference check standard, matrix spike analysis, post digestion spike analysis, duplicate sample analysis, ICP serial dilution, blanks, laboratory control sample analysis, instrument QC data, compound identification, field duplicate sample analysis, and system performance and overall assessment to each procedure. All were found acceptable for the validated samples, unless noted specifically within this text.

The percent recovery of all target analytes met QC criteria in this matrix spike analysis with the exception of Boron (<30%) and Selenium (60.2%). Selenium has been qualified as estimated (UJ/J) in the sample chosen for review. Boron was qualified as unusable (R) in the sample chosen for review.

The ICP serial dilution evaluation of MW-3B (Total Metals Analysis) and MW-11A (Filtered Metals Analysis) was acceptable, with the exception of that for potassium. Detected results for these analytes in the samples in this data set are therefore qualified as estimated (J).

3.1.2 Wet Chemistry Analyses

Review was conducted for method compliance, holding times, calibration analysis, matrix spike analysis, duplicate sample analysis, blanks, laboratory control sample analysis, compound identification, field duplicate sample analysis, and system performance and overall assessment to each procedure. All were found acceptable for the validated samples, unless noted specifically within this text.

The method blank was free from contamination of all target analytes above the reporting limit. The BOD blank depletion was greater than 2.0 mg/l, therefore BOD has been qualified "UJ" estimated.

3.1.3 VOC Analyses

Review was conducted for method compliance, holding times, surrogates, matrix spike/spike duplicate analysis, blank spike analysis, blank contamination, GC/MS calibration, GC/MS mass spectrometer tuning, field duplicate analysis, compound identification and overall assessment. All were found acceptable for the validated samples, unless noted specifically within this text.

All target analyte percent relative standard deviation (%RSD) criteria were met in the initial calibration curve analysis associated with this data set with the exception of Acetone (26.7%), Dibromochloromethane (21.3%), and Bromoform (30.3%). These compounds have been qualified "UJ/J" estimated in the sample chosen for data review.

The GC/MS calibration identified the % difference of all target compounds met QC criteria in this continuing calibration standard with the exception of the following:

Analytes	% Difference
• Chloromethane	25.6
• Acetone	24.5
• Carbon Tetrachloride	21.1
• cis 1,3-Dichloropropene	21.8
• trans 1,3-Dichloropropene	28.5
• Dibromochloromethane	24.6
• Bromoform	31.4

These target analytes have been qualified "UJ/J" estimated in each of the samples that were included in the 5 % data review.

3.2 Data Usability Report

According to the Data Usability report, the analytical data were compliant with established protocols and met the project data quality objectives (DQO) and are usable, with the appropriate qualifiers, to determine the presence, absence, and magnitude of environmental contamination in the samples collected from the site. A copy of the Data Usability report is included in Appendix A.

4.0 SUMMARY

Review of the data for the First Half 2013 indicates that previously implemented remedial actions continue to be effective at minimizing potential site impacts. In brief, the leachate quality has improved 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 the organic constituents has improved when compared to the previous reporting periods as organic constituents were detected at estimated concentrations but below groundwater standards in several of the samples collected. Several inorganic compounds are sporadically detected in wells MW-1A, 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. It is also due to the turbidity in the samples, as contaminant concentrations are significantly reduced in filtered samples.

5.0 RECOMENDATIONS

PWGC recommends that the Post-closure monitoring and maintenance operations program be continued and the groundwater and leachate sampling program be continued on a semi-annual basis.

TABLES

TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
April 2013

ANALYTICAL PARAMETERS	UNITS	GW STND*	MW-1A																			
			April 2005	Oct. 2005	April 2006	Oct. 2006	April 2007	Oct. 2007	April 2008	Oct. 2008	April 2009	Oct. 2009	April 2010	Oct. 2010 Unfiltered	Oct. 2010 Filtered	April 2011	Oct. 2011	April 2012	Oct. 2012	April 2013
Aluminum as Al	mg/L	NA	0.78	0.18	0.35	0.13	0.51	PNA	0.027 B	PNA	0.0092 U	PNA	0.0407 BJ	PNA	PNA	0.0156 B	PNA	0.174 B	PNA	0.0129 B
Antimony as Sb	mg/L	0.003 #	0.005 U	PNA	0.005 U	PNA	0.005 U	PNA	0.0044 U	PNA	0.0027 U	PNA	0.0028 U	PNA	PNA	0.0041 B	PNA	0.0085 B	PNA	0.0012 U
Arsenic as As	mg/L	0.025	0.006	0.005 U	0.005 U	0.005 U	0.005 U	PNA	0.0029 U	PNA	0.0028 U	PNA	0.0028 U	PNA	PNA	0.0019 U	PNA	0.0221 U	PNA	0.0028 U
Barium	mg/L	1	PNA	PNA	PNA	PNA	PNA	PNA	0.0126 B	PNA	0.0186 B	PNA	0.0575 B	PNA	PNA	0.0185 BE	PNA	0.062 B	PNA	0.0058 B
Beryllium as Be	mg/L	0.003	0.001 U	PNA	0.001 U	PNA	0.001 U	PNA	0.00012 B	PNA	0.00016 U	PNA	0.0004 B	PNA	PNA	0.00013 U	PNA	0.00062 U	PNA	0.0001 U
Boron as B	mg/L	1.0	0.11	PNA	0.13	PNA	0.11	PNA	0.055 B	PNA	0.0945 B	PNA	0.156	PNA	PNA	0.0688 BE	PNA	0.263 B	PNA	0.0248 B
Cadmium as Cd	mg/L	0.005	0.005 U	PNA	0.005 U	PNA	0.005 U	0.0061 B	0.00027 U	0.00035 U	0.00023 U	0.00035	0.0004 B	0.00025 U	0.00025 U	0.00027 U	0.00017 U	0.00089 U	0.000087 U	0.0001 U
Calcium as Ca	mg/L	NA	57	42	61	72	56	39.7	27.3	68.6	80	70.4	10.6	44.5	46.1	39.3	66.8	182	66.8	14.1
Chromium as Cr	mg/L	0.05	0.035	PNA	0.038	PNA	**0.14**	PNA	0.00075 U	PNA	0.0013 B	PNA	0.0033 B	PNA	PNA	0.00068 B	PNA	0.013 B	PNA	0.0016 B
Cobalt	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA	0.0017 U	PNA	0.0012 U	PNA	0.0012 U	PNA	PNA	0.00049 U	PNA	0.0026 U	PNA	0.0004 U
Copper as Cu	mg/L	0.2	0.02	PNA	0.01 U	PNA	0.03	PNA	0.0016 U	PNA	0.0016 B	PNA	0.006 B	PNA	PNA	0.0012 B	PNA	0.0045 B	PNA	0.0004 U
Cyanide as CN	mg/L	0.20	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	0.01 U	PNA	0.01 U	PNA	0.01 U	PNA	PNA	0.01 U	PNA	0.01 U	PNA	0.01 U
Iron as Fe	mg/L	0.3	**2.4**	**0.47**	**1.2**	**0.54**	**2.4**	**0.333**	0.12	0.0564 B	0.0576 B	0.18	0.179	0.018 B	0.0071 B	0.0312 B	**1.1**	0.254 B	0.176	0.0124 B
Lead as Pb	mg/L	0.025	0.006	0.005 U	0.005 U	0.005 U	0.007	0.0021 B	0.0023 U	0.0013 U	0.0015 U	0.0018 U	**0.0326 J**	0.009	0.0077	0.0015 U	0.008	0.0247	0.001 B	0.0045
Magnesium	mg/L	35 #	PNA	16	NA	27	PNA	16.2	13.3	30	**36.1**	31.6	**48.2**	21.7	21.5	22.5	27.5	**82.7**	26.5	6.28
Manganese as Mn	mg/L	0.3	**2.0**	0.28	**0.9**	0.15	0.15	0.053	0.0365	0.0223	0.0111 B	0.085	0.0555	0.0015 B	0.0007 B	0.104	**0.98 E**	0.0665 B	0.0771	0.0023 B
Mercury as Hg	mg/L	0.0007	0.00025 U	0.00025 U	0.00025 U	0.00025 U	0.00025 U	PNA	0.0001 U	PNA	0.0001 U	PNA	0.0001 U	PNA	PNA	0.0001 U	PNA	0.0001 U	PNA	0.0001 U
Nickel as Ni	mg/L	0.1	0.02	PNA	0.02	PNA	0.06	PNA	0.0013 U	PNA	0.0014 U	PNA	0.0018 B	PNA	PNA	0.0012 U	PNA	0.005 B	PNA	0.0012 B
Potasium	mg/L	NA	PNA	PNA	PNA	PNA	PNA	15.3	8.19	27.4	28.9 E	25.6	45.1	18.6	15.9	11.7	20.2	53.3	17.2	4.68 B
Selenium as Se	mg/L	0.01	0.004 U	PNA	0.004 U	PNA	0.004 U	PNA	0.0043 U	PNA	0.0027 U	PNA	0.0042 U	PNA	PNA	0.0026 U	PNA	**0.0242 B**	PNA	0.0025 B
Silver as Ag	mg/L	0.05	0.005 U	PNA	0.005 U	PNA	0.005 U	PNA	0.00089 U	PNA	0.0006 U	PNA	0.0005 U	PNA	PNA	0.00052 U	PNA	0.0089 B	PNA	0.0002 U
Sodium as Na	mg/L	20	**21**	PNA	15	PNA	14	13	13.1	**22**	**29.6**	**33.4**	**30**	**21.8**	**28.9**	**20.2**	19.4	**68.6**	16.8	7.87
Thallium as Tl	mg/L	0.0005 #	0.005 U	PNA	0.005 U	PNA	0.005 U	PNA	0.0025 U	PNA	0.0033 U	PNA	0.0056 U	PNA	PNA	0.0037 B	PNA	0.0159 U	PNA	0.0019 U
Vanadium	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA	0.0022 U	PNA	0.00097 U	PNA	0.0012 U	PNA	PNA	0.00056 U	PNA	0.0015 B	PNA	0.0003 U
Zinc as Zn	mg/L	2 #	0.03	PNA	0.01	PNA	0.04	PNA	0.0054 B	PNA	0.006 B	PNA	0.0057 B	PNA	PNA	0.0103 B	PNA	0.0022 U	PNA	0.0084 B
Alkalinity tot CaCo3	mg/L	NA	190	140	240	270	220	150	73.8	216	222	211	324	110 D	PNA	37.7	158 D	69 D	150 D	31
Chloride as Cl	mg/L	250.0	47	24	26	21	24	27.7	28.3	43.8	54.8	52.5	49.8	34.5	PNA	27.8	24.3	17.8	29.6	13.1
Sulfate as SO4	mg/L	250.0	38	24	34	26	27	10.5	33.4	48.8	101	114	171 J	103 D	PNA	**141** D	106 D	63.7 D	128 D	25.7
Bromide	mg/L	2 #	PNA	PNA	PNA	PNA	PNA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	PNA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BOD5	mg/L	NA	10	2.1	2 U	2 U	2 U	2 U	11	2 U	2 U	2 U	2 U	2 U	PNA	2 U	2 U	2 U	2 UJ	2 U
COD	mg/L	NA	100	PNA	40 U	PNA	40 U	10 U	19.4	29.3	10 U	10 U	10 U	10.6	PNA	12.4	16.4	10 U	20	10 U
Color	units	NA	5 U	5 U	10	10	15	PNA	5	PNA	10	PNA	5	PNA	PNA	5 U	PNA	5 U	PNA	5 U
Chromium hex as Cr	mg/L	0.05	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	PNA	0.02 U	PNA	0.02 U	PNA	0.02 U
Hardness as CaC03	mg/L	NA	230	170	250	290	230	160	128	144	520	330	460	210 D	PNA	190 D	288 D	152 D	260 D	62
Ammonia as N	mg/L	2.0	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.1 U	0.1 U	0.18	0.1 U	0.1 U	0.92	0.1 U	PNA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nitrite as N	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA	0.1 U	0.1 U	PNA	0.1 U	0.1 U	0.1 U	PNA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nitrate as N	mg/L	10	1.6	PNA	1.9	PNA	2.5	5.93	3.91	3.79	5.55	0.1 U	1.14	2.84	PNA	6.47 D	4.45 D	4.07 D	6.32 D	2.09 D
Phenols as Phenol	mg/L	0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U	0.005 U	0.005 U	0.0005 U	0.005 U	0.005 U	0.005 U	PNA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Tot Dissolved Solids	mg/L	NA	340	PNA	380	PNA	340	242	0.1	361	531	489	674	333	PNA	356	398	245	501	98
Tot. Kjeldahl Nitrogen	mg/L	NA	1.4	PNA	2.2	PNA	1.6	0.55	0.33	1.02	0.61	0.89	1.02 J	0.47	PNA	0.1 U	0.78	0.1 U	0.95	0.1 U
Tot Organic Carbon	mg/L	NA	10	6.5	10	9.5	7.6	5.9	4.7	8.4	7.3	22	12.4	4.6	PNA	4.8	47.2	2.8	4.8	9.4
Turbidity	NTU	NA	7.6	4.1	8.2	2.4	11	0	18.6	10	5.8	7	0	42	PNA	3.8	5.6	1.4	0	0
Temperature	deg.C	NA	15	13	13	13	13	12.8	12.31	13.45	12.85	12.86	13.47	12.39	PNA	11.96	13.13	12.98	12.31	12.57
pH	units	6.5-8.5	7.3	**8.4**	6.6	6.6	**8.8**	**8.53**	**5.45**	**6.21**	6.58	**6.09**	6.97	**5.38**	PNA	**3.72**	**6.33**	**5.74**	6.56	7.4
Spec. Cond	umho/cm	NA	500	460	570	620	550	PNA	PNA	542	656	950	1,110	432	PNA	490	630	410	690	212

NOTES:

* = NYSDEC, Class GA Groundwater Standards
6 NYCRR Part 703

= Guidance value, no standard exists.

NA = Not available.

PNA = parameter not analyzed for.

B = This flag is used when the analyte is found in the associated blank as in the sample.

E - This flag identified compunds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.

F - This flag indicates the results of a filtered metal analysis.

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

UJ - 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.

R - The sample results are unreliable/unusable. The presence or absence of the analyte cannot be verified.

1.0 = Compound exceeded standard.

1.0 = Compound at standard.

NM = Not Monitored

TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
April 2013

ANALYTICAL PARAMETERS	UNITS	GW STND*	MW-1B																					
			April 2005		Oct. 2005		April 2006		Oct. 2006		April 2007		Oct. 2007		April 2008		Oct. 2008		April 2009		Oct. 2009		April 2010		Oct. 2010		April 2011		Oct. 2011		April 2012		Oct. 2012		April 2013	
Aluminum as Al	mg/L	NA	0.08		0.14		0.06		0.07		0.07		PNA		0.0571	B	PNA		0.0123	B	PNA		0.0196	UJ	PNA		0.0241	B	PNA		0.0334	BJ	PNA		0.0438	B
Antimony as Sb	mg/L	0.003 #	0.005	U	PNA		0.005	U	PNA		0.005	U	PNA		0.0044	U	PNA		0.0027	U	PNA		0.0028	U	PNA		0.0021	U	PNA		0.0018	B	PNA		0.0012	U
Arsenic as As	mg/L	0.025	0.005	U	0.005	U	0.005	U	0.005	U	0.007		PNA		0.0029	U	PNA		0.0028	U	PNA		0.0028	U	PNA		0.0019	U	PNA		0.0044	U	PNA		0.0028	U
Barium	mg/L	1	PNA		PNA		PNA		PNA		PNA		PNA		0.0125	B	PNA		0.0105	B	PNA		0.0104	B	PNA		0.0104	BE	PNA		0.012	B	PNA		0.0098	B
Beryllium as Be	mg/L	0.003	0.001	U	PNA		0.001	U	PNA		0.001	U	PNA		0.0001	U	PNA		0.00016	U	PNA		0.00017	U	PNA		0.00013	U	PNA		0.00012	U	PNA		0.0001	U
Boron as B	mg/L	1.0	0.02		PNA		0.02		PNA		0.01	U	PNA		0.009	B	PNA		0.0022	U	PNA		0.0104	B	PNA		0.0087	BE	PNA		0.0068	B	PNA		0.0129	B
Cadmium as Cd	mg/L	0.005	0.005	U	PNA		0.005	U	PNA		0.005	U	0.0033	B	0.00027	U	0.00035	U	0.00023	U	0.00034	U	0.00024	U	0.00025	U	0.00027	U	0.00017	U	0.00018	U	0.000087	U	0.0001	U
Calcium as Ca	mg/L	NA	4.3		5.1		3.6		4.9		5.4		3.14		3.33	B	3.49		3.68	B	3.71	B	2.98	B	2.99	B	2.76	B	4.22	B	4.29	BJ	4.26	B	4.31	B
Chromium as Cr	mg/L	0.05	0.007		PNA		0.007		PNA		0.007		PNA		0.0073	B	PNA		0.0058	B	PNA		0.0036	B	PNA		0.0088	B	PNA		0.0062	BJ	PNA		0.0131	
Cobalt	mg/L	NA	PNA		PNA		PNA		PNA		PNA		PNA		0.0017	U	PNA		0.0012	U	PNA		0.0012	U	PNA		0.00049	U	PNA		0.00052	U	PNA		0.0004	U
Copper as Cu	mg/L	0.2	0.03		PNA		0.02		PNA		0.03		PNA		0.0016	U	PNA		0.0012	U	PNA		0.0072	B	PNA		0.0012	B	PNA		0.0017	B	PNA		0.0053	B
Cyanide as CN	mg/L	0.20	0.02	U	PNA		0.02	U	PNA		0.02	U	PNA		0.01	U	PNA		0.01	U	PNA		0.01	U	PNA		0.01	U	PNA		0.01	U	PNA		0.01	U
Iron as Fe	mg/L	0.3	**0.42**		**0.71**		**0.35**		**0.42**		**0.36**		0.189		0.15		0.0492	B	0.0532	B	**0.485**		0.0355	B	0.0151	B	0.0699	B	0.0516	U	0.0337	BJ	0.0767	B	0.177	
Lead as Pb	mg/L	0.025	0.012		0.021		0.008		0.012		0.01		0.0022	B	0.0023	U	0.0013	U	0.0019	B	0.0058		0.0185	J	0.0081		0.0015	U	0.0091		0.0069		0.00096	U	0.0052	
Magnesium	mg/L	35 #	PNA		1.5		PNA		1.4		PNA		1.74	B	1.86	B	2.17	B	2.33	B	2.26	B	1.58	B	1.48	B	1.31	B	1.24	B	2	BJ	1.99	B	1.95	B
Manganese as Mn	mg/L	0.3	0.01		0.02		0.02		0.01		0.02		0.0054	B	0.0037	B	0.0023	B	0.0018	B	0.0121	B	0.0015	B	0.0011	B	0.0017	B	0.003	BE	0.0012	BJ	0.0021	B	0.0041	B
Mercury as Hg	mg/L	0.0007	0.00025	U	0.00025	U	0.00025	U	0.00025	U	0.00025	U	PNA		0.0001	U	PNA		0.0001	U	PNA		0.0001	U	PNA		0.0001	U	PNA		0.00025		PNA		0.0001	U
Nickel as Ni	mg/L	0.1	0.01	U	PNA		0.01	U	PNA		0.01	U	PNA		0.0124	B	PNA		0.0064	B	PNA		0.0084	B	PNA		0.0055	B	PNA		0.0114	B	PNA		0.0095	B
Potasium	mg/L	NA	PNA		PNA		PNA		PNA		PNA		0.642	B	0.631	B	0.628	B	0.77	BE	0.795	B	0.934	B	1.25	B	1.12	B	0.3	B	0.961	BJ	0.775	B	0.613	B
Selenium as Se	mg/L	0.01	0.004	U	PNA		0.004	U	PNA		0.004	U	PNA		0.0043	U	PNA		0.0027	U	PNA		0.0042	U	PNA		0.0026	U	PNA		0.0028	U	PNA		0.0023	U
Silver as Ag	mg/L	0.05	0.005	U	PNA		0.005	U	PNA		0.005	U	PNA		0.00089	U	PNA		0.0006	U	PNA		0.0005	U	PNA		0.00052	U	PNA		0.0024	B	PNA		0.0002	U
Sodium as Na	mg/L	20	9.5		PNA		7.7		PNA		7.9		6.65		7.93		8.13		6.78		6.92		7.09		7.41		6.93		7.73		7.04	J	7.16		6.28	
Thallium as Tl	mg/L	0.0005 #	0.005	U	PNA		0.005	U	PNA		0.005	U	PNA		0.0025	U	PNA		0.0033	U	PNA		0.0056	U	PNA		0.0032	B	PNA		0.0032	U	PNA		0.0019	U
Vanadium	mg/L	NA	PNA		PNA		PNA		PNA		PNA		PNA		0.0022	U	PNA		0.00097	U	PNA		0.0012	U	PNA		0.00056	U	PNA		0.00023	U	PNA		0.0003	B
Zinc as Zn	mg/L	2 #	0.04		PNA		0.02		PNA		0.03		PNA		0.0101	B	PNA		0.0106	B	PNA		0.005	B	PNA		0.0118	B	PNA		0.00044	U	PNA		0.013	B
Alkalinity tot CaCo3	mg/L	NA	14		18		18		34		16		7.6		26		11.1		11		12		8.8		6.2		6.5		10.1	D	12.9	D	11.5		11	
Chloride as Cl	mg/L	250.0	10		13		6.0		7.0		8.0		9.9		9.8		9.8		9.61		8.54		9.02		8.95		6.6		8.39		9.89		10.8		8.72	
Sulfate as SO4	mg/L	250.0	9.0		8.0		8.0		8.0		5	U	8		9.14		8.5		8.58		7		7.8	J	8.33		6.31		6.15		6.58		8.09		7.62	
Bromide	mg/L	2 #	PNA		PNA		PNA		PNA		PNA		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
BOD5	mg/L	NA	3.4		2.1		2	U	4.1		2	U	2	U	13		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	UJ
COD	mg/L	NA	40		PNA		40	U	PNA		40	U	10	U	10	U	14.4		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Color	units	NA	5	U	5	U	5	U	5	U	10		PNA		5		PNA		5	U	PNA		5		PNA		5	U	PNA		5		PNA		5	U
Chromium hex as Cr	mg/L	0.05	0.02	U	PNA		0.02	U	PNA		0.02	U	PNA		0.02	U	PNA		0.02	U	PNA		0.02	U	PNA		0.02	U	PNA		0.02	U	PNA		0.02	U
Hardness as CaC03	mg/L	NA	16		19		15		18		19		10		0.1	U	34		28		19		14		21		11		18		22		17		16	
Ammonia as N	mg/L	2.0	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nitrite as N	mg/L	NA	PNA		PNA		PNA		PNA		PNA		PNA		0.1	U	0.1	U	PNA		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nitrate as N	mg/L	10	0.5	U	PNA		0.5	U	PNA		0.5	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	1.49		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Phenols as Phenol	mg/L	0.001	0.001	U	**0.002**		**0.02**		**0.001**		0.001	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U
Tot Dissolved Solids	mg/L	NA	55		PNA		74		PNA		69		54		59		44		55		51		45		35		47		24		53		59		41	
Tot. Kjeldahl Nitrogen	mg/L	NA	0.2		PNA		0.4		PNA		1.8		0.1	U	0.1	U	0.11		0.1	U	0.25		0.56	J	0.45		0.5	UD	0.27		0.1	U	0.1	U	0.1	U
Tot Organic Carbon	mg/L	NA	2.5		6.5		3.3		9.5		1.2		1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	5		1.3		1	U	3.4	
Turbidity	NTU	NA	5.6		6.2		5.2		8.4		5.9		7		27.2		9.4		10.6		18.5		0		32		5.3		7.90		3.5		0.6		1.24	
Temperature	deg.C	NA	13		12		12		12		11		11.6		11.63		11.55		11.46		12.5		11.4		11.25		11.72		13.12		12.55		11.4		12.39	
pH	units	6.5-8.5	6.9		7.2		**6.0**		**6.1**		7.3		**8.51**		**5.37**		**6.18**		**6.43**		**5.85**		**6.33**		**5.2**		**3.94**		7.90		**5.75**		**6.39**		8.12	
Spec. Cond	umho/cm	NA	62		77		71		82		73		PNA		PNA		61		59		91		78		53		59		77		91		84		1	

NOTES:

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6 NYCRR Part 703

= Guidance value, no standard exists

NA = Not available

PNA = parameter not analyzed for

B = This flag is used when the analyte is found in the associated blank as in the sample

E - This flag identified compunds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis

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1.0 = Compound exceeded standard.

1.0 = Compound at standard.

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TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
April 2013

ANALYTICAL PARAMETERS	UNITS	GW STND*	MW-1C																			
			April 2005	Oct. 2005	April 2006	Oct. 2006	April 2007	Oct. 2007	April 2008	Oct. 2008	April 2009	Oct. 2009 Unfiltered	Oct. 2009 Filtered	April 2010	Oct. 2010	April 2011	Oct. 2011	April 2012	Oct. 2012	April 2013
Aluminum as Al	mg/L	NA	0.05	0.11	0.03	0.04	0.03	PNA	0.591	PNA	0.0112 B	PNA	0.0271 B	0.0959 BJ	PNA	0.0659 B	PNA	0.644	PNA	0.0173 B
Antimony as Sb	mg/L	0.003 #	0.005 U	PNA	0.005 U	PNA	0.005 U	PNA	0.0044 U	PNA	0.0027 U	PNA	**0.0034 B**	0.0028 U	PNA	0.0021 U	PNA	0.0011 U	PNA	0.0012 U
Arsenic as As	mg/L	0.025	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	PNA	0.0029 U	PNA	0.0028 U	PNA	0.0023 U	0.0028 U	PNA	0.0019 U	PNA	0.0044 U	PNA	0.0028 U
Barium	mg/L	1	PNA	PNA	PNA	PNA	PNA	PNA	0.0133 B	PNA	0.008 B	PNA	0.011 B	0.0093 B	PNA	0.0095 BE	PNA	0.0139 B	PNA	0.009 B
Beryllium as Be	mg/L	0.003	0.001 U	PNA	0.001 U	PNA	0.001 U	PNA	0.0001 U	PNA	0.00016 U	PNA	**0.0053 B**	0.00017 U	PNA	0.00013 U	PNA	0.00012 U	PNA	0.0001 U
Boron as B	mg/L	1.0	0.04	PNA	0.01	PNA	0.01	PNA	0.0089 B	PNA	0.0022 U	PNA	0.0237 B	0.0111 B	PNA	0.0072 BE	PNA	0.0065 B	PNA	0.0128 B
Cadmium as Cd	mg/L	0.005	0.005 U	PNA	0.005 U	PNA	0.005 U	0.00032 U	0.00027 U	0.00035 U	0.00023 U	0.00034 U	0.004 B	0.00024 U	0.00025 U	0.00027 U	0.00017 U	0.00018 U	0.000087 U	0.0001 U
Calcium as Ca	mg/L	NA	8.0	5.3	4.0	5.1	5.1	4.39 B	4.45 B	3.95 B	3.63 B	10.8	4.63 B	3.54 B	3.67 B	4.25 B	4.32 B	3.89 B	4.98 B	4.49 B
Chromium as Cr	mg/L	0.05	0.023	PNA	0.018	PNA	0.021	PNA	**0.295**	PNA	0.0049 B	PNA	0.0029 B	0.0118	PNA	0.0168	PNA	0.035	PNA	0.0037 B
Cobalt	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA	0.0065 B	PNA	0.0012 U	PNA	0.0012 U	0.0012 U	PNA	0.00057 B	PNA	0.0009 B	PNA	0.0004 U
Copper as Cu	mg/L	0.2	0.04	PNA	0.02	PNA	0.04	PNA	0.0209 B	PNA	0.0012 U	PNA	0.0062 B	0.0071 B	PNA	0.00077 B	PNA	0.0084 B	PNA	0.0013 B
Cyanide as CN	mg/L	0.20	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	0.01 U	PNA	0.01 U	PNA	PNA	0.01 U	PNA	0.01 U	PNA	0.01 U	PNA	0.01 U
Iron as Fe	mg/L	0.3	**0.68**	**0.57**	0.23	**0.36**	0.26	0.024 U	**2.89**	**0.418**	0.0375 B	**20.8**	0.057 B	0.19	0.0099 B	0.243	0.0672 B	**1.25**	0.0389 B	0.0684 B
Lead as Pb	mg/L	0.025	0.007	0.007	0.005 U	0.005 U	0.005 U	0.0014 U	0.0042	0.0018 B	0.0023 B	0.0273	0.0018 U	0.0206 J	0.0092	0.0015 U	0.0077	0.0125	0.0011 B	0.0052
Magnesium	mg/L	35 #	PNA	1.5	PNA	1.5	PNA	2.13 B	2.64 B	2.1 B	2.03 B	7.19	1.81 B	1.84 B	1.94 B	2.09 B	1.58 B	2.06 B	2.45 N	2.23 B
Manganese as Mn	mg/L	0.3	0.05	0.02	0.02	0.01	0.03	0.0012 B	0.116	0.0194	0.0017 B	**0.703**	0.0125 B	0.0075 B	0.0006 B	0.0121 B	0.0138 BE	0.0424	0.0013 B	0.0026 B
Mercury as Hg	mg/L	0.0007	0.00025 U	0.00025 U	0.00025 U	0.00025 U	0.00025 U	PNA	0.0001 U	PNA	0.0001 U	PNA	PNA	0.0001 U	PNA	0.0001 U	PNA	0.0001 U	PNA	0.0001 U
Nickel as Ni	mg/L	0.1	0.01	PNA	0.02	PNA	0.02	PNA	**0.132**	PNA	0.0091 B	PNA	0.0085 B	0.0083 B	PNA	0.015 B	PNA	0.0162 B	PNA	0.009 B
Potasium	mg/L	NA	PNA	PNA	PNA	PNA	PNA	0.604 B	0.726 B	0.66 B	0.803 BE	2.55 B	0.856 B	0.947 B	1.17 B	1	0.406 B	1.12 B	0.751 B	0.702 B
Selenium as Se	mg/L	0.01	0.004 U	PNA	0.004 U	PNA	0.004 U	PNA	0.0043 U	PNA	0.0027 U	PNA	0.0025 U	0.0042 U	PNA	0.0026 U	PNA	0.0028 U	PNA	0.0023 U
Silver as Ag	mg/L	0.05	0.005 U	PNA	0.005 U	PNA	0.005 U	PNA	0.00089 U	PNA	0.0006 U	PNA	0.00083 U	0.0005 U	PNA	0.00052 U	PNA	0.003 B	PNA	0.0002 U
Sodium as Na	mg/L	20	11	PNA	7.0	PNA	9.6	7.13	7.81	7.95	7.68	6.61	7.37	8.34	8.76	7.87	7.62	7.77	9.07	7.77
Thallium as Tl	mg/L	0.0005 #	0.005 U	PNA	0.005 U	PNA	0.005 U	PNA	0.0025 U	PNA	0.0033 U	PNA	0.0032 U	0.0056 U	PNA	0.0027 U	PNA	0.0032 U	PNA	0.0019 U
Vanadium	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA	0.0035 B	PNA	0.00097 U	PNA	0.0014 U	0.0012 U	PNA	0.00056 U	PNA	0.0012 B	PNA	0.0004 B
Zinc as Zn	mg/L	2 #	0.05	PNA	0.02	PNA	0.06	PNA	0.0244	PNA	0.0103 B	PNA	0.0391	0.0061 B	PNA	0.0128 B	PNA	0.0129 B	PNA	0.0092 B
Alkalinity tot CaCo3	mg/L	NA	24	24	18	30	20	13	13.4	12	10.1	15	PNA	11.8	12	12.7	12.6 D	10.8 D	12	12.6
Chloride as Cl	mg/L	250.0	13	8	6.0	7.0	10	10.2	9.7	9.85	10.4	9.28	PNA	9.68	10.1	7.92	9.15	9.85	11.5	9.47
Sulfate as SO4	mg/L	250.0	9.0	5.0	5.0	5.0 U	5	7.6	8.78	8.1	8.29	7.55	PNA	7.34 J	8.12	6.97	6.33	7.23	8.21	7.61
Bromide	mg/L	2 #	PNA	PNA	PNA	PNA	PNA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	PNA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BOD5	mg/L	NA	4.3	6	2 U	3.2	4.1	2 U	14	2 U	2 U	2 U	PNA	2 U	2 U	2 U	2 U	2 U	2 U	2 U
COD	mg/L	NA	80	PNA	40 U	PNA	40 U	10 U	14.4	11.9	10 U	10 U	PNA	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Color	units	NA	5 U	5 U	5 U	5 U	10	PNA	10	PNA	5	PNA	PNA	5	PNA	5 U	PNA	20	PNA	5 U
Chromium hex as Cr	mg/L	0.05	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	PNA	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	0.02 U
Hardness as CaC03	mg/L	NA	28	19	17	19	20	17	26	24	18	64	PNA	18	64 D	18	23	19	19	18
Ammonia as N	mg/L	2.0	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	PNA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nitrite as N	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA	0.1 U	0.1 U	PNA	0.1 U	PNA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nitrate as N	mg/L	10	0.5 U	PNA	0.5 U	PNA	0.5 U	0.1	0.11	0.1 U	0.11	0.36	PNA	0.24	0.3	0.13	0.18	0.11	0.27	0.29
Phenols as Phenol	mg/L	0.001	**0.062**	**0.004**	**0.048**	**0.001**	**0.002**	0.005 U	0.005 U	0.005 U	5 U	0.005 U	PNA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Tot Dissolved Solids	mg/L	NA	74	PNA	88	PNA	73	54	63	43	43	374	PNA	46	55	68	34	61	56	56
Tot. Kjeldahl Nitrogen	mg/L	NA	0.6	PNA	0.2 U	PNA	1.4	0.1 U	0.1 U	0.18	0.1 U	0.33	PNA	1 UJ	0.41	0.5 UD	0.36	0.1 U	0.1 U	0.1 U
Tot Organic Carbon	mg/L	NA	4.3	3.6	1.4	2.1	2.9	1 U	1 U	1 U	1 U	1 U	PNA	1 U	1 U	1 U	5	1 U	1 U	3.8
Turbidity	NTU	NA	4.3	5	2.7	4.1	2.9	0	34.8	18.5	6.1	642	PNA	0	14.2	96.1	15.20	22.10	0.00	0.6
Temperature	deg.C	NA	13	12	12	12	11	12.5	14.44	11.3	10.98	11.45	PNA	11.33	10.96	12.28	12.97	15.74	11.36	12.56
pH	units	6.5-8.5	**8.3**	7.6	**6.1**	**6.1**	**6.4**	8.3	**5.9**	**6.25**	**6.48**	**5.2**	PNA	**6.31**	**5.47**	**4.37**	**6.42**	**6.05**	**6.27**	7.24
Spec. Cond	umho/cm	NA	64	79	70	75	77	PNA	PNA	59	56	100	PNA	92	65	75	86	841	870	79.000

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PNA = parameter not analyzed for.

B = This flag is used when the analyte is found in the associated blank as in the sample.

E - This flag identified compunds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.

F - This flag indicates the results of a filtered metal analysis.

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

UJ - 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.

R - The sample results are unreliable/unusable. The presence or absence of the analyte cannot be verified.

1.0 = Compound exceeded standard.

1.0 = Compound at standard.

NM = Not Monitored

TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
April 2013

ANALYTICAL PARAMETERS	UNITS	GW STND*	MW-3A																									
			April 2005		April 2006		Oct. 2006		April 2007		Oct. 2007		April 2008		Oct. 2008		April 2009		Oct. 2009		April 2010		Oct. 2010		April 2011		Oct. 2011		April 2012		Oct. 2012		April 2013	
																	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered					Unfiltered	Filtered		
Aluminum as Al	mg/L	NA	0.69		0.64		0.11		0.72		PNA		0.5		PNA		0.0232 B	0.0092 U	PNA	PNA	0.0498 B	0.0196 U	PNA	PNA	0.0787 B		PNA		0.0311 B		PNA	PNA	0.0108 B	
Antimony as Sb	mg/L	0.003 #	0.01 U		0.005 U		PNA		0.005 U		PNA		0.0044 U		PNA		0.0027 U	0.0027 U	PNA	PNA	**0.0042 B**	0.0028 U	PNA	PNA	**0.0109 B**		PNA		0.0011 U		PNA	PNA	0.0012 U	
Arsenic as As	mg/L	0.025	0.004 U		0.005 U		0.005 U		0.005 U		PNA		0.0029 B		PNA		0.0028 U	0.0028 U	PNA	PNA	0.0028 U	0.0028 U	PNA	PNA	0.0019 U		PNA		0.0044 U		PNA	0.0015 U	0.0028 U	
Barium	mg/L	1	PNA		PNA		PNA		PNA		PNA		0.111 B		PNA		0.0659 B	0.0586 B	PNA	PNA	0.0393 B	0.0288 B	PNA	PNA	0.0804 BE		PNA		0.0344 B		PNA	PNA	0.0382 B	
Beryllium as Be	mg/L	0.003	0.001 U		0.001 U		PNA		0.001 U		PNA		0.0002 B		PNA		0.00016 U	0.0002 U	PNA	PNA	0.00017 U	0.0004 B	PNA	PNA	0.00013 U		PNA		0.00012 U		PNA	PNA	0.0001 U	
Boron as B	mg/L	1.0	0.07		0.05		PNA		0.04		PNA		0.0588 B		PNA		0.0099 B	0. 009 B	PNA	PNA	0.017 B	0.0227 B	PNA	PNA	0.0318 BE		PNA		0.0274 B		PNA	PNA	0.0257 B	
Cadmium as Cd	mg/L	0.005	0.005 U		0.005 U		PNA		0.005 U		0.00032 U		0.00027 U		0.00035 U		0.00023 U	0.0002 U	0.0034 U	0.00034 U	0.00024 U	0.0003 B	0.00025 U	0.00025 U	0.00027 U		0.00017 U		0.00018 U		0.000087 U	0.000087 U	0.0001 U	
Calcium as Ca	mg/L	NA	19		14		11		37		18.1		15.5		14.3		28.5	28.10	19	18.9	13.4	14.1	14.9	14.8	21.5		7.04		15.5		9.77	8.98	18	
Chromium as Cr	mg/L	0.05	**1.7**		**2.5**		PNA		**1.9**		PNA		**6.5**		PNA		**0.343**	0.0069 B	PNA	PNA	**0.553**	0.0048 B	PNA	PNA	**1.89**		PNA		**0.126**		PNA	PNA	**0.104**	
Cobalt	mg/L	NA	PNA		PNA		PNA		PNA		PNA		0.0397 B		PNA		0.0018 B	0.0012 U	PNA	PNA	0.0034 B	0.0012 U	PNA	PNA	0.0119 B		PNA		0.0008 B		PNA	PNA	0.0013 B	
Copper as Cu	mg/L	0.2	0.02		0.03		PNA		0.02		PNA		0.118		PNA		0.0093 B	0.0028 B	PNA	PNA	0.0177 B	0.0058 B	PNA	PNA	0.0333		PNA		0.0058 B		PNA	PNA	0.0059 B	
Cyanide as CN	mg/L	0.20	0.02 U		0.02 U		PNA		0.02 U		PNA		0.0100 U		PNA		0.01 U	PNA	PNA	PNA	0.01 U	PNA	PNA	PNA	0.01 U		PNA		0.01 U		PNA	PNA	0.01 U	
Iron as Fe	mg/L	0.3	**7.5**		**11**		**1.4**		**0.5**		**7.87**		**31.9**		**30.9**		**1.63**	0.014 B	**10.7**	0.0091 B	**2.4**	0.0235 B	**0.370**	0.0258 B	**7.73**		**4.47**		**0.508**		**8.2**	0.164	**0.441**	
Lead as Pb	mg/L	0.025	0.005 U		0.005 U		0.005 U		0.006		0.0014 U		0.0023 U		0.0027 B		0.0015 U	0.0015 B	1.8 U	0.0018 U	0.0088	0.0088	0.0047	0.0053	0.0015 U		0.0016 U		0.0055		0.00096 U	0.00096 U	0.0033	
Magnesium	mg/L	35 #	PNA		PNA		2.1		PNA		4.81 B		3.79 B		4.46 B		5.97	5.9	5.08	5.03	3.17 B	3.3 B	4.2 B	3.98 B	4.96 B		1.28 B		3.74 B		2.24 B	2.09 B	4.1 B	
Manganese as Mn	mg/L	0.3	**0.31**		**0.35**		0.04		**0.39**		**0.589**		**2.33**		**0.47**		0.123	0.0199	**0.853**	0.0025 B	**0.304**	0.0041 B	0.0355	0.0089 B	**1.04**		0.185 E		0.103		**2.6**	0.0225	0.0866	
Mercury as Hg	mg/L	0.0007	0.00025 U		0.00025 U		0.00025 U		0.00025 U		PNA		0.0001 U		PNA		0.0001 U	0.0001 U	PNA	PNA	0.0001 U	0.0001 U	PNA	PNA	0.0001 U		PNA		0.0001 U		PNA	PNA	0.0001 U	
Nickel as Ni	mg/L	0.1	0.05		0.07		PNA		0.03		PNA		**0.258**		PNA		0.0551	0.0362 B	PNA	PNA	0.0381 B	0.0134 B	PNA	PNA	**0.101**		PNA		0.0351 B		PNA	PNA	0.0408	
Potassium	mg/L	NA	PNA		PNA		PNA		PNA		6.78		5.97		6.97		6.37 E	6.2	4.77 B	4.78 B	3.1 B	2.7 B	5.8	4.45 B	5.92		0.925 B		3.64 B		4.41 B	4.14 B	2.72 B	
Selenium as Se	mg/L	0.01	0.004 U		0.004 U		PNA		0.004 U		PNA		0.0043 U		PNA		0.0027 U	0.0027 U	PNA	PNA	0.0042 U	0.0042 U	PNA	PNA	0.0026 U		PNA		0.0028 U		PNA	PNA	0.0023 U	
Silver as Ag	mg/L	0.05	0.005 U		0.005 U		PNA		0.005 U		PNA		0.0010 B		PNA		0.0006 U	0.0006 U	PNA	PNA	0.0005 U	0.0005 U	PNA	PNA	0.00052 U		PNA		0.00032 U		PNA	PNA	0.0002 U	
Sodium as Na	mg/L	20	**78**		**34**		PNA		**140**		**26.4**		**32.2**		17.1		**69.1**	**60**	12.4	11.9	16.7	15.8	16.6	14.5	**58.4**		18.9		8.94		7.8	7.4	16.9	
Thallium as Tl	mg/L	0.0005 #	0.005 U		0.005 U		PNA		0.005 U		PNA		0.0027 B		PNA		0.0033 U	0.0033 U	PNA	PNA	0.0056 U	0.0056 U	PNA	PNA	0.0027 U		PNA		0.0032 U		PNA	PNA	0.0019 U	
Vanadium	mg/L	NA	PNA		PNA		PNA		PNA		PNA		0.0213 B		PNA		0.0015 B	0.0010 U	PNA	PNA	0.0012 U	0.0012 U	PNA	PNA	0.0064 B		PNA		0.0003 B		PNA	PNA	0.0003 U	
Zinc as Zn	mg/L	2 #	0.01		0.01		PNA		0.01		PNA		0.1		PNA		0.0091 B	0.0172 B	PNA	PNA	0.0036 B	0.0039 B	PNA	PNA	0.0139 B		PNA		0.0083 B		PNA	PNA	0.008 B	
Alkalinity tot CaCo3	mg/L	NA	30		50		50		32		65		60.8		62		41	PNA	68.2	PNA	36.3	PNA	55 D	PNA	39.8		41.4 D		47.8 D		29.5	PNA	28.3	
Chloride as Cl	mg/L	250.0	140		41		18		**320**		28.8		45.4		14.6		139	PNA	9.53	PNA	29.9	PNA	16.6	PNA	109 D		17.2		10.6		11.3	PNA	49.1	
Sulfate as SO4	mg/L	250.0	19		10		6		7.0		13.9		9.5		11.8		6.76	PNA	7.36	PNA	6.42	PNA	8.34	PNA	5 U		5 U		5.77		7.43	PNA	5.84	
Bromide	mg/L	2 #	PNA		PNA		PNA		PNA		<0.5		0.5 U		0.5 U		0.5 U	PNA	0.50 U	PNA	0.5 U	PNA	0.5 U	PNA	0.5 U		0.5 U		0.5 U		0.5 U	PNA	0.5 U	
BOD5	mg/L	NA	2 U		2 U		2 U		2 U		2 U		14		2 U		2 U	PNA	2 U	PNA	2 U	PNA	2 U	PNA	2 U		2 U		2 U		2 U	PNA	2 U	
COD	mg/L	NA	40		40 U		PNA		40 U		10 U		16.9		10 U		10 U	PNA	10 U	PNA	10 U	PNA	10 U	PNA	10 U		10 U		10 U		10 U	PNA	10 U	
Color	units	NA	5 U		5 U		5 U		5 U		PNA		40		PNA		5	PNA	PNA	PNA	20	PNA	PNA	PNA	10		PNA		10		PNA	PNA	5	
Chromium hex as Cr	mg/L	0.05	0.02 U		0.02 U		PNA		0.02 U		PNA		0.0 U		PNA		0.02 U	PNA	PNA	PNA	0.02 U	PNA	PNA	PNA	0.02 U		PNA		0.02 U		PNA	PNA	0.02 U	
Hardness as CaCO3	mg/L	NA	64		51		35		120		66		100		115		160	PNA	74	PNA	38	PNA	58 D	PNA	76 D		32		62 D		38 D	PNA	62 D	
Ammonia as N	mg/L	2.0	0.05 U		0.05 U		0.05 U		0.05 U		0.85		1.2		0.1 U		0.1 U	PNA	0.27	PNA	0.15	PNA	0.1 U	PNA	0.98		0.1 U		0.17		0.46	PNA	0.28	
Nitrite as N	mg/L	NA	PNA		PNA		PNA		PNA		PNA		0.1 U		0.1 U		PNA	PNA	0.10 U	PNA	0.1 U	PNA	0.1 U	PNA	0.1 U		0.1 U		0.1 U		0.1 U	PNA	0.1 U	
Nitrate as N	mg/L	10	0.6		0.5		PNA		0.8		0.52		0.32		0.28		0.52	PNA	1.04	PNA	0.56	PNA	0.41	PNA	0.59		0.15		1.01		0.2	PNA	0.54	
Phenols as Phenol	mg/L	0.001	0.001 U		0.001 U		0.001 U		0.001 U		0.005 U		0.005 U		0.005 U		0.005 U	PNA	5.0 U	PNA	0.005 U	PNA	0.005 U	PNA	0.005 U		0.005 U		0.005 U		0.005 U	PNA	0.005 U	
Tot Dissolved Solids	mg/L	NA	290		150		PNA		680		169		155		97		307	PNA	120	PNA	86	PNA	128	PNA	291		58		87		85	PNA	145	
Tot. Kjeldahl Nitrogen	mg/L	NA	0.8		1.8		PNA		1.8		1.33		5.55		2.28		0.44	PNA	0.37	PNA	0.72	PNA	0.44	PNA	1.32		0.27		0.41 U		0.71	PNA	0.32	
Tot Organic Carbon	mg/L	NA	1 U		1.3		1.8		<1 U		2.3		2.9		2.4		1.8	PNA	2.0	PNA	1.6	PNA	1.3	PNA	1.2		12.2		1.9		1 U	PNA	10.3	
Turbidity	NTU	NA	7.7		77		20		66		21		88.2		634		100	PNA	93.6	PNA	184	PNA	114	PNA	120		49.3		6.6		148	PNA	1.6	
Temperature	deg.C	NA	14		14		14		15		11.9		12.76		12.15		13.31	PNA	10.52	PNA	12.06	PNA	10.74	PNA	12.19		11.86		12.95		13.07	PNA	13.18	
pH	units	6.5-8.5	**6.4**		**6.3**		6.9		**6.3**		8.47		**6.30**		**6.37**		**6.27**	PNA	**5.57**	PNA	6.79	PNA	**5.88**	PNA	**4.47**		**5.09**		**6.26**		6.85	PNA	7.1	
Spec. Cond	umho/cm	NA	590		270		220		1100		PNA		PNA		152		434	PNA	213	PNA	223	PNA	153	PNA	480		202		166		121	PNA	258	

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INORGANIC GROUNDWATER QUALITY RESULTS
April 2013

ANALYTICAL PARAMETERS	UNITS	GW STND*	MW-3B																													
			April 2005		April 2006		Oct. 2006		April 2007		Oct. 2007		April 2008		Oct. 2008		April 2009		Oct. 2009		April 2010		Oct. 2010		April 2011		Oct. 2011 Unfiltered		Oct. 2011 Filtered		April 2012		Oct. 2012		April 2013	
Aluminum as Al	mg/L	NA	0.03		0.06		0.04		0.02		PNA		0.0	B	PNA		0.0092	U	PNA		0.0341	B	PNA		0.0161	B	PNA		PNA		0.0354	B	PNA		0.0123	B
Antimony as Sb	mg/L	0.003 #	0.01	U	0.005	U	PNA		0.005	U	PNA		0.0	U	PNA		0.0027	U	PNA		0.0028	U	PNA		0.0046	B	PNA		PNA		0.0011	U	PNA		0.0012	U
Arsenic as As	mg/L	0.025	**0.025**		0.023		0.019		0.024		PNA		0.0116		PNA		0.0128		PNA		0.0125		PNA		0.0134		PNA		PNA		0.0063	B	PNA		0.0125	
Barium	mg/L	1	PNA		PNA		PNA		PNA		PNA		0.042	B	PNA		0.052	B	PNA		0.0165	B	PNA		0.0409	BE	PNA		PNA		0.0319	B	PNA		0.291	B
Beryllium as Be	mg/L	0.003	0.001	U	0.001	U	PNA		0.001	U	PNA		0.0	U	PNA		0.00016	U	PNA		0.00017	U	PNA		0.00019	B	PNA		PNA		0.00012	U	PNA		0.0001	U
Boron as B	mg/L	1.0	0.1		0.08		PNA		0.12		PNA		0.1	B	PNA		0.0868	B	PNA		0.0131	B	PNA		0.0893	BE	PNA		PNA		0.0502	B	PNA		0.0402	B
Cadmium as Cd	mg/L	0.005	0.005	U	0.005	U	PNA		0.005	U	0.00032	U	0.00027	U	0.00035	U	0.00023	U	0.0034	U	0.00024	U	0.00025	U	0.00027	U	0.00017	U	0.0002	B	0.00018	U	0.000087	U	0.0001	U
Calcium as Ca	mg/L	NA	9.8		12		15		16		11.5		10.7		11.9		13.3		8.74		5.72		9.71		12		13		11.4		7.79		6.35		9.03	
Chromium as Cr	mg/L	0.05	0.005	U	0.005	U	PNA		0.006		PNA		0.0	B	PNA		0.00079	B	PNA		0.002	B	PNA		0.0011	B	PNA		PNA		0.0081	B	PNA		0.0035	B
Cobalt	mg/L	NA	PNA		PNA		PNA		PNA		PNA		0.0056	B	PNA		0.0075	B	PNA		0.0031	B	PNA		0.0054	B	PNA		PNA		0.0041	B	PNA		0.0047	B
Copper as Cu	mg/L	0.2	0.01	U	0.01	U	PNA		0.01	U	PNA		0.0	U	PNA		0.0013	B	PNA		0.0037	B	PNA		0.00055	U	PNA		PNA		0.0007	U	PNA		0.0011	B
Cyanide as CN	mg/L	0.20	0.02	U	0.02	U	PNA		0.02	U	PNA		0.0	U	PNA		0.01	U	PNA		0.01	U	PNA		0.01	U	PNA		PNA		0.01	U	PNA		0.01	U
Iron as Fe	mg/L	0.3	**13**		**21**		**20**		**21**		**13.1**		**14.8**		**15.7**		**21.9**		**10.0**		**8.06**		**13.3**		**16.8**		**9.64**		0.136		**11.2**		**10.8**		**12.1**	
Lead as Pb	mg/L	0.025	0.005	U	0.005	U	0.005	U	0.005	U	0.0014	U	0.0023	U	0.0013	U	0.0015	U	0.0018	U	0.0169		0.0017	U	0.0018	B	0.0034		0.0061		0.0038		0.00096	U	0.0029	B
Magnesium	mg/L	35 #	PNA		PNA		5.3		PNA		3.99	B	4.04	B	4.49	B	5.06		3.26	B	2.09	B	3.8	B	4.45	B	3.09	B	3.18	B	2.51	B	1.9	B	2.96	B
Manganese as Mn	mg/L	0.3	**1.5**		**3.5**		**3.1**		**3.3**		**1.97**		**2.13**		**2.62**		**3.69**		**1.79**		**1.79**		**2.58**		**2.37**		**4.36**	E	**0.995**		**2.34**		**3.54**		**3.4**	
Mercury as Hg	mg/L	0.0007	0.00025	U	0.00025	U	0.00025	U	0.00025	U	PNA		0.0	U	PNA		0.0001	U	PNA		0.0001	U	PNA		0.0001	U	PNA		PNA		0.0001	U	PNA		0.0001	U
Nickel as Ni	mg/L	0.1	0.01	U	0.01	U	PNA		0.01	U	PNA		0.0	B	PNA		0.0043	B	PNA		0.001	U	PNA		0.0027	B	PNA		PNA		0.002	B	PNA		0.0022	B
Potasium	mg/L	NA	PNA		PNA		PNA		PNA		5.99		4.81	B	5.59		6.21		4.96	B	2.99	B	3.68	B	6.82		4.37	B	6.61	E	4.86	B	2.59	B	3.72	B
Selenium as Se	mg/L	0.01	0.004	U	0.004	U	PNA		0.004	U	PNA		0.0	U	PNA		0.0027	U	PNA		0.0042	U	PNA		0.0026	U	PNA		PNA		0.0028	U	PNA		0.0023	U
Silver as Ag	mg/L	0.05	0.005	U	0.005	U	PNA		0.005	U	PNA		0.0	U	PNA		0.0006	U	PNA		0.0005	U	PNA		0.00052	U	PNA		PNA		0.00032	U	PNA		0.0002	U
Sodium as Na	mg/L	20	8.8		11		PNA		18		12.9		15.6		15.9		**20**		9.52		7.92		9.91		16		12.8		12.8		11.5		8.8		9.98	
Thallium as Tl	mg/L	0.0005 #	0.005	U	0.005	U	PNA		0.005	U	PNA		0.0	U	PNA		0.0033	U	PNA		0.0056	U	PNA		0.0027	U	PNA		PNA		0.0032	U	PNA		0.0019	U
Vanadium	mg/L	NA	PNA		PNA		PNA		PNA		PNA		0.0022	U	PNA		0.00097	U	PNA		0.0012	U	PNA		0.00072	B	PNA		PNA		0.00023	U	PNA		0.0003	U
Zinc as Zn	mg/L	2 #	0.01		0.02		PNA		0.02		PNA		0.0	B	PNA		0.0068	B	PNA		0.0101	B	PNA		0.0092	B	PNA		PNA		0.00044	U	PNA		0.0115	B
Alkalinity tot CaCo3	mg/L	NA	42		60		100		110		60.2		60.8		64		72		47.6		28.1		44	D	64.4	D	44.5	D	PNA		63	D	29.9		46.3	D
Chloride as Cl	mg/L	250.0	10		5		20		23		17.1		18.5		19.6		21.9		10.4		8.61		11.6		12.7		12.6		PNA		13.1		12		13.5	
Sulfate as SO4	mg/L	250.0	40		12		7		7.0		11.1		11.9		12.2		9.9		10.1		8.06		8.62		8.24		7.3		PNA		8.61		10.5		11.2	
Bromide	mg/L	2 #	PNA		PNA		PNA		PNA		0.5	U	0.5	U	0.5	U	0.5	U	0.50	U	0.5	U	0.5	U	0.5	U	0.5	U	PNA		0.5	U	0.5	U	0.5	U
BOD5	mg/L	NA	2	U	6.0		3.0	U	3	U	2	U	12		2	U	2	U	2	U	2	U	2	U	2	U	4		PNA		2	U	2	U	2	U
COD	mg/L	NA	80		40	U	PNA		40	U	10	U	21.8		26.8		13.3		10	U	10	U	10	U	13.7		10	U	PNA		10	U	10	U	10	U
Color	units	NA	5	U	5	U	5	U	10		PNA		140		PNA		60		PNA		50		PNA		75	E	PNA		PNA		200	D	PNA		125	D
Chromium hex as Cr	mg/L	0.05	0.02	U	0.02	U	PNA		0.02	U	PNA		0.0	U	PNA		0.02	U	PNA		0.02	U	PNA		0.02	U	PNA		PNA		0.02	U	PNA		0.0001	UD
Hardness as CaC03	mg/L	NA	40		51		60		62		54		60		52		170		48		37		58	D	60	D	64	D	PNA		41		37		84	D
Ammonia as N	mg/L	2.0	**2.4**		1.8		**2.1**		**5.0**		**6.67**		**3.52**		**3.99**		**4.81**		**3.0**		1.62		1.07		**2.6**		0.74		PNA		**4.21**	D	**2.07**		**2.62**	D
Nitrite as N	mg/L	NA	PNA		PNA		PNA		PNA		PNA		0.1	U	0.1	U	PNA		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	PNA		0.1	U	0.1	U	0.1	U
Nitrate as N	mg/L	10	0.5	U	0.5	U	PNA		0.5	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.12		0.1	U	0.1	U	0.9		PNA		0.1	U	0.1	U	0.1	U
Phenols as Phenol	mg/L	0.001	0.001	U	**0.002**		0.001	U	**0.002**		0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	PNA		0.005	U	0.005	U	0.005	U
Tot Dissolved Solids	mg/L	NA	91		110		PNA		180		135		111		101		127		93		63		104		116		73		PNA		85		82		75	
Tot. Kjeldahl Nitrogen	mg/L	NA	2.4		2.4		PNA		8.6		7.66		5.73		5.39		6.01		3.64		1.9		1.63		2.67		1.42		PNA		8.44	D	3.16		3.05	
Tot Organic Carbon	mg/L	NA	1	U	2.4		3.6		1.7		2.6		2.6		2.8		4.1		1.0		1	U	1.7		2.5		13		PNA		1	U	1	U	14.2	
Turbidity	NTU	NA	8.4		150		110		92		7		7.3		24.6		0		16.5		0		10.6		10.4		14.8		PNA		2.2		0		0	
Temperature	deg.C	NA	14		14		13		14		11.9		12.96		12.78		12.84		10.73		12.76		10.54		12.67		12.55		PNA		14.22		12.79		12.58	
pH	units	6.5-8.5	**6.5**		**6.1**		**6.5**		**6.4**		8.35		**6.39**		**6.43**		6.56		**5.77**		6.92		7.54		6.97		**6.29**		PNA		**6.49**		6.95		**6.44**	
Spec. Cond	umho/cm	NA	170		210		340		350		PNA		PNA		212		258		365		154		152		361		254		PNA		245		165		231	

NOTES:

* = NYSDEC. Class GA Groundwater Standards
6 NYCRR Part 703

= Guidance value, no standard exists

NA = Not available

PNA = parameter not analyzed for

B = This flag is used when the analyte is found in the associated blank as in the sample

E - This flag identified compunds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis

F - This flag indicates the results of a filtered metal analysis

J - The analyte was positively identified, the associated numerical value is the approximate concentration of the analyte in the sample

UJ - 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

R - The sample results are unreliable/unusable. The presence or absence of the analyte cannot be verified

1.0 = Compound exceeded standard.

1.0 = Compound at standard.

NM = Not Monitored

TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
April 2013

ANALYTICAL PARAMETERS	UNITS	GW STND*	MW-3C																	
			April 2005	April 2006	Oct. 2006	April 2007	Oct. 2007	April 2008	Oct. 2008	April 2009	Oct. 2009	April 2010	Oct. 2010	April 2011	Oct. 2011	April 2012	Oct. 2012	April 2013
Aluminum as Al	mg/L	NA	0.04	0.05	0.06	0.03	PNA	0.0 B	PNA	0.0092 U	PNA	0.0268 B	PNA	0.0082 U	PNA	0.0369 B	PNA	0.0095 U
Antimony as Sb	mg/L	0.003 #	0.01 U	0.005 U	PNA	0.005 U	PNA	0.0 U	PNA	0.0027 U	PNA	0.0028 U	PNA	0.0021 U	PNA	0.0011 U	PNA	0.0036 B
Arsenic as As	mg/L	0.025	0.004 U	0.005 U	0.005 U	0.005 U	PNA	0.0 U	PNA	0.0028 U	PNA	0.0028 U	PNA	0.0019 U	PNA	0.0044 U	PNA	0.0028 U
Barium	mg/L	1	PNA	PNA	PNA	PNA	PNA	0.0437 B	PNA	0.0376 B	PNA	0.0417 B	PNA	0.0403 BE	PNA	0.04 B	PNA	0.0248 B
Beryllium as Be	mg/L	0.003	0.001 U	0.001 U	PNA	0.001 U	PNA	0.0 U	PNA	0.00016 U	PNA	0.00017 U	PNA	0.00013 U	PNA	0.00012 U	PNA	0.0001 U
Boron as B	mg/L	1.0	0.02	0.03	PNA	0.03	PNA	0.0 B	PNA	0.0034 B	PNA	0.0167 B	PNA	0.0154 BE	PNA	0.0113 B	PNA	0.0175 B
Cadmium as Cd	mg/L	0.005	0.005 U	0.005 U	PNA	0.005 U	0.00032 U	0.00027 U	0.00035 U	0.00023 U	0.0034 U	0.00024 U	0.00025 U	0.00027 U	0.00017 U	0.00018 U	0.000087 U	0.0001 U
Calcium as Ca	mg/L	NA	10	17	18	19	22.2	18.9	18.9	16.7	16.4	16.1	16.8	16.5	16.6	13.8	14.1	12
Chromium as Cr	mg/L	0.05	0.016	0.014	PNA	0.02	PNA	**0.0726**	PNA	**0.0507**	PNA	0.0167	PNA	0.0034 B	PNA	0.0254	PNA	0.0029 B
Cobalt	mg/L	NA	PNA	PNA	PNA	PNA	PNA	0.0017 U	PNA	0.0012 U	PNA	0.0012 U	PNA	0.00049 U	PNA	0.00052 U	PNA	0.0004 U
Copper as Cu	mg/L	0.2	0.01 U	0.01 U	PNA	0.02	PNA	0.0 U	PNA	0.0012 U	PNA	0.0068 B	PNA	0.00065 B	PNA	0.0024 B	PNA	0.0004 U
Cyanide as CN	mg/L	0.20	0.02 U	0.02 U	PNA	0.02 U	PNA	0.0 U	PNA	0.01 U	PNA	0.01 U	PNA	0.01 U	PNA	0.01 U	PNA	0.01 U
Iron as Fe	mg/L	0.3	0.16	0.16	0.16	0.29	**0.823**	**0.354**	0.182	0.283	0.107	0.0769 B	0.0584 B	0.0358 B	**0.323**	0.115	0.171	0.0185 B
Lead as Pb	mg/L	0.025	0.005 U	0.005 U	0.005 U	0.005 U	0.0014 U	0.0023 U	0.0013 U	0.0015 U	0.0018 U	**0.0321**	0.0157	0.0015 U	0.0128	0.0118	0.0012 B	0.0084
Magnesium	mg/L	35 #	PNA	PNA	7.8	PNA	10.6	9.56	9.84	8.73	8.34	7.84	8.36	8.75	5.23	6.48	6.35	5.66
Manganese as Mn	mg/L	0.3	0.03	0.06	0.07	0.06	0.181	0.099	0.0756	0.0628	0.0587	0.054	0.0677	0.0759	0.142 E	0.0517	0.053	0.0406
Mercury as Hg	mg/L	0.0007	0.00025 U	0.00025 U	0.00025 U	0.00025 U	PNA	0.0 U	PNA	0.0001 U	PNA	0.0001 U	PNA	0.0001 U	PNA	0.00011 B	PNA	0.0001 U
Nickel as Ni	mg/L	0.1	0.03	0.04	PNA	0.03	PNA	0.0 B	PNA	0.0098 B	PNA	0.0066 B	PNA	0.0094 B	PNA	0.0056 B	PNA	0.0044 B
Potasium	mg/L	NA	PNA	PNA	PNA	PNA	1.27 B	1.17 B	1.21 B	1.29 BE	1.36 B	1.34 B	1.78 B	1.69 B	1.3 B	1.32 B	1.01 B	1.03 B
Selenium as Se	mg/L	0.01	0.004 U	0.004 U	PNA	0.004 U	PNA	0.0 U	PNA	0.0027 U	PNA	0.0042 U	PNA	0.0026 U	PNA	0.0028 U	PNA	0.0023 U
Silver as Ag	mg/L	0.05	0.005 U	0.005 U	PNA	0.005 U	PNA	0.0 U	PNA	0.0006 U	PNA	0.0005 U	PNA	0.00052 U	PNA	0.00032 U	PNA	0.0002 U
Sodium as Na	mg/L	20	11	15	PNA	17	18.2	18.6	18.7	16.5	18	18.4	19.1	**22.1**	17.4	17	15.7	13.2
Thallium as Tl	mg/L	0.0005 #	0.004 U	0.005 U	PNA	0.005 U	PNA	0.0 U	PNA	0.0033 U	PNA	0.0056 U	PNA	0.0027 U	PNA	0.0032 U	PNA	0.0019 U
Vanadium	mg/L	NA	PNA	PNA	PNA	PNA	PNA	0.0022 U	PNA	0.00097 U	PNA	0.0012 U	PNA	0.00085 B	PNA	0.0004 B	PNA	0.0004 B
Zinc as Zn	mg/L	2 #	0.01 U	0.02	PNA	0.02	PNA	0.0 B	PNA	0.0496	PNA	0.0047 B	PNA	0.0111 B	PNA	0.00044 U	PNA	0.0076 B
Alkalinity tot CaCo3	mg/L	NA	46	70	88	82	97.6	87.2	82.5	73.6	77.5	76.9	90 D	81.8 D	69.3 D	70.4 D	61.9 D	56.1
Chloride as Cl	mg/L	250.0	16	26	23	26	27.7	23.7	23.9	21	20	22.4	22.8	16.8	12.3	16.7	16.1	13.2
Sulfate as SO4	mg/L	250.0	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromide	mg/L	2 #	PNA	PNA	PNA	PNA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BOD5	mg/L	NA	2 U	2 U	2 U	3 U	2 U	13	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
COD	mg/L	NA	60	40 U	PNA	40 U	10 U	10 U	39.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Color	units	NA	5 U	5 U	5 U	10	PNA	5	PNA	5 U	PNA	5	PNA	5 U	PNA	5	PNA	5 U
Chromium hex as Cr	mg/L	0.05	0.02 U	0.02 U	PNA	0.02 U	PNA	0.0 U	PNA	0.02 U	PNA	0.02 U	NA	0.02 U	PNA	0.02 U	PNA	0.02 U
Hardness as CaC03	mg/L	NA	45	70	77	76	91	86	78	150	72	78	86 D	74 D	84 D	64 D	60 D	53
Ammonia as N	mg/L	2.0	0.05 U	0.05 U	0.05 U	0.05 U	0.1 U	0.1 U	0.1 U	0.15	0.1 U	0.1 U	0.1 U	0.1 U	0.16	0.1 U	0.1 U	0.1 U
Nitrite as N	mg/L	NA	PNA	PNA	PNA	PNA	PNA	0.1 U	0.1 U	PNA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nitrate as N	mg/L	10	0.5 U	0.5 U	PNA	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.16	0.1 U	0.1	0.1
Phenols as Phenol	mg/L	0.001	**0.002**	**0.002**	0.001 U	0.001 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Tot Dissolved Solids	mg/L	NA	100	130	PNA	210	187	141	132	129	147	132	130	139	95	120	123	97
Tot. Kjeldahl Nitrogen	mg/L	NA	0.6	1.6	PNA	1.2	0.3	0.1 U	0.13	0.2	0.1 U	0.1 U	1.51	0.1 U	0.28	0.1 U	0.1 U	0.1 U
Tot Organic Carbon	mg/L	NA	1 U	1 U	1.5	1 U	1.4	1.1	1 U	1	1 U	1 U	1	1 U	20.4	1 U	1 U	15.9
Turbidity	NTU	NA	1.6	1.2	2.2	2.2	2	9.6	27	4.9	7	0	7.7	PNA	12.0	0.0	0.0	0
Temperature	deg.C	NA	13	15	13	13	12.5	12.67	12.47	12.4	11.56	12.59	11.95	PNA	13.11	16.55	12.71	12.57
pH	units	6.5-8.5	6.6	**6.3**	6.7	6.6	**8.58**	**6.24**	**6.48**	6.55	**6.27**	6.78	**5.95**	PNA	6.80	**6.23**	6.98	7.15
Spec. Cond	umho/cm	NA	150	200	320	260	PNA	PNA	187	170	256	264	195	PNA	210	210	197	191

NOTES:

* = NYSDEC. Class GA Groundwater Standards
6 NYCRR Part 703

= Guidance value, no standard exists.

NA = Not available

PNA = parameter not analyzed for.

B = This flag is used when the analyte is found in the associated blank as in the sample.

E - This flag identified compunds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis

F - This flag indicates the results of a filtered metal analysis.

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

UJ - 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

R - The sample results are unreliable/unusable. The presence or absence of the analyte cannot be verified.

1.0 = Compound exceeded standard.

1.0 = Compound at standard.

NM = Not Monitored

TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
April 2013

ANALYTICAL PARAMETERS	UNITS	GW STND*	MW-4A																					
			April 2005		Oct. 2005		April 2006		Oct. 2006		April 2007		Oct. 2007		April 2008		Oct. 2008		April 2009		Oct. 2009		April 2010		Oct. 2010		April 2011		Oct. 2011		April 2012		Oct. 2012		April 2013	
Aluminum as Al	mg/L	NA	1.0		0.5		1.3		0.2		0.47		PNA		0.1	B	PNA		0.0092	U	PNA		0.0869	BJ	PNA		0.243		PNA		0.146	B	PNA		0.243	
Antimony as Sb	mg/L	0.003 #	0.01	U	PNA		0.005	U	PNA		0.005	U	PNA		0.0	U	PNA		0.0027	U	PNA		0.0028	U	PNA		0.0021	U	PNA		0.0011	U	PNA		0.0012	U
Arsenic as As	mg/L	0.025	0.005	U	0.004	U	0.005	U	0.005	U	0.006		PNA		0.0	U	PNA		0.0028	U	PNA		0.0028	U	PNA		0.00019	U	PNA		0.0044	U	PNA		0.0028	U
Barium	mg/L	1	PNA		PNA		PNA		PNA		PNA		PNA		0.0275	B	PNA		0.0304	B	PNA		0.0719	B	PNA		0.0465	BE	PNA		0.12	B	PNA		0.206	
Beryllium as Be	mg/L	0.003	0.001	U	PNA		0.001	U	PNA		0.001	U	PNA		0.0	B	PNA		0.00016	U	PNA		0.00017	U	PNA		0.00013	U	PNA		0.0002	B	PNA		0.0002	B
Boron as B	mg/L	1.0	0.04		PNA		0.05	U	PNA		0.02		PNA		0.0	B	PNA		0.0022	U	PNA		0.0286	B	PNA		0.0216	BE	PNA		0.0241	B	PNA		0.0212	B
Cadmium as Cd	mg/L	0.005	0.005	U	PNA		0.005	U	PNA		0.005	U	0.00032	U	0.00027	U	0.00035	U	0.00023	U	0.00034	U	0.00024	U	0.00025	U	0.00027	U	0.00017	U	0.00018	U	0.0004	B	0.0003	B
Calcium as Ca	mg/L	NA	4.6		6.4		6.0		6.3		8.3		5.88		4.18	B	7.38		18.1		9.04		11.2		7.06		7.45		7.51		8.36		23.5		13.9	
Chromium as Cr	mg/L	0.05	**0.056**		PNA		**0.064**		PNA		0.041		PNA		0.0	B	PNA		**0.171**		PNA		0.0033	B	PNA		0.0302		PNA		0.0041	B	PNA		0.0046	B
Cobalt	mg/L	NA	PNA		PNA		PNA		PNA		PNA		PNA		0.0017	U	PNA		0.0028	B	PNA		0.0012	U	PNA		0.00049	U	PNA		0.00052	U	PNA		0.0004	U
Copper as Cu	mg/L	0.2	0.01	U	PNA		0.01	U	PNA		0.01	U	PNA		0.0	U	PNA		0.0054	B	PNA		0.0068	B	PNA		0.0014	B	PNA		0.0007	U	PNA		0.0004	U
Cyanide as CN	mg/L	0.20	0.02	U	PNA		0.02	U	PNA		0.02	U	PNA		0.0	U	PNA		0.01	U	PNA		0.01	U	PNA		0.01	U	PNA		0.01	U	PNA		0.01	U
Iron as Fe	mg/L	0.3	**1.7**		**1.1**		**2.1**		0.29		**1.1**		0.107		0.176		0.0716	B	**0.499**		0.0704	B	0.0696	B	0.0196	B	**0.535**		**0.442**		0.0571	B	[redacted]		0.0631	B
Lead as Pb	mg/L	0.025	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.0014	U	0.0023	U	0.0013	U	0.0015	U	0.0018	U	0.0213	J	0.008		0.0015	U	0.0061		0.0057		0.0034		0.0063	
Magnesium	mg/L	35 #	PNA		4.7		PNA		4		PNA		3.28	B	2.75	B	4.52	B	9.31		4.74	B	4.44	B	2.8	B	3.5	B	2.83	B	3.11	B	8.53		4.57	B
Manganese as Mn	mg/L	0.3	0.19		0.08		0.15		0.04		0.01	U	0.0254		0.0137	B	0.0316		0.0278		0.0643		0.137		0.0659		0.0623		0.0712	E	0.0709		[redacted]		0.133	
Mercury as Hg	mg/L	0.0007	0.00025	U	0.00025	U	0.00025	U	0.00025	U	0.00025	U	PNA		0.0	U	PNA		0.0001	U	PNA		0.0001	U	PNA		0.0001	U	PNA		0.0001	U	PNA		0.0001	U
Nickel as Ni	mg/L	0.1	0.01	U	PNA		0.01	U	PNA		0.01	U	PNA		0.0	B	PNA		**0.154**		PNA		0.0048	B	PNA		0.0026	B	PNA		0.0038	B	PNA		0.0056	B
Potasium	mg/L	NA	PNA		PNA		PNA		PNA		PNA		1.91	B	1.49	B	2.48	B	1.44	BE	2.53	B	4.23	B	3.59	B	3.4	B	1.77	B	3.56	B	6.69		4.36	B
Selenium as Se	mg/L	0.01	0.004	U	PNA		0.004	U	PNA		0.004	U	PNA		0.0	U	PNA		0.0027	U	PNA		0.0042	U	PNA		0.0026	U	PNA		0.0028	U	PNA		0.0023	U
Silver as Ag	mg/L	0.05	0.005	U	PNA		0.005	U	PNA		0.005	U	PNA		0.0	U	PNA		0.0006	U	PNA		0.0005	U	PNA		0.00052	U	PNA		0.00032	U	PNA		0.0002	U
Sodium as Na	mg/L	20	12		PNA		10		PNA		13		10.5		14.2		**25.8**		19.6		16.1		19.2		14.8		17.9		15.1		15.1		[redacted]		18.3	
Thallium as Tl	mg/L	0.0005 #	0.004	U	PNA		0.005	U	PNA		0.005	U	PNA		0.0	U	PNA		0.0033	U	PNA		0.0056	U	PNA		0.0027	U	PNA		0.0032	U	PNA		0.0019	U
Vanadium	mg/L	NA	PNA		PNA		PNA		PNA		PNA		PNA		0.0022	U	PNA		0.00097	U	PNA		0.0012	U	PNA		0.00068	B	PNA		0.00023	U	PNA		0.0003	U
Zinc as Zn	mg/L	2 #	0.01		PNA		0.01		PNA		0.02		PNA		0.0	B	PNA		0.0148	B	PNA		0.0122	B	PNA		0.0116	B	PNA		0.0005	B	PNA		0.0125	B
Alkalinity tot CaCo3	mg/L	NA	6.0		20.0		4.0		18.0		8.0		4.4		13.4		13.4		31.5		7.8		6.8		5.5		10.2		4.4		6.55		8.2		2.2	
Chloride as Cl	mg/L	250.0	19		33		16		25		19		19.2		13.9		35.4		47.8		25.5		30.3		20.7		18.2		22.4		25.3		36		31.5	
Sulfate as SO4	mg/L	250.0	10		11		30		10		11		13.1		14		12.0		5	U	11.7		16	J	17.3		10.9		11.4		12.3		14.4		12	
Bromide	mg/L	2 #	PNA		PNA		PNA		PNA		PNA		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
BOD5	mg/L	NA	2	U	2.4		2	U	2		2	U	2	U	12		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
COD	mg/L	NA	40	U	PNA		40	U	PNA		40	U	10	U	11.9		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Color	units	NA	5	U	5	U	5	U	5	U	5	U	PNA		5		PNA		10		PNA		5		PNA		5	U	PNA		5	U	PNA		5	U
Chromium hex as Cr	mg/L	0.05	0.02	U	PNA		0.02	U	PNA		0.02	U	PNA		0.0	U	PNA		0.02	U	PNA		0.02	U	PNA		0.02	U	PNA		0.02	U	PNA		0.02	U
Hardness as CaC03	mg/L	NA	26		35		31		32		39		29		26		32		140		40		47		30	D	33		33		35		45		52	D
Ammonia as N	mg/L	2.0	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.12		0.1	U	0.1	U	0.1	U
Nitrite as N	mg/L	NA	PNA		PNA		PNA		PNA		PNA		PNA		0.1	U	0.1	U	PNA		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nitrate as N	mg/L	10	2.3		PNA		4.9		PNA		7.4		2.65		1.5		3.97		0.1	U	7.01		6.33		3.59	D	4.55	D	3.3	D	4.3	D	7.03	D	12.2	D
Phenols as Phenol	mg/L	0.001	**0.004**		0.001	U	0.001	U	0.001	U	0.001	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U
Tot Dissolved Solids	mg/L	NA	84		PNA		110		PNA		130		97		68		111		176		134		133		76		103		79		103		153		175	
Tot. Kjeldahl Nitrogen	mg/L	NA	0.4		PNA		1.8		PNA		1.4		0.24		0.1	U	0.2		0.18		0.12		0.1	UJ	0.1	U	0.5	UD	0.11		0.1	U	0.1	U	0.1	U
Tot Organic Carbon	mg/L	NA	1	U	1.4		1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	2.5		1	U	1	U	1.9	
Turbidity	NTU	NA	2.2		3.7		15		1		1.3		0		10.9		23.1		2.1		0.2		0		4.6		PNA		16.2		0.4		13.2		0.1	
Temperature	deg.C	NA	12		15		12		14		12		13.4		12.58		13.33		12.24		13.55		11		13.06		PNA		13.83		11.85		13.3		11.17	
pH	units	6.5-8.5	**5.5**		**5.7**		**5.6**		**6.5**		**5.8**		8.46		**4.90**		**5.29**		**5.17**		**4.68**		**5.27**		**4.62**		PNA		**5.28**		**5.42**		**5.71**		**6.04**	
Spec. Cond	umho/cm	NA	130		200		170		340		210		PNA		PNA		167		137		214		244		124		PNA		181		186		231		268	

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6 NYCRR Part 703

= Guidance value, no standard exists

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TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
April 2013

ANALYTICAL PARAMETERS	UNITS	GW STND*	MW-4B																	
			April 2005	Oct. 2005	April 2006	Oct. 2006	April 2007	Oct. 2007	April 2008	Oct. 2008	April 2009	Oct. 2009	April 2010	Oct. 2010	April 2011	Oct. 2011	April 2012	Oct. 2012	April 2013
Aluminum as Al	mg/L	NA	0.03	0.04	0.03	0.02	0.03	PNA	0.1 B	PNA	0.0092 U	PNA	0.049 BJ	PNA	0.0118 B	PNA	0.0287 B	PNA	0.0095 U
Antimony as Sb	mg/L	0.003 #	0.01 U	PNA	0.005 U	PNA	0.005 U	PNA	0.0 U	PNA	0.0027 U	PNA	0.0028 U	PNA	0.0043 B	PNA	0.0011 U	PNA	0.0012 U
Arsenic as As	mg/L	0.025	0.007	0.004 U	0.007	0.005 U	0.007	PNA	0.0 B	PNA	0.0037 B	PNA	0.0069 B	PNA	0.0041 B	PNA	0.0044 U	PNA	0.0028 U
Barium	mg/L	1	PNA	PNA	PNA	PNA	PNA	PNA	0.0893 B	PNA	0.103 B	PNA	0.135 B	PNA	0.0747 BE	PNA	0.0921 B	PNA	0.0662 B
Beryllium as Be	mg/L	0.003	0.001 U	PNA	0.001 U	PNA	0.001 U	PNA	0.0 U	PNA	0.00016 U	PNA	0.00017 U	PNA	0.00013 U	PNA	0.00012 U	PNA	0.0001 U
Boron as B	mg/L	1.0	0.12	PNA	0.1	PNA	0.1	PNA	0.1 B	PNA	0.0772 B	PNA	0.108	PNA	0.0817 BE	PNA	0.0749 B	PNA	0.0761 B
Cadmium as Cd	mg/L	0.005	0.005 U	PNA	0.005 U	PNA	0.005 U	0.00032 U	0.00027 U	0.00035 U	0.00023 U	0.00034 U	0.00024 U	0.0003 B	0.00027 U	0.00017 U	0.00018 U	0.000087 U	0.0001 U
Calcium as Ca	mg/L	NA	31	31	29	27	28	27.3	26	27.3	22.9	21.7	19.8	17.2	17.8	21.6	19	36.2	21.4
Chromium as Cr	mg/L	0.05	0.005 U	PNA	0.005 U	PNA	0.006	PNA	0.0 B	PNA	0.0075 B	PNA	**0.0611**	PNA	0.0168	PNA	0.0051 B	PNA	0.003 B
Cobalt	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA	0.0036 B	PNA	0.0037 B	PNA	0.0049 B	PNA	0.0039 B	PNA	0.0029 B	PNA	0.0029 B
Copper as Cu	mg/L	0.2	0.01 U	PNA	0.01 U	PNA	0.01 U	PNA	0.0 U	PNA	0.0012 U	PNA	0.0065 B	PNA	0.00055 U	PNA	0.0016 B	PNA	0.0004 U
Cyanide as CN	mg/L	0.20	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	0.0 U	PNA	0.01 U	PNA	0.01 U	PNA	0.01 U	PNA	0.01 U	PNA	0.01 U
Iron as Fe	mg/L	0.3	**2.1**	**1.6**	**1.4**	**0.53**	**2.4**	**2.17**	**3.74**	**4.7**	**6.16**	**8.56**	**11.3**	**6.54**	**7**	**1.28**	**4.94**	**11.7**	**4.1**
Lead as Pb	mg/L	0.025	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0014 U	0.0023 U	0.0013 U	0.0015 U	0.0018 U	0.0242 J	0.0091	0.0015 U	0.0103	0.0099	0.0013 B	0.007
Magnesium	mg/L	35 #	PNA	16	PNA	15	PNA	14.2	14.3	15.4	12.9	11.8	10.4	9.41	10.2	10.8	9.7	17.9	11.2
Manganese as Mn	mg/L	0.3	**0.67**	**1**	**0.31**	0.24	**0.49**	**0.689**	**0.84**	**1.05**	**0.936**	**1.07**	**1.32**	**1.05**	**1.02**	0.265 E	**0.87**	**2.11**	**0.815**
Mercury as Hg	mg/L	0.0007	0.00025 U	0.00025 U	0.00025 U	0.00025 U	0.00025 U	PNA	0.0 U	PNA	0.0001 U	PNA	0.01 U	PNA	0.0001 U	PNA	0.0001 U	PNA	0.0001 U
Nickel as Ni	mg/L	0.1	0.01 U	PNA	0.01 U	PNA	0.01 U	PNA	0.0 B	PNA	0.0049 B	PNA	0.0042 B	PNA	0.0054 B	PNA	0.0045 B	PNA	0.0057 B
Potasium	mg/L	NA	PNA	PNA	PNA	PNA	PNA	4.01 B	4.38 B	4.38 B	5.69 E	5.83	8.23	6.93	6.21	2.72 B	6.3	8.53	4.83 B
Selenium as Se	mg/L	0.01	0.004 U	PNA	0.004 U	PNA	0.004 U	PNA	0.0 U	PNA	0.0027 U	PNA	0.0042 U	PNA	0.0026 U	PNA	0.0028 U	PNA	0.0031 B
Silver as Ag	mg/L	0.05	0.005 U	PNA	0.005 U	PNA	0.005 U	PNA	0.0 U	PNA	0.0006 U	PNA	0.0005 U	PNA	0.00052 U	PNA	0.00032 U	PNA	0.0002 U
Sodium as Na	mg/L	20	**31**	PNA	**34**	PNA	**30**	**27.6**	**28.6**	**27.4**	**26.6**	**27.8**	**29.9**	**23.6**	**26.7**	**23.1**	**20.9**	**35**	**21.3**
Thallium as Tl	mg/L	0.0005 #	0.005 U	PNA	0.005 U	PNA	0.005 U	PNA	0.0 U	PNA	0.0033 U	PNA	0.0056 U	PNA	0.0027 U	PNA	0.0032 U	PNA	0.0019 U
Vanadium	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA	0.0022 U	PNA	0.00097 U	PNA	0.0012 U	PNA	0.00092 B	PNA	0.0005 B	PNA	0.0003 U
Zinc as Zn	mg/L	2 #	0.02	PNA	0.01	PNA	0.02	PNA	0.0437	PNA	0.0092 B	PNA	0.0136 B	PNA	0.01 B	PNA	0.00044 U	PNA	0.0073 B
Alkalinity tot CaCo3	mg/L	NA	160	160	150	150	140	135	134	124	130	147	146	120 D	105 D	108 D	119 D	92.2 D	110 D
Chloride as Cl	mg/L	250.0	42	39	37	36	39	32	28.6	27.9	28.2	30.1	29.7	22.5	18	22	20.4	19.6	26.2
Sulfate as SO4	mg/L	250.0	9.0	7.0	9.0	6.0	5.0	9.2	11.1	11.2	10.8	8.47	9.74 J	9.24	8.26	5.15	9.25	10.3	8.34
Bromide	mg/L	2 #	PNA	PNA	PNA	PNA	PNA	0.5 U	0.5 U	PNA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BOD5	mg/L	NA	7.6	13	4.2	2.5	2.2	2 U	13	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
COD	mg/L	NA	100	PNA	40 U	PNA	40 U	10 U	11.9	16.9	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Color	units	NA	5 U	15	5 U	5 U	10	PNA	30	PNA	35	PNA	50	PNA	50	PNA	90 D	PNA	70 D
Chromium hex as Cr	mg/L	0.05	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	0.0 U	PNA	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	0.02 U
Hardness as CaC03	mg/L	NA	150	140	140	130	130	125	118	96	160	116	105	94 D	88 D	116 D	104 D	94 D	112 D
Ammonia as N	mg/L	2.0	**3.0**	**3.2**	**2.0**	0.98	0.62	1.88	1.64	1.43	**4.76**	**4.21**	**6.25**	**3.96 D**	**2.99**	0.37	**2.84 D**	**2.82**	**3.95 D**
Nitrite as N	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA	0.1 U	0.1 U	PNA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nitrate as N	mg/L	10	0.5	PNA	1.3	PNA	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.13	0.1 U	0.1 U	0.72	0.1 U	0.1 U	0.14
Phenols as Phenol	mg/L	0.001	**0.002**	0.001 U	**0.007**	0.001 U	0.002 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Tot Dissolved Solids	mg/L	NA	260	PNA	260	PNA	270	232	200	194	189	207	188	174	158	140	149	147	159
Tot. Kjeldahl Nitrogen	mg/L	NA	3.2	8.4	2.0	2.8	2.8	2.6	2.7	2.83	5.49	7.22	6.06 J	6.15 D	3.53 D	0.54	6.3 D	3.39 D	5.94 D
Tot Organic Carbon	mg/L	NA	4.0	3.3	3.9	3.3	2.7	3.4	3	3.3	3.1	3.9	4.6	2.3	2.1	29.5	2.1	1.8	31.1
Turbidity	NTU	NA	7.1	PNA	6.7	PNA	4.1	1	9	25.2	0.2	2.6	0	3.9	PNA	11.3	0	22.4	0
Temperature	deg.C	NA	14	14	14	14	13	13.5	13.32	13.35	13.23	12.81	13.55	13.8	PNA	13.87	12.65	13.4	13.19
pH	units	6.5-8.5	**6.1**	6.7	**6.5**	6.6	6.6	**6.52**	**6.24**	**6.42**	6.54	**5.72**	6.8	7.33	PNA	**6.28**	6.5	6.59	7.36
Spec. Cond	umho/cm	NA	440	430	460	440	440	PNA	PNA	298	304	906	452	242	PNA	306	354	316	362

NOTES:

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6 NYCRR Part 703

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B = This flag is used when the analyte is found in the associated blank as in the sample

E - This flag identified compunds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis

F - This flag indicates the results of a filtered metal analysis

J - The analyte was positively identified, the associated numerical value is the approximate concentratinn of the analyte in the sample

UJ - 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

R - The sample results are unreliable/unusable. The presence or absence of the analyte cannot be verified

1.0 = Compound exceeded standard.

1.0 = Compound at standard.

NM = Not Monitored

TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
April 2013

ANALYTICAL PARAMETERS	UNITS	GW STND*	MW-4C																					
			April 2005	Oct. 2005	April 2006	Oct. 2006	April 2007	Oct. 2007	April 2008	Oct. 2008	April 2009	Oct. 2009	April 2010	Oct. 2010	April 2011	Oct. 2011	April 2012	Oct. 2012	April 2013
Aluminum as Al	mg/L	NA	0.02	0.03	0.02	0.01	0.03	PNA	0.0 B	PNA	0.0548 B	PNA	0.0302 BJ	PNA	0.0112 B	PNA	0.0267 B	PNA	0.0126 B
Antimony as Sb	mg/L	0.003 #	0.01 U	PNA	0.005 U	PNA	0.005 U	PNA	0.0 U	PNA	0.0027 U	PNA	0.0028 U	PNA	0.004 B	PNA	0.0011 U	PNA	0.0012 U
Arsenic as As	mg/L	0.025	0.004 U	0.004 U	0.006	0.005 U	0.005 U	PNA	0.0 U	PNA	0.0028 U	PNA	0.0028 U	PNA	0.0019 U	PNA	0.0044 U	PNA	0.0028 U
Barium	mg/L	1	PNA	PNA	PNA	PNA	PNA	PNA	0.0312 B	PNA	0.0489 B	PNA	0.0337 B	PNA	0.0388 BE	PNA	0.0393 B	PNA	0.0391 B
Beryllium as Be	mg/L	0.003	0.001 U	PNA	0.001 U	PNA	0.001 U	PNA	0.0 U	PNA	0.00016 U	PNA	0.00017 U	PNA	0.00013 U	PNA	0.00012 U	PNA	0.0001 U
Boron as B	mg/L	1.0	0.02	PNA	0.05 U	PNA	0.01 U	PNA	0.0 B	PNA	0.015 B	PNA	0.0101 U	PNA	0.0084 BE	PNA	0.0072 B	PNA	0.0108 B
Cadmium as Cd	mg/L	0.005	0.005 U	PNA	0.005 U	PNA	0.005 U	0.00032 U	0.00027 U	0.00035 U	0.00023 U	0.0034 U	0.00024 U	0.00025 U	0.00027 U	0.00017 U	0.00018 U	0.000087 U	0.0001 U
Calcium as Ca	mg/L	NA	12	12	15	14	15	17.1	17	16.5	7.98	17.2	17.3	17.9	20	18.7	21.4	30.6	23.2
Chromium as Cr	mg/L	0.05	0.036	PNA	**0.14**	PNA	**0.23**	PNA	**0.0714**	PNA	0.0048 B	PNA	**0.125**	PNA	**0.355**	PNA	**0.258**	PNA	**0.187**
Cobalt	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA	0.0017 U	PNA	0.0012 U	PNA	0.0024 B	PNA	0.0056 B	PNA	0.0057 B	PNA	0.005 B
Copper as Cu	mg/L	0.2	0.01 U	PNA	0.01 U	PNA	0.01	PNA	0.0 U	PNA	0.0012 U	PNA	0.0089 B	PNA	0.0067 B	PNA	0.0058 B	PNA	0.0043 B
Cyanide as CN	mg/L	0.20	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	0.0 U	PNA	0.01 U	PNA	0.01 U	PNA	0.01 U	PNA	0.01 U	PNA	0.01 U
Iron as Fe	mg/L	0.3	0.28	0.29	**0.33**	0.16	**0.65**	**0.587**	0.245	0.391	0.0769 B	0.232	**0.357**	**0.432**	**0.962**	**0.908**	**0.809**	**1.92**	**0.77**
Lead as Pb	mg/L	0.025	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0014 U	0.0023 U	0.0013 U	0.0021 B	0.0018 U	**0.0301 J**	0.0128	0.0015 U	0.0096	0.0123	0.00096 U	0.008
Magnesium	mg/L	35 #	PNA	5.7	PNA	6.9	PNA	7.95	8.44	8.51	3.38 B	8.65	8.24	8.66	10.4	8.06	9.85	13.7	10.6
Manganese as Mn	mg/L	0.3	0.02	0.03	0.02	0.04	0.02	0.0296	0.0191	0.0292	0.0706	0.0219	0.0242	0.0335	0.0457	0.0621 E	0.0444	0.0778	0.0381
Mercury as Hg	mg/L	0.0007	0.00025 U	0.00025 U	0.00025 U	0.00025 U	0.00025 U	PNA	0.0 U	PNA	0.0001 U	PNA	0.01 U	PNA	0.01 U	PNA	0.0001 U	PNA	0.0001 U
Nickel as Ni	mg/L	0.1	**0.2**	PNA	**0.36**	PNA	**0.46**	PNA	**0.122**	PNA	0.0025 B	PNA	**0.2**	PNA	**0.249**	PNA	**0.206**	PNA	**0.344**
Potasium	mg/L	NA	PNA	PNA	PNA	PNA	PNA	1.07 B	1.17 B	1.2 B	2.87 BE	1.45 B	1.47 B	1.72 B	1.93 B	0.846 B	1.53 B	1.56 B	1.33 B
Selenium as Se	mg/L	0.01	0.004 U	PNA	0.004 U	PNA	0.004 U	PNA	0.0 U	PNA	0.0027 U	PNA	0.0045 B	PNA	0.0026 U	PNA	0.0028 U	PNA	0.0023 U
Silver as Ag	mg/L	0.05	0.005 U	PNA	0.005 U	PNA	0.005 U	PNA	0.0 U	PNA	0.0006 U	PNA	0.0005 U	PNA	0.00052 U	PNA	0.00032 U	PNA	0.0002 U
Sodium as Na	mg/L	20	12	PNA	19	PNA	16	15.8	**21**	**20.4**	16.9	19.7	**20.9**	**21.7**	**26**	19.7	**22**	**30.8**	**24.9**
Thallium as Tl	mg/L	0.0005 #	0.005 U	PNA	0.005 U	PNA	0.005 U	PNA	0.0 U	PNA	0.0033 U	PNA	0.0056 U	PNA	0.0027 U	PNA	0.0032 U	PNA	0.0019 U
Vanadium	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA	0.0022 U	PNA	0.00097 U	PNA	0.0012 U	PNA	0.0015 B	PNA	0.0003 B	PNA	0.0003 U
Zinc as Zn	mg/L	2 #	0.02	PNA	0.01 U	PNA	0.04	PNA	0.0 B	PNA	0.0114	PNA	0.007 B	PNA	0.0144 B	PNA	0.00044 U	PNA	0.0129 B
Alkalinity tot CaCo3	mg/L	NA	34	42	40	50	40	33.4	36	33.4	6.6	33.8	32	31 D	32.1	30.3	36.1 D	35.2 D	33.2
Chloride as Cl	mg/L	250.0	30	32	39	44	53	55.8	54.6	58.4	26.5	55.1	60.9	70 D	60.6 D	64.8 D	72 D	94 D	82.6 D
Sulfate as SO4	mg/L	250.0	5 U	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromide	mg/L	2 #	PNA	PNA	PNA	PNA	PNA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BOD5	mg/L	NA	2 U	2.8	2 U	2 U	2 U	2 U	11	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
COD	mg/L	NA	60	PNA	40 U	PNA	40 U	10 U	10 U	11.9	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Color	units	NA	5 U	5 U	5 U	5 U	5 U	PNA	5	PNA	5	PNA	5	PNA	10	PNA	10	PNA	15
Chromium hex as Cr	mg/L	0.05	0.02 U	PNA	0.01	PNA	0.02	PNA	0.0 U	PNA	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	0.02 U
Hardness as CaC03	mg/L	NA	53	53	68	64	65	78	78	64	120	75	80	84 D	90 D	114 D	102 D	106 D	116 D
Ammonia as N	mg/L	2.0	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.1 U	0.1 U	0.1 U	0.28	0.1 U	0.1 U	0.1 U	0.1 U	0.12	0.1 U	0.1 U	0.1 U
Nitrite as N	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA	0.1 U	0.1 U	PNA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nitrate as N	mg/L	10	0.5 U	PNA	0.5 U	PNA	0.5 U	0.1 U	0.1 U	0.1 U	0.54	0.1 U	0.1 U	0.1 U	0.1 U	0.11	0.1 U	0.1 U	0.1 U
Phenols as Phenol	mg/L	0.001	**0.001**	0.001 U	**0.003**	0.001 U	0.001 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Tot Dissolved Solids	mg/L	NA	110	PNA	150	PNA	190	178	165	158	117	185	183	211	232	196	223	268	250
Tot. Kjeldahl Nitrogen	mg/L	NA	0.2	PNA	0.8	PNA	3.6	0.15	0.1 U	0.16	0.34	0.23	0.32 J	0.25	0.5 UD	0.25	0.1 U	0.1 U	0.1 U
Tot Organic Carbon	mg/L	NA	3.2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	8.6	3.2	1 U	9.9
Turbidity	NTU	NA	1.8	1.8	1.7	1.5	2.5	1	9.6	31.5	9.4	2	0	12.4	PNA	14.8	7.1	48.5	1.4
Temperature	deg.C	NA	13	13	13	13	12	12.8	12.69	12.61	12.43	12.1	12.01	12.49	PNA	13.82	12.55	13.04	12.85
pH	units	6.5-8.5	6.6	7.0	6.9	7.0	6.7	**8.51**	6.70	6.68	7	6.63	7.09	6.87	PNA	7.01	6.71	6.7	8.08
Spec. Cond	umho/cm	NA	180	230	250	300	260	PNA	PNA	207	208	302	315	250	PNA	324	354	414	391

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6 NYCRR Part 703

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TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
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April 2013

ANALYTICAL PARAMETERS	UNITS	GW STND*	MW-11A																															
			April 2005		Oct. 2005		April 2006		Oct. 2006		April 2007		Oct. 2007		April 2008		Oct. 2008		April 2009		Oct. 2009		April 2010		Oct. 2010		April 2011		Oct. 2011		April 2012		Oct. 2012		April 2013	
																	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
Aluminum as Al	mg/L	NA	1		0.24		2.1		0.58		0.98		0.15	B	0.0552	B	0.0249	B	0.0087	UF	0.0092	U	0.0	B	0.174	B	0.177	U	0.0406	BJ	0.0196	U	0.0348	B	0.0061	U	0.0576	B	0.0187	B	0.0044	U	0.0216	B	0.0865	B	0.0308	B	0.133	B	0.0253	B	0.0179	B	0.0308	B
Antimony as Sb	mg/L	0.003 #	0.01	U	PNA		**0.017**		PNA		**0.009**		0.0023	U	**0.0061**	B	**0.0071**	B	0.0023	UF	0.0027	U	**0.0**	B	0.0055	B	0.0021	U	0.0028	U	0.0028	U	0.0029	U	0.0029	U	0.0056	B	0.0021	U	0.008	B	0.0022	B	0.0011	U	0.0011	U	0.007	B	0.0044	B	0.0016	B	0.0013	BJ
Arsenic as As	mg/L	0.025	**0.004**		0.024		**0.047**		0.021		**0.033**		0.0182		**0.0373**		**0.0331**		0.0018	UF	0.0123		0.0	U	**0.0431**		0.0023	U	0.0071	B	0.0028	U	0.017		0.0027	U	0.0106		0.0019	U	**0.0629**		0.0018	B	0.0121		0.0044	U	**0.0299**		0.0015	U	0.0044	B	0.0028	U
Barium	mg/L	1	PNA		PNA		PNA		PNA		PNA		0.221		0.41		0.493	E	0.177	BF	0.194	B	0.1	B	0.36		0.126	B	0.16	B	0.0730	B	0.181	B	0.111	B	0.208	E	0.0989	B	0.851		0.0751	B	0.212		0.1570	B	0.497		0.1470	B	0.164	B	0.1410	B
Beryllium as Be	mg/L	0.003	0.001	U	PNA		0.001	U	PNA		0.001	U	0.00025	B	0.00013	B	0.00012	B	0.000096	UF	0.00016	U	0.0	B	0.00026	U	0.00026	U	0.00017	U	0.00017	U	0.00016	U	0.00016	U	0.00013	U	0.00013	U	0.00013	U	0.00013	U	0.00012	U	0.00012	U	0.00012	U	0.00012	U	0.0001	U	0.00090	B
Boron as B	mg/L	1.0	**2.8**		PNA		0.05		PNA		0.29		0.0366	B	0.0444	B	0.0406	B	0.0446	BF	0.0416	B	0.0	B	0.0336	B	0.04	B	0.0437	B	0.0461	B	0.0129	B	0.0252	B	0.0391	B	0.0500	B	0.003	U	0.0334	B	0.0194	B	0.0342	B	0.0639	B	0.0319	B	0.0419	BR	0.0508	BR
Cadmium as Cd	mg/L	0.005	**0.010**		PNA		0.005	U	PNA		0.005	U	0.00032	U	0.00045	B	0.00035	U	0.002	BF	0.00023	U	0.0	B	0.00034	U	0.00034	U	0.00024	U	0.00024	U	0.0005	B	0.00025	U	0.00027	U	0.00027	U	0.0032	B	0.00017	U	0.0004	B	0.00020	B	0.000087	U	0.00009	U	0.0001	U	0.00080	B
Calcium as Ca	mg/L	NA	79		44		50		50		63		17		37.3		39.2		36	F	37.9		33.30		28.5		26.8		32.4		28.8		23.4		22.8		39.3		41.4		44.7		32.6		30.7		27.5		97.2		30.6		42.6		41.2	
Chromium as Cr	mg/L	0.05	0.012		PNA		0.02		PNA		0.018		0.0031	B	0.005	B	0.0034	B	0.00043	BF	0.0014	B	0.0	B	0.0079	B	0.00044	U	0.0013	B	0.0007	B	0.0008	U	0.0008	U	0.0031	B	0.0025	B	0.0032	B	0.0005	B	0.0283		0.0053	B	0.0149	E	0.0039	B	0.0046	B	0.0033	B
Cobalt	mg/L	NA	PNA		PNA		PNA		PNA		PNA		0.015	B	0.0214	B	0.028	B	0.0141	BF	0.0094	B	0.0	B	0.0302	B	0.0172	B	0.0097	B	0.0074	B	0.0188	B	0.0141	B	0.0083	B	0.0040	B	0.0181	B	0.0031	B	0.0166	B	0.0132	B	0.0532		0.0159	B	0.0107	B	0.0113	B
Copper as Cu	mg/L	0.2	0.01	U	PNA		0.02		PNA		0.01		0.0039	B	0.0237	B	0.0363		0.0065	BF	0.0057	B	0.0	B	0.0218	B	0.0011	B	0.0028	B	0.0030	B	0.0031	U	0.0031	U	0.00055	U	0.0079	B	0.0007	U	0.0007	U	0.0034	B	0.0007	U	0.00052	U	0.0005	U	0.0004	U	0.0016	B
Cyanide as CN	mg/L	0.20	0.02	U	PNA		0.02	U	PNA		0.02	U	PNA		0.01	U	0.01	U	PNA		0.01	U	PNA		PNA		PNA		0.01	U	PNA		PNA		PNA		0.01	U	PNA		PNA		PNA		0.01	U	PNA		PNA		0.01	U	PNA	
Iron as Fe	mg/L	0.3	**480**		**490**		**440**		**280**		**290**		**66.9**		**233**		**210**		0.0443	BF	**98.2**		**8.8**		**227**		**4.99**		**90.9**		**1.40**		**90.9**		**5.50**		**16.1**		**3.94**		**520**		**8.53**		**46.1**		**7.58**		**120**		**5.09**		**22.4**		**4.54**	
Lead as Pb	mg/L	0.025	0.005	U	**0.027**		**0.033**		**0.027**		**0.032**		0.0054		0.0023	U	0.0139		0.0013	UF	0.0015	U	0.0	U	0.0238		0.0018	U	0.0019	BJ	0.0169		0.0173	U	0.0052		**0.0251**		0.0015	U	**0.0327**	**U**	0.0033		0.0132		0.0069		0.00096	U	0.00096	U	0.0049		0.0064	
Magnesium	mg/L	35 #	PNA		16		PNA		17		PNA		9.29		12.3		19		18.9	F	16.9		15.2		12.5		12.3		10.6		9.44		9.81		9.28		13.9		15.10		10.7		10.70		12.3		11.40		33.6		10.6		15.8		15.00	
Manganese as Mn	mg/L	0.3	**14**		**13**		**16**		**7.9**		**20**		**3.74**		**5.17**		**7.44**		**5.3**	**F**	**3.81**		**3.00**		**6.43**		**4.00**		**2.1**		**1.31**		**2.11**		**1.74**		**4.6**		**3.14**		**18.1**	**E**	**3.18**		**2.58**		**2.15**		**7.33**		**2.27**		**2.02**		**1.83**	
Mercury as Hg	mg/L	0.0007	0.00025	U	0.00025	U	0.00025	U	0.00025	U	0.00025	U	0.0001	U	0.0001	U	0.00013	U	0.00013	UF	0.0001	U	0.0	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	B	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U
Nickel as Ni	mg/L	0.1	0.01		PNA		0.02		PNA		0.02		0.0053	B	0.0127	B	0.011	B	0.0059	B	0.0038	B	0.0	B	0.0199	B	0.0086	B	0.001	U	0.0039	B	0.0045	B	0.0071	B	0.0036	B	0.0049	B	0.00066	U	0.0025	B	0.0107	B	0.0073	B	0.0118	B	0.0056	B	0.0045	B	0.0056	B
Potassium	mg/L	NA	PNA		PNA		PNA		PNA		PNA		7.66		6.91		7.92		7.93	F	5.99	E	5.4		5.42		5.25		4.9	B	3.99	B	5.02		3.86	B	6.83		7.56		0.0489	U	6.10	E	6.25		5.97		11.2		3.74	B	5.05	J	5.10	J
Selenium as Se	mg/L	0.01	0.004	U	PNA		0.004	U	PNA		0.004	U	0.0024	U	0.0043	U	0.0019	U	0.0019	UF	0.0027	U	0.0	U	0.0025		0.0025	U	0.0042	U	0.0042	U	0.0032	U	0.0032	U	0.0026	U	0.0026	U	0.0282	U	0.0026	U	0.0028	U	0.0028	U	0.0022	B	0.0021	U	0.0023	UJ	0.0023	U
Silver as Ag	mg/L	0.05	0.005	U	PNA		0.005	U	PNA		0.005	U	0.0008	B	0.0013	B	0.0019	B	0.0013	BF	0.00086	B	0.0	B	0.00083	U	0.00083	U	0.0005	U	0.0005	U	0.00043	U	0.00043	U	0.00052	U	0.0007	B	0.00042	U	0.0004	U	0.00032	U	0.00032	U	0.00098	B	0.00029	U	0.0002	U	0.00045	B
Sodium as Na	mg/L	20	17		PNA		15		PNA		14		7.72		11.8		11.2		11.3	F	12.3		10.70		9.5		9.24		9.83		8.5		8.33		7.07		9.76		11.1		10.6		10.9		12.1		11.5		**46.8**		12.8		13.5		12.9	
Thallium as Tl	mg/L	0.0005 #	0.004	U	PNA		0.005	U	PNA		0.005	U	0.0023	U	**0.0138**		**0.0131**		**0.0032**	**BF**	**0.0045**	**B**	0.0	U	0.0261		0.0032	U	0.0056	U	0.0056	U	0.0036	U	0.0036	U	0.0027	U	0.0027	U	0.0034	U	0.0034	U	0.0032	U	0.0032	U	0.0029	U	0.0029	U	0.0019	U	0.0019	U
Vanadium	mg/L	NA	PNA		PNA		PNA		PNA		PNA		0.0027	B	0.0084	B	0.0073	B	0.00074	UF	0.0024	B	0.0	B	0.009	B	0.0014	U	0.0012	U	0.0012	U	0.0013	U	0.0013	U	0.0039	B	0.00096	B	0.00021	U	0.00021	U	0.0008	B	0.00023	U	0.0005	B	0.00018	U	0.0003	U	0.00030	U
Zinc as Zn	mg/L	2 #	0.08		PNA		0.1		PNA		0.06		0.0118	B	0.0357		0.0383		0.32	F	0.0086	B	0.0	B	0.0337		0.0166	B	0.0192	B	0.0049	B	0.0277		0.0072	B	0.0159	B	0.0312		0.0457		0.0078	B	0.0171	B	0.0069	B	0.0614		0.0163	B	0.0103	B	0.0129	B
Alkalinity tot CaCo3	mg/L	NA	310		220		260		260		230		77.6		133		148		PNA		154		PNA		0.41		PNA		131		PNA		100	D	PNA		148	D	PNA		97.6	D	PNA		118	D	PNA		111	D	PNA		174	D	PNA	
Chloride as Cl	mg/L	250.0	16		15		16		20		12		11		13.6		13.5		PNA		12		PNA		10.9		PNA		9.02		PNA		8.82		PNA		8.33		PNA		14.4		PNA		16.4		PNA		27.3		PNA		14.8		PNA	
Sulfate as SO4	mg/L	250.0	19		17		31		12		9.0		16.5		14.0		10.8		PNA		10.2		PNA		9.97		PNA		9.92	J	PNA		7.64		PNA		6.97		PNA		9.14		PNA		21.6		PNA		32.9		PNA		23.1		PNA	
Bromide	mg/L	2 #	PNA		PNA		PNA		PNA		PNA		0.5	U	0.5	U	0.5	U	PNA		0.5	U	PNA		0.5	U	PNA		0.5	U	PNA		0.5	U	PNA		0.5	U	PNA		0.5	U	PNA		0.5	U	PNA		0.5	U	PNA		0.5	U	PNA		0.5	U	PNA	
BOD5	mg/L	NA	13		20		14		5		3	U	<2		12		4		PNA		3		PNA		2		PNA		2	U	PNA		2	U	PNA		2	U	PNA		3		PNA		2	U	PNA		2	U	PNA		2	U	PNA		2	U	PNA	
COD	mg/L	NA	180		PNA		70		PNA		60		25.7		26.8		39.2		PNA		10	U	PNA		18.2		PNA		10	U	PNA		12.4		PNA		29.9		PNA		10	U	PNA		10	U	PNA		10	U	PNA		10	U	PNA		10	U	PNA	
Color	units	NA	5	U	5	U	10		15		10		PNA		50		PNA		PNA		80		PNA		PNA		PNA		40		PNA		PNA		PNA		25		PNA		PNA		PNA		20		PNA		PNA		50	D	PNA	
Chromium hex as Cr	mg/L	0.05	0.02	U	PNA		0.02	U	PNA		0.02	U	PNA		0.02	U	PNA		PNA		0.02	U	PNA		PNA		PNA		0.02	U	PNA		PNA		PNA		0.02	U	PNA		PNA		PNA		0.02	U	PNA		PNA		0.02	U	PNA		0.02	U	PNA	
Hardness as CaCo3	mg/L	NA	290		170		190		200		240		200		150		190		PNA		280		PNA		110		PNA		135		PNA		140	D	PNA		180	D	PNA		116	D	PNA		144	D	PNA		164	D	PNA		190	D	PNA	
Ammonia as N	mg/L	2.0	1.4		0.9		1.2		**2.8**		0.88		0.18		0.1	U	0.1	U	PNA		0.43		PNA		0.41		PNA		0.53		PNA		0.43		PNA		0.19		PNA		0.36		PNA		0.3		PNA		0.55		PNA		0.32		PNA	
Nitrite as N	mg/L	NA	PNA		PNA		PNA		PNA		PNA		0.1	U	0.1	U	0.1	U	PNA		PNA		PNA		0.1	U	PNA		0.1	U	PNA		0.1	U	PNA		0.1	U	PNA		0.1	U	PNA		0.1	U	PNA		0.1	U	PNA		0.1	U	PNA		0.1	U	PNA	
Nitrate as N	mg/L	10	1.8		PNA		1.6		PNA		0.5	U	0.1	U	0.18		0.1	U	PNA		0.27		PNA		0.22		PNA		0.48		PNA		0.2		PNA		0.36		PNA		0.37		PNA		0.16		PNA		0.28		PNA		0.1	U	PNA	
Phenols as Phenol	mg/L	0.001	**0.83**		0.002	U	0.001	U	0.002	U	0.001	U	0.005	U	0.005	U	0.005	U	PNA		0.005	U	PNA		0.005	U	PNA		0.005	U	PNA		0.005	U	PNA		0.005	U	PNA		0.005	U	PNA		0.005	U	PNA		0.005	U	PNA		0.005	U	PNA		0.005	U	PNA	
Tot Dissolved Solids	mg/L	NA	340		PNA		300		PNA		330		147		198		198		PNA		198		PNA		176		PNA		160		PNA		138		PNA		186		PNA		157		PNA		177		PNA		213		PNA		232		PNA	
Tot. Kjeldahl Nitrogen	mg/L	NA	5.6		PNA		4.2		PNA		6.4		0.63		0.84		1.64		PNA		1.28		PNA		1.03		PNA		0.66	J	PNA		0.83		PNA		0.52		PNA		2.84		PNA		0.64		PNA		0.97		PNA		0.44		PNA	
Tot Organic Carbon	mg/L	NA	19		9.6		16		8.1		8.2		1.9		4.4		7.2		PNA		3.1		PNA		2		PNA		1	U	PNA		1		PNA		4.4		PNA		33.4		PNA		1.5		PNA		2.1		PNA		45.4		PNA	
Turbidity	NTU	NA	3.5		3500		3200		1500		1200		227		>1,000		1,000		PNA		>1,000		PNA		178		PNA		>1,000		PNA		>1,000		PNA		>1,000		PNA		>1,000		PNA		172		PNA		44.8		PNA		79.9		PNA	
Temperature	deg.C	NA	15		16		16		16		14		14.8		15.93		15		PNA		13.96		PNA		12		PNA		14.28		PNA		13.87		PNA		13.85		PNA		14.01		PNA		13.94		PNA		13.79		PNA		13.86		PNA	
pH	units	6.5-8.5	7.3		**6.4**		**6.3**		7.9		6.6		8.21		**5.84**		**6.12**		PNA		**6.42**		PNA		**5.98**		PNA		6.61		PNA		7.31		PNA		**6.08**		PNA		**5.93**		PNA		**6.01**		PNA		**6.19**		PNA		6.7		PNA	
Spec. Cond	umho/cm	NA	520		440		530		530		510		PNA		PNA		538		PNA		334		PNA		124		PNA		347		PNA		237		PNA		364		PNA		223		PNA		385		PNA		406		PNA		469		PNA	

NOTES:

* - NYSDEC Class GA Groundwater Standards
6 NYCRR Part 703

- Guidance value, no standard exists

NA - Not available

PNA - parameter not analyzed for

B - This flag is used when the analyte is found in the associated blank as in the sample.

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.

F - This flag indicates the results of a filtered metal analysis.

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

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

UJ - 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.

R - The sample results are unreliable/unusable. The presence or absence of the analyte cannot be verified.

1.0 = Compound exceeded standard.

1.0 = Compound at standard.

VM - Not Validated

TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
April 2013

ANALYTICAL PARAMETERS	UNITS	GW STND*	MW-11B																													
			April 2005	Oct. 2005	Oct. 2006	April 2007	Oct. 2007	April 2008	Oct. 2008		April 2009		Oct. 2009		April 2010		Oct. 2010		April 2011	Oct. 2011		April 2012		Oct. 2012		April 2013	
									Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered		Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
Aluminum as Al	mg/L	NA	0.44	1.1	0.82	0.51	21.5	0.793	0.411	0.0087 UF	14.1	0.0 U	1.55	0.0177 U	7.63 J	0.0333 B	3.02	0.0626 B	1.7	5.24	0.0986 B	2.22	0.0457 B	7.48	0.077 B	2.15	0.0095 U
Antimony as Sb	mg/L	0.003 #	0.01 U	PNA	PNA	0.005 U	0.0089 B	0.0044 U	0.0023 U	0.0023 UF	**0.0031 B**	0.0 U	0.0021 U	0.0021 U	0.0028 U	0.0028 U	0.0029 U	0.0029 U	0.0031 B	0.0022 U	0.0023 B	0.0016 B	0.0052 B	**0.0041 B**	0.0018 U	0.0012 U	0.0109 B
Arsenic as As	mg/L	0.025	0.005 U	0.005 U	0.008	0.007	**0.121**	0.0029 U	0.0056 B	0.0018 UF	0.0115	0.0 U	0.0023 U	0.0023 U	0.0028 U	0.0028 U	0.0027 U	0.0027 U	0.0019 U	0.0121	0.0018 U	0.0044 U	0.0044 U	0.0116	0.0015 U	0.0052 B	0.0028 B
Barium	mg/L	1	PNA	PNA	PNA	PNA	0.497	0.0346 B	0.0281 BE	0.0137 BF	0.134 B	0.0 B	0.0203 B	0.0083 B	0.0824 B	0.0104 B	0.0429 B	0.0076 B	0.0516 BE	0.164 B	0.0274 B	0.0297 B	0.0084 B	0.0944 B	0.012 B	0.0293 B	0.0096 B
Beryllium as Be	mg/L	0.003	0.001 U	PNA	PNA	0.001 U	0.0015 B	0.0001 U	0.000096 U	0.000096 UF	0.00055 B	0.0 U	0.00026 U	0.00026 U	0.00017 U	0.0002 U	0.00016 U	0.00016 U	0.0003 B	0.00013 U	0.00013 U	0.00012 U	0.00012 U	0.0002 B	0.00012 U	0.0001 U	0.0001 U
Boron as B	mg/L	1.0	0.86	PNA	PNA	0.15	0.0999 B	0.0219 B	0.0139 B	0.0148 BF	0.0219 B	0.0 B	0.0128 B	0.0122 B	0.0112 B	0.0128 B	0.0063 BJ	0.0074 B	0.074 BE	0.0351 BJ	0.0733 B	0.0083 B	0.0113 B	0.0301 B	0.0161 B	0.0151 B	0.0192 B
Cadmium as Cd	mg/L	0.005	**0.005**	PNA	PNA	0.005 U	0.00032 U	0.00027 U	0.00035 U	0.00035 UF	0.00023 U	0.0 U	0.00034 U	0.00034 U	0.0003 B	0.0002 U	0.0007 B	0.00025 U	0.00027 U	0.0016 B	0.00017 U	0.00018 U	0.00018 U	0.000087 U	0.000087 U	0.0001 U	0.0002 B
Calcium as Ca	mg/L	NA	70	36	68	72	37.8	12.3	10.5	10.3 F	27.1	21.70	6.18	5.33	22.5	19.50	11.3	9.12	113	46.1	42.3	5.48	4.69 U	21.5	6.44	14.9	14.2
Chromium as Cr	mg/L	0.05	0.005	PNA	PNA	0.012	**0.28**	0.0192	0.0137	0.0024 BF	**0.0018**	0.0 B	0.0156	0.00044 U	0.0276	0.0009 B	0.0147	0.0011 B	0.02	**0.0896**	0.035	0.0186	0.0017 B	**0.074 E**	0.0041 B	0.0313	0.0023 B
Cobalt	mg/L	NA	PNA	PNA	PNA	PNA	0.026 B	0.002 B	0.00097 B	0.00088 UF	0.009 B	0.0 U	0.0013 B	0.0012 U	0.0042 B	0.0012 U	0.0017 B	0.0013 U	0.0014 B	0.006 B	0.00044 U	0.0011 B	0.00052 U	0.0053 B	0.00028 U	0.0014 B	0.0004 U
Copper as Cu	mg/L	0.2	0.01 U	PNA	PNA	0.01	0.16	0.005 B	0.0053 B	0.00057 BF	0.0574	0.0 B	0.007 B	0.00083 U	0.0276	0.0054 B	0.0153 B	0.0036 B	0.0074 B	0.016 B	0.0007 B	0.008 B	0.0027 B	0.0365	0.0034 B	0.009 B	0.0004 U
Cyanide as CN	mg/L	0.20	0.02 U	PNA	PNA	0.02 U	PNA	0.01 U	0.01 U	PNA	0.01 U	PNA	PNA	PNA	0.01 U	PNA	PNA	PNA	0.01 U	PNA	PNA	0.01 U	PNA	PNA	PNA	0.01 U	PNA
Iron as Fe	mg/L	0.3	**140**	**85**	**75**	**44**	**34.7**	**18.1**	**14.3**	0.0294 BF	**36**	0.036 B	**5.8**	0.231	**14.2**	0.047 B	**5.89**	0.188	**2.29**	**50.4**	**0.433**	**5.01**	0.107	**36.2**	0.176	**12.7**	0.0487 B
Lead as Pb	mg/L	0.025	0.005 U	0.014	0.015	0.011	**0.191**	0.0051	0.0028 B	0.0013 UF	**0.0075**	0.0 B	0.0114	0.0018 U	**0.198 J**	0.0161	**0.0434**	0.0071	0.0106	**0.0343**	0.0083	**0.0275**	0.0077	**0.0525**	0.00096 U	**0.0254**	0.0031
Magnesium	mg/L	35 #	PNA	5.7	17	PNA	14.4	3.48	3.29 B	3.18 BF	9.74	5.3	2.34 B	1.73	4.02 B	1.6 B	2.79 B	1.39 B	12.6	11.8	10.9	2.46 B	1.64 B	8.71	2.18 B	4.49 B	3.8 B
Manganese as Mn	mg/L	0.3	**4.8**	**0.3**	**5.1**	**1.3**	**2.7**	**0.442**	0.257	0.0223 F	**1.66**	0.0793	0.137	0.0961	**0.945**	0.203	0.237	0.0811	0.0936	**4.82 EJ**	0.0408	0.0953	0.0298	**0.774**	0.0265	0.273	0.0276
Mercury as Hg	mg/L	0.0007	0.00025 U	0.00025 U	0.00025 U	0.00025 U	0.0001 U	0.0001 U	0.00013 U	0.00013 UF	0.00028	0.0 U	0.0001 U	0.0001 U	0.00012 B	0.0001 U	0.0001 U	0.0001 U	0.01 U	0.0001 U	0.0001 U	0.00014 B	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
Nickel as Ni	mg/L	0.1	0.01 U	PNA	PNA	0.01	**0.108**	0.011 B	0.0053 B	0.0037 BF	0.0352 B	0.0 B	0.009 B	0.0024 B	0.0117 B	0.0010 U	0.0079 B	0.0013 B	0.0072 B	0.0598	0.0051 B	0.0055 B	0.0007 B	0.031 B	0.0022 B	0.0081 B	0.0046 B
Potassium	mg/L	NA	PNA	PNA	PNA	PNA	7.15	2.52 B	2.25 B	2.4 BF	5.2 E	3.668	1.62 B	1.39 B	3 B	1.7 B	2.32 B	1.2 B	8.19	7.43	7.61 J	1.62 B	1.41 B	3.96 B	1.36 B	2.12 B	2.05 B
Selenium as Se	mg/L	0.01	0.004 U	PNA	PNA	0.004 U	0.0024 U	0.0043 U	0.002 B	0.0019 UF	0.0027 U	0.0 U	0.0025 U	0.0025 U	0.0042 U	0.0042 U	0.0032 U	0.0032 U	0.0026 U	0.0028 U	0.0028 U	0.0028 U	0.0035 B	0.0027 B	0.0021 U	0.0023 U	0.0153
Silver as Ag	mg/L	0.05	0.005 U	PNA	PNA	0.005 U	0.0029 B	0.00089 U	0.00054 U	0.00054 UF	0.0006 U	0.0 U	0.00083 U	0.00083 U	0.0005 U	0.0005 U	0.00043 U	0.00043 U	0.0006 B	0.00042 U	0.00042 U	0.00032 U	0.00032 U	0.00034 B	0.00029 U	0.0002 U	0.0002 U
Sodium as Na	mg/L	20	12	PNA	PNA	14	9.59	7.63	8.11	8.27 F	7.73	7.59	7.86	7.08	6.02	5.37	7.69	6.48	7.59	10.2	10.9	8.33	7.82	**24.4**	7.62	7.07	7.42
Thallium as Tl	mg/L	0.0005 #	0.004 U	PNA	PNA	0.005 U	**0.0141**	0.0025 U	0.0019 U	**0.0037 BF**	0.0033 U	0.0 U	0.0032 U	0.0032 U	0.0056 U	0.0056 U	0.0036 U	0.0036 U	0.0034 B	0.0034 U	0.0034 U	0.0032 U	0.0032 U	0.0029 U	0.0029 U	0.0019 U	0.0019 U
Vanadium	mg/L	NA	PNA	PNA	PNA	PNA	0.0848	0.0033 B	0.0022 B	0.00074 UF	0.0326 B	0.0 U	0.0037 B	0.0014 U	0.0155 B	0.0012 U	0.0078 B	0.0013 U	0.0058 B	0.0165 B	0.00021 U	0.0052 B	0.0004 B	0.0211 B	0.00018 U	0.006 B	0.0009 B
Zinc as Zn	mg/L	2 #	0.05	PNA	PNA	0.04	0.272	0.0156 B	0.0156 B	0.0228 F	0.156	0.0 B	0.0224	0.0084 B	0.0885	0.0040 B	0.0484	0.0098 B	0.03	0.0699	0.0103 B	0.0257	0.0029 B	0.124	0.017 B	0.0293	0.0091 B
Alkalinity tot CaCo3	mg/L	NA	340	110	360	270	25.5	36.7	34.4	PNA	61.8	PNA	20.2	PNA	69.6	PNA	26	PNA	301 D	163 D	PNA	12.8	PNA	16.5	PNA	47 D	PNA
Chloride as Cl	mg/L	250.0	9.0	7.0	2 U	13	10.8	10.2	10.3	PNA	10.1	PNA	9.29	PNA	6.91	PNA	9.58	PNA	6.44	8.72	PNA	10.4	PNA	11.6	PNA	10.5	PNA
Sulfate as SO4	mg/L	250.0	10	120	8	10	13.5	8.37	8.31	PNA	7.52	PNA	6.74	PNA	7.05 J	PNA	8.65	PNA	7.25	5 U	PNA	7.7	PNA	9.13	PNA	6.66	PNA
Bromide	mg/L	2 #	PNA	PNA	PNA	PNA	0.5 U	0.5 U	0.5 U	PNA	0.5 U	PNA	0.5 U	PNA	0.5 U	PNA	0.5 U	PNA	0.5 U	0.5 U	PNA	0.5 U	PNA	0.5 U	PNA	0.5 U	PNA
BOD5	mg/L	NA	18	12	9.4	6.4	3	14	2 U	PNA	3	PNA	2 U	PNA	2 U	PNA	2 U	PNA	2 U	2 U	PNA	2 U	PNA	2 U	PNA	2 U	PNA
COD	mg/L	NA	200	PNA	PNA	40 U	150	31.7	10 U	PNA	276	PNA	30.3	PNA	107	PNA	99	PNA	15.7	101	PNA	10 U	PNA	10 U	PNA	10 U	PNA
Color	units	NA	60	15	15	20	PNA	50	PNA	PNA	160	PNA	PNA	PNA	56	PNA	PNA	PNA	20	PNA	PNA	35	PNA	PNA	PNA	75 D	PNA
Chromium hex as Cr	mg/L	0.05	0.02 U	PNA	PNA	0.02 U	PNA	0.02 U	PNA	PNA	0.02 U	PNA	PNA	PNA	0.02 U	PNA	PNA	PNA	0.02 U	PNA	PNA	0.02 U	PNA	PNA	PNA	0.02 U	PNA
Hardness as CaC03	mg/L	NA	240	110	240	250	48	60	68	PNA	180	PNA	27	PNA	75	PNA	50 D	PNA	310 D	228 D	PNA	30	PNA	34	PNA	68 D	PNA
Ammonia as N	mg/L	2.0	**12**	0.43	**6.8**	0.24	0.1 U	0.1 U	0.1 U	PNA	0.21	PNA	0.36	PNA	0.15	PNA	0.16	PNA	0.1 U	0.19	PNA	0.1 U	PNA	0.1 U	PNA	0.1 U	PNA
Nitrite as N	mg/L	NA	PNA	PNA	PNA	PNA	PNA	0.1 U	0.1 U	PNA	PNA	PNA	0.1 U	PNA	0.1 U	PNA	0.1 U	PNA	0.1 U	0.1 U	PNA	0.1 U	PNA	0.1 U	PNA	0.1 U	PNA
Nitrate as N	mg/L	10	0.5 U	PNA	PNA	4.9	0.25	0.52	0.3	PNA	0.57	PNA	0.26	PNA	0.22	PNA	0.1 U	PNA	1.04	1.25	PNA	0.17	PNA	0.23	PNA	0.51	PNA
Phenols as Phenol	mg/L	0.001	**0.01**	0.001 U	0.002 U	**0.003**	0.005 U	0.005 U	0.005 U	PNA	0.005 U	PNA	5 U	PNA	0.005 U	PNA	0.005 U	PNA	0.005 U	0.005 U	PNA	0.005 U	PNA	0.005 U	PNA	0.005 U	PNA
Tot Dissolved Solids	mg/L	NA	340	PNA	PNA	400	85	83	75	PNA	120	PNA	83	PNA	104	PNA	60	PNA	360	175	PNA	56	PNA	58	PNA	89	PNA
Tot. Kjeldahl Nitrogen	mg/L	NA	17	PNA	PNA	4.4	2.3	0.79	0.8	PNA	72	PNA	0.75	PNA	1.88 J	PNA	1.37	PNA	0.31	3.15	PNA	0.44	PNA	0.74	PNA	0.65	PNA
Tot Organic Carbon	mg/L	NA	18	16	16	7.0	11.0	2.1	2.0	PNA	4.4	PNA	1 U	PNA	9.6	PNA	1.6	PNA	4.3	44.1	PNA	1 U	PNA	1 U	PNA	14.4	PNA
Turbidity	NTU	NA	2.7	580	460	250	300	112	120	PNA	954	PNA	1.000	PNA	>1.000	PNA	>1.000	PNA	60	347	PNA	60.2	PNA	61	PNA	126	PNA
Temperature	deg C	NA	15	15	15	14	14.5	14.22	13	PNA	12.89	PNA	13.88	PNA	13.06	PNA	7.13	PNA	13.73	13.18	PNA	13.84	PNA	13.57	PNA	13.35	PNA
pH	units	6.5-8.5	6.8	**6.0**	7.8	**6.5**	8.49	**5.81**	**6.13**	PNA	**6.3**	PNA	**5.76**	PNA	7.13	PNA	12.72	PNA	**4.81**	**6.47**	PNA	**6.02**	PNA	6.51	PNA	7.52	PNA
Spec. Cond	umho/cm	NA	610	230	700	590	PNA	PNA	103	PNA	356	PNA	371	PNA	204	PNA	89	PNA	565	90	PNA	95	PNA	112	PNA	167	PNA

NOTES:

* NYSDEC Class GA Groundwater Standards

6 NYCRR Part 703

Guidance value, no standard exists

NA Not available

PNA parameter not analyzed for

B - This flag is used when the analyte is found in the associated blank, as in the sample

E - This flag identified compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis

F - This flag indicates the results of a filtered metal analysis

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

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

UJ - 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

R - The sample results are unusable/unusable. The presence or absence of the analyte cannot be verified

1.0 = Compound exceeded standard.

1.0 = Compound at standard.

NM - Not Monitored

TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
April 2013

ANALYTICAL PARAMETERS	UNITS	GW STND*	MW-12A																													
			April 2005		Oct. 2005		April 2006		Oct. 2006		April 2007		Oct. 2007		April 2008		Oct. 2008		April 2009				Oct. 2009		April 2010				Oct. 2010		April 2011			
																			Unfiltered		Filtered		Unfiltered		Unfiltered		Filtered			Unfiltered		Filtered	
Aluminum as Al	mg/L	NA	0.11		0.09		0.31		0.17		0.21		PNA		0.1	B	PNA		0.0245	B	0.0	U	PNA		PNA		0.389		0.0196	U	PNA		0.225		0.107	B
Antimony as Sb	mg/L	0.003 #	0.005	U	PNA		0.005	U	PNA		0.005	U	PNA		0.0	U	PNA		0.0027	U	0.0	U	PNA		PNA		0.0028	U	0.0028	U	PNA		0.0021	U	0.0022	B
Arsenic as As	mg/L	0.025	**0.031**		0.005	U	0.021		0.008		0.013		PNA		0.0	B	PNA		0.0028	U	0.0	U	PNA		PNA		0.0216		0.0028	U	PNA		0.0141		0.0019	U
Barium	mg/L	1	PNA		PNA		PNA		PNA		PNA		PNA		0.0	B	PNA		0.0427	B	0.0	B	PNA		PNA		0.0815	B	0.0368	B	PNA		0.0747	BE	0.0640	B
Beryllium as Be	mg/L	0.003	0.001	U	PNA		0.001	U	PNA		0.001	U	PNA		0.0	B	PNA		0.00016	U	0.0	U	PNA		PNA		0.00017	U	0.0002	U	PNA		0.00013	U	0.00017	B
Boron as B	mg/L	1.0	0.18		PNA		0.06		PNA		0.1		PNA		0.0	B	PNA		0.0462	B	0.0	B	PNA		PNA		0.0307	B	0.0336	B	PNA		0.0721	BE	0.0794	B
Cadmium as Cd	mg/L	0.005	0.005	U	PNA		0.005	U	PNA		0.005	U	0.00032	U	0.00027	U	0.00035	U	0.00027	B	0.0	U	0.00034	U	0.00034	U	0.00024	U	0.0002	U	0.00025	U	0.00027	U	0.00035	B
Calcium as Ca	mg/L	NA	29		14		22		32		42		15.9		10.9		19.1		25.8		27.10		22.9		22.8		17.5		16.40		16.1		25		25.2	
Chromium as Cr	mg/L	0.05	0.005	U	PNA		0.011		PNA		0.011		PNA		0.0	B	PNA		0.0011	B	0.0	B	PNA		PNA		0.0135		0.0006	B	PNA		0.0127		0.0138	B
Cobalt	mg/L	NA	PNA		PNA		PNA		PNA		PNA		PNA		0.0	B	PNA		0.0012	B	0.0	B	PNA		PNA		0.0083	B	0.0042	B	PNA		0.0072	B	0.0052	B
Copper as Cu	mg/L	0.2	0.01		PNA		0.01	U	PNA		0.01		PNA		0.0	B	PNA		0.0016	B	0.0	B	PNA		PNA		0.0083	B	0.0049	B	PNA		0.005	B	**0.262**	
Cyanide as CN	mg/L	0.20	0.02	U	PNA		0.02	U	PNA		0.02	U	PNA		0.0	U	PNA		0.1	U	PNA		PNA		PNA		0.01	U	PNA		PNA		0.01	U	PNA	
Iron as Fe	mg/L	0.3	**19**		**16**		**29**		**8.8**		**19**		**2.96**		**13.8**		**0.804**		**2.74**		0.220		**5.08**		0.0902	B	**28.4**		0.041	B	**0.537**		**16.8**		**4.730**	
Lead as Pb	mg/L	0.025	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.0014	U	0.0023	U	0.0013	U	0.0015	U	0.0	U	0.0018	U	0.0018	U	0.013		0.0194		0.012		0.0025	B	0.0121	B
Magnesium	mg/L	35 #	PNA		3.9		PNA		9.3		PNA		4.93B		3.5	B	6.98		9.82		10.3		7.64		7.56		4.94	B	4.7	B	4.4	B	7.51		7.61	
Manganese as Mn	mg/L	0.3	**0.7**		**0.34**		**1.2**		**1.1**		**1.7**		0.194		0.125		0.217		0.15		0.16		0.179		0.179		**2.86**		**2.30**		**1.6**		**3.9**		**3.630**	
Mercury as Hg	mg/L	0.0007	0.00025	U	0.00025	U	0.00025	U	0.00025	U	0.00025	U	PNA		0.0	U	PNA		0.0001	U	0.0	U	PNA		PNA		0.0001	U	0.0001	U	PNA		0.0001	U	0.0001	U
Nickel as Ni	mg/L	0.1	0.01	U	PNA		0.01		PNA		0.02		PNA		0.0	B	PNA		0.0036	B	0.0	B	PNA		PNA		0.0089	B	0.0025	B	PNA		0.0153	B	0.0369	B
Potasium	mg/L	NA	PNA		PNA		PNA		PNA		PNA		PNA		4.64	B	2.55	B	3.31	B	4.87	BE	5.1		3.26	B	3.34	B	3.31	B	2.8	B	6.36		9.9		10.2	
Selenium as Se	mg/L	0.01	0.004	U	PNA		0.004	U	PNA		0.004	U	PNA		0.0	U	PNA		0.0027	U	0.0	U	PNA		PNA		0.0042	U	0.0042	U	PNA		0.0026	U	0.0026	U
Silver as Ag	mg/L	0.05	0.005	U	PNA		0.005	U	PNA		0.005	U	PNA		0.0	U	PNA		0.0006	U	0.0	U	PNA		PNA		0.0005	U	0.0005	U	PNA		0.00073	B	0.00052	U
Sodium as Na	mg/L	20	14		PNA		12		PNA		17		8.46		8.94		11.7		12		12.60		11.3		10.9		10.3		9.08		11		13.1		15.00	
Thallium as Tl	mg/L	0.0005 #	0.005	U	PNA		0.005	U	PNA		0.005	U	PNA		0.0	U	PNA		0.0033	U	0.0	U	PNA		PNA		0.0056	U	0.0056	U	PNA		0.0027	U	0.0027	U
Vanadium	mg/L	NA	PNA		PNA		PNA		PNA		PNA		PNA		0.0	B	PNA		0.0025	B	0.0	U	PNA		PNA		0.0136	B	0.0012	U	PNA		0.0121	B	0.0045	B
Zinc as Zn	mg/L	2 #	0.03		PNA		0.02		PNA		0.02		PNA		0.0	B	PNA		0.0163	B	0.0	B	PNA		PNA		0.0201		0.0030	B	PNA		0.0094	B	0.404	
Alkalinity tot CaCo3	mg/L	NA	88		44		68		110		130		36		27		57.8		78		PNA		69.9		PNA		54.2		PNA		50	D	94	D	PNA	
Chloride as Cl	mg/L	250.0	13		12		11		16		20		12.1		11		14.3		14.2		PNA		11.4		PNA		10.2		PNA		12.8		11.2		PNA	
Sulfate as SO4	mg/L	250.0	55		27		24		35		34		20		17.3		26		28.8		PNA		21.7		PNA		21.6		PNA		20.3		22.8		PNA	
Bromide	mg/L	2 #	PNA		PNA		PNA		PNA		PNA		0.5	U	0.5	U	0.5	U	0.5	U	PNA		0.5	U	PNA		0.5	U	PNA		0.5	U	0.5	U	PNA	
BOD5	mg/L	NA	2.6		2.5		2	U	2.3		4.8		2		13		2	U	2	U	PNA		2	U	PNA		2	U	PNA		2	U	3		PNA	
COD	mg/L	NA	60		PNA		40	U	PNA		40	U	10	U	10	U	10	U	10	U	PNA		10	U	PNA		10	U	PNA		10	U	10	U	PNA	
Color	units	NA	5	U	5	U	10		5	U	10		PNA		70		PNA		30		PNA		PNA		PNA		40		PNA		PNA		40		PNA	
Chromium hex as Cr	mg/L	0.05	0.02	U	PNA		0.02	U	PNA		0.02	U	PNA		0.0	U	PNA		0.02	U	PNA		PNA		PNA		<0.02	U	PNA		PNA		0.02	U	PNA	
Hardness as CaC03	mg/L	NA	110		51		85		120		150		61		60		52		190		PNA		90		PNA		75		PNA		62		105	D	PNA	
Ammonia as N	mg/L	2.0	**2.2**		0.07		0.19		0.14		1.0		0.1	U	0.1	U	0.1	U	1.09		PNA		0.1	U	PNA		0.36		PNA		1.0		**2.86**		PNA	
Nitrite as N	mg/L	NA	PNA		PNA		PNA		PNA		PNA		PNA		0.1	U	0.1	U	PNA		PNA		0.1	U	PNA		0.1	U	PNA		0.1	U	0.1	U	PNA	
Nitrate as N	mg/L	10	1.5		PNA		1.6		PNA		1.6		0.86		0.6		0.66		0.78		PNA		1.41		PNA		0.24		PNA		0.96		0.74		PNA	
Phenols as Phenol	mg/L	0.001	0.001	U	0.001	U	0.001	U	**0.001**		0.001	U	0.005	U	0.005	U	0.005	U	0.005	U	PNA		0.005	U	PNA		0.005	U	PNA		0.005	U	0.005	U	PNA	
Tot Dissolved Solids	mg/L	NA	170		PNA		150		PNA		300		112		92		126		170		PNA		133		PNA		122		PNA		109		160		PNA	
Tot. Kjeldahl Nitrogen	mg/L	NA	0.6		PNA		0.4		PNA		5.6		1.66		0.19		0.31		0.97		PNA		0.7		PNA		0.65		PNA		1.69		3.63		PNA	
Tot Organic Carbon	mg/L	NA	2.1		1.5		2.5		3.4		2.7		1.4		1.5		1.1		1.9		PNA		1	U	PNA		1.5		PNA		1.5		2.3		PNA	
Turbidity	NTU	NA	5.2		62		140		35		22		12.8		44.2		13.5		115		PNA		71.5		PNA		338		PNA		4.9		PNA		PNA	
Temperature	deg.C	NA	15		14		14		14		13		12.7		13.46		12.94		12.29		PNA		11.97		PNA		12.67		PNA		12.3		PNA		PNA	
pH	units	6.5-8.5	6.6		**6.5**		**6.3**		7.6		6.6		6.82		**5.82**		**6.17**		**6.38**		PNA		**5.8**		PNA		**6.03**		PNA		**6.40**		PNA		PNA	
Spec. Cond	umho/cm	NA	240		150		200		270		390		PNA		PNA		167		225		PNA		275		PNA		208		PNA		145		PNA		PNA	

ANALYTICAL PARAMETERS	UNITS	GW STND*	MW-12A																													
			Oct. 2011		April 2012				Oct. 2012		April 2013																					
					Unfiltered		Filtered				Unfiltered				Filtered																	
Aluminum as Al	mg/L	NA	PNA		0.0548	B	0.0391	B	PNA		0.09	B	0.0214	B																		
Antimony as Sb	mg/L	0.003 #	PNA		0.0011	U	0.0013	B	PNA		0.0012	U	0.0012	U																		
Arsenic as As	mg/L	0.025	PNA		0.0044	U	0.0044	U	PNA		0.0064	B	0.0028	U																		
Barium	mg/L	1	PNA		0.0535	B	0.0475	B	PNA		0.0465	B	0.0421	B																		
Beryllium as Be	mg/L	0.003	PNA		0.00012	U	0.00012	U	PNA		0.0001	U	0.0001	U																		
Boron as B	mg/L	1.0	PNA		0.0695	B	0.0692	B	PNA		0.0479	B	0.0491	B																		
Cadmium as Cd	mg/L	0.005	0.00017	U	0.00018	U	0.00018	U	0.000087	U	0.0001	U	0.0001	U																		
Calcium as Ca	mg/L	NA	15.8		26.3		24.3		46.4		25.1		25.1																			
Chromium as Cr	mg/L	0.05	PNA		0.0038	B	0.0014	B	PNA		0.0063	B	0.0018	B																		
Cobalt	mg/L	NA	PNA		0.0062	B	0.0051	B	PNA		0.0043	B	0.0036	B																		
Copper as Cu	mg/L	0.2	PNA		0.0016	B	0.0009	B	PNA		0.0025	B	0.0025	B																		
Cyanide as CN	mg/L	0.20	PNA		0.01	U	PNA		PNA		0.01	U	PNA																			
Iron as Fe	mg/L	0.3	**2.61**		**2.06**		0.134		**10.3**		**6.78**		0.236																			
Lead as Pb	mg/L	0.025	0.0079		0.0046		0.0056		0.00096	U	0.0042		0.0056																			
Magnesium	mg/L	35 #	3.93	B	7.27		6.8		12.5		6.79		6.73																			
Manganese as Mn	mg/L	0.3	**1.98**	E	**4.3**		**3.86**		**5.93**		**3.72**		**3.61**																			
Mercury as Hg	mg/L	0.0007	PNA		0.0001	U	0.00017	B	PNA		0.0001	U	0.0001	U																		
Nickel as Ni	mg/L	0.1	PNA		0.0084	B	0.0071	B	PNA		0.0105	B	0.0066	B																		
Potasium	mg/L	NA	5.78		8.16		7.58		8.7		6.34		6.28																			
Selenium as Se	mg/L	0.01	PNA		0.0028	U	0.0028	U	PNA		0.0023	U	0.0023	U																		
Silver as Ag	mg/L	0.05	PNA		0.0005	B	0.00037	B	PNA		0.00022	B	0.00045	B																		
Sodium as Na	mg/L	20	10.1		12.8		11.8		**21**		9.97		9.7																			
Thallium as Tl	mg/L	0.0005 #	PNA		0.0032	U	0.0032	U	PNA		0.0019	B	0.0019	U																		
Vanadium	mg/L	NA	PNA		0.0016	B	0.00023	U	PNA		0.0033	B	0.0003	U																		
Zinc as Zn	mg/L	2 #	PNA		0.0016	B	0.0071	B	PNA		0.0172	B	0.0104	B																		
Alkalinity tot CaCo3	mg/L	NA	52.8	D	97	D	PNA		67.8	D	85.4	D	PNA																			
Chloride as Cl	mg/L	250.0	10.9		36.6		PNA		11.7		11.9		PNA																			
Sulfate as SO4	mg/L	250.0	14		19		PNA		20.1		19.4		PNA																			
Bromide	mg/L	2 #	0.5	U	0.5	U	PNA		0.5	U	0.5	U	PNA																			
BOD5	mg/L	NA	2	U	2	U	PNA		2	U	2	U	PNA																			
COD	mg/L	NA	10	U	10	U	PNA		10	U	10	U	PNA																			
Color	units	NA	PNA		20		PNA		PNA		75	D	PNA																			
Chromium hex as Cr	mg/L	0.05	PNA		0.02	U	PNA		PNA		0.02	U	PNA																			
Hardness as CaC03	mg/L	NA	86	D	104	D	PNA		88	D	116	D	PNA																			
Ammonia as N	mg/L	2.0	0.85		1.82		PNA		0.94		1.56		PNA																			
Nitrite as N	mg/L	NA	0.1	U	0.1	U	PNA		0.1	U	0.1	U	PNA																			
Nitrate as N	mg/L	10	0.51		0.74		PNA		0.84		0.34		PNA																			
Phenols as Phenol	mg/L	0.001	0.005	U	0.005	U	PNA		0.005	U	0.005	U	PNA																			
Tot Dissolved Solids	mg/L	NA	95		144		PNA		125		140		PNA																			
Tot. Kjeldahl Nitrogen	mg/L	NA	1.24		3.38		PNA		1.42		1.89		PNA																			
Tot Organic Carbon	mg/L	NA	15.4		1	U	PNA		1.2		22.3		PNA																			
Turbidity	NTU	NA	54.3		60.5		PNA		36.1		81.5		PNA																			
Temperature	deg.C	NA	13.86		13.05		PNA		12.76		12.86		PNA																			
pH	units	6.5-8.5	**5.78**		**6.12**		PNA		**6.43**		7.53		PNA																			
Spec. Cond	umho/cm	NA	199		325		PNA		241		286		PNA																			

NOTES:

* = NYSDEC, Class GA Groundwater Standards
6 NYCRR Part 703

= Guidance value, no standard exists

NA = Not available

PNA = parameter not analyzed for

B = This flag is used when the analyte is found in the associated blank as in the sample

E - This flag identified compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis

F - This flag indicates the results of a filtered metal analysis

J - The analyte was positively identified, the associated numerical value is the approximate concentration of the analyte in the sample

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

UJ - 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

R - The sample results are unreliable/unusable. The presence or absence of the analyte cannot be verified

1.0 = Compound exceeded standard.

1.0 = Compound at standard.

NM = Not Monitored

TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 1
INORGANIC GROUNDWATER QUALITY RESULTS
April 2013

ANALYTICAL PARAMETERS	UNITS	GW STND*	MW-12B																			
			April 2005	Oct. 2005	April 2006	Oct. 2006	April 2007	Oct. 2007	April 2008	Oct. 2008	April 2009	Oct. 2009	April 2010	Oct. 2010	April 2011	Oct. 2011	April 2012 Unfiltered	April 2012 Filtered	Oct. 2012	April 2012
Aluminum as Al	mg/L	NA	0.26	0.45	0.07	0.1	0.14	PNA	0.6	PNA	0.0955 B	0.14 B	0.34	PNA	0.0656 B	PNA	1.61	0.0362 B	PNA	0.0161 B
Antimony as Sb	mg/L	0.003 #	0.005 U	PNA	0.005 U	PNA	0.005 U	PNA	0.0 U	PNA	0.0027 U	0.0021 U	0.0028 U	PNA	0.0041 B	PNA	0.0015 B	0.0011 U	PNA	0.0018 B
Arsenic as As	mg/L	0.025	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	PNA	0.0 U	PNA	0.0028 U	0.0023 U	0.0028 U	PNA	0.0019 U	PNA	0.0044 U	0.0044 U	PNA	0.0028 U
Barium	mg/L	1	PNA	PNA	PNA	PNA	PNA	PNA	0.0 B	PNA	0.0333 B	0.114 B	0.0286 B	PNA	0.0141 BE	PNA	0.16 B	0.137 B	PNA	0.0977 B
Beryllium as Be	mg/L	0.003	0.001 U	PNA	0.001 U	PNA	0.001 U	PNA	0.0 B	PNA	0.00016 U	0.00026 U	0.00017 U	PNA	0.00013 U	PNA	0.00012 U	0.00012 U	PNA	0.0001 U
Boron as B	mg/L	1.0	0.07	PNA	0.02	PNA	0.01	PNA	0.1 B	PNA	0.0591 B	0.106	0.0188 B	PNA	0.0111 BE	PNA	0.103	0.101	PNA	0.0743 B
Cadmium as Cd	mg/L	0.005	0.005 U	PNA	0.005 U	PNA	0.005 U	0.00032 U	0.00027 U	0.00035 U	0.00023 U	0.00034 U	0.00024 U	0.00025 U	0.00027 U	0.00017 U	0.00018 U	0.00018 U	0.000087 U	0.0001 U
Calcium as Ca	mg/L	NA	15	10	8.9	8.9	11	8.18	24.8	18.1	23.8	32.5	8.67	6.32	8.22	15.8	41.6	39.2	25.1	25.2
Chromium as Cr	mg/L	0.05	0.047	PNA	0.011	PNA	0.022	PNA	0.0201	PNA	0.0027 B	0.0029 B	0.0086 B	PNA	0.0014 B	PNA	0.0397	0.0013 B	PNA	0.0014 B
Cobalt	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA	0.0 U	PNA	0.0012 U	0.0012 U	0.0012 U	PNA	0.00049 U	PNA	0.0033 B	0.0007 B	PNA	0.0004 U
Copper as Cu	mg/L	0.2	0.04	PNA	0.01	PNA	0.03	PNA	0.0 B	PNA	0.0015 B	0.0032 B	0.0069 B	PNA	0.00055 U	PNA	0.0109 B	0.002 B	PNA	0.0016 B
Cyanide as CN	mg/L	0.20	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	0.0 U	PNA	0.01 U	PNA	0.01 U	PNA	0.01 U	PNA	0.01 U	PNA	PNA	0.01 U
Iron as Fe	mg/L	0.3	**4.8**	**4.1**	**1**	**1.1**	**2.3**	0.235	**2.52**	0.138	**0.4**	**0.565**	**1**	0.216	0.182	0.0516 U	**4.91**	0.027 B	0.103	0.0274 B
Lead as Pb	mg/L	0.025	0.006	0.009	0.005 U	0.005 U	0.005 U	0.0014 U	0.0023 U	0.0013 U	0.0017 B	0.0018 U	0.0239	0.0094	0.0015 U	0.0078	0.0144	0.0078	0.0011 B	0.0055
Magnesium	mg/L	35 #	PNA	2.8	PNA	2.8	PNA	4.32 B	11.1	7.09	13.2	11.1	2.46 B	1.76 B	2.56 B	5.49	12.3	11.6	8.33	7.03
Manganese as Mn	mg/L	0.3	0.17	0.11	0.09	0.11	0.07	0.0052 B	0.0263	0.0083 B	0.0152	0.0348	0.199	0.0346	0.0102 B	0.0057 BE	**0.92**	**0.818**	0.112	0.124
Mercury as Hg	mg/L	0.0007	0.00025 U	0.00025 U	0.00025 U	0.00025 U	0.00025 U	PNA	0.0 U	PNA	0.0001 U	PNA	0.0001 U	PNA	0.0001 U	PNA	0.0001 U	0.0001 U	PNA	0.0001 U
Nickel as Ni	mg/L	0.1	0.05	PNA	0.01	PNA	0.03	PNA	0.0 B	PNA	0.0075 B	0.0096 B	0.0089 B	PNA	0.0014 B	PNA	0.0386 B	0.0181 B	PNA	0.0085 B
Potasium	mg/L	NA	PNA	PNA	PNA	PNA	PNA	0.832 B	3.48 B	2.02 B	2.25 BE	10.5	4.83 B	3.94 B	2.28 B	0.77 B	10.7	10.1	6.64	10 U
Selenium as Se	mg/L	0.01	0.004 U	PNA	0.004 U	PNA	0.004 U	PNA	0.0 U	PNA	0.0027 U	0.0025 U	0.0042 U	PNA	0.0026 U	PNA	0.0028 U	0.0031 BJ	PNA	0.0023 U
Silver as Ag	mg/L	0.05	0.005 U	PNA	0.005 U	PNA	0.005 U	PNA	0.0 U	PNA	0.0006 U	0.00083 U	0.0005 U	PNA	0.00052 U	PNA	0.00032 U	0.00032 U	PNA	0.00023 B
Sodium as Na	mg/L	20	10	PNA	7.9	PNA	9.5	6.68	12.8	10	14.2	16.5	8.47	8.22	8.96	11.8	19.2	19.9	13.4	11 U
Thallium as Tl	mg/L	0.0005 #	0.005 U	PNA	0.005 U	PNA	0.005 U	PNA	0.0 U	PNA	0.0033 U	0.0032 U	0.0056 U	PNA	0.0028 B	PNA	0.0032 U	0.0032 U	PNA	0.0019 U
Vanadium	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA	0.0 B	PNA	0.0014 B	0.0014 U	0.0029 B	PNA	0.0014 B	PNA	0.0096 B	0.0008 B	PNA	0.0012 B
Zinc as Zn	mg/L	2 #	0.04	PNA	0.01	PNA	0.03	PNA	0.0 B	PNA	0.0173 B	0.0095 B	0.0142 B	PNA	0.0128 B	PNA	0.0109 B	0.0035 B	PNA	0.0073 B
Alkalinity tot CaCo3	mg/L	NA	40	42	30	34	32	25.6	91.8	55	69.6	110	25.7	19 D	208	41.7	147 D	PNA	50.1 D	82.6 D
Chloride as Cl	mg/L	250.0	13	8	11	8	11	10.2	14.3	12.2	17.5	17.3	10.6	9.85	8.01	13.7	24.1	PNA	10.9	14.7
Sulfate as SO4	mg/L	250.0	32	14	11	16	15	11 U	22	17.5	43.7	46.7	10.6	8.47	8.56	19.9	47.2	PNA	20.1	29.3
Bromide	mg/L	2 #	PNA	PNA	PNA	PNA	PNA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	PNA	0.5 U	0.5 U
BOD5	mg/L	NA	4.0	7.5	2 U	9.6	4.3	2 U	13	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	PNA	2 U	2 U
COD	mg/L	NA	40	PNA	40 U	PNA	40 U	10 U	16.9	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	PNA	10 U	10 U
Color	units	NA	5 U	5 U	10	5 U	10	PNA	20	PNA	5	PNA	10	PNA	5 U	PNA	20	PNA	PNA	5 U
Chromium hex as Cr	mg/L	0.05	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	0.0 U	PNA	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	0.02 U	PNA	PNA	0.02 U
Hardness as CaC03	mg/L	NA	58	37	34	34	41	39	100	84	160	130	33	26 D	28 D	68 D	158 D	PNA	68 D	94 D
Ammonia as N	mg/L	2.0	0.22	0.05 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.14	0.1 U	0.35	0.1 U	0.1 U	0.1 U	**2.52**	PNA	1.15	**2.44**
Nitrite as N	mg/L	NA	PNA	PNA	PNA	PNA	PNA	PNA	0.1 U	0.1 U	PNA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	PNA	0.1 U	0.1 U
Nitrate as N	mg/L	10	0.5 U	PNA	0.5 U	PNA	0.5	0.63	1.02	0.56	0.25	0.43	0.71	0.42	0.63	0.71	0.1 U	PNA	2.07 D	1.17
Phenols as Phenol	mg/L	0.001	0.001 U	**0.002**	**0.006**	**0.001**	0.001 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	PNA	0.005 U	0.005 U
Tot Dissolved Solids	mg/L	NA	120	PNA	93	PNA	160	95	168	104	173	217	72	56	69	97	246	PNA	117	164
Tot. Kjeldahl Nitrogen	mg/L	NA	1.0	PNA	0.4	PNA	1.6	0.1 U	1.06	0.22	0.29	4.94	0.35	0.26	0.5 UD	0.19	4.6	PNA	1.32 D	3.99
Tot Organic Carbon	mg/L	NA	5.5	3.6	2.1	11	3.1	1 U	2	1 U	1.7	2.3	1 U	1 U	1 U	11.4	2.4	PNA	1 U	20.6
Turbidity	NTU	NA	2.4	30	7.0	13.0	15	6.62	38.7	13.5	17.4	23.6	6.4	18.1	PNA	12.7	100	PNA	0	1.32
Temperature	deg.C	NA	15	13	13	14	13	12.3	12.9	12.94	11.79	11.7	12.27	11.96	PNA	13.76	14.05	PNA	12.45	13.85
pH	units	6.5-8.5	**6.3**	6.6	**6.1**	7.3	6.8	6.96	**5.84**	**6.17**	**6.2**	**5.55**	**6**	**6.16**	PNA	**5.95**	**6.12**	PNA	6.58	7.67
Spec. Cond	umho/cm	NA	330	120	150	120	190	PNA	PNA	167	224	999	130	82	PNA	195	455	PNA	226	2

NOTES:

* = NYSDEC. Class GA Groundwater Standards
6 NYCRR Part 703

= Guidance value, no standard exists.

NA = Not available.

PNA = parameter not analyzed for.

B = This flag is used when the analyte is found in the associated blank as in the sample.

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

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

UJ - 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.

R - The sample results are unreliable/unusable. The presence or absence of the analyte cannot be verified.

1.0 = Compound exceeded standard.

1.0 = Compound at standard.

NM = Not Monitored

TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 2
ORGANIC GROUNDWATER QUALITY RESULTS
April 2013

Parameters	Units	GW Standard*	MW-1A		MW-1B		MW-1C		MW-3A		MW-3B		MW-3C		MW-4A		MW-4B		MW-4C		MW-11A		MW-11B		MW 12A		MW 12B	
Chloromethane	mg/L	NA	5	U	5	UJ	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Vinyl chloride	mg/L	0.002	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Bromomethane	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Chloroethane	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Acrylonitrile	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Trichlorofluoromethane	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethene	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Iodomethane	mg/L	NA	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Vinyl acetate	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Acetone	mg/L	NA	5	U	5	UJ	5	U	5	U	5	U	5	U	5	U	5	U	5	U	3	BJ	5	U	5	U	5	U
Carbon disulfide	mg/L	NA	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Methylene chloride	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
trans-1,2-Dichloroethene	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethane	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
cis-1,2-Dichloroethene	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Butanone	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Bromochloromethane	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Chloroform	mg/L	0.007	5	U	3	J	2	J	5	U	5	U	5	U	5	U	5	U	5	U	5	U	2	J	5	U	5	U
1,1,1-Trichloroethane	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Carbon tetrachloride	mg/L	0.005	5	U	5	UJ	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Benzene	mg/L	0.001	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dichloroethane	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Trichloroethene	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dichloropropane	mg/L	0.001	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Dibromomethane	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Bromodichloromethane	mg/L	NA	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
cis-1,3-Dichloropropene	mg/L	0.0004	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
4-Methyl-2-pentanone	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Toluene	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
trans-1,3-Dichloropropene	mg/L	0.0004	0.4	U	0.4	UJ	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
1,1,2-Trichloroethane	mg/L	0.001	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Tetrachloroethene	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Hexanone	mg/L	NA	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Dibromochloromethane	mg/L	0.005	5	U	5	UJ	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dibromoethane	mg/L	NA	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Chlorobenzene	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	2	J	5	U	5	U	5	U	5	U	5	U
trans-1,4-Dichloro-2-butene	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Ethylbenzene	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
1,1,1,2 Tetrachloroethane	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Xylene (total)	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Styrene	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Bromoform	mg/L	NA	5	U	5	UJ	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	mg/L	0.005	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
1,4-Dichlorobenzene	mg/L	0.003	3	U	3	U	3	U	3	U	3	U	3	U	3	U	2	J	3	U	3	U	3	U	3	U	3	U
1,2-Dichlorobenzene	mg/L	0.003	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U
1,2-Dibromo-3-chloropropane	mg/L	0.0004	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U

NOTES:

@ = A compound is presented if it has been detected in one or more locations

* = New York State Department of Environmental Conservation. Class GA Groundwater Standards. 6 NYCRR Part 703

^ Standard was taken for total phenols

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

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

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

Indicates compound is at the standard

Indicates compound exceeds the standard

= Guidance Value, no standard exists

NM = Not Monitored

TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL
TABLE 3
LEACHATE QUALITY RESULTS
April 2013

Analytical Parameter	Leachate Collection (Primary)																	Leachate Detection (Secondary)															
Units mg/L	April 2005	October 2005	April 2006	October 2006	April 2007	October 2007	April 2008	October 2008	April 2009	October 2009	April 2010	October 2010	April 2011	October 2011	April 2012	October 2012	April 2013	April 2005	October 2005	April 2006	October 2006	April 2007	October 2007	April 2008	October 2008	April 2009	October 2009	April 2010	October 2010	April 2011	October 2011	April 2012	October 2012	April 2013
Arsenic as As	NA	NA	NA	NA	NA	0.0398	0.0407	0.0021	0.0028B	0.158	<0.0028	<0.0027	0.0023 B	0.0048 B	< 0.0044	0.0048 B	<0.0028	NA	NA	NA	NA	NA	0.217	0.102	0.0148	<0.0028	0.0875	<0.0028	<0.0027	< 0.0019	0.0036 B	< 0.0044	0.0074 B	0.0035 B
Cadmium as Cd	<0.025	<0.005	<0.005	<0.005	<0.005	0.0012B	0.0014 B	< 0.00035	<0.00023	0.0034	<0.00024	<0.00025	0.001 B	< 0.00017	0.0002 B	<0.000087	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.00032	0.0011 B	< 0.00035	<0.00023	<0.00034	<0.00024	<0.00025	< 0.00027	< 0.00017	< 0.00018	<0.000087	<0.0001
Calcium as Ca	82	59	160	110	99	115	99.8	73.1	69.8	291	57.4	80.9	68	70.3	72	100	71.6	83	61	95	82	75	583	117	111	71.5	142	63	104	67.8	85.5	74.6	150	68.8
Iron as Fe	39	1.7	67	38	41	115	422	36.9	47	2930	25.8	33.5	21.2	42.1	36.1	25.7	13.6	0.25	0.35	0.73	0.2	11	496	127	20.2	0.957	101	5.71	0.692	0.99	0.573	0.147	5.41	14.2
Lead as Pb	<0.025	<0.005	0.007	<0.005	<0.005	0.0764	<0.0023	0.0014 B	<0.0015	0.116	0.0071	<0.0017	0.0066	< 0.0033	0.0089	<0.00096	0.0058	<0.005	<0.005	<0.005	<0.005	<0.005	0.108	0.0272	0.0044	0.00248	3.06	0.0173	0.0164	< 0.0015	0.0113	0.0108	0.0024 B	0.0033
Magnesium as Mg	22	6.8	26	28	21	46.7	20.6	19.1	17.1	37.6	12.6	18.9	17.9	14	17	33.7	21.4	14	5.8	9.4	8	11	48.7	11.9	15.3	10	18.5	7.52	12.3	11.3	12.8	10.7	25.9	8.08
Manganese as Mn	3.4	0.4	3.6	2.9	3.2	3.11	4.97	3.05	3.09	167	2.83	2.01	2.03	2.66	2.94	2.59	2.05	3.5	0.02	0.38	0.02	0.79	6.06	3.24	2.43	0.368	2.92	4.31	0.436	0.991	0.727 E	0.163	2.33	5.71
Potassium as K	85	25	810	140	96	236	78.2	71.9	60.1	141	48.9	83.7	67.4	41.3	67.7	160	86.1	58	17	39	19	36	214	20.5	32.3	10.7E	43.6	16.2	35.3	35.6	35.8	22.4	109	134 E
Sodium as Na	180	10	170	250	170	506	146	141	123	328	99.4	186	137	99.4	148	419	186	94	6.1	49	11	52	455	39	61.3	17.6	84.5	27.4	55.7	62.1	66.8	21.2	283	176
Alkalinity total CaCO3	1100	140	980	1300	980	2710	884	778	653	1640	656	820	771	605	808 D	1,860 D	948 D	570	130	300	210	480	2000	438	389	202	489	256	340	350 D	386 D	204 D	986 D	236 D
BOD5	NA	NA	NA	NA	NA	68	96	17	53	117	9	47	20	15	< 2	31	21	NA	NA	NA	NA	NA	NA	NA	257	42	556	<10	10	16	16	< 2	47	< 2
COD	180	220	210	240	150	629	456	178	69.2	549	62.8	163	125	94.4	141	382 D	148 D	120	380	<40	50	70	2600	257	138	154	743	<10	56.1	69.3	75.7	35.7	181 D	31.1
Chloride as Cl	210	16	150	250	210	495	310	168	152	399	107	227	196 D	122 D	193 D	475 D	207 D	100	5	58	10	64	496	46.1	56.6	20.8	100	29.4	52.8	57.3 D	73.7 D	33.1	288 D	29.8
Hardness as CaCO3	300	180	600	390	330	580	330	350	500	870	225	300	280 D	272 D	272 D	450 D	360 D	260	180	280	240	230	1000	330	320	620	440	210	310	230 D	272 D	260 D	460 D	250 D
Ammonia as N	140	1.6	110	160	110	263	9.92	107	1.66	179	81.4	99.8	46.7 D	41.4 D	75.3 D	164 D	145 D	58	0.07	23	<0.1	44	276	2.1	20.8	83.2	27.8	13.9	13.9	24.1 D	19.2 D	2.08 D	77.8 D	12.9 D
Nitrite as N	NA	NA	NA	NA	NA	NA	NA	<0.10	NA	< 1	<0.10	0.3	0.12	< 0.10	< 0.10	< 0.10	< 0.10	NA	NA	NA	NA	NA	NA	NA	0.29	NA	0.23	<0.10	<0.10	0.21	0.25	0.19	0.2	< 0.10
Nitrate as N	<0.5	<0.5	<0.5	<0.5	<0.5	0.25	0.89	< 0.10	5.73	0.15	<0.10	1.27	0.72 D	0.43	0.23	0.11	0.41	<0.5	4.5	10	3.6	<0.5	1.04	2.71	2.47	0.29	8.62	<0.10	6.96	1.84 D	4.08 D	5.73 D	10.6 D	< 0.10
Bromide	NA	NA	NA	NA	NA	2.8	0.85	0.92	0.69	1.84	0.58	1.03	< 0.50	0.6	0.71	3.33 D	0.91	NA	NA	NA	NA	NA	2.6	<0.5	< 0.50	<0.5	0.53	<0.50	<0.50	< 0.50	< 0.50	< 0.50	1.06	< 0.50
Total Recoverable Phenolics	NA	NA	NA	NA	NA	16,600	8,700	8	<0.0005	0.013	<0.005	0.0133	< 0.005	0.0114	< 0.005	0.0056	0.0077	NA	NA	NA	NA	NA	18,200	10,300	5	0.0058	0.0079	<0.005	<0.005	< 0.005	0.0143	< 0.005	0.0052	< 0.005
Sulfate as SO4	35	74	100	10	19	121	25.5	9.91	16.7	24.5	8.29	39.1	18	< 5.00	7.64	20.3	10.5	<25	52	80	45	20	282	64.4	65.6	45.3	105	15.4	48.5	22.3	13.4	15.9	44.7	10.8
Total Dissolved Solids	930	340	1300	1300	970	2180	772	690	710	1520	570	925	875	592 D	782 D	2,050 D	948 D	610	280	730	390	480	2350	468	465	332	792	302	559	508	498 D	357	1,550 D	292
Total Organic Carbon	66	28	63	76	51	111	53.5	59.2	38.7	123	32.1	56.6	38.6	152 D	51.4	104 D	246 D	27	13	14	13	20	122	39.6	27.5	12.2	41.3	8.9	21.2	23.2	96.4 D	14.1	63.3 D	67.1 D
Total Kjeldahl Nitorgen	NA	NA	NA	NA	NA	521	38.3	129	5.08	392	86.1	149	113 D	85.5 D	137 D	328 D	171 D	NA	NA	NA	NA	NA	474	10.7	26.2	120	103	14.9	22.5	40.9 D	37.9 D	5.67 D	128 D	13.6
Turbidity NTU	6.5	5.8	440	570	910	NA	NA	NA	NA	1,000	250	815	900	> 1,000	244	187	104	5.9	5.5	15	2.4	120	NA	NA	NA	NA	976	20.9	77.3	78	55	20.8	5.2	21.1

B = This flag is used when the analyte is found in the associated blank as in the sample.

E - This flag identified compunds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.

F - This flag indicates the results of a filtered metal analysis.

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

UJ -The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

UJ - The analyte was not detected above the reported sample wuantitation 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.

TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL

TABLE 4

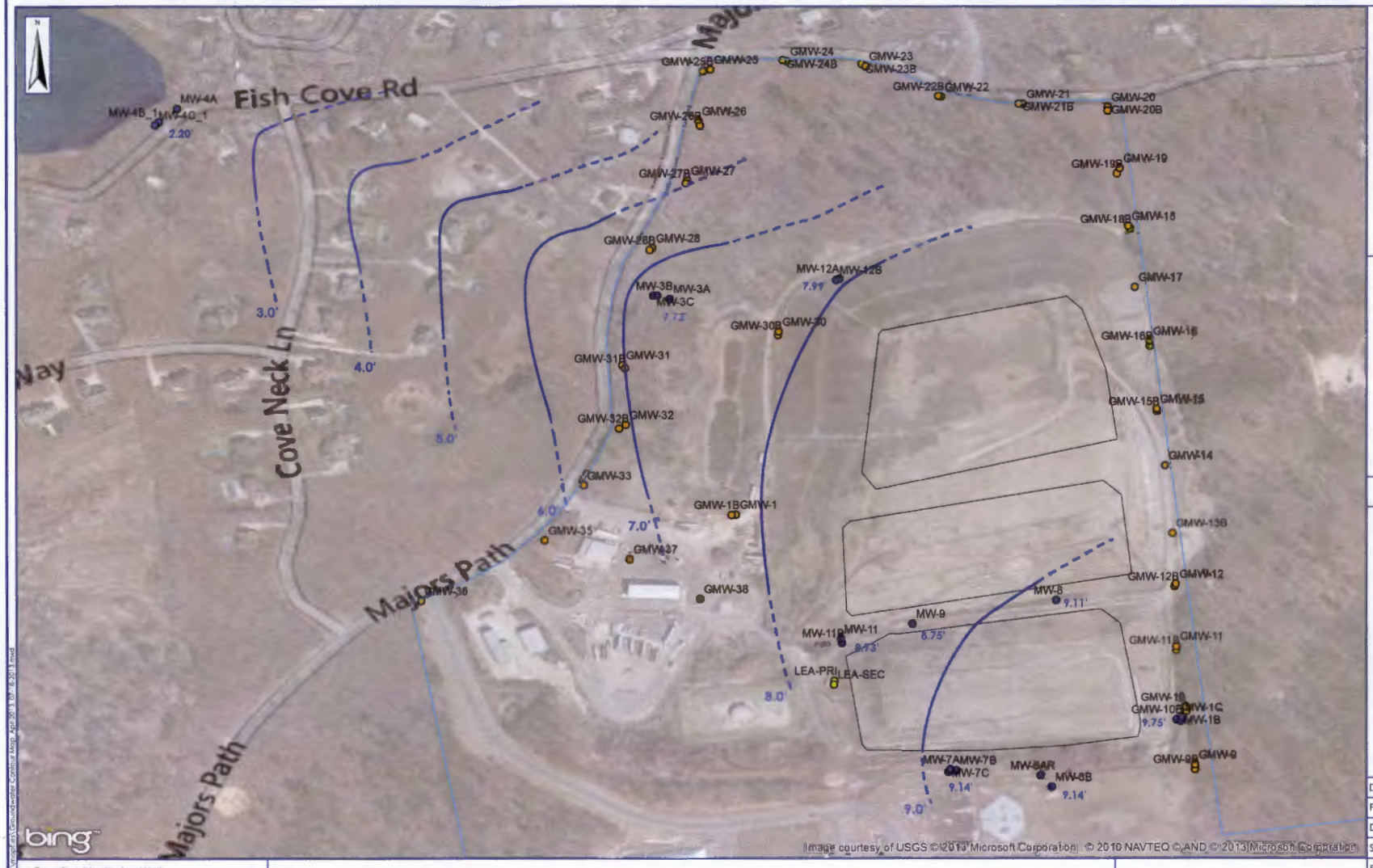
GROUNDWATER ELEVATIONS
April 2013

Monitoring	* Casing	April 2005		October 2005		April 2006		October 2006		April 2007		October 2007		April 2008		October 2008		April 2009		October 2009		April 2010		October 2010		April 2011		October 2011		April 2012		October 2012		April 2013	
Well Number	Elevation	DTW	GWE	DTW	GWE	DTW	GWE	DTW	GWE	DTW	GWE	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	102.40	11.47	103.22	10.65	102.03	11.84	101.36	12.51	101.23	12.64	102.55	11.32	102.50	11.37	104.12	9.75	103.34	10.53	102.76	11.11	101.22	12.65	102.43	11.44	103.49	10.38	104.13	9.74	104.12	9.75	104.12	9.75	104.53	9.75
MW-1B	115.09	103.61	11.48	104.43	10.66	103.24	11.85	102.58	12.51	102.45	12.64	103.78	11.31	103.01	12.08	105.38	9.71	104.56	10.53	103.96	11.13	103.00	12.09	103.64	11.45	104.66	10.43	105.34	9.75	105.30	9.79	105.30	9.79	105.77	9.79
MW-1C	114.99	104.57	10.42	105.31	9.68	104.49	10.50	103.94	11.05	103.83	11.16	105.22	9.77	104.98	10.01	106.28	8.71	105.43	9.56	105.16	9.83	103.10	11.89	105.06	9.93	105.52	9.47	106.27	8.72	106.15	8.84	106.15	8.84	106.44	8.84
MW-2	74.8	64.22	10.58	64.81	9.99	63.46	11.34	63.36	11.44	63.31	11.49	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--
MW-3A	55.3	46.39	8.91	NM	--	46.22	9.08	45.59	9.71	45.47	9.83	47.09	8.21	47.45	7.85	47.89	7.41	47.27	8.03	47.20	8.10	47.30	8.00	46.89	8.41	47.43	7.87	47.90	7.40	47.96	7.34	47.96	7.34	47.93	7.37
MW-3B	51.9	43.11	8.79	NM	--	42.95	8.95	42.35	9.55	42.20	9.70	43.81	8.09	44.45	7.45	44.70	7.20	43.97	7.93	43.90	8.00	43.03	8.87	43.59	8.31	44.15	7.75	44.59	7.31	44.66	7.24	44.66	7.24	44.62	7.28
MW-3C	51.4	42.97	8.43	NM	--	42.95	8.45	42.57	8.83	42.21	9.19	43.88	7.52	43.91	7.49	44.28	7.12	43.62	7.78	43.72	7.68	43.66	7.74	43.59	7.81	43.73	7.67	44.26	7.14	44.23	7.17	44.23	7.17	44.22	7.18
MW-4A	16	13.21	2.79	12.89	3.11	13.47	2.53	12.93	3.07	13.11	2.89	13.78	2.22	13.66	2.34	13.51	2.49	13.63	2.37	13.63	2.37	12.68	3.32	13.02	2.98	13.10	2.90	13.42	2.58	13.66	2.34	13.87	2.13	13.80	2.20
MW-4B	16.1	13.21	2.89	12.37	3.73	13.85	2.25	13.03	3.07	13.25	2.85	11.06	5.04	13.63	2.47	13.64	2.46	13.81	2.29	13.87	2.23	12.82	3.28	13.14	2.96	13.27	2.83	13.51	2.59	13.73	2.37	14.50	1.60	13.89	2.21
MW-4C	16	8.40	7.60	8.36	7.64	8.74	7.26	8.03	7.97	8.15	7.85	9.34	6.66	9.20	6.80	9.61	6.39	9.01	6.99	9.15	6.85	7.14	8.86	8.62	7.38	9.11	6.89	9.37	6.63	9.48	6.52	10.25	5.75	9.40	6.60
MW-5A	74.27	64.11	10.16	64.77	9.50	63.92	10.35	63.09	11.18	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--
MW-5B	75.25	NM	--	NM	--	65.67	9.58	65.39	9.86	NM	--	NM	--	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	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--
MW-6A	NS	NM	--	NM	--	NM	--	NM	--	88.75	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--
MW-6AR	100.72	NM	--	NM	--	NM	--	91.28	9.44	NM	--	90.23	10.49	91.13	9.59	91.67	9.05	90.82	9.90	90.47	10.25	88.80	11.92	90.12	10.60	90.99	9.73	91.67	9.05	91.58	9.14	92.62	8.10	91.99	8.73
MW-6B	103.46	92.55	10.91	92.97	10.49	91.97	11.49	91.28	12.18	91.13	12.33	92.62	10.84	93.54	9.92	94.06	9.40	93.25	10.21	92.85	10.61	91.23	12.23	92.43	11.03	93.55	9.91	94.04	9.42	93.97	9.49	94.94	8.52	94.32	9.14
MW-7A	92.83	82.11	10.72	82.49	10.34	81.69	11.14	80.94	11.89	80.78	12.05	NM	--	NM	--	NM	--	82.83	10.00	82.48	10.35	80.58	12.25	82.20	10.63	82.94	9.89	83.61	9.22	83.60	9.23	84.61	8.22	83.69	9.14
MW-7B	92.72	81.67	11.05	82.47	10.25	81.57	11.15	80.85	11.87	80.66	12.06	NM	--	NM	--	83.52	9.20	82.63	10.09	NM	--	NM	--	NM	--	82.86	9.86	83.48	9.24	83.50	9.22	84.52	8.20	83.82	8.90
MW-7C	93.31	83.73	9.58	84.22	9.09	83.66	9.65	83.11	10.20	82.77	10.54	NM	--	NM	--	NM	--	84.41	8.90	NM	--	NM	--	NM	--	84.54	8.77	85.27	8.04	85.12	8.19	86.10	7.21	85.03	8.28
MW-8	86.02	74.99	11.03	75.79	10.23	74.75	11.27	73.99	12.03	73.90	12.12	75.72	10.30	76.21	9.81	76.68	9.34	75.91	10.11	75.43	10.59	73.72	12.30	75.06	10.96	76.02	10.00	76.62	9.40	76.68	9.34	77.65	8.37	76.91	9.11
MW-9	82.56	71.99	10.57	72.86	9.70	71.88	10.68	71.06	11.50	70.98	11.58	72.49	10.07	73.23	9.33	73.65	8.91	72.91	9.65	72.58	9.98	70.57	11.99	72.25	10.31	73.05	9.51	73.61	8.95	73.69	8.87	74.63	7.93	73.81	8.75
MW-11A	80.78	70.56	10.22	71.32	9.46	70.32	10.46	69.52	11.26	69.43	11.35	70.97	9.81	71.61	9.17	72.05	8.73	71.57	9.21	71.11	9.67	71.90	8.88	70.88	9.90	71.46	9.32	72.03	8.75	72.06	8.72	72.98	7.80	73.59	7.19
MW-11B	78.32	43.85	34.47	59.19	19.13	NM	--	47.72	30.60	51.04	27.28	63.68	14.64	69.10	9.22	69.57	8.75	67.16	11.16	68.64	9.68	62.79	15.53	67.68	10.64	68.81	9.51	69.50	8.82	69.61	8.71	74.43	7.89	73.59	8.73
MW-12A	87.95	78.31	9.64	78.61	9.34	78.36	9.59	77.48	10.47	77.46	10.49	78.87	9.08	79.41	8.54	79.90	8.05	79.22	8.73	79.05	8.90	76.42	11.53	78.76	9.19	79.42	8.53	79.91	8.04	79.96	7.99	80.75	7.20	79.96	7.99
MW-12B	88.28	79.19	9.09	79.47	8.81	79.23	9.05	78.37	9.91	78.35	9.93	79.46	8.82	80.04	8.24	80.50	7.78	79.82	8.46	79.64	8.64	77.01	11.27	79.34	8.94	80.02	8.26	80.50	7.78	80.80	7.48	81.30	6.98	80.57	7.71

NOTES:

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

FIGURES



Gas Monitoring Well
Leachate Well
Monitoring Well
Actual Groundwater Contour
Inferred Groundwater Contour
Landfill Boundary
Cells

SITE PLAN - APRIL 2013

NORTH SEA LANDFILL
SOUTHAMPTON, NY

0 470 940 1,410 1,880 Feet

PWGC
Strategic Environmental and Engineering Solutions
P.W. GROSSER CONSULTING, INC.
630 Johnson Avenue, • Suite 7
Bohemia • NY • 11716-2618
Phone: (631) 589-6353 • Fax: (631) 589-6705
E-mail: INFO@PWGROSSER.COM

TOWN OF SOUTHAMPTON
1370 MAJORS PATH
SOUTHAMPTON, NY 11968

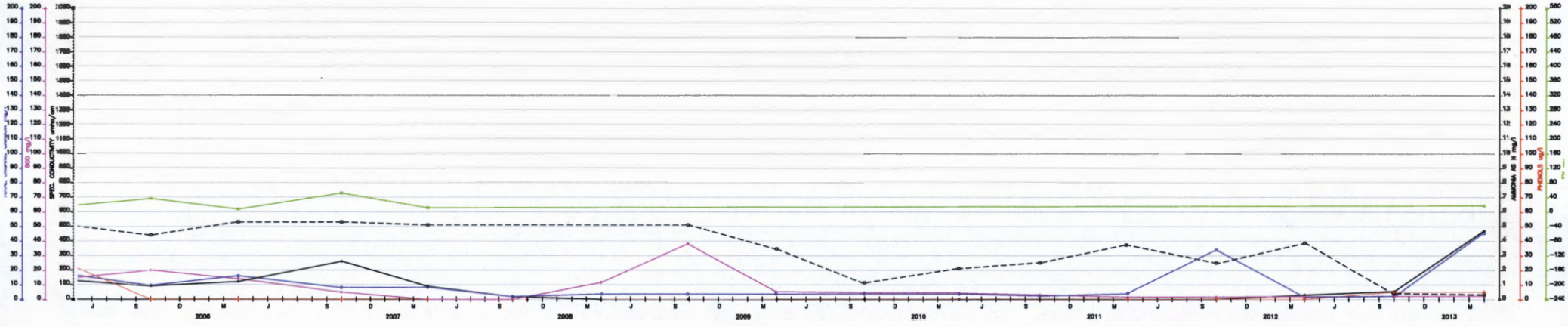
DRAWING INFORMATION:

Project:	SHP1301	Designed by:	ICB
Date:	7/18/2013	Drawn by:	JMC
Scale:	AS SHOWN	Approved by:	DE

FIGURE NO: 1

SHEET:

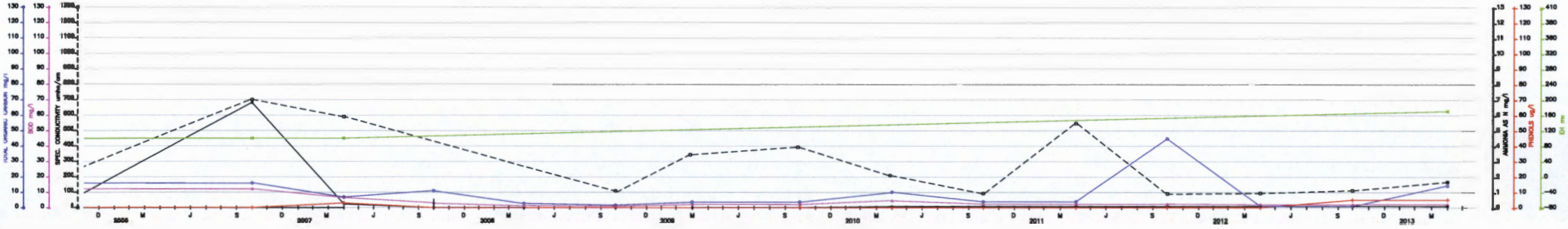
MONITORING WELL 11A
(2003–2013)



P.W. GROSSER CONSULTING
ENGINEER & HYDROGEOLOGIST P.C.
Figure – 2

I:\Projects S-Z\SHP\1301 - North Sea Landfill Sampling\1st Semi-Annual Sampling\CAD\cross section mw-11a - April 2013.dwg (Layout 1) May 10,2013-2:35pm By: lund

MONITORING WELL 11B
(2003–2013)



P.W. GROSSER CONSULTING
ENGINEER & HYDROGEOLOGIST P.C.
Figure – 3

APPENDIX A

LABORATORY ANAYTICAL REPORTS / DATA VALIDATION & USABILITY REPORT

H 2 M labs

575 Broad Hollow Road
Melville, NY 11747

tel 631.694.3040
fax 631.420.8436

SAMPLE DATA SUMMARY PACKAGE

TABLE OF CONTENTS

NORTH SEA LANDFILL
SAMPLES RECEIVED: 4/16/13 & 4/17/13
WATER SAMPLES
SDG NO.: TOS012/012F

H 2 M labs

575 Broad Hollow Road
Melville, NY 11747

tel 631.694.3040
fax 631.420.8436

1. NYS DEC SUMMARY FORMS

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

SDG: TOS012 **Analytical Requirements**

Customer Sample Code	Laboratory Sample Code	ME	MSVOA	WC
DUP001	1304917-001	X	X	X
LEA-PRIMARY	1304917-002	X		X
LEA-SECONDARY	1304917-003	X		X
MW-3A	1304917-004	X	X	X
MW-3B	1304917-005	X	X	X
MW-3C	1304917-006	X	X	X
MW-4A	1304917-007	X	X	X
MW-4B	1304917-008	X	X	X
MW-4C	1304917-009	X	X	X
FB001	1304917-010	X	X	X
TRIP BLANK 001	1304917-011		X	
STORAGE BLANK	1304917-012		X	
MW-1A	1304A27-001	X	X	X
MW-1B	1304A27-002	X	X	X
MW-1C	1304A27-003	X	X	X
MW-11A	1304A27-004	X	X	X
MW-11B	1304A27-005	X	X	X
MW-12A	1304A27-006	X	X	X
MW-12B	1304A27-007	X	X	X
FB002	1304A27-008	X	X	X
TRIP BLANK	1304A27-009		X	

CLP, ~~Non-CLP~~ (Please indicate year of protocol) ~~ASP~~ B 2000
TCL/TAL, ~~HSL~~, Priority Pollutant,

CG 5/6/13

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
VOLATILE (VOA)
ANALYSES

SDG: TOS012

Laboratory Samp ID	Client Sample ID	Matrix	Analytical Protocol	Date Collected	DateRecd at Lab	Date Extracted	Date Analyzed	Extraction Method	DF	Level	Aux Cleanup
1304917-001A	DUP001	Aqueous	ASPB 8260	15-Apr-13	16-Apr-13		17-Apr-13		1	LOW	
1304917-004A	MW-3A	Aqueous	ASPB 8260	15-Apr-13	16-Apr-13		17-Apr-13		1	LOW	
1304917-005A	MW-3B	Aqueous	ASPB 8260	15-Apr-13	16-Apr-13		17-Apr-13		1	LOW	
1304917-005AMS	MW-3BMS	Aqueous	ASPB 8260	15-Apr-13	16-Apr-13		17-Apr-13		1	LOW	
1304917-005AMSD	MW-3BMSD	Aqueous	ASPB 8260	15-Apr-13	16-Apr-13		17-Apr-13		1	LOW	
1304917-006A	MW-3C	Aqueous	ASPB 8260	15-Apr-13	16-Apr-13		17-Apr-13		1	LOW	
1304917-007A	MW-4A	Aqueous	ASPB 8260	15-Apr-13	16-Apr-13		17-Apr-13		1	LOW	
1304917-008A	MW-4B	Aqueous	ASPB 8260	15-Apr-13	16-Apr-13		17-Apr-13		1	LOW	
1304917-009A	MW-4C	Aqueous	ASPB 8260	15-Apr-13	16-Apr-13		17-Apr-13		1	LOW	
1304917-010A	FB001	Aqueous	ASPB 8260	15-Apr-13	16-Apr-13		18-Apr-13		1	LOW	
1304917-011A	TRIP BLANK 001	Aqueous	ASPB 8260	15-Apr-13	16-Apr-13		18-Apr-13		1	LOW	
1304917-012A	STORAGE BLANK	Aqueous	ASPB 8260	16-Apr-13	16-Apr-13		18-Apr-13		1	LOW	
1304A27-001A	MW-1A	Aqueous	ASPB 8260	16-Apr-13	17-Apr-13		18-Apr-13		1	LOW	
1304A27-002A	MW-1B	Aqueous	ASPB 8260	16-Apr-13	17-Apr-13		18-Apr-13		1	LOW	
1304A27-003A	MW-1C	Aqueous	ASPB 8260	16-Apr-13	17-Apr-13		18-Apr-13		1	LOW	
1304A27-004A	MW-11A	Aqueous	ASPB 8260	16-Apr-13	17-Apr-13		18-Apr-13		1	LOW	
1304A27-005A	MW-11B	Aqueous	ASPB 8260	16-Apr-13	17-Apr-13		18-Apr-13		1	LOW	
1304A27-006A	MW-12A	Aqueous	ASPB 8260	16-Apr-13	17-Apr-13		18-Apr-13		1	LOW	
1304A27-007A	MW-12B	Aqueous	ASPB 8260	16-Apr-13	17-Apr-13		18-Apr-13		1	LOW	
1304A27-008A	FB002	Aqueous	ASPB 8260	16-Apr-13	17-Apr-13		18-Apr-13		1	LOW	
1304A27-009A	TRIP BLANK	Aqueous	ASPB 8260	16-Apr-13	17-Apr-13		18-Apr-13		1	LOW	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSIS

SDG : TOS012

Laboratory Samp ID	Client Sample ID	Matrix	Metals Requested	DateRecd at Lab	Date Analyzed
1304917-001	DUP001	WATER	AG,AL,AS,B,BA,BE,CA,CD,CN,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	16-Apr-13	04/13 - 05/13
1304917-002	LEA-PRIMARY	WATER	AS,CA,CD,FE,K,MG,MN,NA,PB,	16-Apr-13	05/13
1304917-003	LEA-SECONDARY	WATER	AS,CA,CD,FE,K,MG,MN,NA,PB,	16-Apr-13	05/13
1304917-004	MW-3A	WATER	AG,AL,AS,B,BA,BE,CA,CD,CN,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	16-Apr-13	04/13 - 05/13
1304917-005	MW-3B	WATER	AG,AL,AS,B,BA,BE,CA,CD,CN,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	16-Apr-13	04/13 - 05/13
1304917-005DUP	MW-3BD	WATER	AG,AL,AS,B,BA,BE,CA,CD,CN,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	16-Apr-13	04/13 - 05/13
1304917-005MS	MW-3BS	WATER	AG,AL,AS,B,BA,BE,CA,CD,CN,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	16-Apr-13	04/13 - 05/13
1304917-006	MW-3C	WATER	AG,AL,AS,B,BA,BE,CA,CD,CN,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	16-Apr-13	04/13 - 05/13
1304917-007	MW-4A	WATER	AG,AL,AS,B,BA,BE,CA,CD,CN,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	16-Apr-13	04/13 - 05/13
1304917-008	MW-4B	WATER	AG,AL,AS,B,BA,BE,CA,CD,CN,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	16-Apr-13	04/13 - 05/13
1304917-009	MW-4C	WATER	AG,AL,AS,B,BA,BE,CA,CD,CN,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	16-Apr-13	04/13 - 05/13
1304917-010	FB001	WATER	AG,AL,AS,B,BA,BE,CA,CD,CN,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	16-Apr-13	04/13 - 05/13
1304A27-001	MW-1A	WATER	AG,AL,AS,B,BA,BE,CA,CD,CN,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	17-Apr-13	04/13 - 05/13
1304A27-002	MW-1B	WATER	AG,AL,AS,B,BA,BE,CA,CD,CN,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	17-Apr-13	04/13 - 05/13
1304A27-003	MW-1C	WATER	AG,AL,AS,B,BA,BE,CA,CD,CN,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	17-Apr-13	04/13 - 05/13
1304A27-004	MW-11A	WATER	AG,AL,AS,B,BA,BE,CA,CD,CN,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	17-Apr-13	04/13 - 05/13
1304A27-005	MW-11B	WATER	AG,AL,AS,B,BA,BE,CA,CD,CN,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	17-Apr-13	04/13 - 05/13
1304A27-006	MW-12A	WATER	AG,AL,AS,B,BA,BE,CA,CD,CN,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	17-Apr-13	04/13 - 05/13
1304A27-007	MW-12B	WATER	AG,AL,AS,B,BA,BE,CA,CD,CN,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	17-Apr-13	04/13 - 05/13
1304A27-008	FB002	WATER	AG,AL,AS,B,BA,BE,CA,CD,CN,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	17-Apr-13	04/13 - 05/13

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSIS

SDG : TOS012F

Laboratory Samp ID	Client Sample ID	Matrix	Metals Requested	DateRecd at Lab	Date Analyzed
1304A28-001	MW-11A	WATER	AG,AL,AS,B,BA,BE,CA,CD,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	17-Apr-13	04/13 - 05/13
1304A28-001DUP	MW-11AD	WATER	AG,AL,AS,B,BA,BE,CA,CD,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	17-Apr-13	04/13 - 05/13
1304A28-001MS	MW-11AS	WATER	AG,AL,AS,B,BA,BE,CA,CD,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	17-Apr-13	04/13 - 05/13
1304A28-002	MW-11B	WATER	AG,AL,AS,B,BA,BE,CA,CD,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	17-Apr-13	04/13 - 05/13
1304A28-003	MW-12A	WATER	AG,AL,AS,B,BA,BE,CA,CD,CO,CR,CU,FE,HG,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN,	17-Apr-13	04/13 - 05/13

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSIS

SDG : TOS012

Laboratory Samp ID	Client Sample ID	Matrix	Tests	DateRecd at Lab	Date Analyzed
1304917-001	DUP001	Groundwater	SELECT WET CHEMISTRY **	04/16/13	04/13
1304917-002	LEA-PRIMARY	Leachate	SELECT WET CHEMISTRY **	04/16/13	04/13
1304917-003	LEA-SECONDARY	Leachate	SELECT WET CHEMISTRY **	04/16/13	04/13
1304917-004	MW-3A	Groundwater	SELECT WET CHEMISTRY **	04/16/13	04/13
1304917-005	MW-3B	Groundwater	SELECT WET CHEMISTRY **	04/16/13	04/13
1304917-005DUP	MW-3BDUP	Groundwater	SELECT WET CHEMISTRY **	04/16/13	04/13
1304917-005MS	MW-3BMS	Groundwater	SELECT WET CHEMISTRY **	04/16/13	04/13
1304917-006	MW-3C	Groundwater	SELECT WET CHEMISTRY **	04/16/13	04/13
1304917-007	MW-4A	Groundwater	SELECT WET CHEMISTRY **	04/16/13	04/13
1304917-008	MW-4B	Groundwater	SELECT WET CHEMISTRY **	04/16/13	04/13
1304917-009	MW-4C	Groundwater	SELECT WET CHEMISTRY **	04/16/13	04/13
1304917-010	FB001	Field Blank	SELECT WET CHEMISTRY **	04/16/13	04/13
1304A27-001	MW-1A	Groundwater	SELECT WET CHEMISTRY **	04/17/13	04/13
1304A27-002	MW-1B	Groundwater	SELECT WET CHEMISTRY **	04/17/13	04/13
1304A27-003	MW-1C	Groundwater	SELECT WET CHEMISTRY **	04/17/13	04/13
1304A27-004	MW-11A	Groundwater	SELECT WET CHEMISTRY **	04/17/13	04/13
1304A27-005	MW-11B	Groundwater	SELECT WET CHEMISTRY **	04/17/13	04/13
1304A27-006	MW-12A	Groundwater	SELECT WET CHEMISTRY **	04/17/13	04/13
1304A27-007	MW-12B	Groundwater	SELECT WET CHEMISTRY **	04/17/13	04/13
1304A27-008	FB002	Field Blank	SELECT WET CHEMISTRY **	04/17/13	04/13

** **Alkalinity, Total (As CaCO3) ; Biochemical Oxygen Demand ; Bromide ; Chemical Oxygen Demand ; Chloride ; Chromium, Hexavalent ; Color ; Cyanide ; Hardness (As CaCO3) ; Nitrate as N ; Nitrite as N ; Nitrogen, Ammonia (As N) ; Nitrogen, Kjeldahl, Total ; Phenolics, Total Recoverable ; Sulfate ; Total Dissolved Solids ; Total Organic Carbon ;**

H 2 M labs

575 Broad Hollow Road
Melville, NY 11747

tel 631.694.3040
fax 631.420.8436

2. CHAIN OF CUSTODY DOCUMENTATION

H2M LABS, INC. 42125 EXTERNAL CHAIN OF CUSTODY

575 Broad Hollow Rd, Melville, NY 11747-5076
Tel: (631) 694-3040 Fax: (631) 420-8436

2 / 2

CLIENT: PWGC TOS

H2M SDG NO: TOS012/012F

PROJECT NAME/NUMBER
North Sea Landfill
1370 Majors Path
Southampton, NY

SAMPLERS: (signature)/Client
Brian Butler

DELIVERABLES: ASP Category B B0-70

TURNAROUND TIME: Standard

NOTES:
* Lab to Filter metals.

Project Contact: Derek Ersbak 4/10/13

Phone Number: 631-589-6353

PIS/Quote #

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	Sample Container Description →	ANALYSIS REQUESTED: ORGANIC VOA	ORGANIC BNA	ORGANIC Pest/PCB	Baseline Parameters *	Dissolved Metals	INORG. Metal	INORG. CN	LAB I.D. NO.	REMARKS:
4/15	1020	GW	MW-3B	10					X				1304917-005	
	1140		MW-3C						X				006	
	1220		MW-3A						X				004	
	1020		MW-3B/MS						X				005	
	1020		MW-3B/MSD						X				↓	
	1100		FB001						X				010	
	1315		MW-4A						X				007	
	1400		MW-4B						X				008	
	1510		MW-4C						X				009	
↓	XX	↓	DUP001	↓					X				↓ 001	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Brian Butler	4/16	920		4/16	920
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	4/16	950		4/16/13	0950
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

LABORATORY USE ONLY

Discrepancies Between Sample Labels and COC Record? Y or N
Explain:

Samples were:
1. Shipped ___ or Hand Delivered ___ Airbill# ___
2. Ambient or chilled, Temp 1.2, 2.4
3. Received in good condition: Y or N
4. Properly preserved: Y or N

COC Tape was:
1. Present on outer package: Y or N
2. Unbroken on outer package: Y or N
3. COC record present & complete upon sample receipt: Y or N

WHITE COPY - ORIGINAL YELLOW COPY - CLIENT PINK COPY - LABORATORY

H2M LABS, INC. — 42055 EXTERNAL CHAIN OF CUSTODY

575 Broad Hollow Rd, Melville, NY 11747-5076
Tel: (631) 694-3040 Fax: (631) 420-8436

CLIENT: PWGC TOS

H2M SDG NO: TOS 012

PROJECT NAME/NUMBER
North Sea Landfill
1370 Majors Path
Southampton, NY

SAMPLERS: (signature)/Client

DELIVERABLES: ASP Category B 30-70

TURNAROUND TIME: Standard

NOTES:

Project Contact: Derek Erspak

Phone Number: 631-589-6353

PIS/Quote #

Sample Container Description → 40ml vial - HCl

Routine Parameters + Arsenic

Total No. of Containers

ANALYSIS REQUESTED

ORGANIC: VOA | BNA | Pest/PCB

INORG.: Metal | CN

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	VOA	BNA	Pest/PCB	Routine Parameters + Arsenic	Metal	CN	LAB I.D. NO.	REMARKS:
4/15	855	Leachate	LEA-PRIMARY	9				X			1304917-002	
4/15	900	↓	LEA-SECONDARY	9				X			↓ 003	
4/15		BL	TripBlank001 (CW) 4/16/13	~~3~~ (CW)	~~3~~ J						011	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	4/16	925		4/16	920
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	4/16	950		4/16/13	0950
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

LABORATORY USE ONLY

Discrepancies Between Sample Labels and COC Record? Y or N
Explain:

Samples were:
1. Shipped___ or Hand Delivered___ Airbill# ___
2. Ambient or chilled, Temp 1.2 / 12.4
3. Received in good condition: Y or N
4. Properly preserved: Y or N

COC Tape was:
1. Present on outer package: Y or N
2. Unbroken on outer package: Y or N
3. COC record present & complete upon sample receipt: Y or N

WHITE COPY - ORIGINAL YELLOW COPY - CLIENT PINK COPY - LABORATORY

TOS012/012FS10

H2M labs

H2M LABS INC
575 Broad Hollow Rd.
Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
Website: www.h2mlabs.com

TOS 012

Sample Receipt Checklist

Client Name **TOS** Date and Time Received: 4/16/2013 9:50:00 AM

Work Order Number: **1304917** RcptNo: **1** Received by **Linda Siciliano**

Completed by: Reviewed by:

Completed Date: 4/16/2013 11:11:12 AM Reviewed Date: 4/18/2013 12:30:22 PM

Carrier name: H2M Pickup

Chain of custody present?	Yes	☑	No	☐		
Chain of custody signed when relinquished and received?	Yes	☑	No	☐		
Chain of custody agrees with sample labels?	Yes	☑	No	☐		
Are matrices correctly identified on Chain of custody?	Yes	☑	No	☐		
Is it clear what analyses were requested?	Yes	☑	No	☐		
Custody seals intact on sample bottles?	Yes	☐	No	☐	Not Present	☑
Samples in proper container/bottle?	Yes	☑	No	☐		
Were correct preservatives used and noted?	Yes	☑	No	☐	NA	☐
Preservative added to bottles:						
Sample Condition?	Intact	☑	Broken	☐	Leaking	☐
Sufficient sample volume for indicated test?	Yes	☑	No	☐		
Were container labels complete (ID, Pres, Date)?	Yes	☑	No	☐		
All samples received within holding time?	Yes	☑	No	☐		
Was an attempt made to cool the samples?	Yes	☑	No	☐	NA	☐
All samples received at a temp. of > 0° C to 6.0° C?	Yes	☑	No	☐	NA	☐
Response when temperature is outside of range:						
Sample Temp. taken and recorded upon receipt?	Yes	☑	No	☐	To	1.2 °
Water - Were bubbles absent in VOC vials?	Yes	☑	No	☐	No Vials	☐
Water - Was there Chlorine Present?	Yes	☐	No	☐	NA	☑
Water - pH acceptable upon receipt?	Yes	☐	No	☑	No Water	☐
Are Samples considered acceptable?	Yes	☑	No	☐		
Custody Seals present?	Yes	☐	No	☑		
Airbill or Sticker?	Air Bil	☐	Sticker	☐	Not Present	☑
Airbill No:						

Case Number: SDG: TOS012 SAS:

Any No response should be detailed in the comments section below, if applicable.

Client Contacted? ☐ Yes ☑ No Person Contacted:

Contact Mode: ☐ Phone: ☐ Fax: ☐ Email: ☐ In Person:

Client Instructions:

Date Contacted: Contacted By:

Regarding:

Comments:

pH of metals bottle for sample "LEA-PRIMARY" was neutral possibly due to matrix,
LEA-Primary and Secondary samples are being analyzed for "Routine Paramters" which do not include VOC anlaysis. H2M received VOC vials for these samples.
TBs not listed on COC

CorrectiveAction:

Sample was preserved with 1:1 nitric acid 4/16/13 @ 12:20.
It is assumed that the VOC bottles were collected in error.
TBs were added to COC

TOS012/012F S11

H2M LABS, INC.

INTERNAL CHAIN OF CUSTODY

CLIENT: TOS DELIVERABLES: 30-20D TURN AROUND TIME: 21 Days

SDG #: TOS012 CASE #: _____ MATRIX: GW pH CHECK Y or N

REMARKS: 087 TOS 07

RECEIVED BY: LSP SIGNATURE: [signature] DATE: 4/16/13 TIME: 0930

CLIENT ID	H2M LAB #	DATE COLLECTED	BOTTLE TYPE	# OF BOTTLES	TESTS REQUESTED
DUP001	130417-001A	4.15	DH	2	8260_W_36OB(Sel)
MW-3A	005A			6	
3B	005A				MS/MSD
3C	006A			2	
4A	007A				
4B	008A				
4C	009A				
FB001	010A			3	
TripBlank001	011A				
StorageBlank	012A	4.16		2	
"					
"					
"					
"		CSD			
"					
"					
"					
"					
"					
"					

4/16/13

VOLATILE

P 0220

TOS012/012F S12

H2M LABS, INC.

CLIENT: TOS

SDG #: TOSa2

INTERNAL CHAIN OF CUSTODY

DATE	TIME	SAMPLE RELINQUISHED BY	SAMPLE RECEIVED BY	BOTTLE TYPE	PURPOSE OF CHANGE OF CUSTODY	INIT
9/10/13	1245	SIGN	SIGN	DH	analysis	
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
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VOLATILE

P 0221

TOS012/012F S13

H2M LABS, INC.

INTERNAL CHAIN OF CUSTODY

CLIENT: TOS DELIVERABLES: B0-70D TURN AROUND TIME: 21 Days

SDG #: T02012 CASE #: _____ MATRIX: GW pH CHECK Y or N

REMARKS: 087TOS07 (* = +As)

RECEIVED BY: LSD SIGNATURE: [signature] DATE: 4/16/13 TIME: 0950

CLIENT ID	H2M LAB #	DATE COLLECTED	BOTTLE TYPE	# OF BOTTLES	TESTS REQUESTED
DUP001	1304912 001G	4-15	JN	1	~~6010-W-PKG (SEL)~~ HG-7470A-W
LEA-PRIMARY	002E				6010_W-PKG (SEL) *
LEA-SECONDARY	003E			↓	↓ *
MW-3A	004G			3	(6010_W-PKG (SEL) HG-7470A-W
3B	005G			1	MS/MSD
3C	006G				
4A	007G				
4B	008G				
4C	009G				
FB001	010G	↓	↓	↓	↓
		LSD 4/16/13			

METALS

P 0061

TOS012/012F S14

H2M LABS, INC.

CLIENT: TOS

SDG #: TOS012

INTERNAL CHAIN OF CUSTODY

DATE	TIME	SAMPLE RELINQUISHED BY	SAMPLE RECEIVED BY	BOTTLE TYPE	PURPOSE OF CHANGE OF CUSTODY	INIT
4/16/13	1245	SIGN	SIGN	JN	digestion	
5/1/13	800	SIGN	SIGN	Digs	ICP Analysis	
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
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		SIGN	SIGN			

METALS

H2M LABS, INC.

INTERNAL CHAIN OF CUSTODY

CLIENT: TOS DELIVERABLES: B0-70D TURN AROUND TIME: 21 Days

SDG #: TOS012 CASE #: _____ MATRIX: GW pH CHECK (Y) or N

REMARKS: 087 TOS07

RECEIVED BY: LSD SIGNATURE: [signature] DATE: 4/16/13 TIME: 0950

	CLIENT ID	H2M LAB #	DATE COLLECTED	BOTTLE TYPE	# OF BOTTLES	TESTS REQUESTED
1	DUP 001	1309111-001B	4.15	DS	2	TOC-9060-W
2		001C		FN	1	Hard-WC_SM
3		001D		HS	1	COD-W, NH3-W-SM, NO3-W, PhenolS-W, TKN-W
4		001E		FS	1	CN.9014_W
5		001F		E	2	Alk-W-SM, Anion300_WW(Sol), TDS_WSM, BOD-W-SM, Color_W_SM(Sol), Cr6-W, NO2-A-W
6	LEA-PRIMARY	002A		E	2	Alk-W-SM, Anion300-WW(Sol), BOD5-W-SM, NO2-A-W, TDS-W-SM
7		002B		HS	1	COD-W, NH3-W-SM, NO3-W, PhenolS-W, TKN-W
8		002C		DS	2	TOC_W_SM
9		002D		FN	1	Hard-WC_SM
10	LEA-SECONDARY	003A-D		As Above	As Above	As Above (Sample 002A-D)
11	MW-3A	004B-F		As Above	As Above	As Above (Sample 001B-F)
12	3B	005				- MS/MSD
13	3C	006				
14	4A	007				
15	4B	008				
16	4C	009				
17	FB001	010				
18			LSD			
19				4/16/13		
20						

WET CHEMISTRY

TOS012/012F S16

H2M LABS, INC.

CLIENT: TDS

SDG #: TDS012

INTERNAL CHAIN OF CUSTODY

DATE	TIME	SAMPLE RELINQUISHED BY	SAMPLE RECEIVED BY	BOTTLE TYPE	PURPOSE OF CHANGE OF CUSTODY	INIT
4/16/13	1245	SIGN	SIGN	DS, TN, HS FS, E	analysis/Storage	
4/17/13	0515	SIGN	SIGN	E	Cold/Cold/Storage	
4/17/13	0800	SIGN	SIGN	E	BOD/Storage	
4/17/13	0810	SIGN	SIGN	E	NO2/NO3/Storage	
4/17/13	10:00	SIGN	SIGN Hamawathi Thind	FS	CN/Storage	
4/17/13	11:00	SIGN	SIGN Hamawathi Thind	E	Alk/Storage	
4-18-13	11:45	SIGN Hamawathi Thind	SIGN	E	TDS/storage	
4-19-13	1000	SIGN	SIGN	FN	Hard/storage	
4/22/13	0600	SIGN	SIGN	HS	Phenols/storage	
4/22/13	930	SIGN	SIGN	HS	NH3/Storage	
4/23/13	0600	SIGN	SIGN	HS	TKN/Storage	
4/23/13	1115	SIGN	SIGN	D	TKN and	
4/23/13	0900	SIGN	SIGN	HS	COD/Storage	
4/23/13	15:45	SIGN	SIGN	E	Amino/storage	
4/25/13	0630	SIGN	SIGN	HS	TKN/storage	
4/25/13	1130	SIGN	SIGN	D	TKN and	
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			

WET CHEMISTRY

H2M LABS, INC. 42157 EXTERNAL CHAIN OF CUSTODY

575 Broad Hollow Rd, Melville, NY 11747-5076
Tel: (631) 694-3040 Fax: (631) 420-8436

CLIENT: PWGC (TOS) **H2M SDG NO:** TOS012/012F

PROJECT NAME/NUMBER: North Sea Landfill, 1370 Major Path, Southampton, NY

SAMPLERS: (signature)/Client: Andy Rain

DELIVERABLES: ASP Category B.

TURNAROUND TIME: Standard

NOTES: * Lab to filter metals.

Project Contact: Derek Ersbak

Phone Number: 631-589-6353

PIS/Quote #:

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	ORGANIC: VOA	ORGANIC: BNA	ORGANIC: Pest/PCB	Baseline Parameters	* Dissolved Metals			INORG.: Metal	INORG.: CN	LAB I.D. NO. (012)	REMARKS: (012F)
4/16/13	0930	GW	FB002	10				X						1304A27-008	
	1025		MW-1C					X						003	
	1100		MW-1B					X						002	
	1120		MW-1A					X						001	
	1240		MW-12B					X						007	
	1300		MW-12A	11				X	X					006	1304A28-003
	1440		MW-11B					X	X					005	002
	1505		MW-11A					X	X					004	001
4/16/13	XX	GW	TripBlank	3				X						009	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Andy Rain	4/17/13	925		4/17/13	925
	4/17/13	1000		4/17/13	1000

LABORATORY USE ONLY

Discrepancies Between Sample Labels and COC Record? Y or N
Explain:

Samples were:
1. Shipped ___ or Hand Delivered ___ Airbill# ___
2. Ambient or chilled, Temp 1.6, 2.0, 2.8
3. Received in good condition: Y or N
4. Properly preserved: Y or N

COC Tape was:
1. Present on outer package: Y or N (duct tape)
2. Unbroken on outer package: Y or N
3. COC record present & complete upon sample receipt: Y or N

WHITE COPY - ORIGINAL YELLOW COPY - CLIENT PINK COPY - LABORATORY

H2M labs

H2M LABS INC
575 Broad Hollow Rd.
Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
Website: www.h2mlabs.com

TOS012

Sample Receipt Checklist

Client Name **TOS** Date and Time Received: 4/17/2013 10:00:00 AM

Work Order Number: **1304A27** RcptNo: 1 Received by **Linda Siciliano**

Completed by: Linda Siciliano Reviewed by: Jennifer Cox

Completed Date: 4/17/2013 10:51:50 AM Reviewed Date: 4/18/2013 4:36:44 PM

Carrier name: H2M Pickup

Chain of custody present?	Yes	☑	No	☐		
Chain of custody signed when relinquished and received?	Yes	☑	No	☐		
Chain of custody agrees with sample labels?	Yes	☑	No	☐		
Are matrices correctly identified on Chain of custody?	Yes	☑	No	☐		
Is it clear what analyses were requested?	Yes	☑	No	☐		
Custody seals intact on sample bottles?	Yes	☐	No	☐	Not Present	☑
Samples in proper container/bottle?	Yes	☑	No	☐		
Were correct preservatives used and noted?	Yes	☑	No	☐	NA	☐
Preservative added to bottles:						
Sample Condition?	Intact	☑	Broken	☐	Leaking	☐
Sufficient sample volume for indicated test?	Yes	☑	No	☐		
Were container labels complete (ID, Pres, Date)?	Yes	☑	No	☐		
All samples received within holding time?	Yes	☑	No	☐		
Was an attempt made to cool the samples?	Yes	☑	No	☐	NA	☐
All samples received at a temp. of > 0° C to 6.0° C?	Yes	☑	No	☐	NA	☐
Response when temperature is outside of range:						
Sample Temp. taken and recorded upon receipt?	Yes	☑	No	☐	1.6 To 2.8 °	
Water - Were bubbles absent in VOC vials?	Yes	☑	No	☐	No Vials	☐
Water - Was there Chlorine Present?	Yes	☐	No	☐	NA	☑
Water - pH acceptable upon receipt?	Yes	☑	No	☐	No Water	☐
Are Samples considered acceptable?	Yes	☑	No	☐		
Custody Seals present?	Yes	☐	No	☑		
Airbill or Sticker?	Air Bil	☐	Sticker	☐	Not Present	☑
Airbill No:						

Case Number: SDG: TOS012 SAS:

Any No response should be detailed in the comments section below, if applicable.

Client Contacted? ☐ Yes ☑ No Person Contacted:

Contact Mode: ☐ Phone: ☐ Fax: ☐ Email: ☐ In Person:

Client Instructions:

Date Contacted: Contacted By:

Regarding:

Comments:

CorrectiveAction:

TOS012/012F S19

H2M LABS, INC.

INTERNAL CHAIN OF CUSTODY

CLIENT: TOS DELIVERABLES: B-TOD TURN AROUND TIME: 21 Days

SDG #: TOS012 CASE #: _____ MATRIX: GW pH CHECK Y (or N)

REMARKS: 08TOS07

RECEIVED BY: LSD SIGNATURE: [signature] DATE: 4/17/13 TIME: 1000

CLIENT ID	H2M LAB #	DATE COLLECTED	BOTTLE TYPE	# OF BOTTLES	TESTS REQUESTED
MW-1A	13041827 001A	4.16	DH	2	8260_W_360B(SIM)
" 1B	002A				
" 1C	003A				
" 11A	004A				
" 11B	005A				
" 12A	006A				
" 12B	007A				
FB002	008A				
Trip Blank	009A				
"					
"					
"					
"					
"					
"					
"					
"					
"					
"					
"					

VOLATILE

H2M LABS, INC.

CLIENT: TOS

SDG #: TOS012

INTERNAL CHAIN OF CUSTODY

DATE	TIME	SAMPLE RELINQUISHED BY	SAMPLE RECEIVED BY	BOTTLE TYPE	PURPOSE OF CHANGE OF CUSTODY	INIT
4/1/13	1200	SIGN	SIGN	DH	analysis	
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
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VOLATILE

P 0227

TOS012/012F S21

H2M LABS, INC.

INTERNAL CHAIN OF CUSTODY

CLIENT: TOS DELIVERABLES: B0-70D TURN AROUND TIME: 21 Days

SDG #: TOS012 CASE #: _____ MATRIX: GW pH CHECK (Y) or N

REMARKS: 0870TOS07

RECEIVED BY: LSD SIGNATURE: LSD DATE: 4/17/13 TIME: 1000

	CLIENT ID	H2M LAB #	DATE COLLECTED	BOTTLE TYPE	# OF BOTTLES	TESTS REQUESTED
1	MW-1A	B4A27-001G	4.16	JN	1	6010-W-PKG-(Sel) HG-7470A-W
2	1B	002G				
3	1C	003G				
4	11A	004G				
5	11B	005G				
6	12A	006G				
7	12B	007G				
8	FB002	008G				
9						
10						
11						
12						
13						
14			LSD			
15			4/17/13			
16						
17						
18						
19						
20						

METALS

TOS012/012F S22

H2M LABS, INC.

CLIENT: TOS

SDG #: TOS012

INTERNAL CHAIN OF CUSTODY

DATE	TIME	SAMPLE RELINQUISHED BY	SAMPLE RECEIVED BY	BOTTLE TYPE	PURPOSE OF CHANGE OF CUSTODY	INIT
4/17/13	1200	SIGN	SIGN	JN	Analysis	
5/1/13	800	SIGN	SIGN	DIGS	ICP Analysis	
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
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METALS

H2M LABS, INC.

INTERNAL CHAIN OF CUSTODY

CLIENT: TOS DELIVERABLES: B-20D TURN AROUND TIME: 21 Days

SDG #: TOS012 CASE #: _____ MATRIX: GW pH CHECK Y or N

REMARKS: 087 TOS07

RECEIVED BY: LSD SIGNATURE: [signature] DATE: 4/17/13 TIME: 1000

CLIENT ID	H2M LAB #	DATE COLLECTED	BOTTLE TYPE	# OF BOTTLES	TESTS REQUESTED
1 MW-1A	1304A2 001B	4-16	DS	2	TOC-9060_W
2	001C		FN	1	Hard-WC_SM
3	001D		HS	1	002_W, NH3_W_SM, NO3_W Phenols_W, TKN_W
4	001E		~~FS~~ E	x2	Alk_W_SM, Anions_IC_W(SO4), TDS_W_SM COD_W_SM, Color_W_SM(APHA) CL6_W, NO2_A_W
5	001F		EFS	21	~~COD_W, NH3_W_SM, NO3_W Phenols_W, TKN_W~~ CN_9014_W
6 MW-1B	002B-F		AS Above	2.1.1.1.2	As Above
7 1C	003				
8 11A	004				
9 11B	005				
10 12A	006				
11 12B	007				
12 FB002	008				
13					
14					
15					
16					
17					
18					
19					
20					

WET CHEMISTRY

TOS012/012F S24

H2M LABS, INC.

CLIENT: TOS

SDG #: TOS012

INTERNAL CHAIN OF CUSTODY

DATE	TIME	SAMPLE RELINQUISHED BY	SAMPLE RECEIVED BY	BOTTLE TYPE	PURPOSE OF CHANGE OF CUSTODY	INIT
4/17/13	1200	SIGN	SIGN	DS, FN HS FS E	analysis / Storage	
4/17/13	0530	SIGN	SIGN	E	CL / Cl- / Storage	
4/18/13	0730	SIGN	SIGN	E	BOD / Storage	
4/18/13	0745	SIGN	SIGN	E	NO_2 / NO_3 / Storage	
4/18/13	9:30	SIGN	SIGN Hamawaki Third	FS	CN / Storage	
4/18/13	11:00	SIGN	SIGN Hamawaki Third	E	Alk / Storage	
4/18/13	18:15	SIGN Hamawaki Third	SIGN	E	TDS / Storage	
4/19/13	10:00	SIGN	SIGN	FN	Hard / Storage	
4/22/13	0600	SIGN	SIGN	HS	Phenols / Storage	
4/22/13	930	SIGN	SIGN	HS	NH3 / Storage	
4/23/13	0600	SIGN	SIGN	HS	TKN / Storage	
4/23/13	1115	SIGN	SIGN	D	TKN cancel	
4/23/13	15:45	SIGN	SIGN	E	Anions / storage	
4/20/13	0730	SIGN	SIGN	HS	COD / Storage	
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			

WET CHEMISTRY

575 Broad Hollow Rd, Melville, NY 11747-5076
Tel: (631) 694-3040 Fax: (631) 420-8436

CLIENT: PWGC (TOS) **H2M SDG NO:** TOS012 | 012F

PROJECT NAME/NUMBER
North Sea Landfill
1370 Major Path
Southampton, NY

SAMPLERS: (signature)/Client
Andy Raile

DELIVERABLES: ASP Category B.

TURNAROUND TIME: Standard

NOTES:
* Lab to filter metals.

Project Contact: Derek Ersbak
Phone Number: 631-589-6353
PIS/Quote #

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	ANALYSIS REQUESTED: ORGANIC VOA	ORGANIC BNA	ORGANIC Pest/PCB	Baseline parameters	Dissolved Metals *	INORG. Metal	INORG. CN	LAB I.D. NO. (012)	REMARKS: (012F)
4/16/13	0930	GW	FB002	10				X				1304A27-008	
	1025		MW-1C					X				003	
	1100		MW-1B					X				002	
	1120		MW-1A					X				001	
	1240		MW-12B					X				007	
	1300		MW-12A	11				X	X			006	1304A28-013
	1440		MW-11B					X	X			005	012
	1505		MW-11A					X	X			004	011
4/16/13	XX	GW	TripBlank	3				X				009	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Andy Raile	4/17/13	925		4/17/13	925
	4/17/13	1005		4/17/13	1000
	Date	Time		Date	Time
	Date	Time		Date	Time

LABORATORY USE ONLY

Discrepancies Between Sample Labels and COC Record? Y or N
Explain:

Samples were:
1. Shipped ___ Hand Delivered ___ Airbill# ___
2. Ambient or chilled, Temp 1.6, 2.0, 1.8
3. Received in good condition: Y or N
4. Property preserved: Y or N

COC Tape was:
1. Present on outer package: Y or N (duct tape)
2. Unbroken on outer package: Y or N
3. COC record present & complete upon sample receipt: Y or N

WHITE COPY - ORIGINAL YELLOW COPY - CLIENT PINK COPY - LABORATORY

H2M labs

H2M LABS INC
575 Broad Hollow Rd.
Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
Website: www.h2mlabs.com

TOS012F

Sample Receipt Checklist

Client Name **TOS**

Date and Time Received: 4/17/2013 10:00:00 AM

Work Order Number: **1304A28** RcptNo: **1**

Received by **Linda Siciliano**

Completed by: Linda Siciliano

Reviewed by:

Completed Date: 4/17/2013 11:05:12 AM

Reviewed Date: 4/18/2013 5:02:01 PM

Carrier name: H2M Pickup

Chain of custody present?	Yes	☑	No	☐		
Chain of custody signed when relinquished and received?	Yes	☑	No	☐		
Chain of custody agrees with sample labels?	Yes	☑	No	☐		
Are matrices correctly identified on Chain of custody?	Yes	☑	No	☐		
Is it clear what analyses were requested?	Yes	☑	No	☐		
Custody seals intact on sample bottles?	Yes	☐	No	☐	Not Present	☑
Samples in proper container/bottle?	Yes	☑	No	☐		
Were correct preservatives used and noted?	Yes	☑	No	☐	NA	☐
Preservative added to bottles:						
Sample Condition?	Intact	☑	Broken	☐	Leaking	☐
Sufficient sample volume for indicated test?	Yes	☑	No	☐		
Were container labels complete (ID, Pres, Date)?	Yes	☑	No	☐		
All samples received within holding time?	Yes	☑	No	☐		
Was an attempt made to cool the samples?	Yes	☑	No	☐	NA	☐
All samples received at a temp. of > 0° C to 6.0° C?	Yes	☑	No	☐	NA	☐
Response when temperature is outside of range:						
Sample Temp. taken and recorded upon receipt?	Yes	☑	No	☐	1.6 To	2.8 °
Water - Were bubbles absent in VOC vials?	Yes	☑	No	☐	No Vials	☐
Water - Was there Chlorine Present?	Yes	☐	No	☐	NA	☑
Water - pH acceptable upon receipt?	Yes	☑	No	☐	No Water	☐
Are Samples considered acceptable?	Yes	☑	No	☐		
Custody Seals present?	Yes	☐	No	☑		
Airbill or Sticker?	Air Bil	☐	Sticker	☐	Not Present	☑
Airbill No:						

Case Number: SDG: TOS012F SAS:

Any No response should be detailed in the comments section below, if applicable.

Client Contacted? ☐ Yes ☑ No Person Contacted:

Contact Mode: ☐ Phone: ☐ Fax: ☐ Email: ☐ In Person:

Client Instructions:

Date Contacted: Contacted By:

Regarding:

Comments:

Trip Blanks for both days of sampling were provided by client.

CorrectiveAction:

TOS012/012F S27

H2M LABS, INC.

INTERNAL CHAIN OF CUSTODY

CLIENT: TOS DELIVERABLES: B0-70D TURN AROUND TIME: 21 Days

SDG #: TOS012F CASE #: _____ MATRIX: GW pH CHECK Y or N

REMARKS: 087TOS07

RECEIVED BY: LSD SIGNATURE: LSD DATE: 4/17/13 TIME: 1000

	CLIENT ID	H2M LAB #	DATE COLLECTED	BOTTLE TYPE	# OF BOTTLES	TESTS REQUESTED
1	MW-11A (MS/MSD)	1304A28-001A	4.16	JN	1	TALMPKG-W-DISS + FILTER
2	11B	002A	↓	↓	↓	↓
3	12A	003A	↓	↓	↓	↓
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

LSD 4/17/13

METALS

TOS012/012F S28

P 0067

H2M LABS, INC.

CLIENT: TOS

SDG #: TOS012F

INTERNAL CHAIN OF CUSTODY

DATE	TIME	SAMPLE RELINQUISHED BY	SAMPLE RECEIVED BY	BOTTLE TYPE	PURPOSE OF CHANGE OF CUSTODY	INIT
9/17/13	1200	SIGN	SIGN	J	digestion/FILTER	
9/1/13	800	SIGN	SIGN	DLAS	ICP ANALYSIS	
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
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		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			

METALS

H 2 M labs

575 Broad Hollow Road
Melville, NY 11747

tel 631.694.3040
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3. SDG NARRATIVES

H 2 M labs

575 Broad Hollow Road
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fax 631.420.8436

SDG NARRATIVE FOR VOLATILE ANALYSES
SAMPLE RECEIVED: 4/16/12 & 4/17/13
SDG#: TOS012

For Sample(s):

DUP001	MW-4B	MW-1C
LEA-PRIMARY	MW-4C	MW-11A
LEA-SECONDARY	FB001	MW-11B
MW-3A	TRIP BLANK 001	MW-12A
MW-3B	STORAGE BLANK	MW-12B
MW-3C	MW-1A	FB002
MW-4A	MW-1B	TRIP

The above sample(s) and blank(s) was/were analyzed for a specific list of volatile organic analytes by EPA method 8260B according to the requirements of the NYSDEC ASP 2000 with category B deliverables.

All Q. C. data and calibrations met the requirements of the method, and no problems were encountered with sample analysis. The following should be noted:

Sample MW-3B was analyzes as the matrix spike / matrix spike duplicate (MS/MSD). All percent recoveries and RPDs were met. A lab fortified blank was analyzed and indicates good method efficiency.

Low levels of acetone were present in the method blanks. This analyte was flagged with a "B" qualifier if present in samples associated with these blanks.

In the initial calibration of 3/18/13 the %RSD was greater than 20.5% but below the limit of 40% for dibromochloromethane (21.3%) and bromoform (30.3%). In the continuing calibration of 4/17/13, trans-1,3-dichloropropane had a %D greater than 25% but below the limit of 40%.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Date Reported: April 26, 2013

****
* *
* *
****
Joann M. Slavin
Senior Vice President

H2M labs
575 Broad Hollow Road
Melville, NY 11747
tel 631.694.3040
fax 631.420.8436

SDG NARRATIVE FOR TOTAL METALS ANALYSES
SAMPLE(S) RECEIVED: 4/16/13 & 4/17/13
SDG #: TOS012

For Sample(s):

DUP001	MW-4A	MW-1C
LEA-PRIMARY	MW-4B	MW-11A
LEA-SECONDARY	MW-4C	MW-11B
MW-3A	FB001	MW-12A
MW-3B	MW-1A	MW-12B
MW-3C	MW-1B	FB002

The above water sample(s) was/were received by H2M Labs, for analysis of select lists of total metals and cyanide.

Samples were prepared and analyzed using EPA methods 6010B with a TS ICAP 6000 Instrument, 7470A with a Leeman HYDRA mercury analyzer and cyanide methods 9010/9014.

All Q. C. data and calibrations met the requirements of the method, unless discussed below, and no problems were encountered with sample analysis. The following should be noted:

Sample MW-3B was utilized for Q. C. analysis and reporting.

The sample spike recoveries for boron and selenium were below the acceptance limit. Data for the analytes were flagged with the "N" qualifier on Forms 1 and 5A. The post spike recoveries were within the acceptance limits.

The sample spike recovery for iron was above 125%. Since the sample result exceeded the spike concentrations by more than four times, post spike analysis and data qualifiers were not required.

The ICP serial dilution analysis did not meet acceptance criteria for potassium. Potassium data were reported flagged "E" on forms 1 and 9.

labs

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SDG NARRATIVE FOR TOTAL METALS ANALYSES
SAMPLE(S) RECEIVED: 4/16/13 & 4/17/13
SDG #: TOS012

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Date Reported: May 6, 2013

****
* *
* *
****

Ursula Middel
Technical Manager

H2M labs

575 Broad Hollow Road
Melville, NY 11747

tel 631.694.3040
fax 631.420.8436

SDG NARRATIVE FOR DISSOLVED METALS ANALYSES
SAMPLE(S) RECEIVED: 4/16/13 & 4/17/13
SDG #: TOS012F

For Sample(s):

MW-11A
MW-11B
MW-12A

The above water sample(s) was/were received by H2M Labs, for analysis of a select list of dissolved metals.

Samples were prepared and analyzed using EPA methods 6010B with a TS ICAP 6000 Instrument, 7470A with a Leeman HYDRA mercury analyzer and cyanide methods 9010/9014.

All Q. C. data and calibrations met the requirements of the method, unless discussed below, and no problems were encountered with sample analysis. The following should be noted:

Sample MW-11A was utilized for Q. C. analysis and reporting.

The sample spike recovery for boron was below the acceptance limit. Data for the analyte were flagged with the "N" qualifier on Forms 1 and 5A. The post spike recovery was within the acceptance limits.

The ICP serial dilution analysis did not meet acceptance criteria for potassium. Potassium data were reported flagged "E" on forms 1 and 9.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Date Reported: May 6, 2013

****
* Middel *
****

Ursula Middel
Technical Manager

TOS012/012F S34

H2M labs

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Melville, NY 11747

tel 631.694.3040
fax 631.420.8436

SDG NARRATIVE FOR WET CHEMISTRY ANALYSES
SAMPLE(S) RECEIVED: 4/16/13 & 4/17/13
SDG #: TOS012

For Sample(s):

DUP001	MW-4A	MW-1C
LEA-PRIMARY	MW-4B	MW-11A
LEA-SECONDARY	MW-4C	MW-11B
MW-3A	FB001	MW-12A
MW-3B	MW-1A	MW-12B
MW-3C	MW-1B	FB002

Sample(s) was/were received by H2M Labs, Inc. for select wet chemistry analysis.

Samples were prepared and analyzed using the following methods:

Alkalinity	SM 2320 B	Nitrite	EPA 353.2
Anions- Cl, SO_4, Br	EPA 300.0	Nitrate	EPA 353.2
Biochemical Oxygen Demand	SM 5210 B	Phenols	EPA 420.1
Chemical Oxygen Demand	EPA 410.4	Total Dissolved Solids	SM 2540 C
Hardness	SM 2340 C	Total Kjeldahl Nitrogen	EPA 351.2
Ammonia	EPA 350.1	Total Organic Carbon	EPA SW846 9060

Sample MW-3B was utilized for QC analysis and reporting.

BOD blank depletion exceeded 0.2 mg/l for the samples received on 4/16/13 and 4/17/13. BOD Batch acceptance was based on LCS standard analysis.

Samples were diluted and reanalyzed as required to keep instrument readings within calibration ranges or to minimize matrix interferences.

No other issues were noted during the analysis of this sample group.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Date Reported: May 6, 2013

****
* *
* *
****

Joann M. Slavin
Senior Vice President

H 2 M labs

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4. SAMPLE REPORTS

4.1 VOLATILES
4.2 TOTAL METALS
4.3 FILTERED METALS
4.4 WET CHEMISTRY

H 2 M labs

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4.1 VOLATILES

QUALIFIERS FOR REPORTING ORGANICS DATA

Value - If the result is a value greater than or equal to the quantification limit, report the value.

U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For example, 10U for phenol in water if the sample final volume is the protocol-specified final volume. If a 1 to 10 dilution of extract is necessary, the reported limit is 100 U. For a soil sample, the value must also be adjusted for percent moisture. For example, if the sample had 24% moisture and a 1 to 10 dilution factor, the sample quantitation limit for phenol (330 U) would be corrected to:

$$\frac{(300\ U)}{D} \times df \text{ where } D = \frac{100\% moisture}{100}$$

and df - dilution factor

For example, at 24% moisture, $D = \frac{100 - 24}{100} = 0.76$

$$\frac{(300\ U)}{.76} \times 10 = 4300\ U$$ rounded to the appropriate number of significant figures

For semivolatile soil samples, the extract must be concentrated to 0.5 mL, and the sensitivity of the analysis is not compromised by the cleanup procedures. Similarly, pesticide samples subjected to GPC are concentrated to 5.0 mL. Therefore, the CRQL values in Exhibit C will apply to all samples, regardless of cleanup. However, if a sample extract cannot be concentrated to the protocol-specified volume (see Exhibit C), this fact must be accounted for in reporting the sample quantitation limit.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified quantification limit but greater than zero. (e.g.: If limit of quantification is 10 ug/L and a concentration of 3 ug/L is calculated, report as 3J.) The sample quantitation limit must be adjusted for dilution as discussed for the U flag.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.

P - This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns (see Form X). The lower of the two values is reported of Form I with a "P".

C - This flag applies to pesticide results when the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, do not apply this flag, instead use a Laboratory defined flag, discussed below.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified target compound.

E - This flag identified compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. If one or more compounds have a response greater than full scale, except as noted in Exhibit D, the sample or extract must be diluted and re -analyzed according to the specifications in Exhibit D. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration ranges in the second analysis, then the results of both analyses shall be reported on separate copies of Form I. The Form I for the diluted sample shall have the "DL" suffix appended to the sample number. NOTE: For total xylenes, where three isomers are quantified as two peaks, the calibration range of each peak should be considered separately, e.g. a diluted analysis is not required for total xylenes unless the concentration of the peak representing the single isomer exceed 200 ug/L or the peak representing the two coeluting isomers on that GC column exceed 400 ug/L. Similarly, if the two 1,2-Dichloroethene isomers coelute, a diluted analysis is not required unless the concentration exceed 400 ug /L.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and all concentration values reported on that Form I are flagged with the "D" flag. This flag alerts data users that any discrepancies between the concentrations reported may be due to dilution of the sample or extract.

A - This flag indicates that a TIC is a suspected aldol -condensation product.

X - Other specific flags may be required to properly define the results. If used, they must be fully described and such description attached to the Sample Data Summary Package and the SDG narrative. Begin by using "X". If more than one flag is required use "Y" and "Z" as needed. If more than five qualifiers are required for a sample result, used the "X" flag to combine several flags as needed. For instance, the "X" flag might combine "A", "B", and "D" flags for some samples. The laboratory defined flags limited to the letters "X", "Y" and "Z".

The combination of flags "BU' or "UB" is expressly prohibited. Blank contaminants are flagged "B" only when they are detected in the sample.

1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP001

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60373.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	2	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	0.4	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	1	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP001

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60373.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

1F

EPA SAMPLE NO.

DUP001

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60373.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-3A

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-004A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60374.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	2	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	0.4	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	1	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-3A

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-004A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60374.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

1F

EPA SAMPLE NO.

MW-3A

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-004A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60374.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-3B

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-005A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60375.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	2	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	0.4	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	1	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-3B

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-005A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60375.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

EPA SAMPLE NO.

MW-3B

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-005A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60375.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

Number TICs found: 0 CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-3C

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-006A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60378.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	2	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	0.4	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	1	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-3C

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-006A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60378.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

TOS012/012F S50

1F

EPA SAMPLE NO.

MW-3C

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-006A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60378.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-4A

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-007A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60379.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	2	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	0.4	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	1	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-4A

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-007A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60379.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

1F

EPA SAMPLE NO.

MW-4A

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-007A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60379.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-4B

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-008A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60380.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	2	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	0.4	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	1	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-4B

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-008A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60380.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	2	J
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	2	J
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

1F

EPA SAMPLE NO.

MW-4B

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-008A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60380.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-4C

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-009A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60381.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	2	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	0.4	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	1	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-4C

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-009A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60381.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

1F

EPA SAMPLE NO.

MW-4C

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-009A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60381.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FB001

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-010A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60382.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	2	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	0.4	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	1	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FB001

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-010A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60382.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

EPA SAMPLE NO.

FB001

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-010A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60382.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK 001

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-011A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60383.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	2	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	0.4	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	1	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK 001

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-011A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60383.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

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1F

EPA SAMPLE NO.

TRIP BLANK 001

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-011A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60383.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

STORAGE BLANK

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-012A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60384.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	2	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	1	BJ
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	0.4	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	1	U

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

STORAGE BLANK

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-012A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60384.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

TOS012/012F S68

1F

EPA SAMPLE NO.

STORAGE BLANK

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304917-012A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60384.D

Level: (low/med) LOW Date Received: 04/16/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-1A

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60385.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	2	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	0.4	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	1	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-1A

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60385.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

EPA SAMPLE NO.

MW-1A

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60385.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-1B

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60386.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	2	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	3	J
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	0.4	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	1	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-1B

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60386.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

1F

EPA SAMPLE NO.

MW-1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60386.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-1C

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60387.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	2	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	2	J
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	0.4	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	1	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-1C

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60387.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

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EPA SAMPLE NO.

MW-1C

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60387.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-11A

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-004A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60388.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	2	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	3	BJ
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	0.4	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	1	U

EPA SAMPLE NO.

MW-11A

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-004A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60388.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

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1F

EPA SAMPLE NO.

MW-11A

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-004A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60388.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-11B

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-005A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60389.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	2	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	2	J
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	0.4	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	1	U

EPA SAMPLE NO.

MW-11B

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-005A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60389.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

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EPA SAMPLE NO.

MW-11B

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-005A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60389.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-12A

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-006A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60390.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	2	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	0.4	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	1	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-12A

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-006A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60390.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

EPA SAMPLE NO.

MW-12A

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-006A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60390.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

Number TICs found: 0 CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-12B

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-007A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60391.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	2	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	0.4	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	1	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-12B

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-007A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60391.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

1F

EPA SAMPLE NO.

MW-12B

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-007A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60391.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FB002

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-008A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60396.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	2	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	1	BJ
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	0.4	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	1	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FB002

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-008A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60396.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

1F

EPA SAMPLE NO.

FB002

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-008A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60396.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

Number TICs found: 0 CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIP BLANK

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-009A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60397.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	2	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	2	BJ
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	0.4	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	1	U

1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-009A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60397.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

TOS012/012F S95

1F

EPA SAMPLE NO.

TRIP BLANK

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-009A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60397.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

H 2 M labs

575 Broad Hollow Road
Melville, NY 11747

tel 631.694.3040
fax 631.420.8436

4.2 TOTAL METALS

H2M LABS, INC.

QUALIFIERS FOR METALS ANALYSIS

Q (Quality Control) Qualifiers

E - Serial dilution is not within acceptance criteria or the reported value is estimated because of the presence of interference. An explanatory note is included in the SDG narrative.

N - Matrix spike sample recovery not within control limits.

* - Duplicate analysis is not within control limits.

C (Concentration) Qualifiers

B - Entered if the reported value is less than the Contract Required Detection Limit (CRDL) but greater than the Instrument Detection Limit (IDL).

U - Entered if the analyte was analyzed for but not detected, i.e., less than the IDL.

M (Method) Qualifiers

P - Analyzed by ICP.
MS - Analyzed by ICP-MS
CV - Analyzed by Manual Cold Vapor techniques.
AV - Analyzed by Automated Cold Vapor techniques.
C - Analyzed by Manual Spectrophotometric Method.
CA- Analyzed by Midi-distillation Spectrophotometric Method.
NR - Analyte not Required.

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

DUP001

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Lab Sample ID: 1304917-001

Level (low/med): LOW Date Received: 4/16/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.0	B		P
7440-36-0	Antimony	2.1	B		P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	27.7	B		P
7440-41-7	Beryllium	0.20	B		P
7440-42-8	Boron	16.4	B	N	P
7440-43-9	Cadmium	0.20	B		P
7440-70-2	Calcium	12600			P
7440-47-3	Chromium	3.4	B		P
7440-48-4	Cobalt	0.40	U		P
7440-50-8	Copper	3.0	B		P
57-12-5	Cyanide	10.0	U		CA
7439-89-6	Iron	25.6	B		P
7439-92-1	Lead	9.1			P
7439-95-4	Magnesium	5830			P
7439-96-5	Manganese	42.4			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	4.5	B		P
7440-09-7	Potassium	975	B	E	P
7782-49-2	Selenium	2.3	U	N	P
7440-22-4	Silver	0.20	U		P
7440-23-5	Sodium	13600			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	0.50	B		P
7440-66-6	Zinc	5.6	B		P

Color Before: COLORLESS Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Date Reported 5/2/2013

TOS012/012F S99

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

LEA-PRIMARY

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Lab Sample ID: 1304917-002

Level (low/med): LOW Date Received: 4/16/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.8	U		P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	71600			P
7439-89-6	Iron	13600			P
7439-92-1	Lead	5.8			P
7439-95-4	Magnesium	21400			P
7439-96-5	Manganese	2060			P
7440-09-7	Potassium	86100		E	P
7440-23-5	Sodium	186000			P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Date Reported 5/2/2013

TOS012/012F S100

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

LEA-SECONDARY

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Lab Sample ID: 1304917-003

Level (low/med): LOW Date Received: 4/16/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.5	B		P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	68800			P
7439-89-6	Iron	14200			P
7439-92-1	Lead	3.3			P
7439-95-4	Magnesium	8080			P
7439-96-5	Manganese	5710			P
7440-09-7	Potassium	13400		E	P
7440-23-5	Sodium	17600			P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

Date Reported 5/2/2013

TOS012/012F S101

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-3A

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Lab Sample ID: 1304917-004

Level (low/med): LOW Date Received: 4/16/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10.8	B		P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	38.2	B		P
7440-41-7	Beryllium	0.10	U		P
7440-42-8	Boron	25.7	B	N	P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	18000			P
7440-47-3	Chromium	104			P
7440-48-4	Cobalt	1.3	B		P
7440-50-8	Copper	5.9	B		P
57-12-5	Cyanide	10.0	U		CA
7439-89-6	Iron	441			P
7439-92-1	Lead	3.3			P
7439-95-4	Magnesium	4100	B		P
7439-96-5	Manganese	86.6			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	40.8			P
7440-09-7	Potassium	2720	B	E	P
7782-49-2	Selenium	2.3	U	N	P
7440-22-4	Silver	0.20	U		P
7440-23-5	Sodium	16900			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	0.30	U		P
7440-66-6	Zinc	8.0	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Date Reported 5/2/2013

TOS012/012F S102

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-3B

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Lab Sample ID: 1304917-005

Level (low/med): LOW Date Received: 4/16/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12.3	B		P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	12.5			P
7440-39-3	Barium	29.1	B		P
7440-41-7	Beryllium	0.10	U		P
7440-42-8	Boron	40.2	B	N	P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	9030			P
7440-47-3	Chromium	3.5	B		P
7440-48-4	Cobalt	4.7	B		P
7440-50-8	Copper	1.1	B		P
57-12-5	Cyanide	10.0	U		CA
7439-89-6	Iron	12100			P
7439-92-1	Lead	2.9	B		P
7439-95-4	Magnesium	2960	B		P
7439-96-5	Manganese	3400			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.2	B		P
7440-09-7	Potassium	3720	B	E	P
7782-49-2	Selenium	2.3	U	N	P
7440-22-4	Silver	0.20	U		P
7440-23-5	Sodium	9980			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	0.30	U		P
7440-66-6	Zinc	11.5	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Date Reported 5/2/2013

TOS012/012F S103

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-3C

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Lab Sample ID: 1304917-006

Level (low/med): LOW Date Received: 4/16/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9.5	U		P
7440-36-0	Antimony	3.6	B		P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	24.8	B		P
7440-41-7	Beryllium	0.10	U		P
7440-42-8	Boron	17.5	B	N	P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	12000			P
7440-47-3	Chromium	2.9	B		P
7440-48-4	Cobalt	0.40	U		P
7440-50-8	Copper	0.40	U		P
57-12-5	Cyanide	10.0	U		CA
7439-89-6	Iron	18.5	B		P
7439-92-1	Lead	8.4			P
7439-95-4	Magnesium	5660			P
7439-96-5	Manganese	40.6			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	4.4	B		P
7440-09-7	Potassium	1030	B	E	P
7782-49-2	Selenium	2.3	U	N	P
7440-22-4	Silver	0.20	U		P
7440-23-5	Sodium	13200			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	0.40	B		P
7440-66-6	Zinc	7.6	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Date Reported 5/2/2013

TOS012/012F S104

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-4A

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Lab Sample ID: 1304917-007

Level (low/med): LOW Date Received: 4/16/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	243			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	206			P
7440-41-7	Beryllium	0.20	B		P
7440-42-8	Boron	21.2	B	N	P
7440-43-9	Cadmium	0.30	B		P
7440-70-2	Calcium	13900			P
7440-47-3	Chromium	4.6	B		P
7440-48-4	Cobalt	0.40	U		P
7440-50-8	Copper	0.40	U		P
57-12-5	Cyanide	10.0	U		CA
7439-89-6	Iron	63.1	B		P
7439-92-1	Lead	6.3			P
7439-95-4	Magnesium	4570	B		P
7439-96-5	Manganese	133			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	5.6	B		P
7440-09-7	Potassium	4360	B	E	P
7782-49-2	Selenium	2.3	U	N	P
7440-22-4	Silver	0.20	U		P
7440-23-5	Sodium	18300			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	0.30	U		P
7440-66-6	Zinc	12.5	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Date Reported 5/2/2013

TOS012/012F S105

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-4B

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Lab Sample ID: 1304917-008

Level (low/med): LOW Date Received: 4/16/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9.5	U		P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	66.2	B		P
7440-41-7	Beryllium	0.10	U		P
7440-42-8	Boron	76.1	B	N	P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	21400			P
7440-47-3	Chromium	3.0	B		P
7440-48-4	Cobalt	2.9	B		P
7440-50-8	Copper	0.40	U		P
57-12-5	Cyanide	10.0	U		CA
7439-89-6	Iron	4100			P
7439-92-1	Lead	7.0			P
7439-95-4	Magnesium	11200			P
7439-96-5	Manganese	815			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	5.7	B		P
7440-09-7	Potassium	4830	B	E	P
7782-49-2	Selenium	3.1	B	N	P
7440-22-4	Silver	0.20	U		P
7440-23-5	Sodium	21300			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	0.30	U		P
7440-66-6	Zinc	7.3	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Date Reported 5/2/2013

TOS012/012F S106

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-4C

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Lab Sample ID: 1304917-009

Level (low/med): LOW Date Received: 4/16/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12.6	B		P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	39.1	B		P
7440-41-7	Beryllium	0.10	U		P
7440-42-8	Boron	10.8	B	N	P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	23200			P
7440-47-3	Chromium	187			P
7440-48-4	Cobalt	5.0	B		P
7440-50-8	Copper	4.3	B		P
57-12-5	Cyanide	10.0	U		CA
7439-89-6	Iron	770			P
7439-92-1	Lead	8.0			P
7439-95-4	Magnesium	10600			P
7439-96-5	Manganese	38.1			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	344			P
7440-09-7	Potassium	1330	B	E	P
7782-49-2	Selenium	2.3	U	N	P
7440-22-4	Silver	0.20	U		P
7440-23-5	Sodium	24900			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	0.30	U		P
7440-66-6	Zinc	12.9	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Date Reported 5/2/2013

TOS012/012F S107

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

FB001

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Lab Sample ID: 1304917-010

Level (low/med): LOW Date Received: 4/16/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9.7	B		P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	3.7	U		P
7440-41-7	Beryllium	0.10	U		P
7440-42-8	Boron	4.0	B	N	P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	56.6	B		P
7440-47-3	Chromium	1.3	B		P
7440-48-4	Cobalt	0.40	U		P
7440-50-8	Copper	0.60	B		P
57-12-5	Cyanide	10.0	U		CA
7439-89-6	Iron	3.0	B		P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	16.9	U		P
7439-96-5	Manganese	0.40	B		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	0.70	B		P
7440-09-7	Potassium	84.4	B	E	P
7782-49-2	Selenium	2.3	U	N	P
7440-22-4	Silver	0.20	U		P
7440-23-5	Sodium	67.0	U		P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	0.30	U		P
7440-66-6	Zinc	6.8	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Date Reported 5/2/2013

TOS012/012F S108

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-1A

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Lab Sample ID: 1304A27-001

Level (low/med): LOW Date Received: 4/17/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12.9	B		P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	5.8	B		P
7440-41-7	Beryllium	0.10	U		P
7440-42-8	Boron	24.8	B	N	P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	14100			P
7440-47-3	Chromium	1.6	B		P
7440-48-4	Cobalt	0.40	U		P
7440-50-8	Copper	0.40	U		P
57-12-5	Cyanide	10.0	U		CA
7439-89-6	Iron	12.4	B		P
7439-92-1	Lead	4.5			P
7439-95-4	Magnesium	6280			P
7439-96-5	Manganese	2.3	B		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	1.2	B		P
7440-09-7	Potassium	4680	B	E	P
7782-49-2	Selenium	2.5	B	N	P
7440-22-4	Silver	0.20	U		P
7440-23-5	Sodium	7870			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	0.30	U		P
7440-66-6	Zinc	8.4	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Date Reported 5/2/2013

TOS012/012F S109

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-1B

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Lab Sample ID: 1304A27-002

Level (low/med): LOW Date Received: 4/17/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	43.8	B		P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	9.8	B		P
7440-41-7	Beryllium	0.10	U		P
7440-42-8	Boron	12.9	B	N	P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	4310	B		P
7440-47-3	Chromium	13.1			P
7440-48-4	Cobalt	0.40	U		P
7440-50-8	Copper	5.3	B		P
57-12-5	Cyanide	10.0	U		CA
7439-89-6	Iron	177			P
7439-92-1	Lead	5.2			P
7439-95-4	Magnesium	1950	B		P
7439-96-5	Manganese	4.1	B		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	9.5	B		P
7440-09-7	Potassium	613	B	E	P
7782-49-2	Selenium	2.3	U	N	P
7440-22-4	Silver	0.20	U		P
7440-23-5	Sodium	6280			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	0.30	B		P
7440-66-6	Zinc	13.0	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Date Reported 5/2/2013

TOS012/012F S110

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-1C

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Lab Sample ID: 1304A27-003

Level (low/med): LOW Date Received: 4/17/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17.3	B		P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	9.0	B		P
7440-41-7	Beryllium	0.10	U		P
7440-42-8	Boron	12.8	B	N	P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	4490	B		P
7440-47-3	Chromium	3.7	B		P
7440-48-4	Cobalt	0.40	U		P
7440-50-8	Copper	1.3	B		P
57-12-5	Cyanide	10.0	U		CA
7439-89-6	Iron	68.4	B		P
7439-92-1	Lead	5.2			P
7439-95-4	Magnesium	2230	B		P
7439-96-5	Manganese	2.6	B		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	9.0	B		P
7440-09-7	Potassium	702	B	E	P
7782-49-2	Selenium	2.3	U	N	P
7440-22-4	Silver	0.20	U		P
7440-23-5	Sodium	7770			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	0.40	B		P
7440-66-6	Zinc	9.2	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

Date Reported 5/2/2013

TOS012/012F S111

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-11A

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Lab Sample ID: 1304A27-004

Level (low/med): LOW Date Received: 4/17/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17.9	B		P
7440-36-0	Antimony	1.6	B		P
7440-38-2	Arsenic	4.4	B		P
7440-39-3	Barium	164	B		P
7440-41-7	Beryllium	0.10	U		P
7440-42-8	Boron	41.9	B	N	P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	42600			P
7440-47-3	Chromium	4.6	B		P
7440-48-4	Cobalt	10.7	B		P
7440-50-8	Copper	0.40	U		P
57-12-5	Cyanide	10.0	U		CA
7439-89-6	Iron	22400			P
7439-92-1	Lead	4.9			P
7439-95-4	Magnesium	15800			P
7439-96-5	Manganese	2020			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	4.5	B		P
7440-09-7	Potassium	5050		E	P
7782-49-2	Selenium	2.3	U	N	P
7440-22-4	Silver	0.20	U		P
7440-23-5	Sodium	13900			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	0.30	U		P
7440-66-6	Zinc	10.3	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Date Reported 5/2/2013

TOS012/012F S112

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-11B

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Lab Sample ID: 1304A27-005

Level (low/med): LOW Date Received: 4/17/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2150			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	5.2	B		P
7440-39-3	Barium	29.3	B		P
7440-41-7	Beryllium	0.10	U		P
7440-42-8	Boron	15.1	B	N	P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	14900			P
7440-47-3	Chromium	31.3			P
7440-48-4	Cobalt	1.4	B		P
7440-50-8	Copper	9.0	B		P
57-12-5	Cyanide	10.0	U		CA
7439-89-6	Iron	12700			P
7439-92-1	Lead	25.4			P
7439-95-4	Magnesium	4490	B		P
7439-96-5	Manganese	273			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	8.1	B		P
7440-09-7	Potassium	2120	B	E	P
7782-49-2	Selenium	2.3	U	N	P
7440-22-4	Silver	0.20	U		P
7440-23-5	Sodium	7070			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	6.0	B		P
7440-66-6	Zinc	29.3			P

Color Before: COLORLESS Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Date Reported 5/2/2013

TOS012/012F S113

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-12A

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Lab Sample ID: 1304A27-006

Level (low/med): LOW Date Received: 4/17/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	90.0	B		P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	6.4	B		P
7440-39-3	Barium	46.5	B		P
7440-41-7	Beryllium	0.10	U		P
7440-42-8	Boron	47.9	B	N	P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	25100			P
7440-47-3	Chromium	6.3	B		P
7440-48-4	Cobalt	4.3	B		P
7440-50-8	Copper	2.5	B		P
57-12-5	Cyanide	10.0	U		CA
7439-89-6	Iron	6780			P
7439-92-1	Lead	4.2			P
7439-95-4	Magnesium	6790			P
7439-96-5	Manganese	3720			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	10.5	B		P
7440-09-7	Potassium	6340		E	P
7782-49-2	Selenium	2.3	U	N	P
7440-22-4	Silver	0.22	B		P
7440-23-5	Sodium	9970			P
7440-28-0	Thallium	1.9	B		P
7440-62-2	Vanadium	3.3	B		P
7440-66-6	Zinc	17.2	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Date Reported 5/2/2013

TOS012/012F S114

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-12B

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Lab Sample ID: 1304A27-007

Level (low/med): LOW Date Received: 4/17/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.1	B		P
7440-36-0	Antimony	1.8	B		P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	97.7	B		P
7440-41-7	Beryllium	0.10	U		P
7440-42-8	Boron	74.3	B	N	P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	25200			P
7440-47-3	Chromium	1.4	B		P
7440-48-4	Cobalt	0.40	U		P
7440-50-8	Copper	1.6	B		P
57-12-5	Cyanide	10.0	U		CA
7439-89-6	Iron	27.4	B		P
7439-92-1	Lead	5.5			P
7439-95-4	Magnesium	7030			P
7439-96-5	Manganese	124			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	8.5	B		P
7440-09-7	Potassium	10000		E	P
7782-49-2	Selenium	2.3	U	N	P
7440-22-4	Silver	0.23	B		P
7440-23-5	Sodium	11000			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	1.2	B		P
7440-66-6	Zinc	7.3	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Date Reported 5/2/2013

TOS012/012F S115

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

FB002

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Lab Sample ID: 1304A27-008

Level (low/med): LOW Date Received: 4/17/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9.9	B		P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	3.7	U		P
7440-41-7	Beryllium	0.10	U		P
7440-42-8	Boron	3.8	B	N	P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	88.9	B		P
7440-47-3	Chromium	1.0	B		P
7440-48-4	Cobalt	0.40	U		P
7440-50-8	Copper	0.50	B		P
57-12-5	Cyanide	10.0	U		CA
7439-89-6	Iron	8.4	B		P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	16.9	U		P
7439-96-5	Manganese	0.70	B		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	0.90	B		P
7440-09-7	Potassium	135	B	E	P
7782-49-2	Selenium	2.3	U	N	P
7440-22-4	Silver	0.20	U		P
7440-23-5	Sodium	67.0	U		P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	0.30	U		P
7440-66-6	Zinc	5.2	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Date Reported 5/2/2013

TOS012/012F S116

H 2 M labs

575 Broad Hollow Road
Melville, NY 11747

tel 631.694.3040
fax 631.420.8436

4.3 FILTERED METALS

H2M LABS, INC.

QUALIFIERS FOR METALS ANALYSIS

Q (Quality Control) Qualifiers

E - Serial dilution is not within acceptance criteria or the reported value is estimated because of the presence of interference. An explanatory note is included in the SDG narrative.

N - Matrix spike sample recovery not within control limits.

* - Duplicate analysis is not within control limits.

C (Concentration) Qualifiers

B - Entered if the reported value is less than the Contract Required Detection Limit (CRDL) but greater than the Instrument Detection Limit (IDL).

U - Entered if the analyte was analyzed for but not detected, i.e., less than the IDL.

M (Method) Qualifiers

P - Analyzed by ICP.
MS - Analyzed by ICP-MS
CV - Analyzed by Manual Cold Vapor techniques.
AV - Analyzed by Automated Cold Vapor techniques.
C - Analyzed by Manual Spectrophotometric Method.
CA- Analyzed by Midi-distillation Spectrophotometric Method.
NR - Analyte not Required.

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-11A

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012F

Matrix (soil/water): WATER Lab Sample ID: 1304A28-001

Level (low/med): LOW Date Received: 4/17/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	30.8	B		P
7440-36-0	Antimony	1.3	B		P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	141	B		P
7440-41-7	Beryllium	0.90	B		P
7440-42-8	Boron	50.8	B	N	P
7440-43-9	Cadmium	0.80	B		P
7440-70-2	Calcium	41200			P
7440-47-3	Chromium	3.3	B		P
7440-48-4	Cobalt	11.3	B		P
7440-50-8	Copper	1.6	B		P
7439-89-6	Iron	4540			P
7439-92-1	Lead	6.4			P
7439-95-4	Magnesium	15000			P
7439-96-5	Manganese	1830			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	5.6	B		P
7440-09-7	Potassium	5100		E	P
7782-49-2	Selenium	2.3	U		P
7440-22-4	Silver	0.45	B		P
7440-23-5	Sodium	12900			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	0.30	U		P
7440-66-6	Zinc	12.9	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

Date Reported 5/3/2013

TOS012/012F S119

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-11B

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012F

Matrix (soil/water): WATER Lab Sample ID: 1304A28-002

Level (low/med): LOW Date Received: 4/17/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9.5	U		P
7440-36-0	Antimony	10.9	B		P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	9.6	B		P
7440-41-7	Beryllium	0.10	U		P
7440-42-8	Boron	19.2	B	N	P
7440-43-9	Cadmium	0.20	B		P
7440-70-2	Calcium	14200			P
7440-47-3	Chromium	2.3	B		P
7440-48-4	Cobalt	0.40	U		P
7440-50-8	Copper	0.40	U		P
7439-89-6	Iron	48.7	B		P
7439-92-1	Lead	3.1			P
7439-95-4	Magnesium	3800	B		P
7439-96-5	Manganese	27.6			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	4.6	B		P
7440-09-7	Potassium	2050	B	E	P
7782-49-2	Selenium	15.3			P
7440-22-4	Silver	0.20	U		P
7440-23-5	Sodium	7420			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	0.90	B		P
7440-66-6	Zinc	9.1	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Date Reported 5/3/2013

TOS012/012F S120

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-12A

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012F

Matrix (soil/water): WATER Lab Sample ID: 1304A28-003

Level (low/med): LOW Date Received: 4/17/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	21.4	B		P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	42.1	B		P
7440-41-7	Beryllium	0.10	U		P
7440-42-8	Boron	49.1	B	N	P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	25100			P
7440-47-3	Chromium	1.8	B		P
7440-48-4	Cobalt	3.6	B		P
7440-50-8	Copper	2.5	B		P
7439-89-6	Iron	236			P
7439-92-1	Lead	5.6			P
7439-95-4	Magnesium	6730			P
7439-96-5	Manganese	3610			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	6.6	B		P
7440-09-7	Potassium	6280		E	P
7782-49-2	Selenium	2.3	U		P
7440-22-4	Silver	0.45	B		P
7440-23-5	Sodium	9700			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	0.30	U		P
7440-66-6	Zinc	10.4	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

Date Reported 5/3/2013

TOS012/012F S121

H2M labs
575 Broad Hollow Road
Melville, NY 11747
tel 631.694.3040
fax 631.420.8436

4.4 WET CHEMISTRY

H 2 M labs

575 Broad Hollow Rd., Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-001
Client Sample ID: DUP001

Sample Information:
Type : Groundwater

Origin:

Analytical Method: SM2320B :						Analyst: HT
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Alkalinity, Total (As CaCO3)	58.1	D	2	mg/L	04/17/2013 12:45 PM	Container-01 of 02
Analytical Method: E300.0 :						Analyst: bka
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromide	< 0.50		1	mg/L	04/23/2013 7:38 PM	Container-01 of 02
Chloride	12.9		1	mg/L	04/23/2013 7:38 PM	Container-01 of 02
Sulfate	< 5.00		1	mg/L	04/23/2013 7:38 PM	Container-01 of 02
Analytical Method: SM5210B :	Prep Method: SM5210B				Prep Date: 4/17/2013 6:39:36 AM	Analyst: CN
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Biochemical Oxygen Demand	< 2		1	mg/L	04/17/2013 9:10 AM	Container-01 of 02

NOTES:
Blank depletion exceeds 0.2 mg/L - average depletion of 0.3 mg/L

Analytical Method: E410.4 :						Analyst: CN
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chemical Oxygen Demand	< 10		1	mg/L	04/23/2013 8:51 AM	Container-01 of 01
Analytical Method: SM2120B : IOC						Analyst: EM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Color	< 5		1	units	04/17/2013 5:52 AM	Container-01 of 02
Analytical Method: M3500-Cr D :						Analyst: EM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chromium, Hexavalent	< 0.02		1	mg/L	04/17/2013 5:32 AM	Container-01 of 02
Analytical Method: SM2340C :						Analyst: JA
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Hardness (As CaCO3)	52	D	2	mg/L	04/19/2013 10:40 AM	Container-01 of 01
Analytical Method: SM4500-NH3 H :						Analyst: bka
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	04/22/2013 11:53 AM	Container-01 of 01
Analytical Method: E353.2 :						Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrite as N	< 0.10		1	mg/L	04/17/2013 7:43 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

TOS012/012F S123

H 2 M labs

575 Broad Hollow Rd., Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-001
Client Sample ID: DUP001

Sample Information:
Type : Groundwater

Origin:

Analytical Method: E353.2 :						Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrate as N	0.10		1	mg/L	04/17/2013 11:58 AM	Container-01 of 01

Analytical Method: E420.1 :	Prep Method: E420.1				Prep Date: 4/22/2013 6:30:00 AM	Analyst: EM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Phenolics, Total Recoverable	< 5.0		1	µg/L	04/24/2013 8:02 AM	Container-01 of 01

Analytical Method: SM2540C : IOC						Analyst: MM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Dissolved Solids	95		1	mg/L	04/18/2013 12:18 PM	Container-01 of 02

Analytical Method: E351.2 :	Prep Method: E351.2				Prep Date: 4/23/2013 6:45:00 AM	Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Kjeldahl, Total	< 0.10		1	mg/L	04/23/2013 2:21 PM	Container-01 of 01

Analytical Method: SW9060 :						Analyst: CO
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Organic Carbon	15.6		1	mg/L	04/25/2013 3:39 PM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H2M labs
575 Broad Hollow Rd., Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013 8:55:00 AM
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-002
Client Sample ID: LEA-PRIMARY

Sample Information:
Type : Leachate

Origin:

Analytical Method: SM2320B : Analyst: HT

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Alkalinity, Total (As CaCO3)	948	D	10	mg/L	04/17/2013 12:52 PM	Container-01 of 02

Analytical Method: E300.0 : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromide	0.91		1	mg/L	04/23/2013 8:33 PM	Container-01 of 02
Chloride	207	D	20	mg/L	04/23/2013 8:46 PM	Container-01 of 02
Sulfate	10.5		1	mg/L	04/23/2013 8:33 PM	Container-01 of 02

Analytical Method: SM5210B : Prep Method: SM5210B Prep Date: 4/17/2013 6:39:36 AM Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Biochemical Oxygen Demand	21		1	mg/L	04/17/2013 9:15 AM	Container-01 of 02

NOTES:
Blank depletion exceeds 0.2 mg/L - average depletion of 0.3 mg/L

Analytical Method: E410.4 : Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chemical Oxygen Demand	148	D	4	mg/L	04/23/2013 8:53 AM	Container-01 of 01

Analytical Method: SM2340C : Analyst: JA

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Hardness (As CaCO3)	360	D	20	mg/L	04/19/2013 10:45 AM	Container-01 of 01

Analytical Method: SM4500-NH3 H : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Ammonia (As N)	145	D	50	mg/L	04/22/2013 11:54 AM	Container-01 of 01

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrite as N	< 0.10		1	mg/L	04/17/2013 7:44 AM	Container-01 of 02

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrate as N	0.41		1	mg/L	04/17/2013 11:59 AM	Container-01 of 01

Analytical Method: E420.1 : Prep Method: E420.1 Prep Date: 4/22/2013 6:30:00 AM Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Phenolics, Total Recoverable	7.7		1	µg/L	04/24/2013 8:03 AM	Container-01 of 01

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd. , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013 8:55:00 AM
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-002
Client Sample ID: LEA-PRIMARY

Sample Information:
Type : Leachate

Origin:

Analytical Method: SM2540C : IOC — Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Dissolved Solids	948	D	4	mg/L	04/18/2013 12:21 PM	Container-01 of 02

Analytical Method: E351.2 : Prep Method: E351.2 — Prep Date: 4/23/2013 6:45:00 AM — Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Kjeldahl, Total	171	D	10	mg/L	04/23/2013 2:22 PM	Container-01 of 01

Analytical Method: SM5310B : — Analyst: CO

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Organic Carbon	246	D	20	mg/L	04/17/2013 2:43 PM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd. , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013 9:00:00 AM
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-003
Client Sample ID: LEA-SECONDARY

Sample Information:
Type : Leachate

Origin:

Analytical Method: SM2320B : Analyst: HT

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Alkalinity, Total (As CaCO3)	236	D	10	mg/L	04/17/2013 1:01 PM	Container-01 of 02

Analytical Method: E300.0 : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromide	< 0.50		1	mg/L	04/23/2013 9:00 PM	Container-01 of 02
Chloride	29.8		1	mg/L	04/23/2013 9:00 PM	Container-01 of 02
Sulfate	10.8		1	mg/L	04/23/2013 9:00 PM	Container-01 of 02

Analytical Method: SM5210B : Prep Method: SM5210B Prep Date: 4/17/2013 6:39:36 AM Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Biochemical Oxygen Demand	< 2		1	mg/L	04/17/2013 9:20 AM	Container-01 of 02

NOTES:
Blank depletion exceeds 0.2 mg/L - average depletion of 0.3 mg/L

Analytical Method: E410.4 : Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chemical Oxygen Demand	31.1		1	mg/L	04/23/2013 8:55 AM	Container-01 of 01

Analytical Method: SM2340C : Analyst: JA

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Hardness (As CaCO3)	250	D	10	mg/L	04/19/2013 10:50 AM	Container-01 of 01

Analytical Method: SM4500-NH3 H : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Ammonia (As N)	12.9	D	50	mg/L	04/22/2013 11:55 AM	Container-01 of 01

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrite as N	< 0.10		1	mg/L	04/17/2013 7:45 AM	Container-01 of 02

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrate as N	< 0.10		1	mg/L	04/17/2013 12:00 PM	Container-01 of 01

Analytical Method: E420.1 : Prep Method: E420.1 Prep Date: 4/22/2013 6:30:00 AM Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Phenolics, Total Recoverable	< 5.0		1	µg/L	04/24/2013 8:04 AM	Container-01 of 01

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

TOS012/012F S127

H 2 M labs

575 Broad Hollow Rd., Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013 9:00:00 AM
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-003
Client Sample ID: LEA-SECONDARY

Sample Information:
Type : Leachate

Origin:

Analytical Method: SM2540C : IOC						Analyst: MM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Dissolved Solids	292		1	mg/L	04/18/2013 12:24 PM	Container-01 of 02

Analytical Method: E351.2 :	Prep Method: E351.2				Prep Date: 4/23/2013 6:45:00 AM	Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Kjeldahl, Total	13.6		1	mg/L	04/23/2013 3:04 PM	Container-01 of 01

Analytical Method: SM5310B :						Analyst: CO
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Organic Carbon	67.1	D	20	mg/L	04/17/2013 3:05 PM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd., Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013 12:20:00 PM
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-004
Client Sample ID: MW-3A

Sample Information:
Type : Groundwater

Origin:

Analytical Method: SM2320B : Analyst: HT

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Alkalinity, Total (As CaCO3)	28.3		1	mg/L	04/17/2013 1:08 PM	Container-01 of 02

Analytical Method: E300.0 : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromide	< 0.50		1	mg/L	04/23/2013 9:27 PM	Container-01 of 02
Chloride	49.1		1	mg/L	04/23/2013 9:27 PM	Container-01 of 02
Sulfate	5.84		1	mg/L	04/23/2013 9:27 PM	Container-01 of 02

Analytical Method: SM5210B : Prep Method: SM5210B Prep Date: 4/17/2013 6:39:36 AM Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Biochemical Oxygen Demand	< 2		1	mg/L	04/17/2013 9:25 AM	Container-01 of 02

NOTES:
Blank depletion exceeds 0.2 mg/L - average depletion of 0.3 mg/L

Analytical Method: E410.4 : Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chemical Oxygen Demand	< 10		1	mg/L	04/23/2013 8:57 AM	Container-01 of 01

Analytical Method: SM2120B : IOC Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Color	5		1	units	04/17/2013 5:53 AM	Container-01 of 02

Analytical Method: M3500-Cr D : Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chromium, Hexavalent	< 0.02		1	mg/L	04/17/2013 5:33 AM	Container-01 of 02

Analytical Method: SM2340C : Analyst: JA

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Hardness (As CaCO3)	62	D	2	mg/L	04/19/2013 10:55 AM	Container-01 of 01

Analytical Method: SM4500-NH3 H : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Ammonia (As N)	0.28		1	mg/L	04/25/2013 2:52 PM	Container-01 of 01

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrite as N	< 0.10		1	mg/L	04/17/2013 7:47 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd., Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013 12:20:00 PM
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-004
Client Sample ID: MW-3A

Sample Information:
Type : Groundwater

Origin:

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrate as N	0.54		1	mg/L	04/17/2013 12:01 PM	Container-01 of 01

Analytical Method: E420.1 : Prep Method: E420.1 Prep Date: 4/22/2013 6:30:00 AM Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Phenolics, Total Recoverable	< 5.0		1	µg/L	04/24/2013 8:05 AM	Container-01 of 01

Analytical Method: SM2540C : IOC Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Dissolved Solids	145		1	mg/L	04/18/2013 12:27 PM	Container-01 of 02

Analytical Method: E351.2 : Prep Method: E351.2 Prep Date: 4/25/2013 7:15:00 AM Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Kjeldahl, Total	0.32		1	mg/L	04/25/2013 3:21 PM	Container-01 of 01

Analytical Method: SW9060 : Analyst: CO

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Organic Carbon	10.3		1	mg/L	04/25/2013 4:17 PM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

TOS012/012F S130

H 2 M labs

575 Broad Hollow Rd. , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013 10:20:00 AM
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-005
Client Sample ID: MW-3B

Sample Information:
Type : Groundwater

Origin:

Analytical Method: SM2320B : Analyst: HT

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Alkalinity, Total (As CaCO3)	46.3	D	2	mg/L	04/17/2013 2:07 PM	Container-01 of 06

Analytical Method: E300.0 : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromide	< 0.50		1	mg/L	04/23/2013 9:40 PM	Container-01 of 06
Chloride	13.5		1	mg/L	04/23/2013 9:40 PM	Container-01 of 06
Sulfate	11.2		1	mg/L	04/23/2013 9:40 PM	Container-01 of 06

Analytical Method: SM5210B : Prep Method: SM5210B Prep Date: 4/17/2013 6:39:36 AM Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Biochemical Oxygen Demand	< 2		1	mg/L	04/17/2013 9:30 AM	Container-01 of 06

NOTES:
Blank depletion exceeds 0.2 mg/L - average depletion of 0.3 mg/L

Analytical Method: E410.4 : Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chemical Oxygen Demand	< 10		1	mg/L	04/23/2013 8:59 AM	Container-01 of 03

Analytical Method: SM2120B : IOC Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Color	125	D	5	units	04/17/2013 5:54 AM	Container-01 of 06

Analytical Method: M3500-Cr D : Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chromium, Hexavalent	< 0.10	D	5	mg/L	04/17/2013 5:45 AM	Container-01 of 06

Analytical Method: SM2340C : Analyst: JA

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Hardness (As CaCO3)	84	D	4	mg/L	04/19/2013 11:00 AM	Container-01 of 03

Analytical Method: SM4500-NH3 H : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Ammonia (As N)	2.82	D	5	mg/L	04/22/2013 11:58 AM	Container-01 of 03

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrite as N	< 0.10		1	mg/L	04/17/2013 7:48 AM	Container-01 of 06

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd., Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013 10:20:00 AM
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-005
Client Sample ID: MW-3B

Sample Information:
Type : Groundwater

Origin:

Analytical Method: E353.2 :						Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrate as N	< 0.10		1	mg/L	04/17/2013 1:48 PM	Container-01 of 03

Analytical Method: E420.1 :	Prep Method: E420.1				Prep Date: 4/22/2013 6:30:00 AM	Analyst: EM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Phenolics, Total Recoverable	< 5.0		1	µg/L	04/24/2013 8:06 AM	Container-01 of 03

Analytical Method: SM2540C : IOC						Analyst: MM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Dissolved Solids	75		1	mg/L	04/18/2013 12:30 PM	Container-01 of 06

Analytical Method: E351.2 :	Prep Method: E351.2				Prep Date: 4/23/2013 6:45:00 AM	Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Kjeldahl, Total	3.05		1	mg/L	04/23/2013 3:05 PM	Container-01 of 03

Analytical Method: SW9060 :						Analyst: CO
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Organic Carbon	14.2		1	mg/L	04/26/2013 8:19 AM	Container-01 of 06

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd. , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013 11:40:00 AM
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-006
Client Sample ID: MW-3C

Sample Information:
Type : Groundwater

Origin:

Analytical Method: SM2320B : Analyst: HT

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Alkalinity, Total (As CaCO3)	56.1		1	mg/L	04/17/2013 2:30 PM	Container-01 of 02

Analytical Method: E300.0 : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromide	< 0.50		1	mg/L	04/23/2013 10:21 PM	Container-01 of 02
Chloride	13.2		1	mg/L	04/23/2013 10:21 PM	Container-01 of 02
Sulfate	< 5.00		1	mg/L	04/23/2013 10:21 PM	Container-01 of 02

Analytical Method: SM5210B : Prep Method: SM5210B Prep Date: 4/17/2013 6:39:36 AM Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Biochemical Oxygen Demand	< 2		1	mg/L	04/17/2013 9:40 AM	Container-01 of 02

NOTES:
Blank depletion exceeds 0.2 mg/L - average depletion of 0.3 mg/L

Analytical Method: E410.4 : Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chemical Oxygen Demand	< 10		1	mg/L	04/23/2013 9:05 AM	Container-01 of 01

Analytical Method: SM2120B : IOC Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Color	< 5		1	units	04/17/2013 5:56 AM	Container-01 of 02

Analytical Method: M3500-Cr D : Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chromium, Hexavalent	< 0.02		1	mg/L	04/17/2013 5:37 AM	Container-01 of 02

Analytical Method: SM2340C : Analyst: JA

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Hardness (As CaCO3)	53		1	mg/L	04/19/2013 11:15 AM	Container-01 of 01

Analytical Method: SM4500-NH3 H : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	04/22/2013 12:01 PM	Container-01 of 01

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrite as N	< 0.10		1	mg/L	04/17/2013 7:51 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

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Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd. , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

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Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013 11:40:00 AM
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-006
Client Sample ID: MW-3C

Sample Information:
Type : Groundwater

Origin:

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrate as N	0.10		1	mg/L	04/17/2013 1:14 PM	Container-01 of 01

Analytical Method: E420.1 : Prep Method: E420.1 Prep Date: 4/22/2013 6:30:00 AM Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Phenolics, Total Recoverable	< 5.0		1	µg/L	04/24/2013 8:09 AM	Container-01 of 01

Analytical Method: SM2540C : IOC Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Dissolved Solids	97		1	mg/L	04/18/2013 12:39 PM	Container-01 of 02

Analytical Method: E351.2 : Prep Method: E351.2 Prep Date: 4/23/2013 6:45:00 AM Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Kjeldahl, Total	< 0.10		1	mg/L	04/23/2013 2:27 PM	Container-01 of 01

Analytical Method: SW9060 : Analyst: CO

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Organic Carbon	15.9		1	mg/L	04/25/2013 6:50 PM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

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Date Reported : 5/3/2013

H 2 M labs

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TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013 1:15:00 PM
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-007
Client Sample ID: MW-4A

Sample Information:
Type : Groundwater

Origin:

Analytical Method: SM2320B : Analyst: HT

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Alkalinity, Total (As CaCO3)	2.20		1	mg/L	04/17/2013 2:54 PM	Container-01 of 02

Analytical Method: E300.0 : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromide	< 0.50		1	mg/L	04/23/2013 10:34 PM	Container-01 of 02
Chloride	31.5		1	mg/L	04/23/2013 10:34 PM	Container-01 of 02
Sulfate	12.0		1	mg/L	04/23/2013 10:34 PM	Container-01 of 02

Analytical Method: SM5210B : Prep Method: SM5210B Prep Date: 4/17/2013 6:39:36 AM Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Biochemical Oxygen Demand	< 2		1	mg/L	04/17/2013 9:45 AM	Container-01 of 02

NOTES:
Blank depletion exceeds 0.2 mg/L - average depletion of 0.3 mg/L

Analytical Method: E410.4 : Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chemical Oxygen Demand	< 10		1	mg/L	04/23/2013 9:07 AM	Container-01 of 01

Analytical Method: SM2120B : IOC Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Color	< 5		1	units	04/17/2013 5:57 AM	Container-01 of 02

Analytical Method: M3500-Cr D : Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chromium, Hexavalent	< 0.02		1	mg/L	04/17/2013 5:38 AM	Container-01 of 02

Analytical Method: SM2340C : Analyst: JA

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Hardness (As CaCO3)	52	D	2	mg/L	04/19/2013 11:20 AM	Container-01 of 01

Analytical Method: SM4500-NH3 H : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	04/22/2013 12:05 PM	Container-01 of 01

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrite as N	< 0.10		1	mg/L	04/17/2013 7:53 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
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s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd. , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013 1:15:00 PM
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-007
Client Sample ID: MW-4A

Sample Information:
Type : Groundwater

Origin:

Analytical Method: E353.2 :						Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrate as N	12.2	D	10	mg/L	04/17/2013 1:15 PM	Container-01 of 01

Analytical Method: E420.1 :	Prep Method: E420.1				Prep Date: 4/22/2013 6:30:00 AM	Analyst: EM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Phenolics, Total Recoverable	< 5.0		1	µg/L	04/24/2013 8:10 AM	Container-01 of 01

Analytical Method: SM2540C : IOC						Analyst: MM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Dissolved Solids	175		1	mg/L	04/18/2013 12:42 PM	Container-01 of 02

Analytical Method: E351.2 :	Prep Method: E351.2				Prep Date: 4/23/2013 6:45:00 AM	Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Kjeldahl, Total	< 0.10		1	mg/L	04/23/2013 2:30 PM	Container-01 of 01

Analytical Method: SW9060 :						Analyst: CO
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Organic Carbon	1.9		1	mg/L	04/25/2013 7:28 PM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

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Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd., Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013 2:00:00 PM
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-008
Client Sample ID: MW-4B

Sample Information:
Type : Groundwater
Origin:

Analytical Method: SM2320B : Analyst: HT

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Alkalinity, Total (As CaCO3)	110	D	4	mg/L	04/17/2013 2:59 PM	Container-01 of 02

Analytical Method: E300.0 : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromide	< 0.50		1	mg/L	04/23/2013 11:15 PM	Container-01 of 02
Chloride	26.2		1	mg/L	04/23/2013 11:15 PM	Container-01 of 02
Sulfate	8.34		1	mg/L	04/23/2013 11:15 PM	Container-01 of 02

Analytical Method: SM5210B : Prep Method: SM5210B Prep Date: 4/17/2013 6:39:36 AM Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Biochemical Oxygen Demand	< 2		1	mg/L	04/17/2013 9:50 AM	Container-01 of 02

NOTES:
Blank depletion exceeds 0.2 mg/L - average depletion of 0.3 mg/L

Analytical Method: E410.4 : Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chemical Oxygen Demand	< 10		1	mg/L	04/23/2013 9:09 AM	Container-01 of 01

Analytical Method: SM2120B : IOC Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Color	70	D	2	units	04/17/2013 5:58 AM	Container-01 of 02

Analytical Method: M3500-Cr D : Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chromium, Hexavalent	< 0.02		1	mg/L	04/17/2013 5:39 AM	Container-01 of 02

Analytical Method: SM2340C : Analyst: JA

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Hardness (As CaCO3)	112	D	4	mg/L	04/19/2013 11:25 AM	Container-01 of 01

Analytical Method: SM4500-NH3 H : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Ammonia (As N)	3.95	D	10	mg/L	04/23/2013 1:38 PM	Container-01 of 01

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrite as N	< 0.10		1	mg/L	04/17/2013 7:56 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd. , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013 2:00:00 PM
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-008
Client Sample ID: MW-4B

Sample Information:
Type : Groundwater

Origin:

Analytical Method: E353.2 :						Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrate as N	0.14		1	mg/L	04/17/2013 1:16 PM	Container-01 of 01
Analytical Method: E420.1 :		Prep Method: E420.1			Prep Date: 4/22/2013 6:30:00 AM	Analyst: EM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Phenolics, Total Recoverable	< 5.0		1	µg/L	04/24/2013 8:11 AM	Container-01 of 01
Analytical Method: SM2540C : IOC						Analyst: MM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Dissolved Solids	159		1	mg/L	04/18/2013 12:45 PM	Container-01 of 02
Analytical Method: E351.2 :		Prep Method: E351.2			Prep Date: 4/23/2013 6:45:00 AM	Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Kjeldahl, Total	5.94	D	10	mg/L	04/23/2013 3:08 PM	Container-01 of 01
Analytical Method: SW9060 :						Analyst: CO
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Organic Carbon	31.1		1	mg/L	04/25/2013 8:07 PM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

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TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013 3:10:00 PM
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-009
Client Sample ID: MW-4C

Sample Information:
Type : Groundwater

Origin:

Analytical Method: SM2320B : Analyst: HT

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Alkalinity, Total (As CaCO3)	33.2		1	mg/L	04/17/2013 3:06 PM	Container-01 of 02

Analytical Method: E300.0 : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromide	< 0.50		1	mg/L	04/23/2013 11:28 PM	Container-01 of 02
Chloride	82.6	D	5	mg/L	04/23/2013 11:42 PM	Container-01 of 02
Sulfate	< 5.00		1	mg/L	04/23/2013 11:28 PM	Container-01 of 02

Analytical Method: SM5210B : Prep Method: SM5210B Prep Date: 4/17/2013 6:39:36 AM Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Biochemical Oxygen Demand	< 2		1	mg/L	04/17/2013 9:55 AM	Container-01 of 02

NOTES:
Blank depletion exceeds 0.2 mg/L - average depletion of 0.3 mg/L

Analytical Method: E410.4 : Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chemical Oxygen Demand	< 10		1	mg/L	04/23/2013 9:11 AM	Container-01 of 01

Analytical Method: SM2120B : IOC Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Color	15		1	units	04/17/2013 5:59 AM	Container-01 of 02

Analytical Method: M3500-Cr D : Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chromium, Hexavalent	< 0.02		1	mg/L	04/17/2013 5:40 AM	Container-01 of 02

Analytical Method: SM2340C : Analyst: JA

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Hardness (As CaCO3)	116	D	4	mg/L	04/19/2013 11:30 AM	Container-01 of 01

Analytical Method: SM4500-NH3 H : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	04/22/2013 12:07 PM	Container-01 of 01

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrite as N	< 0.10		1	mg/L	04/17/2013 7:57 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd. , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013 3:10:00 PM
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-009
Client Sample ID: MW-4C

Sample Information:
Type : Groundwater

Origin:

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrate as N	< 0.10		1	mg/L	04/17/2013 1:17 PM	Container-01 of 01

Analytical Method: E420.1 : Prep Method: E420.1 Prep Date: 4/22/2013 6:30:00 AM Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Phenolics, Total Recoverable	< 5.0		1	µg/L	04/24/2013 8:12 AM	Container-01 of 01

Analytical Method: SM2540C : IOC Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Dissolved Solids	250		1	mg/L	04/18/2013 12:48 PM	Container-01 of 02

Analytical Method: E351.2 : Prep Method: E351.2 Prep Date: 4/23/2013 6:45:00 AM Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Kjeldahl, Total	< 0.10		1	mg/L	04/23/2013 2:32 PM	Container-01 of 01

Analytical Method: SW9060 : Analyst: CO

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Organic Carbon	9.9		1	mg/L	04/25/2013 8:45 PM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

TOS012/012F S140

H 2 M labs

575 Broad Hollow Rd., Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013 11:00:00 AM
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-010
Client Sample ID: FB001

Sample Information:
Type : Field Blank

Origin:

Analytical Method: SM2320B : Analyst: HT

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Alkalinity, Total (As CaCO3)	< 1.00		1	mg/L	04/17/2013 3:14 PM	Container-01 of 02

Analytical Method: E300.0 : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromide	< 0.50		1	mg/L	04/23/2013 11:55 PM	Container-01 of 02
Chloride	< 2.00		1	mg/L	04/23/2013 11:55 PM	Container-01 of 02
Sulfate	< 5.00		1	mg/L	04/23/2013 11:55 PM	Container-01 of 02

Analytical Method: SM5210B : Prep Method: SM5210B Prep Date: 4/17/2013 6:39:36 AM Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Biochemical Oxygen Demand	< 2		1	mg/L	04/17/2013 10:00 AM	Container-01 of 02

NOTES:
Blank depletion exceeds 0.2 mg/L - average depletion of 0.3 mg/L

Analytical Method: E410.4 : Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chemical Oxygen Demand	< 10		1	mg/L	04/23/2013 9:13 AM	Container-01 of 01

Analytical Method: SM2120B : IOC Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Color	< 5		1	units	04/17/2013 6:00 AM	Container-01 of 02

Analytical Method: M3500-Cr D : Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chromium, Hexavalent	< 0.02		1	mg/L	04/17/2013 5:41 AM	Container-01 of 02

Analytical Method: SM2340C : Analyst: JA

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Hardness (As CaCO3)	< 5		1	mg/L	04/19/2013 11:35 AM	Container-01 of 01

Analytical Method: SM4500-NH3 H : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	04/22/2013 12:08 PM	Container-01 of 01

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrite as N	< 0.10		1	mg/L	04/17/2013 7:59 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

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Laboratory Manager

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H 2 M labs

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NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

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Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/16/2013 11:20:00 AM
Received : 4/17/2013 10:00:00 AM
Collected By : PWG99

Lab No. : 1304A27-001
Client Sample ID: MW-1A

Sample Information:
Type : Groundwater

Origin:

Analytical Method: E353.2 :						Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrate as N	2.09	D	10	mg/L	04/18/2013 11:11 AM	Container-01 of 01
Analytical Method: E420.1 :	Prep Method: E420.1				Prep Date: 4/22/2013 6:30:00 AM	Analyst: EM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Phenolics, Total Recoverable	< 5.0		1	µg/L	04/24/2013 8:14 AM	Container-01 of 01
Analytical Method: SM2540C : IOC						Analyst: MM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Dissolved Solids	98		1	mg/L	04/18/2013 12:54 PM	Container-01 of 02
Analytical Method: E351.2 :	Prep Method: E351.2				Prep Date: 4/23/2013 6:45:00 AM	Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Kjeldahl, Total	< 0.10		1	mg/L	04/23/2013 2:33 PM	Container-01 of 01
Analytical Method: SW9060 :						Analyst: CO
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Organic Carbon	9.4		1	mg/L	04/25/2013 11:17 PM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd., Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/16/2013 11:00:00 AM
Received : 4/17/2013 10:00:00 AM
Collected By : PWG99

Lab No. : 1304A27-002
Client Sample ID: MW-1B

Sample Information:
Type : Groundwater

Origin:

Analytical Method: SM2320B : Analyst: HT

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Alkalinity, Total (As CaCO3)	11.0		1	mg/L	04/18/2013 1:54 PM	Container-01 of 02

Analytical Method: E300.0 : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromide	< 0.50		1	mg/L	04/24/2013 12:36 AM	Container-01 of 02
Chloride	8.72		1	mg/L	04/24/2013 12:36 AM	Container-01 of 02
Sulfate	7.62		1	mg/L	04/24/2013 12:36 AM	Container-01 of 02

Analytical Method: SM5210B : Prep Method: SM5210B Prep Date: 4/18/2013 7:27:47 AM Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Biochemical Oxygen Demand	< 2		1	mg/L	04/18/2013 10:25 AM	Container-01 of 02

NOTES:
Blank depletion exceeds 0.2 mg/L - average depletion of 0.65 mg/L

Analytical Method: E410.4 : Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chemical Oxygen Demand	< 10		1	mg/L	04/30/2013 8:42 AM	Container-01 of 01

Analytical Method: SM2120B : IOC Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Color	< 5		1	units	04/18/2013 6:04 AM	Container-01 of 02

Analytical Method: M3500-Cr D : Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chromium, Hexavalent	< 0.02		1	mg/L	04/18/2013 5:50 AM	Container-01 of 02

Analytical Method: SM2340C : Analyst: JA

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Hardness (As CaCO3)	16		1	mg/L	04/19/2013 11:45 AM	Container-01 of 01

Analytical Method: SM4500-NH3 H : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	04/22/2013 12:16 PM	Container-01 of 01

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrite as N	< 0.10		1	mg/L	04/18/2013 8:55 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

TOS012/012F S145

H 2 M labs

575 Broad Hollow Rd., Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/16/2013 11:00:00 AM
Received : 4/17/2013 10:00:00 AM
Collected By : PWG99

Lab No. : 1304A27-002
Client Sample ID: MW-1B

Sample Information:
Type : Groundwater

Origin:

Analytical Method: E353.2 :						Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrate as N	< 0.10		1	mg/L	04/18/2013 10:32 AM	Container-01 of 01
Analytical Method: E420.1 :	Prep Method: E420.1				Prep Date: 4/22/2013 6:30:00 AM	Analyst: EM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Phenolics, Total Recoverable	< 5.0		1	µg/L	04/24/2013 8:15 AM	Container-01 of 01
Analytical Method: SM2540C : IOC						Analyst: MM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Dissolved Solids	41		1	mg/L	04/18/2013 12:57 PM	Container-01 of 02
Analytical Method: E351.2 :	Prep Method: E351.2				Prep Date: 4/23/2013 6:45:00 AM	Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Kjeldahl, Total	< 0.10		1	mg/L	04/23/2013 2:34 PM	Container-01 of 01
Analytical Method: SW9060 :						Analyst: CO
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Organic Carbon	3.4		1	mg/L	04/25/2013 11:56 PM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

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Laboratory Manager

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Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd., Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/16/2013 10:25:00 AM
Received : 4/17/2013 10:00:00 AM
Collected By : PWG99

Lab No. : 1304A27-003
Client Sample ID: MW-1C

Sample Information:
Type : Groundwater

Origin:

Analytical Method: SM2320B : Analyst: HT

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Alkalinity, Total (As CaCO3)	12.6		1	mg/L	04/18/2013 2:02 PM	Container-01 of 02

Analytical Method: E300.0 : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromide	< 0.50		1	mg/L	04/24/2013 12:49 AM	Container-01 of 02
Chloride	9.47		1	mg/L	04/24/2013 12:49 AM	Container-01 of 02
Sulfate	7.61		1	mg/L	04/24/2013 12:49 AM	Container-01 of 02

Analytical Method: SM5210B : Prep Method: SM5210B Prep Date: 4/18/2013 7:27:47 AM Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Biochemical Oxygen Demand	< 2		1	mg/L	04/18/2013 10:30 AM	Container-01 of 02

NOTES:
Blank depletion exceeds 0.2 mg/L - average depletion of 0.65 mg/L

Analytical Method: E410.4 : Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chemical Oxygen Demand	< 10		1	mg/L	04/30/2013 8:44 AM	Container-01 of 01

Analytical Method: SM2120B : IOC Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Color	< 5		1	units	04/18/2013 6:05 AM	Container-01 of 02

Analytical Method: M3500-Cr D : Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chromium, Hexavalent	< 0.02		1	mg/L	04/18/2013 5:51 AM	Container-01 of 02

Analytical Method: SM2340C : Analyst: JA

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Hardness (As CaCO3)	18		1	mg/L	04/19/2013 11:50 AM	Container-01 of 01

Analytical Method: SM4500-NH3 H : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	04/23/2013 1:31 PM	Container-01 of 01

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrite as N	< 0.10		1	mg/L	04/18/2013 8:56 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd. , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/16/2013 10:25:00 AM
Received : 4/17/2013 10:00:00 AM
Collected By : PWG99

Lab No. : 1304A27-003
Client Sample ID: MW-1C

Sample Information:
Type : Groundwater

Origin:

Analytical Method: E353.2 :						Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrate as N	0.29		1	mg/L	04/18/2013 10:33 AM	Container-01 of 01
Analytical Method: E420.1 :	Prep Method: E420.1				Prep Date: 4/22/2013 6:30:00 AM	Analyst: EM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Phenolics, Total Recoverable	< 5.0		1	µg/L	04/24/2013 8:16 AM	Container-01 of 01
Analytical Method: SM2540C : IOC						Analyst: MM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Dissolved Solids	56		1	mg/L	04/18/2013 1:00 PM	Container-01 of 02
Analytical Method: E351.2 :	Prep Method: E351.2				Prep Date: 4/23/2013 6:45:00 AM	Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Kjeldahl, Total	< 0.10		1	mg/L	04/23/2013 2:35 PM	Container-01 of 01
Analytical Method: SW9060 :						Analyst: CO
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Organic Carbon	3.8		1	mg/L	04/26/2013 12:34 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd. , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/16/2013 3:05:00 PM
Received : 4/17/2013 10:00:00 AM
Collected By : PWG99

Lab No. : 1304A27-004
Client Sample ID: MW-11A

Sample Information:
Type : Groundwater

Origin:

Analytical Method: SM2320B : Analyst: HT

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Alkalinity, Total (As CaCO3)	174	D	10	mg/L	04/18/2013 2:09 PM	Container-01 of 02

Analytical Method: E300.0 : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromide	< 0.50		1	mg/L	04/24/2013 1:03 AM	Container-01 of 02
Chloride	14.8		1	mg/L	04/24/2013 1:03 AM	Container-01 of 02
Sulfate	23.1		1	mg/L	04/24/2013 1:03 AM	Container-01 of 02

Analytical Method: SM5210B : Prep Method: SM5210B Prep Date: 4/18/2013 7:27:47 AM Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Biochemical Oxygen Demand	< 2		1	mg/L	04/18/2013 10:35 AM	Container-01 of 02

NOTES:
Blank depletion exceeds 0.2 mg/L - average depletion of 0.65 mg/L

Analytical Method: E410.4 : Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chemical Oxygen Demand	< 10		1	mg/L	04/30/2013 8:46 AM	Container-01 of 01

Analytical Method: SM2120B : IOC Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Color	50	D	5	units	04/18/2013 6:06 AM	Container-01 of 02

Analytical Method: M3500-Cr D : Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chromium, Hexavalent	< 0.02		1	mg/L	04/18/2013 5:52 AM	Container-01 of 02

Analytical Method: SM2340C : Analyst: JA

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Hardness (As CaCO3)	190	D	10	mg/L	04/19/2013 11:55 AM	Container-01 of 01

Analytical Method: SM4500-NH3 H : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Ammonia (As N)	0.32		1	mg/L	04/23/2013 1:32 PM	Container-01 of 01

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrite as N	< 0.10		1	mg/L	04/18/2013 8:58 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd., Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/16/2013 3:05:00 PM
Received : 4/17/2013 10:00:00 AM
Collected By : PWG99

Lab No. : 1304A27-004
Client Sample ID: MW-11A

Sample Information:
Type : Groundwater

Origin:

Analytical Method: E353.2 :						Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrate as N	< 0.10		1	mg/L	04/18/2013 10:34 AM	Container-01 of 01
Analytical Method: E420.1 :	Prep Method: E420.1				Prep Date: 4/22/2013 6:30:00 AM	Analyst: EM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Phenolics, Total Recoverable	< 5.0		1	µg/L	04/24/2013 8:17 AM	Container-01 of 01
Analytical Method: SM2540C : IOC						Analyst: MM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Dissolved Solids	232		1	mg/L	04/18/2013 1:03 PM	Container-01 of 02
Analytical Method: E351.2 :	Prep Method: E351.2				Prep Date: 4/23/2013 6:45:00 AM	Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Kjeldahl, Total	0.44		1	mg/L	04/23/2013 2:36 PM	Container-01 of 01
Analytical Method: SW9060 :						Analyst: CO
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Organic Carbon	45.4		1	mg/L	04/26/2013 1:12 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd. , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/16/2013 2:40:00 PM
Received : 4/17/2013 10:00:00 AM
Collected By : PWG99

Lab No. : 1304A27-005
Client Sample ID: MW-11B

Sample Information:
Type : Groundwater

Origin:

Analytical Method: SM2320B : Analyst: HT

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Alkalinity, Total (As CaCO3)	47.0	D	2	mg/L	04/18/2013 2:16 PM	Container-01 of 02

Analytical Method: E300.0 : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromide	< 0.50		1	mg/L	04/24/2013 1:16 AM	Container-01 of 02
Chloride	10.5		1	mg/L	04/24/2013 1:16 AM	Container-01 of 02
Sulfate	6.66		1	mg/L	04/24/2013 1:16 AM	Container-01 of 02

Analytical Method: SM5210B : Prep Method: SM5210B Prep Date: 4/18/2013 7:27:47 AM Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Biochemical Oxygen Demand	< 2		1	mg/L	04/18/2013 10:40 AM	Container-01 of 02

NOTES:
Blank depletion exceeds 0.2 mg/L - average depletion of 0.65 mg/L

Analytical Method: E410.4 : Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chemical Oxygen Demand	< 10		1	mg/L	04/30/2013 8:48 AM	Container-01 of 01

Analytical Method: SM2120B : IOC Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Color	75	D	5	units	04/18/2013 6:07 AM	Container-01 of 02

Analytical Method: M3500-Cr D : Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chromium, Hexavalent	< 0.02		1	mg/L	04/18/2013 5:53 AM	Container-01 of 02

Analytical Method: SM2340C : Analyst: JA

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Hardness (As CaCO3)	68	D	2	mg/L	04/19/2013 12:00 PM	Container-01 of 01

Analytical Method: SM4500-NH3 H : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	04/23/2013 1:33 PM	Container-01 of 01

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrite as N	< 0.10		1	mg/L	04/18/2013 8:59 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

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Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd. , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID# 10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/16/2013 2:40:00 PM
Received : 4/17/2013 10:00:00 AM
Collected By : PWG99

Lab No. : 1304A27-005
Client Sample ID: MW-11B

Sample Information:
Type : Groundwater

Origin:

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrate as N	0.51		1	mg/L	04/18/2013 10:38 AM	Container-01 of 01

Analytical Method: E420.1 : Prep Method: E420.1 Prep Date: 4/22/2013 6:30:00 AM Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Phenolics, Total Recoverable	< 5.0		1	µg/L	04/24/2013 8:18 AM	Container-01 of 01

Analytical Method: SM2540C : IOC Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Dissolved Solids	89		1	mg/L	04/18/2013 1:06 PM	Container-01 of 02

Analytical Method: E351.2 : Prep Method: E351.2 Prep Date: 4/23/2013 6:45:00 AM Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Kjeldahl, Total	0.65		1	mg/L	04/23/2013 2:37 PM	Container-01 of 01

Analytical Method: SW9060 : Analyst: CO

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Organic Carbon	14.4		1	mg/L	04/26/2013 1:51 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd. , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/16/2013 1:00:00 PM
Received : 4/17/2013 10:00:00 AM
Collected By : PWG99

Lab No. : 1304A27-006
Client Sample ID: MW-12A

Sample Information:
Type : Groundwater

Origin:

Analytical Method: SM2320B : Analyst: HT

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Alkalinity, Total (As CaCO3)	85.4	D	4	mg/L	04/18/2013 2:23 PM	Container-01 of 02

Analytical Method: E300.0 : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromide	< 0.50		1	mg/L	04/24/2013 1:57 AM	Container-01 of 02
Chloride	11.9		1	mg/L	04/24/2013 1:57 AM	Container-01 of 02
Sulfate	19.4		1	mg/L	04/24/2013 1:57 AM	Container-01 of 02

Analytical Method: SM5210B : Prep Method: SM5210B Prep Date: 4/18/2013 7:27:47 AM Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Biochemical Oxygen Demand	< 2		1	mg/L	04/18/2013 10:45 AM	Container-01 of 02

NOTES:
Blank depletion exceeds 0.2 mg/L - average depletion of 0.65 mg/L

Analytical Method: E410.4 : Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chemical Oxygen Demand	< 10		1	mg/L	04/30/2013 8:50 AM	Container-01 of 01

Analytical Method: SM2120B : IOC Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Color	75	D	5	units	04/18/2013 6:08 AM	Container-01 of 02

Analytical Method: M3500-Cr D : Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chromium, Hexavalent	< 0.02		1	mg/L	04/18/2013 5:54 AM	Container-01 of 02

Analytical Method: SM2340C : Analyst: JA

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Hardness (As CaCO3)	116	D	4	mg/L	04/19/2013 12:05 PM	Container-01 of 01

Analytical Method: SM4500-NH3 H : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Ammonia (As N)	1.56		1	mg/L	04/23/2013 1:35 PM	Container-01 of 01

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrite as N	< 0.10		1	mg/L	04/18/2013 9:00 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd., Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/16/2013 1:00:00 PM
Received : 4/17/2013 10:00:00 AM
Collected By : PWG99

Lab No. : 1304A27-006
Client Sample ID: MW-12A

Sample Information:
Type : Groundwater

Origin:

Analytical Method: E353.2 :						Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrate as N	0.34		1	mg/L	04/18/2013 10:39 AM	Container-01 of 01

Analytical Method: E420.1 :	Prep Method: E420.1				Prep Date: 4/22/2013 6:30:00 AM	Analyst: EM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Phenolics, Total Recoverable	< 5.0		1	µg/L	04/24/2013 8:19 AM	Container-01 of 01

Analytical Method: SM2540C : IOC						Analyst: MM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Dissolved Solids	140		1	mg/L	04/18/2013 1:09 PM	Container-01 of 02

Analytical Method: E351.2 :	Prep Method: E351.2				Prep Date: 4/23/2013 6:45:00 AM	Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Kjeldahl, Total	1.89		1	mg/L	04/23/2013 2:38 PM	Container-01 of 01

Analytical Method: SW9060 :						Analyst: CO
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Organic Carbon	22.3		1	mg/L	04/26/2013 2:29 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

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Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd., Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/16/2013 12:40:00 PM
Received : 4/17/2013 10:00:00 AM
Collected By : PWG99

Lab No. : 1304A27-007
Client Sample ID: MW-12B

Sample Information:
Type : Groundwater

Origin:

Analytical Method: SM2320B : Analyst: HT

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Alkalinity, Total (As CaCO3)	82.6	D	4	mg/L	04/18/2013 2:36 PM	Container-01 of 02

Analytical Method: E300.0 : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromide	< 0.50		1	mg/L	04/24/2013 2:10 AM	Container-01 of 02
Chloride	14.7		1	mg/L	04/24/2013 2:10 AM	Container-01 of 02
Sulfate	29.3		1	mg/L	04/24/2013 2:10 AM	Container-01 of 02

Analytical Method: SM5210B : Prep Method: SM5210B Prep Date: 4/18/2013 7:27:47 AM Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Biochemical Oxygen Demand	< 2		1	mg/L	04/18/2013 10:50 AM	Container-01 of 02

NOTES:
Blank depletion exceeds 0.2 mg/L - average depletion of 0.65 mg/L

Analytical Method: E410.4 : Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chemical Oxygen Demand	< 10		1	mg/L	04/30/2013 8:52 AM	Container-01 of 01

Analytical Method: SM2120B : IOC Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Color	< 5		1	units	04/18/2013 6:09 AM	Container-01 of 02

Analytical Method: M3500-Cr D : Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chromium, Hexavalent	< 0.02		1	mg/L	04/18/2013 5:55 AM	Container-01 of 02

Analytical Method: SM2340C : Analyst: JA

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Hardness (As CaCO3)	94	D	2	mg/L	04/19/2013 12:10 PM	Container-01 of 01

Analytical Method: SM4500-NH3 H : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Ammonia (As N)	2.44		1	mg/L	04/23/2013 1:36 PM	Container-01 of 01

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrite as N	< 0.10		1	mg/L	04/18/2013 9:01 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd. , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/16/2013 12:40:00 PM
Received : 4/17/2013 10:00:00 AM
Collected By : PWG99

Lab No. : 1304A27-007
Client Sample ID: MW-12B

Sample Information:
Type : Groundwater

Origin:

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrate as N	1.17		1	mg/L	04/18/2013 10:40 AM	Container-01 of 01

Analytical Method: E420.1 : Prep Method: E420.1 Prep Date: 4/23/2013 7:45:00 AM Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Phenolics, Total Recoverable	< 5.0		1	µg/L	04/24/2013 8:22 AM	Container-01 of 01

Analytical Method: SM2540C : IOC Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Dissolved Solids	164		1	mg/L	04/18/2013 1:12 PM	Container-01 of 02

Analytical Method: E351.2 : Prep Method: E351.2 Prep Date: 4/23/2013 6:45:00 AM Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Kjeldahl, Total	3.99		1	mg/L	04/23/2013 2:40 PM	Container-01 of 01

Analytical Method: SW9060 : Analyst: CO

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Organic Carbon	20.6		1	mg/L	04/26/2013 3:07 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

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TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/16/2013 9:30:00 AM
Received : 4/17/2013 10:00:00 AM
Collected By : PWG99

Lab No. : 1304A27-008
Client Sample ID: FB002

Sample Information:
Type : Field Blank

Origin:

Analytical Method: SM2320B : Analyst: HT

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Alkalinity, Total (As CaCO3)	< 1.00		1	mg/L	04/18/2013 2:44 PM	Container-01 of 02

Analytical Method: E300.0 : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromide	< 0.50		1	mg/L	04/24/2013 2:24 AM	Container-01 of 02
Chloride	< 2.00		1	mg/L	04/24/2013 2:24 AM	Container-01 of 02
Sulfate	< 5.00		1	mg/L	04/24/2013 2:24 AM	Container-01 of 02

Analytical Method: SM5210B : Prep Method: SM5210B Prep Date: 4/18/2013 7:27:47 AM Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Biochemical Oxygen Demand	< 2		1	mg/L	04/18/2013 10:55 AM	Container-01 of 02

NOTES:
Blank depletion exceeds 0.2 mg/L - average depletion of 0.65 mg/L

Analytical Method: E410.4 : Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chemical Oxygen Demand	< 10		1	mg/L	04/30/2013 8:54 AM	Container-01 of 01

Analytical Method: SM2120B : IOC Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Color	< 5		1	units	04/18/2013 6:10 AM	Container-01 of 02

Analytical Method: M3500-Cr D : Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chromium, Hexavalent	< 0.02		1	mg/L	04/18/2013 5:56 AM	Container-01 of 02

Analytical Method: SM2340C : Analyst: JA

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Hardness (As CaCO3)	< 5		1	mg/L	04/19/2013 12:15 PM	Container-01 of 01

Analytical Method: SM4500-NH3 H : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	04/23/2013 1:37 PM	Container-01 of 01

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrite as N	< 0.10		1	mg/L	04/18/2013 9:02 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

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TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/16/2013 9:30:00 AM
Received : 4/17/2013 10:00:00 AM
Collected By : PWG99

Lab No. : 1304A27-008
Client Sample ID: FB002

Sample Information:
Type : Field Blank

Origin:

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrate as N	< 0.10		1	mg/L	04/18/2013 10:42 AM	Container-01 of 01

Analytical Method: E420.1 : Prep Method: E420.1 Prep Date: 4/23/2013 7:45:00 AM Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Phenolics, Total Recoverable	< 5.0		1	µg/L	04/24/2013 8:23 AM	Container-01 of 01

Analytical Method: SM2540C : IOC Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Dissolved Solids	< 10		1	mg/L	04/18/2013 1:15 PM	Container-01 of 02

Analytical Method: E351.2 : Prep Method: E351.2 Prep Date: 4/23/2013 6:45:00 AM Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Kjeldahl, Total	< 0.10		1	mg/L	04/23/2013 2:41 PM	Container-01 of 01

Analytical Method: SW9060 : Analyst: CO

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Organic Carbon	< 1.0		1	mg/L	04/26/2013 3:46 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

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Melville, NY 11747

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fax 631.420.8436

5. SURROGATE SPIKE ANALYSIS RESULTS

5.1 VOLATILES

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

	EPA SAMPLE NO.	SMC1 DCA #	SMC2 TOL #	SMC3 BFB #	OTHER	TOT OUT
01	VBLK041713	95	99	94		0
02	LFB041713	99	100	100		0
03	MSB041713	95	98	94		0
04	DUP001	96	101	95		0
05	MW-3A	96	100	93		0
06	MW-3B	97	100	94		0
07	MW-3BMS	97	101	96		0
08	MW-3BMSD	97	100	94		0
09	MW-3C	97	100	94		0
10	MW-4A	98	101	95		0
11	MW-4B	99	101	96		0
12	MW-4C	99	101	95		0
13	FB001	98	101	95		0
14	TRIP BLANK 001	99	102	96		0
15	STORAGE BLANK	100	101	96		0
16	MW-1A	99	100	95		0
17	MW-1B	99	101	96		0
18	MW-1C	101	103	97		0
19	MW-11A	101	102	98		0
20	MW-11B	101	101	96		0
21	MW-12A	103	103	97		0
22	MW-12B	102	102	97		0
23	VBLK041813	97	99	92		0
24	FB002	96	99	92		0
25	TRIP BLANK	97	99	93		0

		QC Limit
SMC 1 DCA	= 1,2-Dichloroethane-d4	(76-114)
SMC 2 TOL	= Toluene-d8	(88-110)
SMC 3 BFB	= 4-Bromofluorobenzene	(86-115)

Column to be used to flag recovery values

* Values outside of contract required QC limits

H 2 M labs

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6. MATRIX SPIKE / MATRIX SPIKE DUPLICATE SUMMARY

6.1 VOLATILES

SYSTEM MONITORING SPIKE/DUPLICATE RECOVERY

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No.: TOS SAS No.: SDG No.: TOS012

Matrix Spike - Sample No.: MW-3B Level: (low/med) LOW

COMPOUND	SPIKE ADDED (µg/L)	SAMPLE CONCENTRATION (µg/L)	MS CONCENTRATION (µg/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50	0	44	88	61-145
Benzene	50	0	48	95	76-127
Trichloroethene	50	0	49	97	71-120
Toluene	50	0	48	97	76-125
Chlorobenzene	50	0	49	97	75-130

COMPOUND	SPIKE ADDED (µg/L)	MSD CONCENTRATION (µg/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	44	87	1	14	61-145
Benzene	50	47	94	1	11	76-127
Trichloroethene	50	48	96	1	14	71-120
Toluene	50	48	96	1	13	76-125
Chlorobenzene	50	49	99	2	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

3A

SYSTEM MONITORING SPIKE RECOVERY

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No.: TOS SAS No.: SDG No.: TOS012

Sample ID LFB041713 Level:(low/med) LOW

Column ID DB-624 Column Diam 0.18

Inst. ID HP5973-1 Init. Calib. Date(s): 03/18/13 18:56

Analysis Date: 04/17/13 19:06 03/18/13 21:19

COMPOUND	SPIKE ADDED (µg/L)	SAMPLE CONCENTRATION (µg/L)	SPIKE CONCENTRATION (µg/L)	SPIKE % REC #	QC. LIMITS REC.
Chloromethane	50	0	47	93	46-144
Vinyl chloride	50	0	45	91	43-143
Bromomethane	50	0	49	99	52-147
Chloroethane	50	0	47	94	49-151
Acrylonitrile	50	0	48	97	59-148
Trichlorofluoromethane	50	0	45	89	27-173
1,1-Dichloroethene	50	0	46	92	45-146
Iodomethane	50	0	47	94	61-144
Vinyl acetate	50	0	49	98	20-158
Acetone	50	0	50	100	23-188
Carbon disulfide	50	0	45	91	48-132
Methylene chloride	50	0	49	98	61-142
trans-1,2-Dichloroethene	50	0	47	93	56-142
1,1-Dichloroethane	50	0	47	94	83-151
cis-1,2-Dichloroethene	50	0	47	94	72-121
2-Butanone	50	0	43	86	44-162
Bromochloromethane	50	0	49	97	81-116
Chloroform	50	0	49	97	72-122
1,1,1-Trichloroethane	50	0	46	91	65-118
Carbon tetrachloride	50	0	45	91	59-120
Benzene	50	0	47	95	73-119
1,2-Dichloroethane	50	0	50	99	74-129
Trichloroethene	50	0	47	93	69-117
1,2-Dichloropropane	50	0	49	97	75-117
Dibromomethane	50	0	49	98	75-125
Bromodichloromethane	50	0	48	97	78-117
cis-1,3-Dichloropropene	50	0	48	96	78-116
4-Methyl-2-pentanone	50	0	49	97	69-132
Toluene	50	0	47	95	72-119
trans-1,3-Dichloropropene	50	0	48	96	79-116

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 47 outside limits

COMMENTS:

3A

SYSTEM MONITORING SPIKE RECOVERY

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No.: TOS SAS No.: SDG No.: TOS012

Sample ID LFB041713 Level:(low/med) LOW

Column ID DB-624 Column Diam 0.18

Inst. ID HP5973-1 Init. Calib. Date(s): 03/18/13 18:56

Analysis Date: 04/17/13 19:06 03/18/13 21:19

1,1,2-Trichloroethane	50	0	49	98	80-117
Tetrachloroethene	50	0	47	94	60-128
2-Hexanone	50	0	49	98	83-115
Dibromochloromethane	50	0	48	97	70-120
1,2-Dibromoethane	50	0	49	98	83-115
Chlorobenzene	50	0	47	95	75-113
trans-1,4-Dichloro-2-butene	50	0	47	94	71-121
Ethylbenzene	50	0	47	94	70-113
1,1,1,2-Tetrachloroethane	50	0	48	97	74-113
Xylene (total)	150	0	140	96	71-109
Styrene	50	0	48	96	72-118
Bromoform	50	0	48	96	65-122
1,1,2,2-Tetrachloroethane	50	0	48	96	74-121
1,2,3-Trichloropropane	50	0	48	96	71-123
1,4-Dichlorobenzene	50	0	48	96	71-113
1,2-Dichlorobenzene	50	0	48	95	74-113
1,2-Dibromo-3-chloropropane	50	0	48	96	74-119

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 47 outside limits

COMMENTS:

3A

SYSTEM MONITORING SPIKE RECOVERY

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No.: TOS SAS No.: SDG No.: TOS012

Sample ID MSB041713 Level:(low/med) LOW

Column ID DB-624 Column Diam 0.18

Inst. ID HP5973-1 Init. Calib. Date(s): 03/18/13 18:56

Analysis Date: 04/17/13 19:35 03/18/13 21:19

COMPOUND	SPIKE ADDED (µg/L)	SAMPLE CONCENTRATION (µg/L)	SPIKE CONCENTRATION (µg/L)	SPIKE % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50	0	43	85	61-145
Benzene	50	0	47	94	76-127
Trichloroethene	50	0	49	98	71-120
Toluene	50	0	48	97	76-125
Chlorobenzene	50	0	51	102	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

COMMENTS:

H 2 M labs

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Melville, NY 11747

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7. DUPLICATE SUMMARY RESULTS

7.1 TOTAL METALS
7.2 FILTERED METALS
7.3 WET CHEMISTRY

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO
MW-3B

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum	200.0000	12.3000	B	9.5000	U	200.0		P
Antimony		1.2000	U	1.2000	U			P
Arsenic	10.0000	12.4900		13.6400		8.8		P
Barium	200.0000	29.1000	B	30.0000	B	3.0		P
Beryllium		0.1000	U	0.1000	U			P
Boron	100.0000	40.2000	B	43.6000	B	8.1		P
Cadmium		0.1000	U	0.1000	U			P
Calcium	5000.0000	9032.0000		9302.0000		2.9		P
Chromium	10.0000	3.5000	B	4.2000	B	18.2		P
Cobalt	50.0000	4.7000	B	5.0000	B	6.2		P
Copper	25.0000	1.1000	B	2.0000	B	58.1		P
Cyanide		10.0000	U	10.0000	U			CA
Iron		12110.0000		12340.0000		1.9		P
Lead	3.0000	2.8950	B	3.3490		14.5		P
Magnesium	5000.0000	2962.0000	B	3036.0000	B	2.5		P
Manganese		3398.0000		3527.0000		3.7		P
Mercury		0.1000	U	0.1000	U			CV
Nickel	40.0000	2.2000	B	2.0000	B	9.5		P
Potassium	5000.0000	3724.0000	B	3894.0000	B	4.5		P
Selenium		2.3000	U	2.3000	U			P
Silver		0.2000	U	0.2000	U			P
Sodium	5000.0000	9985.0000		10490.0000		4.9		P
Thallium		1.9000	U	1.9000	U			P
Vanadium		0.3000	U	0.3000	U			P
Zinc	20.0000	11.5000	B	7.9000	B	37.1		P

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO
MW-11A

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012F

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum	200.0000	30.8000	B	24.5000	B	22.8		P
Antimony	60.0000	1.2740	B	1.2000	U	200.0		P
Arsenic		2.8000	U	2.8000	U			P
Barium	200.0000	140.9000	B	149.8000	B	6.1		P
Beryllium	5.0000	0.9000	B	0.2000	B	127.3		P
Boron	100.0000	50.8000	B	52.7000	B	3.7		P
Cadmium	5.0000	0.8000	B	0.1000	U	200.0		P
Calcium		41160.0000		44170.0000		7.1		P
Chromium	10.0000	3.3000	B	2.4000	B	31.6		P
Cobalt	50.0000	11.3000	B	11.4000	B	0.9		P
Copper	25.0000	1.6000	B	0.4000	U	200.0		P
Iron		4541.0000		4889.0000		7.4		P
Lead	3.0000	6.3620		6.2170		2.3		P
Magnesium	5000.0000	15030.0000		16170.0000		7.3		P
Manganese		1834.0000		1957.0000		6.5		P
Mercury		0.1000	U	0.1000	U			CV
Nickel	40.0000	5.6000	B	5.2000	B	7.4		P
Potassium	5000.0000	5096.0000		5351.0000		4.9		P
Selenium		2.3000	U	2.3000	U			P
Silver	10.0000	0.4485	B	0.2000	U	200.0		P
Sodium	5000.0000	12870.0000		13770.0000		6.8		P
Thallium		1.9000	U	1.9000	U			P
Vanadium		0.3000	U	0.3000	U			P
Zinc	20.0000	12.9000	B	18.6000	B	36.2		P

H2M LABS INC

Date: *01-May-13*

QC SUMMARY REPORT

SDG: TOS012

Sample ID:	Client Sample ID:	Analyte	Result	Units	Spike Amount	Sample Result	%REC	Recovery Limits		RPDRef Value	%RPD	%RPD UCL
MB-041713	MB-041713	Alkalinity, Total (As CaCO3)	< 1	MG/L								
LCS-041713	LCS-041713	Alkalinity, Total (As CaCO3)	24.5	MG/L	25	< 1	98	80	120			
1304917-005FMS	MW-3BMS	Alkalinity, Total (As CaCO3)	90.3	MG/L	50	46.3	88	75	125			
1304917-005FDUP	MW-3BDUP	Alkalinity, Total (As CaCO3)	44.8	MG/L						46.3	3.3	20
MB-041813	MB-041813	Alkalinity, Total (As CaCO3)	< 1	MG/L								
LCS-041813	LCS-041813	Alkalinity, Total (As CaCO3)	24.6	MG/L	25	< 1	98	80	120			
MB-39303	MB-39303	Biochemical Oxygen Demand	< 2	MG/L								
LCS-39303	LCS-39303	Biochemical Oxygen Demand	186	MG/L	198	< 2	94	85	116			
MB-39281	MB-39281	Biochemical Oxygen Demand	< 2	MG/L								
LCS-39281	LCS-39281	Biochemical Oxygen Demand	201	MG/L	198	< 2	102	85	116			
1304917-005FDUP	MW-3BDUP	Biochemical Oxygen Demand	< 2	MG/L						< 2		20
MB-042313	MB-042313	Bromide	< 0.5	MG/L								
LCS-042313	LCS-042313	Bromide	2.38	MG/L	2.5	< 0.5	95	90	110			
1304917-005FMS	MW-3BMS	Bromide	0.99	MG/L	1	< 0.5	99	80	120			
1304917-005FDUP	MW-3BDUP	Bromide	< 0.5	MG/L						< 0.5		20
MB-042313	MB-042313	Chemical Oxygen Demand	< 10	MG/L								
LCS-042313	LCS-042313	Chemical Oxygen Demand	100	MG/L	100	< 10	100	90	110			
1304917-005DMS	MW-3BMS	Chemical Oxygen Demand	110	MG/L	100	< 10	110	90	110			
1304917-005DDUP	MW-3BDUP	Chemical Oxygen Demand	< 10	MG/L						< 10		20
MB-043013	MB-043013	Chemical Oxygen Demand	< 10	MG/L								
LCS-043013	LCS-043013	Chemical Oxygen Demand	103	MG/L	100	< 10	103	90	110			

QC SUMMARY REPORT

SDG: TOS012

Sample ID:	Client Sample ID:	Analyte	Result	Units	Spike Amount	Sample Result	%REC	Recovery Limits		RPDRef Value	%RPD	%RPD UCL
MB-042313	MB-042313	Chloride	< 2	MG/L								
LCS-042313	LCS-042313	Chloride	9.43	MG/L	10	< 2	94	90	110			
1304917-005FMS	MW-3BMS	Chloride	23.2	MG/L	10	13.5	97	80	120			
1304917-005FDUP	MW-3BDUP	Chloride	< 2	MG/L						13.5	0.35	20
MB-041813	MB-041813	Chromium, Hexavalent	< 0.02	MG/L								
LCS-041813	LCS-041813	Chromium, Hexavalent	0.20	MG/L	0.2	< 0.02	100	80	120			
MB-041713	MB-041713	Chromium, Hexavalent	< 0.02	MG/L								
LCS-041713	LCS-041713	Chromium, Hexavalent	0.20	MG/L	0.2	< 0.02	100	80	120			
1304917-005FMS	1304917-005FMS	Chromium, Hexavalent	0.79	MG/L	1	< 0.1	79	75	125			
1304917-005FDUP	1304917-005FDUP	Chromium, Hexavalent	< 0.1	MG/L						< 0.1		20
MB-041713	MB-041713	Color	< 5	Units								
LCS-041713	LCS-041713	Color	40	Units	40	< 5	100	80	120			
1304917-005FDUP	MW-3BDUP	Color	125	Units						125		20
MB-041813	MB-041813	Color	< 5	Units								
LCS-041813	LCS-041813	Color	40	Units	40	< 5	100	80	120			
MB-041913	MB-041913	Hardness (As CaCO3)	< 5	MG/L								
LCS-041913	LCS-041913	Hardness (As CaCO3)	1020	MG/L	1000	< 5	102	80	120			
1304917-005CMS	MW-3BMS	Hardness (As CaCO3)	480	MG/L	400	84	99	75	125			
1304917-005CDUP	MW-3BDUP	Hardness (As CaCO3)	80	MG/L						84	4.9	20
MB-041713	MB-041713	Nitrate as N	< 0.1	MG/L								
LCS-041713	LCS-041713	Nitrate as N	1.21	MG/L	1.13	< 0.1	107	90	110			

H 2 M labs

575 Broad Hollow Rd. , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/15/2013 11:00:00 AM
Received : 4/16/2013 9:50:00 AM
Collected By : PWG99

Lab No. : 1304917-010
Client Sample ID: FB001

Sample Information:
Type : Field Blank

Origin:

Analytical Method: E353.2 :						Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrate as N	< 0.10		1	mg/L	04/17/2013 1:19 PM	Container-01 of 01
Analytical Method: E420.1 :	Prep Method: E420.1				Prep Date: 4/22/2013 6:30:00 AM	Analyst: EM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Phenolics, Total Recoverable	< 5.0		1	µg/L	04/24/2013 8:13 AM	Container-01 of 01
Analytical Method: SM2540C : IOC						Analyst: MM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Dissolved Solids	< 10		1	mg/L	04/18/2013 12:51 PM	Container-01 of 02
Analytical Method: E351.2 :	Prep Method: E351.2				Prep Date: 4/23/2013 6:45:00 AM	Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Kjeldahl, Total	< 0.10		1	mg/L	04/23/2013 2:32 PM	Container-01 of 01
Analytical Method: SW9060 :						Analyst: CO
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Organic Carbon	< 1.0		1	mg/L	04/25/2013 10:39 PM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

H 2 M labs

575 Broad Hollow Rd. , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/16/2013 11:20:00 AM
Received : 4/17/2013 10:00:00 AM
Collected By : PWG99

Lab No. : 1304A27-001
Client Sample ID: MW-1A

Sample Information:
Type : Groundwater

Origin:

Analytical Method: SM2320B : Analyst: HT

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Alkalinity, Total (As CaCO3)	31.0		1	mg/L	04/18/2013 1:48 PM	Container-01 of 02

Analytical Method: E300.0 : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromide	< 0.50		1	mg/L	04/24/2013 12:09 AM	Container-01 of 02
Chloride	13.1		1	mg/L	04/24/2013 12:09 AM	Container-01 of 02
Sulfate	25.7		1	mg/L	04/24/2013 12:09 AM	Container-01 of 02

Analytical Method: SM5210B : Prep Method: SM5210B Prep Date: 4/18/2013 7:27:47 AM Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Biochemical Oxygen Demand	< 2		1	mg/L	04/18/2013 10:20 AM	Container-01 of 02

NOTES:
Blank depletion exceeds 0.2 mg/L - average depletion of 0.65 mg/L

Analytical Method: E410.4 : Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chemical Oxygen Demand	< 10		1	mg/L	04/30/2013 8:36 AM	Container-01 of 01

Analytical Method: SM2120B : IOC Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Color	< 5		1	units	04/18/2013 6:02 AM	Container-01 of 02

Analytical Method: M3500-Cr D : Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chromium, Hexavalent	< 0.02		1	mg/L	04/18/2013 5:47 AM	Container-01 of 02

Analytical Method: SM2340C : Analyst: JA

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Hardness (As CaCO3)	62		1	mg/L	04/19/2013 11:40 AM	Container-01 of 01

Analytical Method: SM4500-NH3 H : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	04/22/2013 12:14 PM	Container-01 of 01

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrite as N	< 0.10		1	mg/L	04/18/2013 8:52 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

TOS012/012F S143

QC SUMMARY REPORT

SDG: TOS012

Sample ID:	Client Sample ID:	Analyte	Result	Units	Spike Amount	Sample Result	%REC	Recovery Limits		RPDRef Value	%RPD	%RPD UCL
MB-041813	MB-041813	Nitrate as N	< 0.1	MG/L								
LCS-041813	LCS-041813	Nitrate as N	1.13	MG/L	1.13	< 0.1	100	90	110			
MB-041713	MB-041713	Nitrate as N	< 0.1	MG/L								
LCS-041713	LCS-041713	Nitrate as N	1.16	MG/L	1.13	< 0.1	103	90	110			
1304917-005DMS	MW-3BMS	Nitrate as N	0.52	MG/L	0.5	< 0.1	104	90	110			
1304917-005DDUP	MW-3BDUP	Nitrate as N	< 0.1	MG/L						< 0.1		20
MB-041813	MB-041813	Nitrite as N	< 0.1	MG/L								
LCS-041813	LCS-041813	Nitrite as N	1.03	MG/L	1	< 0.1	103	90	110			
MB-041713	MB-041713	Nitrite as N	< 0.1	MG/L								
LCS-041713	LCS-041713	Nitrite as N	1.03	MG/L	1	< 0.1	103	90	110			
1304917-005FMS	MW-3BMS	Nitrite as N	0.45	MG/L	0.5	< 0.1	90	90	110			
1304917-005FDUP	MW-3BDUP	Nitrite as N	< 0.1	MG/L						< 0.1		20
MB-042213	MB-042213	Nitrogen, Ammonia (As N)	< 0.1	MG/L								
LCS-042213	LCS-042213	Nitrogen, Ammonia (As N)	1.03	MG/L	1	< 0.1	103	90	110			
1304917-005DMS	MW-3BMS	Nitrogen, Ammonia (As N)	5.39	MG/L	2.5	2.82	103	75	125			
1304917-005DDUP	MW-3BDUP	Nitrogen, Ammonia (As N)	2.90	MG/L						2.82	2.5	20
MB1-042513	MB1-042513	Nitrogen, Ammonia (As N)	< 0.1	MG/L								
LCS1-042513	LCS1-042513	Nitrogen, Ammonia (As N)	1.03	MG/L	1	< 0.1	103	90	110			
MB-042313	MB-042313	Nitrogen, Ammonia (As N)	< 0.1	MG/L								
LCS-042313	LCS-042313	Nitrogen, Ammonia (As N)	1.02	MG/L	1	< 0.1	102	90	110			
MB-39401	MB-39401	Nitrogen, Kjeldahl, Total	< 0.1	MG/L								
LCS-39401	LCS-39401	Nitrogen, Kjeldahl, Total	4.06	MG/L	4	< 0.1	102	90	110			

QC SUMMARY REPORT

SDG: TOS012

Sample ID:	Client Sample ID:	Analyte	Result	Units	Spike Amount	Sample Result	%REC	Recovery Limits		RPDRef Value	%RPD	%RPD UCL
MB-39354	MB-39354	Nitrogen, Kjeldahl, Total	< 0.1	MG/L								
LCS-39354	LCS-39354	Nitrogen, Kjeldahl, Total	3.71	MG/L	4	< 0.1	93	90	110			
1304917-005DMS	1304917-005DMS	Nitrogen, Kjeldahl, Total	7.57	MG/L	4	2.90	117	75	125			
1304917-005DDUP	1304917-005DDUP	Nitrogen, Kjeldahl, Total	2.84	MG/L						2.90	1.9	20
MB-39356	MB-39356	Phenolics, Total Recoverable	< 5	UG/L								
LCS-39356	LCS-39356	Phenolics, Total Recoverable	26.8	UG/L	30	< 5	89	80	120			
MB-39333	MB-39333	Phenolics, Total Recoverable	< 5	UG/L								
LCS-39333	LCS-39333	Phenolics, Total Recoverable	30.3	UG/L	30	< 5	101	80	120			
1304917-005DMS	MW-3BMS	Phenolics, Total Recoverable	17.5	UG/L	20	< 5	88	75	125			
1304917-005DDUP	MW-3BDUP	Phenolics, Total Recoverable	< 5	UG/L						< 5		20
MB-042313	MB-042313	Sulfate	< 5	MG/L								
LCS-042313	LCS-042313	Sulfate	9.84	MG/L	10	< 5	98	90	110			
1304917-005FMS	MW-3BMS	Sulfate	20.9	MG/L	10	11.2	97	80	120			
1304917-005FDUP	MW-3BDUP	Sulfate	11.2	MG/L						11.2	0.33	20
MB-041813	MB-041813	Total Dissolved Solids	< 10	MG/L								
LCS-041813	LCS-041813	Total Dissolved Solids	281	MG/L	300	< 10	94	80	120			
1304917-005FMS	MW-3BMS	Total Dissolved Solids	385	MG/L	300	75	103	75	125			
1304917-005FDUP	MW-3BDUP	Total Dissolved Solids	80	MG/L						75	6.5	20
MB-041713	MB-041713	Total Organic Carbon	< 1	MG/L								
LCS-041713	LCS-041713	Total Organic Carbon	26.5	MG/L	25	< 1	106	80	120			
MB-042513	MB-042513	Total Organic Carbon	< 1	MG/L								
LCS-042513	LCS-042513	Total Organic Carbon	27.6	MG/L	25	< 1	110	80	120			
1304917-005BMS	MW-3BMS	Total Organic Carbon	24.9	MG/L	10	14.2	108	75	125			
1304917-005BDUP	MW-3BDUP	Total Organic Carbon	14.3	MG/L						14.2	0.99	20

H 2 M labs

575 Broad Hollow Road
Melville, NY 11747

tel 631.694.3040
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8. SPIKE SAMPLE RESULTS

8.1 TOTAL METALS
8.2 FILTERED METALS
8.3 WET CHEMISTRY

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO
MW-3BS

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	2164.0000		12.3000	B	2000.00	107.6		P
Antimony	75-125	537.8000		1.2000	U	500.00	107.6		P
Arsenic	75-125	52.3500		12.4900		40.00	99.6		P
Barium	75-125	2060.0000		29.1000	B	2000.00	101.5		P
Beryllium	75-125	50.7000		0.1000	U	50.00	101.4		P
Boron	75-125	44.3000	B	40.2000	B	50.00	8.2	N	P
Cadmium	75-125	48.4000		0.1000	U	50.00	96.8		P
Chromium	75-125	205.8000		3.5000	B	200.00	101.2		P
Cobalt	75-125	506.9000		4.7000	B	500.00	100.4		P
Copper	75-125	256.6000		1.1000	B	250.00	102.2		P
Cyanide	75-125	102.6307		10.0000	U	100.00	102.6		CA
Iron		13530.0000		12110.0000		1000.00	142.0		P
Lead	75-125	24.8400		2.8950	B	20.00	109.7		P
Manganese		4017.0002		3398.0000		500.00	123.8		P
Mercury	75-125	0.7480		0.1000	U	1.00	74.8		CV
Nickel	75-125	494.1000		2.2000	B	500.00	98.4		P
Selenium	75-125	6.0220		2.3000	U	10.00	60.2	N	P
Silver	75-125	49.8900		0.2000	U	50.00	99.8		P
Thallium	75-125	56.8000		1.9000	U	50.00	113.6		P
Vanadium	75-125	514.0000		0.3000	U	500.00	102.8		P
Zinc	75-125	518.0000		11.5000	B	500.00	101.3		P

Comments:

U.S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO
MW-3BA

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Boron		2106.00		40.20	B	2000.0	103.3		P
Selenium		29.10		2.30	U	30.0	97.0		P

Comments:

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO
MW-11AS

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012F

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	2202.0000		30.8000	B	2000.00	108.6		P
Antimony	75-125	550.3000		1.2740	B	500.00	109.8		P
Arsenic	75-125	40.4400		2.8000	U	40.00	101.1		P
Barium	75-125	2227.0000		140.9000	B	2000.00	104.3		P
Beryllium	75-125	51.3000		0.9000	B	50.00	100.8		P
Boron	75-125	47.8000	B	50.8000	B	50.00	-6.0	N	P
Cadmium	75-125	49.1000		0.8000	B	50.00	96.6		P
Chromium	75-125	205.0000		3.3000	B	200.00	100.9		P
Cobalt	75-125	515.7000		11.3000	B	500.00	100.9		P
Copper	75-125	256.8000		1.6000	B	250.00	102.1		P
Iron		5781.0000		4541.0000		1000.00	124.0		P
Lead	75-125	29.0700		6.3620		20.00	113.5		P
Manganese	75-125	2426.0000		1834.0000		500.00	118.4		P
Mercury	75-125	0.7830		0.1000	U	1.00	78.3		CV
Nickel	75-125	498.3000		5.6000	B	500.00	98.5		P
Selenium	75-125	9.5400		2.3000	U	10.00	95.4		P
Silver	75-125	50.0600		0.4485	B	50.00	99.2		P
Thallium	75-125	56.0400		1.9000	U	50.00	112.1		P
Vanadium	75-125	523.0000		0.3000	U	500.00	104.6		P
Zinc	75-125	523.8000		12.9000	B	500.00	102.2		P

Comments:

U.S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO
MW-11AA

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012F

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Boron		2187.00		50.80	B	2000.0	106.8		P

Comments:

H2M LABS INC

Date: *01-May-13*

QC SUMMARY REPORT

SDG: TOS012

Sample ID:	Client Sample ID:	Analyte	Result	Units	Spike Amount	Sample Result	%REC	Recovery Limits		RPDRef Value	%RPD	%RPD UCL
MB-041713	MB-041713	Alkalinity, Total (As CaCO3)	< 1	MG/L								
LCS-041713	LCS-041713	Alkalinity, Total (As CaCO3)	24.5	MG/L	25	< 1	98	80	120			
1304917-005FMS	MW-3BMS	Alkalinity, Total (As CaCO3)	90.3	MG/L	50	46.3	88	75	125			
1304917-005FDUP	MW-3BDUP	Alkalinity, Total (As CaCO3)	44.8	MG/L						46.3	3.3	20
MB-041813	MB-041813	Alkalinity, Total (As CaCO3)	< 1	MG/L								
LCS-041813	LCS-041813	Alkalinity, Total (As CaCO3)	24.6	MG/L	25	< 1	98	80	120			
MB-39303	MB-39303	Biochemical Oxygen Demand	< 2	MG/L								
LCS-39303	LCS-39303	Biochemical Oxygen Demand	186	MG/L	198	< 2	94	85	116			
MB-39281	MB-39281	Biochemical Oxygen Demand	< 2	MG/L								
LCS-39281	LCS-39281	Biochemical Oxygen Demand	201	MG/L	198	< 2	102	85	116			
1304917-005FDUP	MW-3BDUP	Biochemical Oxygen Demand	< 2	MG/L						< 2		20
MB-042313	MB-042313	Bromide	< 0.5	MG/L								
LCS-042313	LCS-042313	Bromide	2.38	MG/L	2.5	< 0.5	95	90	110			
1304917-005FMS	MW-3BMS	Bromide	0.99	MG/L	1	< 0.5	99	80	120			
1304917-005FDUP	MW-3BDUP	Bromide	< 0.5	MG/L						< 0.5		20
MB-042313	MB-042313	Chemical Oxygen Demand	< 10	MG/L								
LCS-042313	LCS-042313	Chemical Oxygen Demand	100	MG/L	100	< 10	100	90	110			
1304917-005DMS	MW-3BMS	Chemical Oxygen Demand	110	MG/L	100	< 10	110	90	110			
1304917-005DDUP	MW-3BDUP	Chemical Oxygen Demand	< 10	MG/L						< 10		20
MB-043013	MB-043013	Chemical Oxygen Demand	< 10	MG/L								
LCS-043013	LCS-043013	Chemical Oxygen Demand	103	MG/L	100	< 10	103	90	110			

QC SUMMARY REPORT

SDG: TOS012

Sample ID:	Client Sample ID:	Analyte	Result	Units	Spike Amount	Sample Result	%REC	Recovery Limits		RPDRef Value	%RPD	%RPD UCL
MB-042313	MB-042313	Chloride	< 2	MG/L								
LCS-042313	LCS-042313	Chloride	9.43	MG/L	10	< 2	94	90	110			
1304917-005FMS	MW-3BMS	Chloride	23.2	MG/L	10	13.5	97	80	120			
1304917-005FDUP	MW-3BDUP	Chloride	< 2	MG/L						13.5	0.35	20
MB-041813	MB-041813	Chromium, Hexavalent	< 0.02	MG/L								
LCS-041813	LCS-041813	Chromium, Hexavalent	0.20	MG/L	0.2	< 0.02	100	80	120			
MB-041713	MB-041713	Chromium, Hexavalent	< 0.02	MG/L								
LCS-041713	LCS-041713	Chromium, Hexavalent	0.20	MG/L	0.2	< 0.02	100	80	120			
1304917-005FMS	1304917-005FMS	Chromium, Hexavalent	0.79	MG/L	1	< 0.1	79	75	125			
1304917-005FDUP	1304917-005FDUP	Chromium, Hexavalent	< 0.1	MG/L						< 0.1		20
MB-041713	MB-041713	Color	< 5	Units								
LCS-041713	LCS-041713	Color	40	Units	40	< 5	100	80	120			
1304917-005FDUP	MW-3BDUP	Color	125	Units						125		20
MB-041813	MB-041813	Color	< 5	Units								
LCS-041813	LCS-041813	Color	40	Units	40	< 5	100	80	120			
MB-041913	MB-041913	Hardness (As CaCO3)	< 5	MG/L								
LCS-041913	LCS-041913	Hardness (As CaCO3)	1020	MG/L	1000	< 5	102	80	120			
1304917-005CMS	MW-3BMS	Hardness (As CaCO3)	480	MG/L	400	84	99	75	125			
1304917-005CDUP	MW-3BDUP	Hardness (As CaCO3)	80	MG/L						84	4.9	20
MB-041713	MB-041713	Nitrate as N	< 0.1	MG/L								
LCS-041713	LCS-041713	Nitrate as N	1.21	MG/L	1.13	< 0.1	107	90	110			

QC SUMMARY REPORT

SDG: TOS012

Sample ID:	Client Sample ID:	Analyte	Result	Units	Spike Amount	Sample Result	%REC	Recovery Limits		RPDRef Value	%RPD	%RPD UCL
MB-041813	MB-041813	Nitrate as N	< 0.1	MG/L								
LCS-041813	LCS-041813	Nitrate as N	1.13	MG/L	1.13	< 0.1	100	90	110			
MB-041713	MB-041713	Nitrate as N	< 0.1	MG/L								
LCS-041713	LCS-041713	Nitrate as N	1.16	MG/L	1.13	< 0.1	103	90	110			
1304917-005DMS	MW-3BMS	Nitrate as N	0.52	MG/L	0.5	< 0.1	104	90	110			
1304917-005DDUP	MW-3BDUP	Nitrate as N	< 0.1	MG/L						< 0.1		20
MB-041813	MB-041813	Nitrite as N	< 0.1	MG/L								
LCS-041813	LCS-041813	Nitrite as N	1.03	MG/L	1	< 0.1	103	90	110			
MB-041713	MB-041713	Nitrite as N	< 0.1	MG/L								
LCS-041713	LCS-041713	Nitrite as N	1.03	MG/L	1	< 0.1	103	90	110			
1304917-005FMS	MW-3BMS	Nitrite as N	0.45	MG/L	0.5	< 0.1	90	90	110			
1304917-005FDUP	MW-3BDUP	Nitrite as N	< 0.1	MG/L						< 0.1		20
MB-042213	MB-042213	Nitrogen, Ammonia (As N)	< 0.1	MG/L								
LCS-042213	LCS-042213	Nitrogen, Ammonia (As N)	1.03	MG/L	1	< 0.1	103	90	110			
1304917-005DMS	MW-3BMS	Nitrogen, Ammonia (As N)	5.39	MG/L	2.5	2.82	103	75	125			
1304917-005DDUP	MW-3BDUP	Nitrogen, Ammonia (As N)	2.90	MG/L						2.82	2.5	20
MB1-042513	MB1-042513	Nitrogen, Ammonia (As N)	< 0.1	MG/L								
LCS1-042513	LCS1-042513	Nitrogen, Ammonia (As N)	1.03	MG/L	1	< 0.1	103	90	110			
MB-042313	MB-042313	Nitrogen, Ammonia (As N)	< 0.1	MG/L								
LCS-042313	LCS-042313	Nitrogen, Ammonia (As N)	1.02	MG/L	1	< 0.1	102	90	110			
MB-39401	MB-39401	Nitrogen, Kjeldahl, Total	< 0.1	MG/L								
LCS-39401	LCS-39401	Nitrogen, Kjeldahl, Total	4.06	MG/L	4	< 0.1	102	90	110			

QC SUMMARY REPORT

SDG: TOS012

Sample ID:	Client Sample ID:	Analyte	Result	Units	Spike Amount	Sample Result	%REC	Recovery Limits		RPDRef Value	%RPD	%RPD UCL
MB-39354	MB-39354	Nitrogen, Kjeldahl, Total	< 0.1	MG/L								
LCS-39354	LCS-39354	Nitrogen, Kjeldahl, Total	3.71	MG/L	4	< 0.1	93	90	110			
1304917-005DMS	1304917-005DMS	Nitrogen, Kjeldahl, Total	7.57	MG/L	4	2.90	117	75	125			
1304917-005DDUP	1304917-005DDUP	Nitrogen, Kjeldahl, Total	2.84	MG/L						2.90	1.9	20
MB-39356	MB-39356	Phenolics, Total Recoverable	< 5	UG/L								
LCS-39356	LCS-39356	Phenolics, Total Recoverable	26.8	UG/L	30	< 5	89	80	120			
MB-39333	MB-39333	Phenolics, Total Recoverable	< 5	UG/L								
LCS-39333	LCS-39333	Phenolics, Total Recoverable	30.3	UG/L	30	< 5	101	80	120			
1304917-005DMS	MW-3BMS	Phenolics, Total Recoverable	17.5	UG/L	20	< 5	88	75	125			
1304917-005DDUP	MW-3BDUP	Phenolics, Total Recoverable	< 5	UG/L						< 5		20
MB-042313	MB-042313	Sulfate	< 5	MG/L								
LCS-042313	LCS-042313	Sulfate	9.84	MG/L	10	< 5	98	90	110			
1304917-005FMS	MW-3BMS	Sulfate	20.9	MG/L	10	11.2	97	80	120			
1304917-005FDUP	MW-3BDUP	Sulfate	11.2	MG/L						11.2	0.33	20
MB-041813	MB-041813	Total Dissolved Solids	< 10	MG/L								
LCS-041813	LCS-041813	Total Dissolved Solids	281	MG/L	300	< 10	94	80	120			
1304917-005FMS	MW-3BMS	Total Dissolved Solids	385	MG/L	300	75	103	75	125			
1304917-005FDUP	MW-3BDUP	Total Dissolved Solids	80	MG/L						75	6.5	20
MB-041713	MB-041713	Total Organic Carbon	< 1	MG/L								
LCS-041713	LCS-041713	Total Organic Carbon	26.5	MG/L	25	< 1	106	80	120			
MB-042513	MB-042513	Total Organic Carbon	< 1	MG/L								
LCS-042513	LCS-042513	Total Organic Carbon	27.6	MG/L	25	< 1	110	80	120			
1304917-005BMS	MW-3BMS	Total Organic Carbon	24.9	MG/L	10	14.2	108	75	125			
1304917-005BDUP	MW-3BDUP	Total Organic Carbon	14.3	MG/L						14.2	0.99	20

H 2 M labs

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9. BLANK SUMMARY DATA AND RESULTS

9.1 VOLATILES
9.2 TOTAL METALS
9.3 FILTERED METALS
9.4 WET CHEMISTRY

EPA SAMPLE NO.

VBLK041713

VOLATILE METHOD BLANK SUMMARY

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Lab File ID: 3\F60370.D Lab Sample ID: VBLK041713

Date Analyzed: 04/17/13 Time Analyzed: 18:38

GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: HP5973-1

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LFB041713	LFB041713	3\F60371.D	19:06
02	MSB041713	MSB041713	3\F60372.D	19:35
03	DUP001	1304917-001A	3\F60373.D	20:04
04	MW-3A	1304917-004A	3\F60374.D	20:33
05	MW-3B	1304917-005A	3\F60375.D	21:01
06	MW-3BMS	1304917-005AMS	3\F60376.D	21:30
07	MW-3BMSD	1304917-005AMSD	3\F60377.D	21:59
08	MW-3C	1304917-006A	3\F60378.D	22:27
09	MW-4A	1304917-007A	3\F60379.D	22:56
10	MW-4B	1304917-008A	3\F60380.D	23:25
11	MW-4C	1304917-009A	3\F60381.D	23:54
12	FB001	1304917-010A	3\F60382.D	0:22
13	TRIP BLANK 001	1304917-011A	3\F60383.D	0:51
14	STORAGE BLANK	1304917-012A	3\F60384.D	1:20
15	MW-1A	1304A27-001A	3\F60385.D	1:48
16	MW-1B	1304A27-002A	3\F60386.D	2:17
17	MW-1C	1304A27-003A	3\F60387.D	2:46
18	MW-11A	1304A27-004A	3\F60388.D	3:15
19	MW-11B	1304A27-005A	3\F60389.D	3:44
20	MW-12A	1304A27-006A	3\F60390.D	4:12
21	MW-12B	1304A27-007A	3\F60391.D	4:41

COMMENTS: _____

_____

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK041713

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: VBLK041713

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60370.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	1	J
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK041713

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: VBLK041713

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60370.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U

1F

EPA SAMPLE NO.

VBLK041713

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: VBLK041713

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60370.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 04/17/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

4A

EPA SAMPLE NO.

VOLATILE METHOD BLANK SUMMARY

VBLK041813

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Lab File ID: 3\F60394.D Lab Sample ID: VBLK041813

Date Analyzed: 04/18/13 Time Analyzed: 17:12

GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: HP5973-1

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	FB002	1304A27-008A	3\F60396.D	18:09
02	TRIP BLANK	1304A27-009A	3\F60397.D	18:38

COMMENTS: _____

_____

1B

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

VBLK041813

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: VBLK041813

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60394.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
107-13-1	Acrylonitrile	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
74-88-4	Iodomethane	5	U
108-05-4	Vinyl acetate	5	U
67-64-1	Acetone	2	J
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U

EPA SAMPLE NO.

VBLK041813

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: VBLK041813

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60394.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U

TOS012/012F S189

1F

EPA SAMPLE NO.

VBLK041813

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: VBLK041813

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60394.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

U.S. EPA - CLP

3
BLANKS

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	9.5	U	27.0	B	9.5	U	9.5	U	9.500	U	P
Antimony	1.2	U	-1.6	B	-1.5	B	1.2	U	1.200	U	P
Arsenic	2.8	U	2.8	U	2.8	U	2.8	U	3.810	B	P
Barium	3.7	U	3.7	U	3.7	U	3.7	U	3.700	U	P
Beryllium	0.1	U	0.1	U	0.2	B	0.3	B	0.100	U	P
Boron	4.0	B	2.8	U	2.8	U	2.8	U	2.800	U	P
Cadmium	0.2	B	0.2	B	0.1	U	0.3	B	0.100	U	P
Calcium	-8.7	B	15.4	B	5.3	U	5.3	U	5.300	U	P
Chromium	0.4	U	-0.6	B	1.0	B	0.7	B	0.700	B	P
Cobalt	0.6	B	0.6	B	0.5	B	0.6	B	0.400	U	P
Copper	-2.4	B	1.3	B	1.1	B	1.3	B	2.900	B	P
Iron	2.3	B	10.5	B	6.8	B	9.2	B	1.800	U	P
Lead	1.0	U	1.0	U	1.0	U	1.0	U	1.000	U	P
Magnesium	16.9	U	16.9	U	-17.0	B	16.9	U	16.900	U	P
Manganese	0.2	B	0.2	B	0.2	B	0.6	B	0.800	B	P
Nickel	0.3	B	0.3	U	0.3	U	0.3	U	0.300	U	P
Potassium	49.0	U	49.0	U	-290.0	B	-200.0	B	49.000	U	P
Selenium	2.3	U	2.3	U	2.3	U	2.3	U	2.300	U	P
Silver	-0.9	B	-0.7	B	-0.4	B	-0.3	B	0.200	U	P
Sodium	80.0	B	77.9	B	-100.0	B	-100.0	B	67.000	U	P
Thallium	1.9	U	1.9	U	1.9	U	1.9	U	1.900	U	P
Vanadium	0.3	U	0.4	B	0.3	B	0.5	B	0.300	U	P
Zinc	0.3	U	0.3	U	0.4	B	0.7	B	0.300	U	P

U.S. EPA - CLP

3
BLANKS

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			9.5	U	9.5	U	9.5	U			P
Antimony			-1.3	B	-1.3	B	-2.2	B			P
Arsenic			2.8	U	2.8	U	2.8	U			P
Barium			3.7	U	3.7	U	3.7	U			P
Beryllium			0.1	U	0.1	U	0.1	U			P
Boron			5.3	B	4.3	B	2.9	B			P
Cadmium			0.3	B	0.2	B	0.3	B			P
Calcium			5.3	U	5.3	U	5.3	U			P
Chromium			0.4	U	0.4	U	0.4	U			P
Cobalt			0.4	U	0.4	U	0.4	U			P
Copper			1.0	B	-0.8	B	0.4	U			P
Iron			3.5	B	1.8	U	2.1	B			P
Lead			1.0	U	-2.3	B	1.0	U			P
Magnesium			16.9	U	16.9	U	16.9	U			P
Manganese			0.2	B	0.1	U	0.1	U			P
Nickel			-0.4	B	0.6	B	0.6	B			P
Potassium			-220.0	B	-150.0	B	-68.0	B			P
Selenium			-4.6	B	2.3	U	2.3	U			P
Silver			-0.5	B	-0.3	B	0.4	B			P
Sodium			-92.0	B	67.0	U	67.0	U			P
Thallium			1.9	U	1.9	U	1.9	U			P
Vanadium			0.3	B	0.3	B	0.3	B			P
Zinc			0.3	U	0.3	U	0.3	B			P

U.S. EPA - CLP

3
BLANKS

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			128.0	B							P
Antimony			-1.4	B							P
Arsenic			2.8	U							P
Barium			3.7	U							P
Beryllium			0.5	B							P
Boron			2.8	U							P
Cadmium			0.5	B							P
Calcium			126.0	B							P
Chromium			0.5	B							P
Cobalt			0.4	U							P
Copper			1.1	B							P
Iron			60.1	B							P
Lead			1.0	U							P
Magnesium			123.0	B							P
Manganese			0.4	B							P
Nickel			1.2	B							P
Potassium			-140.0	B							P
Selenium			2.3	U							P
Silver			0.2	U							P
Sodium			67.0	U							P
Thallium			1.9	U							P
Vanadium			0.8	B							P
Zinc			0.7	B							P

U.S. EPA - CLP

3
BLANKS

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.100	U	CV

U.S. EPA - CLP

3
BLANKS

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Mercury			0.1	U	0.1	U	0.1	U			CV

U.S. EPA - CLP

3
BLANKS

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	CA

U.S. EPA - CLP

3
BLANKS

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	CA

U.S. EPA - CLP

3
BLANKS

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012F

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	9.5	U	27.0	B	9.5	U	9.5	U	9.500	U	P
Antimony	1.2	U	-1.6	B	-1.5	B	1.2	U	1.200	U	P
Arsenic	2.8	U	2.8	U	2.8	U	2.8	U	2.800	U	P
Barium	3.7	U	3.7	U	3.7	U	3.7	U	3.700	U	P
Beryllium	0.1	U	0.1	U	0.2	B	0.3	B	0.100	U	P
Boron	4.0	B	2.8	U	2.8	U	2.8	U	4.200	B	P
Cadmium	0.2	B	0.2	B	0.1	U	0.3	B	0.100	U	P
Calcium	-8.7	B	15.4	B	5.3	U	5.3	U	5.300	U	P
Chromium	0.4	U	-0.6	B	1.0	B	0.7	B	1.000	B	P
Cobalt	0.6	B	0.6	B	0.5	B	0.6	B	0.400	U	P
Copper	-2.4	B	1.3	B	1.1	B	1.3	B	2.200	B	P
Iron	2.3	B	10.5	B	6.8	B	9.2	B	3.800	B	P
Lead	1.0	U	1.0	U	1.0	U	1.0	U	1.000	U	P
Magnesium	16.9	U	16.9	U	-17.0	B	16.9	U	16.900	U	P
Manganese	0.2	B	0.2	B	0.2	B	0.6	B	0.200	B	P
Nickel	0.3	B	0.3	U	0.3	U	0.3	U	0.300	U	P
Potassium	49.0	U	49.0	U	-290.0	B	-200.0	B	49.000	U	P
Selenium	2.3	U	2.3	U	2.3	U	2.3	U	2.300	U	P
Silver	-0.9	B	-0.7	B	-0.4	B	-0.3	B	0.200	U	P
Sodium	80.0	B	77.9	B	-100.0	B	-100.0	B	67.000	U	P
Thallium	1.9	U	1.9	U	1.9	U	1.9	U	1.900	U	P
Vanadium	0.3	U	0.4	B	0.3	B	0.5	B	0.300	B	P
Zinc	0.3	U	0.3	U	0.4	B	0.7	B	0.800	B	P

U.S. EPA - CLP

3
BLANKS

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012F

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			9.5	U	9.5	U	9.5	U			P
Antimony			-1.3	B	-1.3	B	-2.2	B			P
Arsenic			2.8	U	2.8	U	2.8	U			P
Barium			3.7	U	3.7	U	3.7	U			P
Beryllium			0.1	U	0.1	U	0.1	U			P
Boron			5.3	B	4.3	B	2.9	B			P
Cadmium			0.3	B	0.2	B	0.3	B			P
Calcium			5.3	U	5.3	U	5.3	U			P
Chromium			0.4	U	0.4	U	0.4	U			P
Cobalt			0.4	U	0.4	U	0.4	U			P
Copper			1.0	B	-0.8	B	0.4	U			P
Iron			3.5	B	1.8	U	2.1	B			P
Lead			1.0	U	-2.3	B	1.0	U			P
Magnesium			16.9	U	16.9	U	16.9	U			P
Manganese			0.2	B	0.1	U	0.1	U			P
Nickel			-0.4	B	0.6	B	0.6	B			P
Potassium			-220.0	B	-150.0	B	-68.0	B			P
Selenium			-4.6	B	2.3	U	2.3	U			P
Silver			-0.5	B	-0.3	B	0.4	B			P
Sodium			-92.0	B	67.0	U	67.0	U			P
Thallium			1.9	U	1.9	U	1.9	U			P
Vanadium			0.3	B	0.3	B	0.3	B			P
Zinc			0.3	U	0.3	U	0.3	B			P

U.S. EPA - CLP

3
BLANKS

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012F

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			128.0	B							P
Antimony			-1.4	B							P
Arsenic			2.8	U							P
Barium			3.7	U							P
Beryllium			0.5	B							P
Boron			2.8	U							P
Cadmium			0.5	B							P
Calcium			126.0	B							P
Chromium			0.5	B							P
Cobalt			0.4	U							P
Copper			1.1	B							P
Iron			60.1	B							P
Lead			1.0	U							P
Magnesium			123.0	B							P
Manganese			0.4	B							P
Nickel			1.2	B							P
Potassium			-140.0	B							P
Selenium			2.3	U							P
Silver			0.2	U							P
Sodium			67.0	U							P
Thallium			1.9	U							P
Vanadium			0.8	B							P
Zinc			0.7	B							P

U.S. EPA - CLP

3
BLANKS

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012F

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.100	U	CV

U.S. EPA - CLP

3
BLANKS

Lab Name: H2M LABS INC Contract:

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012F

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Mercury			0.1	U	0.1	U					CV

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

PBWF

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012F

Matrix (soil/water): WATER Lab Sample ID: MB1-39433

Level (low/med): LOW Date Received:

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9.5	U		P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	3.7	U		P
7440-41-7	Beryllium	0.10	U		P
7440-42-8	Boron	2.8	U		P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	5.3	U		P
7440-47-3	Chromium	0.60	B		P
7440-48-4	Cobalt	0.50	B		P
7440-50-8	Copper	1.6	B		P
7439-89-6	Iron	1.8	U		P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	16.9	U		P
7439-96-5	Manganese	0.10	U		P
7440-02-0	Nickel	0.30	U		P
7440-09-7	Potassium	49.0	U		P
7782-49-2	Selenium	2.3	U		P
7440-22-4	Silver	0.20	U		P
7440-23-5	Sodium	67.0	U		P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	0.30	U		P
7440-66-6	Zinc	0.30	U		P

Comments:

Date Reported 5/3/2013

TOS012/012F S203

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

PBWF

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012F

Matrix (soil/water): WATER Lab Sample ID: MB1-39468

Level (low/med): LOW Date Received:

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.10	U		CV

Comments:

Date Reported 5/3/2013

TOS012/012F S204

H2M LABS INC

Date: *01-May-13*

QC SUMMARY REPORT

SDG: TOS012

Sample ID:	Client Sample ID:	Analyte	Result	Units	Spike Amount	Sample Result	%REC	Recovery Limits		RPDRef Value	%RPD	%RPD UCL
MB-041713	MB-041713	Alkalinity, Total (As CaCO3)	< 1	MG/L								
LCS-041713	LCS-041713	Alkalinity, Total (As CaCO3)	24.5	MG/L	25	< 1	98	80	120			
1304917-005FMS	MW-3BMS	Alkalinity, Total (As CaCO3)	90.3	MG/L	50	46.3	88	75	125			
1304917-005FDUP	MW-3BDUP	Alkalinity, Total (As CaCO3)	44.8	MG/L						46.3	3.3	20
MB-041813	MB-041813	Alkalinity, Total (As CaCO3)	< 1	MG/L								
LCS-041813	LCS-041813	Alkalinity, Total (As CaCO3)	24.6	MG/L	25	< 1	98	80	120			
MB-39303	MB-39303	Biochemical Oxygen Demand	< 2	MG/L								
LCS-39303	LCS-39303	Biochemical Oxygen Demand	186	MG/L	198	< 2	94	85	116			
MB-39281	MB-39281	Biochemical Oxygen Demand	< 2	MG/L								
LCS-39281	LCS-39281	Biochemical Oxygen Demand	201	MG/L	198	< 2	102	85	116			
1304917-005FDUP	MW-3BDUP	Biochemical Oxygen Demand	< 2	MG/L						< 2		20
MB-042313	MB-042313	Bromide	< 0.5	MG/L								
LCS-042313	LCS-042313	Bromide	2.38	MG/L	2.5	< 0.5	95	90	110			
1304917-005FMS	MW-3BMS	Bromide	0.99	MG/L	1	< 0.5	99	80	120			
1304917-005FDUP	MW-3BDUP	Bromide	< 0.5	MG/L						< 0.5		20
MB-042313	MB-042313	Chemical Oxygen Demand	< 10	MG/L								
LCS-042313	LCS-042313	Chemical Oxygen Demand	100	MG/L	100	< 10	100	90	110			
1304917-005DMS	MW-3BMS	Chemical Oxygen Demand	110	MG/L	100	< 10	110	90	110			
1304917-005DDUP	MW-3BDUP	Chemical Oxygen Demand	< 10	MG/L						< 10		20
MB-043013	MB-043013	Chemical Oxygen Demand	< 10	MG/L								
LCS-043013	LCS-043013	Chemical Oxygen Demand	103	MG/L	100	< 10	103	90	110			

QC SUMMARY REPORT

SDG: TOS012

Sample ID:	Client Sample ID:	Analyte	Result	Units	Spike Amount	Sample Result	%REC	Recovery Limits		RPDRef Value	%RPD	%RPD UCL
MB-042313	MB-042313	Chloride	< 2	MG/L								
LCS-042313	LCS-042313	Chloride	9.43	MG/L	10	< 2	94	90	110			
1304917-005FMS	MW-3BMS	Chloride	23.2	MG/L	10	13.5	97	80	120			
1304917-005FDUP	MW-3BDUP	Chloride	< 2	MG/L						13.5	0.35	20
MB-041813	MB-041813	Chromium, Hexavalent	< 0.02	MG/L								
LCS-041813	LCS-041813	Chromium, Hexavalent	0.20	MG/L	0.2	< 0.02	100	80	120			
MB-041713	MB-041713	Chromium, Hexavalent	< 0.02	MG/L								
LCS-041713	LCS-041713	Chromium, Hexavalent	0.20	MG/L	0.2	< 0.02	100	80	120			
1304917-005FMS	1304917-005FMS	Chromium, Hexavalent	0.79	MG/L	1	< 0.1	79	75	125			
1304917-005FDUP	1304917-005FDUP	Chromium, Hexavalent	< 0.1	MG/L						< 0.1		20
MB-041713	MB-041713	Color	< 5	Units								
LCS-041713	LCS-041713	Color	40	Units	40	< 5	100	80	120			
1304917-005FDUP	MW-3BDUP	Color	125	Units						125		20
MB-041813	MB-041813	Color	< 5	Units								
LCS-041813	LCS-041813	Color	40	Units	40	< 5	100	80	120			
MB-041913	MB-041913	Hardness (As CaCO3)	< 5	MG/L								
LCS-041913	LCS-041913	Hardness (As CaCO3)	1020	MG/L	1000	< 5	102	80	120			
1304917-005CMS	MW-3BMS	Hardness (As CaCO3)	480	MG/L	400	84	99	75	125			
1304917-005CDUP	MW-3BDUP	Hardness (As CaCO3)	80	MG/L						84	4.9	20
MB-041713	MB-041713	Nitrate as N	< 0.1	MG/L								
LCS-041713	LCS-041713	Nitrate as N	1.21	MG/L	1.13	< 0.1	107	90	110			

QC SUMMARY REPORT

SDG: TOS012

Sample ID:	Client Sample ID:	Analyte	Result	Units	Spike Amount	Sample Result	%REC	Recovery Limits		RPDRef Value	%RPD	%RPD UCL
MB-041813	MB-041813	Nitrate as N	< 0.1	MG/L								
LCS-041813	LCS-041813	Nitrate as N	1.13	MG/L	1.13	< 0.1	100	90	110			
MB-041713	MB-041713	Nitrate as N	< 0.1	MG/L								
LCS-041713	LCS-041713	Nitrate as N	1.16	MG/L	1.13	< 0.1	103	90	110			
1304917-005DMS	MW-3BMS	Nitrate as N	0.52	MG/L	0.5	< 0.1	104	90	110			
1304917-005DDUP	MW-3BDUP	Nitrate as N	< 0.1	MG/L						< 0.1		20
MB-041813	MB-041813	Nitrite as N	< 0.1	MG/L								
LCS-041813	LCS-041813	Nitrite as N	1.03	MG/L	1	< 0.1	103	90	110			
MB-041713	MB-041713	Nitrite as N	< 0.1	MG/L								
LCS-041713	LCS-041713	Nitrite as N	1.03	MG/L	1	< 0.1	103	90	110			
1304917-005FMS	MW-3BMS	Nitrite as N	0.45	MG/L	0.5	< 0.1	90	90	110			
1304917-005FDUP	MW-3BDUP	Nitrite as N	< 0.1	MG/L						< 0.1		20
MB-042213	MB-042213	Nitrogen, Ammonia (As N)	< 0.1	MG/L								
LCS-042213	LCS-042213	Nitrogen, Ammonia (As N)	1.03	MG/L	1	< 0.1	103	90	110			
1304917-005DMS	MW-3BMS	Nitrogen, Ammonia (As N)	5.39	MG/L	2.5	2.82	103	75	125			
1304917-005DDUP	MW-3BDUP	Nitrogen, Ammonia (As N)	2.90	MG/L						2.82	2.5	20
MB1-042513	MB1-042513	Nitrogen, Ammonia (As N)	< 0.1	MG/L								
LCS1-042513	LCS1-042513	Nitrogen, Ammonia (As N)	1.03	MG/L	1	< 0.1	103	90	110			
MB-042313	MB-042313	Nitrogen, Ammonia (As N)	< 0.1	MG/L								
LCS-042313	LCS-042313	Nitrogen, Ammonia (As N)	1.02	MG/L	1	< 0.1	102	90	110			
MB-39401	MB-39401	Nitrogen, Kjeldahl, Total	< 0.1	MG/L								
LCS-39401	LCS-39401	Nitrogen, Kjeldahl, Total	4.06	MG/L	4	< 0.1	102	90	110			

QC SUMMARY REPORT

SDG: TOS012

Sample ID:	Client Sample ID:	Analyte	Result	Units	Spike Amount	Sample Result	%REC	Recovery Limits		RPDRef Value	%RPD	%RPD UCL
MB-39354	MB-39354	Nitrogen, Kjeldahl, Total	< 0.1	MG/L								
LCS-39354	LCS-39354	Nitrogen, Kjeldahl, Total	3.71	MG/L	4	< 0.1	93	90	110			
1304917-005DMS	1304917-005DMS	Nitrogen, Kjeldahl, Total	7.57	MG/L	4	2.90	117	75	125			
1304917-005DDUP	1304917-005DDUP	Nitrogen, Kjeldahl, Total	2.84	MG/L						2.90	1.9	20
MB-39356	MB-39356	Phenolics, Total Recoverable	< 5	UG/L								
LCS-39356	LCS-39356	Phenolics, Total Recoverable	26.8	UG/L	30	< 5	89	80	120			
MB-39333	MB-39333	Phenolics, Total Recoverable	< 5	UG/L								
LCS-39333	LCS-39333	Phenolics, Total Recoverable	30.3	UG/L	30	< 5	101	80	120			
1304917-005DMS	MW-3BMS	Phenolics, Total Recoverable	17.5	UG/L	20	< 5	88	75	125			
1304917-005DDUP	MW-3BDUP	Phenolics, Total Recoverable	< 5	UG/L						< 5		20
MB-042313	MB-042313	Sulfate	< 5	MG/L								
LCS-042313	LCS-042313	Sulfate	9.84	MG/L	10	< 5	98	90	110			
1304917-005FMS	MW-3BMS	Sulfate	20.9	MG/L	10	11.2	97	80	120			
1304917-005FDUP	MW-3BDUP	Sulfate	11.2	MG/L						11.2	0.33	20
MB-041813	MB-041813	Total Dissolved Solids	< 10	MG/L								
LCS-041813	LCS-041813	Total Dissolved Solids	281	MG/L	300	< 10	94	80	120			
1304917-005FMS	MW-3BMS	Total Dissolved Solids	385	MG/L	300	75	103	75	125			
1304917-005FDUP	MW-3BDUP	Total Dissolved Solids	80	MG/L						75	6.5	20
MB-041713	MB-041713	Total Organic Carbon	< 1	MG/L								
LCS-041713	LCS-041713	Total Organic Carbon	26.5	MG/L	25	< 1	106	80	120			
MB-042513	MB-042513	Total Organic Carbon	< 1	MG/L								
LCS-042513	LCS-042513	Total Organic Carbon	27.6	MG/L	25	< 1	110	80	120			
1304917-005BMS	MW-3BMS	Total Organic Carbon	24.9	MG/L	10	14.2	108	75	125			
1304917-005BDUP	MW-3BDUP	Total Organic Carbon	14.3	MG/L						14.2	0.99	20

H 2 M labs

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10. INTERNAL STANDARD AREA DATA

10.1 VOLATILES

INTERNAL STANDARD AREA AND RT SUMMARY

ab Name: H2M LABS INC SDG No.: TOS012

Lab Code: H2M

ab File ID (Standard): 3\F60369.D Date Analyzed: 4/17/2013

strument ID: HP5973-1 Time Analyzed: 18:09

GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 (CBZ) AREA #	RT #	IS4 14DCB AREA #	RT #
12 HOUR STD	274830	3.830	443724	4.360	250899	6.490	206568	7.960
UPPER LIMIT	549660	4.330	887448	4.860	501798	6.990	413136	8.460
LOWER LIMIT	137415	3.330	221862	3.860	125450	5.990	103284	7.460
SAMPLE NO.								
01 VBLK041713	269881	3.83	439296	4.36	241696	6.49	186845	7.97
02 LFB041713	271880	3.84	439490	4.36	249125	6.49	208460	7.97
03 MSB041713	270707	3.84	437651	4.37	243471	6.49	186176	7.97
04 DUP001	267297	3.83	429209	4.36	242795	6.49	186753	7.97
05 MW-3A	263393	3.83	426733	4.36	239869	6.49	182402	7.96
06 MW-3B	261185	3.83	422843	4.36	237858	6.49	183512	7.96
07 MW-3BMS	257684	3.83	425276	4.36	243402	6.49	184580	7.96
08 MW-3BMSD	255682	3.83	421458	4.36	238131	6.49	181207	7.96
09 MW-3C	251998	3.83	413132	4.37	231663	6.49	176308	7.96
10 MW-4A	250238	3.83	415196	4.36	234795	6.49	178729	7.96
11 MW-4B	250190	3.83	407856	4.36	231448	6.49	175827	7.96
12 MW-4C	247582	3.84	408074	4.37	230822	6.49	175318	7.97
13 FB001	246649	3.83	407055	4.36	227976	6.49	172106	7.96
14 TRIP BLANK 001	242839	3.84	399690	4.36	229796	6.49	174018	7.96
15 STORAGE BLANK	245119	3.84	402351	4.36	229462	6.49	173865	7.96
16 MW-1A	243144	3.83	403197	4.36	225269	6.49	173382	7.96
17 MW-1B	237783	3.83	396367	4.36	226622	6.49	173607	7.96
18 MW-1C	235890	3.84	387961	4.36	226098	6.49	172097	7.96
19 MW-11A	234727	3.83	385912	4.36	222920	6.49	170753	7.96
20 MW-11B	230621	3.83	385879	4.36	221495	6.49	169560	7.96
21 MW-12A	232087	3.83	383753	4.36	223080	6.49	170728	7.96
22 MW-12B	231826	3.83	381271	4.36	219893	6.49	166715	7.96

IS1 = Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5
IS4 14DCB = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

INTERNAL STANDARD AREA AND RT SUMMARY

b Name: H2M LABS INC SDG No.: TOS012

Lab Code: H2M

b File ID (Standard): 3\F60393.D Date Analyzed: 4/18/2013

strument ID: HP5973-1 Time Analyzed: 16:43

GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 (CBZ) AREA #	RT #	IS4 14DCB AREA #	RT #
12 HOUR STD	238799	3.830	395799	4.360	233549	6.490	194692	7.970
UPPER LIMIT	477598	4.330	791598	4.860	467098	6.990	389384	8.470
LOWER LIMIT	119400	3.330	197900	3.860	116775	5.990	97346	7.470
SAMPLE NO.								
1 VBLK041813	232912	3.83	386368	4.36	223609	6.49	169277	7.96
02 FB002	232037	3.83	388373	4.36	223100	6.49	168442	7.96
03 TRIP BLANK	233730	3.84	385326	4.36	221026	6.49	170022	7.97

IS1 = Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5
IS4 14DCB = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Premier Environmental Services

DATA VALIDATION REPORT
OF THE
TOWN OF SOUTHAMPTON
NORTH SEA LANDFILL

ORGANIC AND INORGANIC ANALYSES
OF AQUEOUS SAMPLES

H2M LABORATORIES
MELVILLE, NEW YORK

SDG NUMBER:
TOS012/TOS012F

June, 2013

Prepared for
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Prepared by
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NYS DEC Data Usability Summary Report

DATA VALIDATION FOR:	**Volatile Organic Analyses**
SITE:	**North Sea Landfill**
CONTRACT LAB:	**H2M Laboratories Melville, New York**
REPORT NO.:	**TOS012/012F**
REVIEWER:	**Renee Cohen**
DATE REVIEW COMPLETED:	**June, 2013**
MATRIX:	**Aqueous**

The data validation was performed according to the guidelines in the described in the New York State Department of Environmental Conservation, Division of Environmental Remediation, Guidance for the Development of Data Usability Summary Reports (DUSR). In addition the data was been reviewed using the protocol specified in the NYS Analytical Services Protocol ('05).

All data are considered valid and acceptable except those analytes which have been rejected "R" (unusable). Due to various QC problems some analytes may have been qualified with a "J" (estimated), "N" (presumptive evidence for the presence of the material, "U" (non-detect), or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All actions are detailed on the attached sheets.

Several factors should be noted for all persons using this data. Persons using this data should be aware that no result is guaranteed to be accurate even if it has passed all QC tests. The main purpose of this review is to appropriately qualify outliers and to determine whether the results presented meet the specific site/project criteria for data quality and data use.

This data reports includes sixteen (16) aqueous samples, two (2) Field Blank samples and two (2) Trip Blank samples. The samples associated with this data set were collected April 15, 2013 and April 16, 2013. The samples were received at H2M Laboratories located in Melville, New York on April 16, 2013 and April 17, 2013. The cooler temperatures were within QC limits upon receipt. The samples were analyzed for Volatile Organic Analytes (EPA Method 8260B), Total and Dissolved Metals and Miscellaneous Wet Chemistry analytes as specified on the Chain of Custody (COC) documentation that accompanied the samples to the laboratory.

A cross-reference between Field Sample ID and Laboratory Sample ID is located in Table 1 of this report. Copies of the definitions that may be used to qualify data results are located in Appendix A of this report. Copies of qualified data result pages are located in Appendix B of this report and a copy of Chain of Custody (COC) documentation associated with sampling event is located in Appendix C.

This review is for the subset of samples that were marked on the Chain of Custody for Volatile Organic Analytes. These samples were also analyzed for Total and Dissolved Metals as well as miscellaneous wet chemistry analytes. The review of these inorganic analytes is located in the Inorganic Data review section of this report.

ORGANIC DATA ASSESSMENT

1. OVERVIEW:

The client requested that five (5) percent (%) of the samples in this data set be reviewed. One (1) discreet sample point was chosen for Volatile Organic Data review. A full review of the holding times and instrument calibration was performed on this data set.

The samples were analyzed using EPA Test Methods for the Evaluation of Solid Waste (SW 846), Method 8260B. The Volatile Organic analytes were reported by the laboratory. Proper custody transfer of the samples was documented in the laboratory reports. Cooler temperatures were within QC limits. Sample preservation was checked prior to analysis. All samples in this data set were properly preserved.

The following aqueous sample was chosen for review in the VOA fraction: MW-1B (1304A27-002).

2. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Preserved volatile organic analyses are required to be analyzed within 10 days of validated time of sample receipt (VTSR) in accordance with the NYSDEC ASP, Rev '95. The technical holding time for properly preserved aqueous samples is 14 days from collection.

Sample MW-1B was collected on April 16, 2013. The sample analysis was completed by April 17, 2013. All QC sample analyses associated with this sample were completed within ten (10) days of VTSR.

3. SURROGATES:

All samples are spiked with surrogate compounds prior to sample preparation to evaluate the overall laboratory performance and the efficiency of the analytical technique. If the measured surrogate concentrations are outside the QC limits, qualifiers were applied to the effected samples.

Each of the samples in this data set was spiked with the three (3) surrogate compounds 1,2-Dichloroethane-d4, Toluene-d8 and 4-Bromofluorobenzene. In house-surrogate recovery limits were utilized by the laboratory. The percent recovery of each surrogate met QC criteria in all samples associated with this data set.

4. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for additional qualification of data. The laboratory used the in-house generated recovery criteria and RPD (precision) data for reporting purposes.

Site specific matrix spike/matrix spike duplicate analysis was performed on sample MW-3B. The Form 3 summary was not included in the laboratory report, however, the raw data was provided for review. A review of this raw data indicated that the percent recovery of the fortified analytes met QC criteria.

ORGANIC DATA ASSESSMENT

5. BLANK SPIKE ANALYSIS:

The NY ASP protocol requires that a blank spike analysis be performed with each sample batch. The blank spike analysis is used to insure that the analytical system is in control. The laboratory applied in-house recovery limits for each analyte.

The laboratory performed one (1) matrix spike blank sample (Laboratory Fortified Blank/LFB) is associated with this data set. The LFB was fortified with the complete list of target analytes in LFB041713. In-house spike recovery limits were reported for each of target analyte. All spike recoveries met QC criteria in this LFB sample analysis.

6. BLANK CONTAMINATION:

Quality assurance (QA) blanks, such as the method, trip, field, or rinse blanks are prepared to identify any contamination that may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field blanks measure cross-contamination of samples during field operations. Samples are then qualified based on blank contamination when detected.

A) Method Blank contamination

Two (2) aqueous method blank samples are associated with these sample analyses. This method blank samples were free from contamination of all target and non-target (TIC) analytes with the exception of Acetone (1 J ug/l-VBLK041713) and Acetone (2 J ug/l-VBLK0418). Acetone was not detected in the sample chosen for review, therefore no action was taken.

B) Field Blank contamination

Two (2) Field Blank samples are associated with this data set. Sample FB-001 was free from contamination of target analytes. FB-002 detected Acetone at a concentration of 1 BJ ug/l.

C) Trip Blank contamination

Two (2) Trip Blank samples are associated with this data set. Sample TB-001 was free from contamination of target analytes. TB-002 detected Acetone at a concentration of 2 BJ ug/l.

C) Storage Blank contamination

The Storage Blank sample contained Acetone at a concentration of 1 BJ ug/l.

ORGANIC DATA ASSESSMENT

7. GC/MS CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance.

A) RESPONSE FACTOR

The response factor measures the instrument's response to specific chemical compounds. Region II data review requires that the response factor of all analytes be greater than or equal to 0.05 in both initial and continuing calibration analyses. A value less than 0.05 indicates a serious detection and quantitation problem (poor sensitivity). Region II data validation criteria states that if the minimum RRF criteria are not met in an initial calibration the positive results are qualified "J". Non-detect results in the initial calibration with a RRF <0.05 are qualified "R", unusable. If RRF criteria is not met in the continuing calibration curve analysis, affected positive analytes will be qualified "J" estimated. Those analytes not detected are not qualified. The SW-846 Methods cite specific analytes known as System Performance Check Compounds (SPCC). Minimum response criteria are set for these analytes. If the minimum criteria are not met, analyses must stop and the source of problems must be found and corrected. Data associated with this set has been reviewed for the criteria in the cited in the EPA Method and the Region II criteria.

One (1) initial calibration curve analysis is associated with the aqueous samples in this data set. The laboratory performed one aqueous initial multilevel calibration on March 18, 2013(Inst. HP5973-1). The RRF of all target compounds met QC criteria in this initial calibration curve analysis.

One (1) continuing calibration standards are associated with the sample chosen for review in this data set. The CCV standard was analyzed April 17, 2013 (3\F60368.D). The RRF of all target compounds met QC criteria in this continuing calibration standard analysis.

B) PERCENT RELATIVE STANDARD DEVIATION (RSD) AND PERCENT DIFFERENCE (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the compounds in the continuing calibration standard to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Region II data validation criteria states that the percent RSD of the initial calibration curve must be less than or equal to 20% (30% CCC compounds). The %D must be <20% in the continuing calibration standard. This criteria has been applied to all target analytes. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects may be flagged "UJ", based on professional judgment. If %RSD and %D grossly exceed QC criteria (>90%), non-detects data may be qualified "R", unusable. Data associated with this set has been reviewed for the criteria in the cited in the USEPA Data Validation Guidelines and the USEPA Region II criteria.

One (1) aqueous initial calibration standard analysis is associated with this data set. The laboratory analyzed an aqueous initial calibration curve on March 18, 2013 (Inst. HP5973-1). The laboratory reported the Relative Standard Deviation (%RSD) of each target compound on a summary form that was included in the report. All target analyte %RSD criteria were met in the initial calibration curve analysis with the exception of Acetone (26.7%), Dibromochloromethane (21.3%) and Bromoform (30.3%). These target analytes have been qualified "UJ/J" estimated in the sample chosen for data review.

Qualified data result pages are located in Appendix B of this report.

ORGANIC DATA ASSESSMENT

7. GC/MS CALIBRATION:

B) PERCENT RELATIVE STANDARD DEVIATION (RSD) AND PERCENT DIFFERENCE (%D) (cont'd):

One (1) continuing calibration standard analysis is associated with the aqueous samples in this data set. This CCV standard was analyzed April 17, 2013. The % Difference of all target compounds met QC criteria in the continuing calibration standard with the exception of the following:

Date/File ID	Analytes	%Difference
4/17/2013 (3\F60389.D)	Chloromethane	25.6
	Acetone	24.5
	Carbon Tetrachloride	21.1
	cis 1,3-Dichloropropene	21.8
	trans 1,3-Dichloropropene	28.5
	Dibromochloromethane	24.6
	Bromoform	31.4

The associated target analytes in the sample chosen for data review (MW-1B) have been qualified "UJ/J" estimated.

Qualified data result pages are located in Appendix B of this report.

8. GC/MS INTERNAL STANDARDS PERFORMANCE:

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every run. The method recommends that the internal standard area count must not vary by more than a factor of 2 (-50%to +100%) from the associated continuing calibration standard. The method recommends that the retention time of the internal standard must not vary more than ±30 seconds from the associated continuing calibration standard. The EPA CLP validation guidelines state that if the area count is outside the (-50% to +100%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified estimated, "J", and all non-detects below 50% are qualified "UJ", non-detects above 100% should not be qualified or "R" if there is a severe loss of sensitivity. The internal standard area count evaluation criteria are applied to all field and QC samples.

The samples in this data set were spiked with the internal standards Pentafluorobenzene, 1,4-Difluorobenzene, Chlorobenzene-d5 and 1,4-Dichlorobenzene-d4 prior to analysis. The area counts and retention time of each internal standard met QC criteria in the field samples and QC samples associated with this data set.

9. GC/MS MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds, and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is Bromofluorobenzene (BFB). If the mass calibration is in error, or missing, all associated data will be classified as unusable, "R".

The tune criteria listed in the data report met or exceeded that required by the method. All tuning criteria associated with these sample analyses were met.

ORGANIC DATA ASSESSMENT

10. FIELD DUPLICATE ANALYSIS:

Field duplicate samples are taken and analyzed as an indication of overall precision. These measure both field and lab precision, therefore, the results may have more variability than lab duplicate samples. Soil samples are also expected to have a greater variance due to the difficulties associated with collecting exact duplicate soil samples. Data was not qualified based on the results of the field duplicate sample data.

Field duplicate samples were not part of the samples designated for volatile organic analyses.

11. COMPOUND IDENTIFICATION:

Target compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within $\pm$ 0.06 RRT units of the standard compound, and have an ion spectra which has a ratio of the primary and secondary ion intensities with 20% of that in the standard compound.

One (1) aqueous sample was chosen for data review and DUSR preparation. Sample MW-1Bwas analyzed for Volatile Organic analytes using EPA Method 8260B. Tentatively Identified Compounds (TIC's) were analyzed for and reported when detected in the samples in this data set. The samples were analyzed in accordance with the cited method.

Sample MW-1B was analyzed without dilution. The laboratory provided the quantitation report, chromatogram and analyte spectra in the New York Sate DEC ASP Category B deliverable that was reported for this data set.

12. OVERALL ASSESSMENT:

The aqueous samples associated with this data set were collected April 15, 2013 and April 16, 2012. The COC documents that accompanied the samples to the laboratory and indicated which samples were to be analyzed Volatile Organic compounds. The data reported agrees with the raw data provided in the final report. The laboratory provided a complete ASP Category B data package and reported all data using acceptable protocols and laboratory qualifiers as defined in the report package.

One (1) sample was reviewed to meet the Quality Assurance Plan requirements. The Volatile Organic analytes/sample results associated with sample MW-1B are reported to the laboratory reporting limit or LOQ. These Volatile Organic data results are acceptable for use with the noted data qualifiers. Data qualification is described in the above report.

The qualified data result pages associated with sample, MW-11A, is located in Appendix B of this report.

NYS DEC Data Usability Summary Report

DATA VALIDATION FOR:	**Target Analyte List of Metals (TAL), Boron Filtered Metals (TAL), Filtered Boron**
SITE:	**North Sea Landfill**
CONTRACT LAB:	**H2M Laboratories Melville, New York**
SDG NO.:	**TSO012/TSO012F**
REVIEWER:	**Renee Cohen**
DATE REVIEW COMPLETED:	**June, 2013**
MATRIX:	**Aqueous**

The Chain of Custody (COC) documentation associated with this data set listed eighteen (18) aqueous samples and two (2) Field Bank samples. Sample in this data set were analyzed for the Total TAL metals list, Filtered metals and Boron or a subset of metals in accordance with the COC documents that accompanied the samples to the laboratory.

The samples in this data set were collected April 15, 2013 and April 16, 2013 and delivered to H2M Laboratories located in Melville, New York. The samples were received at the laboratory on April 16, 2013 and April 17, 2013.

The data evaluation was performed according to the guidelines noted in the "National Functional Guidelines for Inorganic Data Review", February 1994, SOP HW-2, Evaluation of Metals Data for the Contract Laboratory Program based on ILM05.3 (9/05) and the NYSDEC ASP. A Data Usability Summary Report (DUSR) has been prepared in accordance with the guidelines of the Division of Environmental Remediation.

Several factors should be noted for all persons using this data. Persons using this data should be aware that no result is guaranteed to be accurate even if it has passed all QC tests. The main purpose of this review is to appropriately qualify outliers and to determine whether the results presented meet the specific site/project criteria for data quality and data use.

Table 1 of this report contains a cross reference between the Field Sample ID's and the Laboratory Sample ID's. Appendix A of this Data Usability Summary Report (DUSR) contains a summary of the data qualifiers that may be used in the report. Appendix B contains the qualified data result pages. Appendix C contains the Chain of Custody (COC) documents associated with this data set.

The samples in this data set were also analyzed for Volatile Organic Analytes and Miscellaneous Wet Chemistry analytes. The data review associated with these analyses are located in stand-alone Data Usability Reports (DUSR). This data review is associated with the Metals (Total and Filtered) Analyses.

DATA USABILITY SUMMARY REPORT (DUSR)
Inorganic Data Assessment

1. OVERVIEW

This data report includes the analysis of 5% of the aqueous samples that were collected on April 15, 2013 and April 16, 2013. The samples were received at the laboratory on April 16, 2013 and April 17, 2013 and analyzed for the parameters indicated on the COC documents that accompanied the samples to the laboratory. Table 1 of this report is a cross reference between the Field Sample ID and Laboratory Sample ID.

One (1) sample was chosen for review for each of the Total and Filtered Metals. Sample MW-11A (1304A27-004)/1304A28-001 was reviewed for Total Metals and Filtered Metals.

2. HOLDING TIME

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Metals with the exception of Mercury, is required to be digested and analyzed within 180 days of Verified Time of Sample Receipt (VTSR). Mercury samples are to be digested and analyzed within 26 days of VTSR.

Total and Filtered Metal Analyses - The aqueous samples in this data set were prepared in one (1) batch on April 26, 2013 for both Total and Filtered ICP Metals. These sample digestates were analyzed in one (1) analytical sequence on May 1, 2013. All Total and Filtered ICP digestions and analyses were performed within the method holding time.

Total and Filtered Mercury Analyses - The samples in this data set were prepared and analyzed for Total Mercury and Filtered Mercury on April 30, 2013. The Mercury preparations and analyses were performed within the method holding time.

3. CALIBRATION ANALYSIS

Inductively Coupled Plasma (ICP) was utilized for these analyses. The ICP was calibrated using the calibration standards required by the manufacturer. An initial calibration verification (ICV) standard is then analyzed to verify instrument calibration. One (1) continuing calibration standard was analyzed after each ten (10) field samples.

Total and Filtered Metal Analyses – One (1) analytical sequence is associated with the samples in this data set. The samples were analyzed May 1, 2013. The laboratory reported provided raw data for each of the analytical sequences to review. All ICV and CCV standards associated with this analytical sequence met QC criteria.

Total and Filtered Mercury Analyses - Analysis for Cold Vapor Mercury is calibrated using multi point standards and calculating the correlation coefficient of the curve. One (1) of the calibrations standards must be analyzed at the CRDL. The Total and Filtered Mercury sample digestates associated with this data set were analyzed in one (1) sequence on April 30, 2013. All initial calibration analyses met QC criteria. Continuing calibration standard analysis was performed using a mid point standard and calculating the concentration of the standard in terms of recovery from the initial calibration curve. All continuing calibration analyses associated with this data set met QC criteria.

4. ICP CRDL STANDARD

The CRDL standard is used for the verification of instrument linearity near the CRDL. The CRDL standard control limits are 70%-130% recovery. If the CRDL standard falls outside of the control limits, associated data less than or equal to the 10X the CRDL are qualified estimated (J or UJ) or rejected (R) depending on the recovery of the CRDL standard and the concentration of the analyte in the sample. When the CRDL standard exceeds the control limit, indicating a high bias samples are qualified estimated (J or UJ).

The laboratory analyzed one (1) CRDL standard with each of the Total and Filtered ICP analytical sequence associated with this data set. This validator applied limits of 70-130% to review each target analyte. The recovery of all target analytes met QC criteria in the CRI sample analysis.

All CRDL standard QC criteria were met in the Total and Filtered Mercury analysis associated with this data set.

5. ICP INTERFERENCE CHECK STANDARD

The Interference Check Standard (ICS) is used to verify the laboratory interelement and background correction factors of the ICP. Two solutions comprise the ICS A and ICS AB. Solution A consists of the interferent metals while solution AB is the group of target analytes and the interferent metals. An ICS analysis consists of analyzing both solutions consecutively for all wavelengths used for each analyte reported by ICP. The ICP ICS standards are to be analyzed at the beginning and end of each analytical run. The results are to fall within control limits of +/-20% of the true value.

The laboratory analyzed one (1) ICSA and one (1) ICSAB standard at the beginning and end of the ICP analytical sequence reported with this data set. These QC samples are used to verify the laboratories interelement and background correction factors of the ICP. The recovery of all ICSA/AB standards met QC criteria in the analytical sequence associated with this data set on May 1, 2013.

6. MATRIX SPIKE (MS) ANALYSIS

The spike sample analysis provides information about the effect of the sample matrix upon the digestion and measurement methodology. The spike control limits are 75%-125% when the sample concentration is less than four (4) times the spike added. If the matrix spike recoveries fall in the range of 30%-74%, the sample results are may be biased low and are qualified as estimated (J or UJ). If the matrix spike recoveries fall in the range of 126%-200%, sample results may be biased high. Positive results are qualified estimated (J). If the spike recovery is greater than 125% and the reported sample result is less than the IDL the data point is acceptable for use. If the matrix spike recovery is greater than 200%, the associated sample data are unusable and are rejected (R). If matrix spike results are less than 30%, the associated non-detect results are qualified unusable and rejected (R), and the results reported above the IDL are qualified estimated (J).

Total Metal Analyses - Site specific matrix spike (MS) analysis was performed on Total Metal sample MW-3B (1304917-005) for ICP Metals. The percent recovery of all target analytes met QC criteria in this matrix spike analysis with the exception of Boron (<30%) and Selenium (60.2%). Selenium has been qualified "UJ/J" estimated in the sample chosen for review. Boron was qualified "R" unusable in the sample chosen for review.

Filtered Metal Analyses - Site specific matrix spike (MS) analysis was performed on sample MW-11A (1304A28-001). This sample was utilized for both the ICP and Mercury matrix spike analysis. The percent recovery of all target analytes met QC criteria with the exception of Boron (<30%). Boron has been qualified "R" unusable in the sample chosen for review.

Qualified data result pages are located in Appendix B of this report.

7. POST DIGESTION SPIKE ANALYSIS

The post digestion spike sample analysis provides additional information about the effect of the sample matrix upon the digestion and measurement methodology. The post digestion spike is performed for each analyte that the pre-digestion spike recovery falls outside the 75-125% control limit.

Total/Filtered Metal Analyses - Post digestion spike analysis was performed with each of these Total Metal and Filtered Metal analyses. Post digestion spike analysis when reported met QC criteria in the Total and Filtered Metal analyses.

8. DUPLICATE SAMPLE ANALYSIS

The laboratory duplicate sample analysis is used to evaluate the laboratory precision of the method for each analyte. If the duplicate sample analysis results for a particular analyte fall outside the control windows of 20% RPD or +/- CRDL, whichever is appropriate depending upon the concentration of the sample, the associated sample results are qualified "J" estimated.

Total Metals Analyses - Site specific duplicate analysis was reported on sample MW-3B. The RPD of all target analytes met QC criteria when the result is above the contract required detection limit.

Filtered Metals - Site specific duplicate analysis was reported on sample MW-11A. The RPD of all target analytes met QC criteria when the result is above the contract required detection limit.

9. ICP SERIAL DILUTION

The serial dilution analysis indicates whether significant physical or chemical interference's exist due to the sample matrix. If the concentration of any analyte in the original sample is greater than 50 times the instrument detection limit (IDL), an analysis of a 5-fold dilution samples must yield results which have a percent difference (%D) of less than or equal to 10 with the original sample results. If the %D of the serial dilution exceeds the 10% (and is not greater than 100%) for a particular analyte, all the associated sample results are qualified estimated (J).

Total Metal Analysis - Serial dilution analysis was performed on sample MW-3B. All %Differences met QC criteria with the exception of Potassium (24.2%) in the serial dilution analysis. Potassium has been qualified J"J estimated in the sample chosen for data review.

Filtered Metal Analysis - Serial dilution analysis was performed on sample MW-11A. The %Difference of all target analytes with the exception of Potassium (23.4%) met QC criteria in the serial dilution analysis. Potassium has been qualified "J" estimated in the sample chosen for review.

Qualified data result pages are located in Appendix B of this report.

10. BLANKS

Blank analyses are assessed to determine the existence and magnitude of contamination problems. The criteria for the evaluation of blanks applies to all blanks, including but not limited to reagent blanks, method blanks and field blanks. The responsibility for action in the case of an unsuitable blank result depends upon the circumstances and the origin of the blank itself. If the problem with any blank exists, then all associated data must be carefully evaluated to determine whether there is inherent variability in the data for that case, or the problem is an isolated occurrence not affecting other data.

The laboratory provided a summary report form for the method blank associated with each of the preparation batches. Each of the ICP preparation blanks (Total and Filtered) was free from contamination of all target analytes above the reporting limit.

The preparation blank associated with both the Total and Filtered Mercury sample analyses was free from contamination above the laboratory reporting limit.

The laboratory provided summary forms to report the ICB and CCB analyses for all of the ICP and Mercury analytical sequences associated with this data set. All QC criteria were met in each of the ICB/CCB analyses reported in this data set.

11. LABORATORY CONTROL SAMPLE ANALYSIS (LCS)

The laboratory control sample (LCS) analysis provides information about the efficiency of the laboratory digestion procedure. If the recovery of any analyte is outside the established control limits, then laboratory performance and method accuracy are in question. Professional judgment is used to determine of data should be qualified or rejected.

One (1) Laboratory Control Sample (LCS) was prepared and analyzed with each preparation batch. Each of the LCS samples was fortified with the associated target analytes. A recovery limit of 80%-120% was applied to each target analyte. The recovery of all target analytes met QC criteria in each of the ICP and Mercury LCS samples associated with this data set.

DATA USABILITY SUMMARY REPORT (DUSR)
Inorganic Data Assessment

12. INSTRUMENT QC DATA

The laboratory provided the required annual and semiannual ICP and Mercury Instrument QC summary report forms in this data report. All annual and semiannual QC studies were performed by the laboratory within the proper time frame.

13. COMPOUND IDENTIFICATION

The samples in this data set were reported as Total Metals and Filtered/Dissolved Metals. Samples were filtered upon receipt at the laboratory as per the documentation that accompanied the samples to the laboratory. Samples in this data set were analyzed for a subset of ICP metals specified by the COC documents or the TAL metal data set.

Five (5) percent (%) of these samples were chosen for data review. One (1) sample was chosen for the review of Total Metals (MW-11A/1304A27-004) and Filtered Metals (MW-11A/(1304A28-001).

The samples in this data set were analyzed in accordance with the required methods as specified by the COC documents that accompanied the samples to the laboratory. All sample data was reported in ug/l.

14. FIELD DUPLICATE SAMPLE ANALYSIS

Field duplicate samples are collected and analyzed as an indication of overall precision. These results are expected to have more variability than laboratory duplicate samples. Soil samples have more variability than aqueous samples due to the non-homogeneity of the soil. The sample chosen for data review (MW-11A) is not the field duplicate sample that was included in this data set. The sample chosen for review was not qualified based on the results of the field duplicate sample analysis.

15. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

This data set included the reporting of Total and Filtered Metals as required by the Chain of Custody Documentation that accompanied the samples to the laboratory. The samples were analyzed for the Total/Filtered TAL Metals and Boron or a subset of metals designated by the associated COC documents. The Chain of Custody documents noted what samples were analyzed for specified analytes. A copy of the Chain of Custody is located in Appendix C of this report. The sample results are reported in accordance with the cited methods.

The sample chosen for Total and Filtered Metal data review in this data set is acceptable for use the noted data qualifiers. The above text details the QC outliers.

Qualified data result pages are located in Appendix B of this report.

NYS DEC Data Usability Summary Report

DATA VALIDATION FOR:	**Miscellaneous Wet Chemistry**
SITE:	**North Sea Landfill**
CONTRACT LAB:	**H2M Laboratories Melville, NY**
REVIEWER:	**Renee Cohen**
DATE REVIEW COMPLETED:	**June, 2013**
MATRIX:	**Aqueous**

The Chain of Custody (COC) documentation associated with this data set listed sixteen (16) aqueous samples and two (2) Field Blank samples. The samples in this data set were collected April 15, 2013 and April 16, 2013. The samples were delivered to H2M Laboratories located in Melville, New York. The samples were received at the laboratory on April 16, 2013 and April 17, 2013.

The data evaluation was performed according to the guidelines and QC criteria cited in the miscellaneous wet chemistry methods that were used for this data set. A Data Usability Summary Report (DUSR) has been prepared in accordance with the guidelines of the Division of Environmental Remediation.

Several factors should be noted for all persons using this data. Persons using this data should be aware that no result is guaranteed to be accurate even if it has passed all QC tests. The main purpose of this review is to appropriately qualify outliers and to determine whether the results presented meet the specific site/project criteria for data quality and data use.

Table 1 of this report contains a cross reference between the Field Sample ID's and the Laboratory Sample ID's. Appendix A of this Data Usability Summary Report (DUSR) contains a summary of the data qualifiers that may be used in the report. Appendix B contains the qualified data result pages. Appendix C contains the Chain of Custody (COC) documents associated with this data set.

The laboratory performed these wet chemistry analyses based on the COC documentation that accompanied the samples to the laboratory. In addition these samples were analyzed for Volatile Organic Analytes and TAL Metals (Total and Filtered). The review of these various analyses are reported in stand-alone DUSR reports. This data review is associated with the Miscellaneous Wet Chemistry Analyses.

DATA USABILITY SUMMARY REPORT (DUSR)
NORTH SEA LANDFILL

1. OVERVIEW

This data report includes the analysis of 5% of the aqueous samples that were collected April 15, 2013 and April 16, 2013. The samples were received at the laboratory on April 16, 2013 and April 17, 20132 per the COC documents that accompanied the samples to the laboratory. Table 1 of this report is a cross reference between the field sample ID and laboratory sample ID. Eighteen (18) field samples and two (2) Field Blank samples were analyzed for the wet chemistry parameters listed on the COC documents.

One (1) of the samples in this data set was chosen for review. The sample chosen for review was sample MW-1B (1304A27-002).

The samples in this data set were analyzed for the parameters listed on the COC documents. A full data deliverable was generated to report these sample results. The aqueous samples in this data set were analyzed for the Wet Chemistry analytes. These included the following: Alkalinity, Chloride, Sulfate, Bromide, Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Hardness, Nitrogen-Ammonia (as N), Nitrate, Nitrite, Total Recoverable Phenols, Total Dissolved Solids (TDS), Total Kjeldahl Nitrogen (TKN) and Total Organic Carbon (TOC).

2. HOLDING TIME

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid.

The laboratory chronicles lists the date of analysis dates for all samples for the Miscellaneous Wet Chemistry analyses. Based on the laboratory chronicle and the raw data included for review with this data set, all samples were prepared and analyzed for these inorganic analytes within holding time.

3. CALIBRATION ANALYSIS

Miscellaneous Wet Chemistry Analyses – The laboratory summarized the initial and continuing calibration data associated with each of the wet chemistry analytes where applicable. All initial and continuing calibration standard analyses associated with this data set met QC criteria for each of the analytes reported in this data set.

4. MATRIX SPIKE (MS) ANALYSIS

The spike sample analysis provides information about the effect of the sample matrix upon the digestion and measurement methodology. The spike control limits are designated by H2M Laboratories. The in-house recovery limits are cited on the QC summary report pages for each analyte where applicable.

Sample MW-3B (1304917-005) was utilized for the matrix spike analyses where applicable. The percent recovery of the MS sample met QC criteria for all analytes reported.

5. DUPLICATE SAMPLE ANALYSIS

The laboratory duplicate sample analysis is used to evaluate the laboratory precision of the method for each analyte. If the duplicate sample analysis results for a particular analyte fall outside the control windows of 20% RPD depending upon the concentration of the sample, the associated sample results are qualified "J" estimated.

Sample MW-3B (1304917-005) designated on the COC documents to be utilized for the laboratory duplicate sample where applicable. The RPD% met QC criteria for all duplicate sample analyses.

6. BLANKS

Blank analyses are assessed to determine the existence and magnitude of contamination problems. The criteria for the evaluation of blanks applies to all blanks, including but not limited to reagent blanks, method blanks and field blanks. The responsibility for action in the case of an unsuitable blank result depends upon the circumstances and the origin of the blank itself. If the problem with any blank exists, then all associated data must be carefully evaluated to determine whether there is inherent variability in the data for that case, or the problem is an isolated occurrence not affecting other data.

The laboratory provided Method Blank data results for all the Wet Chemistry analytes. The method blank and/or preparation blank associated with all of the miscellaneous Wet Chemistry methods were free from contamination of the target analyte above the reporting limit. The BOD blank depletion was greater than 2.0 mg/l for the samples received on April 17, 2013. The sample chosen for review (MW-1B) is associated with this blank. BOD has been qualified "UJ" estimated.

Qualified data result pages are located in Appendix B of this report.

Each of the Field Blank samples reported in this data set was free from contamination of all target wet chemistry analytes.

7. LABORATORY CONTROL SAMPLE ANALYSIS (LCS)

The laboratory control sample (LCS) analysis provides information about the efficiency of the laboratory digestion procedure. If the recovery of any analyte is outside the established control limits, then laboratory performance and method accuracy are in question. Professional judgment is used to determine of data should be qualified or rejected.

The laboratory reported LCS recoveries for each of the wet chemistry analyses. The recovery of each of the LCS samples met QC criteria.

8. COMPOUND IDENTIFICATION

All samples results are reported in accordance with the cited methods. A review of the raw data was performed for these wet chemistry analyses. Sample MW-1BA (1304A27-002) was the sample chosen for complete review. All analytes were reported without dilution in this sample analysis.

DATA USABILITY SUMMARY REPORT (DUSR)
NORTH SEA LANDFILL

9. FIELD DUPLICATE DATA RESULTS:

Field duplicate samples are taken and analyzed as an indication of overall precision. These measure both field and laboratory precision; therefore, the results may have more variability than lab duplicate samples.

The duplicate sample in this data set was not chosen within the 5% sample review. A review of the field duplicate sample results was not performed.

10. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The inorganic analyses associated with this data set included the reporting of eighteen (18) aqueous samples. The samples were analyzed for miscellaneous Wet Chemistry analytes as noted on the COC documents that accompanied the data set. Five percent (5%) of the sample set was to be reviewed. The sample chosen for review was sample MW-1B (1304A27-002). A copy of the Chain of Custody is located in Appendix C of this report. The sample results are reported in accordance with the cited methods.

The miscellaneous wet chemistry analyte results in sample MW-1B are acceptable for use with the noted data qualifiers.

Qualified data result pages are located in Appendix B of this report.

TABLE 1

CLIENT SAMPLE ID	LABORATORYSAMPLE ID
MW-1B	1304A27-002*
MW-11A	1304A27-004**
MW-11A	1304A28-001***

* chosen for Volatile Organic Analysis, Wet Chemistry Analysis
** chosen for Total Metal Analyses
*** chosen for Dissolved Metals

APPENDIX A

DATA QUALIFIER DEFINITIONS

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

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

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

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

UJ - 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.

R - The sample results are unreliable/unusable. The presence or absence of the analyte cannot be verified.

K – The analyte is present. The reported value may be biased high. The actual value is expected to be lower than reported.

L - The analyte is present. The reported value may be biased low. The actual value is expected to be higher than reported.

UL – The analyte was not detected, and the reported quantitation limit is probably higher than reported.

APPENDIX B

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-1B

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60386.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q	
74-87-3	Chloromethane	5	U	U J
75-01-4	Vinyl chloride	2	U	
74-83-9	Bromomethane	5	U	
75-00-3	Chloroethane	5	U	
107-13-1	Acrylonitrile	5	U	
75-69-4	Trichlorofluoromethane	5	U	
75-35-4	1,1-Dichloroethene	5	U	
74-88-4	Iodomethane	5	U	
108-05-4	Vinyl acetate	5	U	
67-64-1	Acetone	5	U	U J
75-15-0	Carbon disulfide	5	U	
75-09-2	Methylene chloride	5	U	
156-60-5	trans-1,2-Dichloroethene	5	U	
75-34-3	1,1-Dichloroethane	5	U	
156-59-2	cis-1,2-Dichloroethene	5	U	
78-93-3	2-Butanone	5	U	
74-97-5	Bromochloromethane	5	U	
67-66-3	Chloroform	3	J	
71-55-6	1,1,1-Trichloroethane	5	U	
56-23-5	Carbon tetrachloride	5	U	U J
71-43-2	Benzene	1	U	
107-06-2	1,2-Dichloroethane	5	U	
79-01-6	Trichloroethene	5	U	
78-87-5	1,2-Dichloropropane	1	U	
74-95-3	Dibromomethane	5	U	
75-27-4	Bromodichloromethane	5	U	
10061-01-5	cis-1,3-Dichloropropene	0.4	U	U J
108-10-1	4-Methyl-2-pentanone	5	U	
108-88-3	Toluene	5	U	
10061-02-6	trans-1,3-Dichloropropene	0.4	U	U J
79-00-5	1,1,2-Trichloroethane	1	U	
127-18-4	Tetrachloroethene	5	U	
591-78-6	2-Hexanone	5	U	
124-48-1	Dibromochloromethane	5	U	U J
106-93-4	1,2-Dibromoethane	1	U	

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1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-1B

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60386.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
108-90-7	Chlorobenzene	5	U
110-57-6	trans-1,4-Dichloro-2-butene	5	U
100-41-4	Ethylbenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U UJ
79-34-5	1,1,2,2-Tetrachloroethane	5	U
96-18-4	1,2,3-Trichloropropane	5	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U

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1F

EPA SAMPLE NO.

MW-1B

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: TOS SAS No.: _____ SDG No.: TOS012

Matrix: (soil/water) WATER Lab Sample ID: 1304A27-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F60386.D

Level: (low/med) LOW Date Received: 04/17/13

% Moisture: not dec. Date Analyzed: 04/18/13

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

Number TICs found: 0 CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-11A

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012

Matrix (soil/water): WATER Lab Sample ID: 1304A27-004

Level (low/med): LOW Date Received: 4/17/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17.9	B		P
7440-36-0	Antimony	1.6	B		P
7440-38-2	Arsenic	4.4	B		P
7440-39-3	Barium	164	B		P
7440-41-7	Beryllium	0.10	U		P
7440-42-8	Boron	41.9	B	N	P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	42600			P
7440-47-3	Chromium	4.6	B		P
7440-48-4	Cobalt	10.7	B		P
7440-50-8	Copper	0.40	U		P
57-12-5	Cyanide	10.0	U		CA
7439-89-6	Iron	22400			P
7439-92-1	Lead	4.9			P
7439-95-4	Magnesium	15600			P
7439-96-5	Manganese	2020			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	4.5	B		P
7440-09-7	Potassium	5050		E	P
7782-49-2	Selenium	2.3	U	N	P
7440-22-4	Silver	0.20	U		P
7440-23-5	Sodium	13900			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	0.30	U		P
7440-66-6	Zinc	10.3	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

Date Reported 5/2/2013

TOS012 M19

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-11A

Lab Name: H2M LABS INC

Lab Code: H2M Case No. SAS No.: SDG No.: TOS012F

Matrix (soil/water): WATER Lab Sample ID: 1304A28-001

Level (low/med): LOW Date Received: 4/17/2013

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	30.8	B		P
7440-36-0	Antimony	1.3	B		P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	141	B		P
7440-41-7	Beryllium	0.90	B		P
7440-42-8	Boron	50.8	B	N	P
7440-43-9	Cadmium	0.80	B		P
7440-70-2	Calcium	41200			P
7440-47-3	Chromium	3.3	B		P
7440-48-4	Cobalt	11.3	B		P
7440-50-8	Copper	1.6	B		P
7439-89-6	Iron	4540			P
7439-92-1	Lead	6.4			P
7439-95-4	Magnesium	15000			P
7439-96-5	Manganese	1830			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	5.6	B		P
7440-09-7	Potassium	5100		E	P
7782-49-2	Selenium	2.3	U		P
7440-22-4	Silver	0.45	B		P
7440-23-5	Sodium	12900			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	0.30	U		P
7440-66-6	Zinc	12.9	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Date Reported 5/3/2013

TOS012F M5

2M labs

575 Broad Hollow Rd. Melville, NY 11747
TEL: (631) 694-3040 FAX (631) 420-8436
NYSDOH ID# 10478

LABORATORY RESULTS

Results for the samples and analytes requested

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Fetten
Collected : 4/16/2013 11:00:00 AM
Received : 4/17/2013 10:00:00 AM
Collected By : PWG99

Lab No. : 1304A27-002
Client Sample ID: MW-1B

Sample Information:
Type : Groundwater
Origin:

Analytical Method: SM2320B : Analyst: HT

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Alkalinity, Total (As CaCO3)	11.0		1	mg/L	04/18/2013 1:54 PM	Container-01 of 02

Analytical Method: E300.0 : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromide	< 0.50		1	mg/L	04/24/2013 12:36 AM	Container-01 of 02
Chloride	8.72		1	mg/L	04/24/2013 12:36 AM	Container-01 of 02
Sulfate	7.62		1	mg/L	04/24/2013 12:36 AM	Container-01 of 02

Analytical Method: SM5210B : Prep Method: SM5210B Prep Date: 4/18/2013 7:27:47 AM Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Biochemical Oxygen Demand	< 2	J	1	mg/L	04/18/2013 10:25 AM	Container-01 of 02

NOTES:
Blank depletion exceeds 0.2 mg/L - average depletion of 0.65 mg/L

Analytical Method: E410.4 : Analyst: CN

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chemical Oxygen Demand	< 10		1	mg/L	04/30/2013 8:42 AM	Container-01 of 01

Analytical Method: SM2120B : IOC Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Color	< 5		1	units	04/18/2013 6:04 AM	Container-01 of 02

Analytical Method: M3500-Cr D : Analyst: EM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Chromium, Hexavalent	< 0.02		1	mg/L	04/18/2013 5:50 AM	Container-01 of 02

Analytical Method: SM2340C : Analyst: JA

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Hardness (As CaCO3)	16		1	mg/L	04/19/2013 11:45 AM	Container-01 of 01

Analytical Method: SM4500-NH3 H : Analyst: bka

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	04/22/2013 12:16 PM	Container-01 of 01

Analytical Method: E353.2 : Analyst: MJL

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrite as N	< 0.10		1	mg/L	04/18/2013 8:55 AM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted

Date Reported : 5/3/2013

TOS012 W25

H2M labs
575 Broad Hollow Rd. Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478

LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Town of Southampton
Waste Management Division
Southampton, New York 11968
Attn To : Christine Felten
Collected : 4/16/2013 11:00:00 AM
Received : 4/17/2013 10:00:00 AM
Collected By PWG99

Lab No. : 1304A27-002
Client Sample ID: MW-1B

Sample Information:
Type : Groundwater

Origin.

Analytical Method: E353.2						Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrate as N	< 0.10		1	mg/L	04/18/2013 10:32 AM	Container-01 of 01
Analytical Method: E420.1 :		Prep Method:	E420.1		Prep Date: 4/22/2013 6:30:00 AM	Analyst: EM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Phenolics, Total Recoverable	< 5.0		1	µg/L	04/24/2013 8:15 AM	Container-01 of 01
Analytical Method: SM2540C : IOC						Analyst: MM
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Dissolved Solids	41		1	mg/L	04/18/2013 12:57 PM	Container-01 of 02
Analytical Method: E351.2 :		Prep Method:	E351.2		Prep Date: 4/23/2013 6:45:00 AM	Analyst: MJL
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Nitrogen, Kjeldahl, Total	< 0.10		1	mg/L	04/23/2013 2:34 PM	Container-01 of 01
Analytical Method: SW9060 :						Analyst: CO
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Total Organic Carbon	3.4		1	mg/L	04/25/2013 11:56 PM	Container-01 of 02

Qualifiers: E = Value above quantitation range
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
H = Received/analyzed outside of analytical holding time
+ = ELAP / NELAC does not offer certification for this analyte
c = Calibration acceptability criteria exceeded for this analyte
r = Reporting limit > MDL and < LOQ
J = Estimated value - below calibration range
s = Recovery exceeded control limits for this analyte
N = Indicates presumptive evidence of compound

Joann M. Slavin
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 5/3/2013

TOS012 W26

APPENDIX C

H2M LABS, INC.

575 Broad Hollow Rd, Melville, NY 11747-5076
Tel: (631) 694-3040 Fax: (631) 420-8436

42125 EXTERNAL CHAIN OF CUSTODY

CLIENT: PWGC TOS

H2M SDG NO: TOS012/012F

PROJECT NAME/NUMBER
North Sea Landfill
1370 Majors Path
Southampton, NY

SAMPLERS: (signature)/Client
Brian Butler

DELIVERABLES: ASP Category B 80-70

TURNAROUND TIME: Standard

NOTES:
* Lab to filter metals.

Project Contact: Derek Erdbak

Phone Number: 631-589-6353

PIS/Quote #

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	Baseline Parameters *	Dissolved Metals	LAB I.D. NO.	REMARKS:
4/15	1020	GW	MW-3B	10	X		104917-005	
	1140		MW-3C		X		006	
	1220		MW-3A		X		004	
	1020		MW-3B/MS		X		005	
	1020		MW-3B/MSD		X		↓	
	1100		FB001		X		010	
	1315		MW-4A		X		007	
	1400		MW-4B		X		008	
	1510		MW-4C		X		009	
↓	XX	↓	DUP001	↓	X		↓ 001	

ANALYSIS REQUESTED — ORGANIC: VOA, BNA, Pest/PCB; INORG.: Metal, CN

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	4/16	9:20		4/16	9:20
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	4/16	9:50		4/16/13	0950
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

LABORATORY USE ONLY

Discrepancies Between Sample Labels and COC Record? Y or N
Explain:

Samples were:
1. Shipped___ or Hand Delivered___ Airbill# _____
2. Ambient or chilled, Temp 1.2, 1.4
3. Received in good condition: Y or N
4. Properly preserved: Y or N

COC Tape was:
1. Present on outer package: Y or N
2. Unbroken on outer package: Y or N
3. COC record present & complete upon sample receipt: Y or N

WHITE COPY - ORIGINAL YELLOW COPY - CLIENT PINK COPY - LABORATORY

H2M LABS, INC.

575 Broad Hollow Rd, Melville, NY 11747-5076
Tel: (631) 694-3040 Fax: (631) 420-8436

42055 EXTERNAL CHAIN OF CUSTODY

CLIENT: PWGC TOS **H2M SDG NO:** TOS 012

PROJECT NAME/NUMBER: North Sea Landfill, 1370 Majors Path, Southampton, NY

SAMPLERS: (signature)/Client

DELIVERABLES: ASP Category B 30-70

TURNAROUND TIME: Standard

NOTES:

Project Contact: Derek Erstvak

Phone Number: 631-589-6353

PIS/Quote #

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	Sample Container Description: 40ml VOA-HCl	ORGANIC: VOA	ORGANIC: BNA	ORGANIC: Pest/PCB	Routine Parameters+Arsenic	INORG.: Metal	INORG.: CN	LAB I.D. NO.	REMARKS:
4/15	855	Ground	LEA-PRIMARY	9					X			1304917-002	
4/15	900	↓	LEA-SECONDARY	9					X			↓ 003	
4/15		TB	TRIP BLANK 001 (ORIG) 4/16/13	3 (2)	3 J							011	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	4/16	920		4/16	920
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	4/16	950		4/16/13	0950
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

LABORATORY USE ONLY

Discrepancies Between Sample Labels and COC Record? Y or N
Explain:

Samples were:
1. Shipped ___ or Hand Delivered ___ Airbills ___
2. Ambient or chilled, Temp 12 12.4
3. Received in good condition: Y or N
4. Properly preserved: Y or N

COC Tape was:
1. Present on outer package: Y or N
2. Unbroken on outer package: Y or N
3. COC record present & complete upon sample receipt: Y or N

WHITE COPY - ORIGINAL YELLOW COPY - CLIENT PINK COPY - LABORATORY

TOS012/012FS10

H2M labs

H2M LABS INC
575 Broad Hollow Rd.
Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
Website: www.h2mlabs.com

TOS 012

Sample Receipt Checklist

Client Name **TOS** Date and Time Received: **4/16/2013 9:50:00 AM**

Work Order Number: **1304917** RcptNo: 1 Received by **Linda Sicillano**

Completed by: Reviewed by:

Completed Date: 4/16/2013 11:11:12 AM Reviewed Date: 4/18/2013 12:30:22 PM

Carrier name: H2M Pickup

Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Are matrices correctly identified on Chain of custody?	Yes ☑	No ☐		
Is it clear what analyses were requested?	Yes ☑	No ☐		
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present	☑
Samples in proper container/bottle?	Yes ☑	No ☐		
Were correct preservatives used and noted?	Yes ☑	No ☐	NA	☐
Preservative added to bottles:				
Sample Condition?	Intact ☑	Broken ☐	Leaking	☐
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
Were container labels complete (ID, Pres, Date)?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Was an attempt made to cool the samples?	Yes ☑	No ☐	NA	☐
All samples received at a temp. of > 0° C to 6.0° C?	Yes ☑	No ☐	NA	☐
Response when temperature is outside of range:				
Sample Temp. taken and recorded upon receipt?	Yes ☑	No ☐	To	1.2 °
Water - Were bubbles absent in VOC vials?	Yes ☑	No ☐	No Vials	☐
Water - Was there Chlorine Present?	Yes ☐	No ☐	NA	☑
Water - pH acceptable upon receipt?	Yes ☐	No ☑	No Water	☐
Are Samples considered acceptable?	Yes ☑	No ☐		
Custody Seals present?	Yes ☐	No ☑		
Airbill or Sticker?	Air Bil ☐	Sticker ☐	Not Present	☑
Airbill No:				

Case Number: SDG: TOS012 SAS:

Any No response should be detailed in the comments section below, if applicable.

Client Contacted? ☐ Yes ☑ No Person Contacted:

Contact Mode: ☐ Phone: ☐ Fax: ☐ Email: ☐ In Person:

Client Instructions:

Date Contacted: Contacted By:

Regarding:

Comments:

pH of metals bottle for sample "LEA-PRIMARY" was neutral possibly due to matrix.
LEA-Primary and Secondary samples are being analyzed for "Routine Paramters" which do not include VOC anlaysis. H2M received VOC vials for these samples.
TBs not listed on COC

CorrectiveAction:

Sample was preserved with 1:1 nitric acid 4/16/13 @ 12:20.
It is assumed that the VOC bottles were collected in error.
TBs were added to COC

TOS012/012F S11

H2M LABS, INC.

575 Broad Hollow Rd, Melville, NY 11747-5076
Tel: (631) 694-3040 Fax: (631) 420-8436

42157 EXTERNAL CHAIN OF CUSTODY

CLIENT: PWGC (TOS) **H2M SDG NO:** TOS012 | 012F

PROJECT NAME/NUMBER: North Sea Landfill, 1370 Major Path, Southampton, NY

SAMPLERS: (signature)/Client: Andy Rail

DELIVERABLES: ASP Category B.

TURNAROUND TIME: Standard

NOTES: * Lab to filter metals.

Project Contact: Derek Ersbak

Phone Number: 631-589-6353

PIS/Quote #:

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	ORGANIC: VOA	ORGANIC: BNA	ORGANIC: Pest/PCB	# Baseline parameters	* Dissolved Metals			INORG: Metal	INORG: CN	LAB I.D. NO. (012)	REMARKS: (012F)
4/16/13	0930	GW	FB002	10				X						1304A27-008	
	1025		MW-1C					X						003	
	1100		MW-1B					X						002	
	1120		MW-1A					X						001	
	1240		MW-12B					X						007	
	1300		MW-12A	11				X	X					006	1304A28-003
	1440		MW-11B					X	X					005	002
	1505		MW-11A					X	X					004	001
4/16/13	XX	GW	TripBlank	3				X						009	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Andy Rail	4/17/13	925		4/17/13	925
	4/17/13	1000		4/17/13	1000
	Date	Time		Date	Time
	Date	Time		Date	Time

LABORATORY USE ONLY

Discrepancies Between Sample Labels and COC Record? Y or N
Explain:

Samples were:
1. Shipped ___ or Hand Delivered ___ Airbill# ___
2. Ambient or chilled, Temp 1.6, 2.0, 2.8
3. Received in good condition: Y or N
4. Properly preserved: Y or N

COC Tape was:
1. Present on outer package: Y or N (duct tape)
2. Unbroken on outer package: Y or N
3. COC record present & complete upon sample receipt: Y or N

WHITE COPY - ORIGINAL YELLOW COPY - CLIENT PINK COPY - LABORATORY

TOS012/012F S18

H2M labs

H2M LABS INC
575 Broad Hollow Rd.
Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
Website: www.h2mlabs.com

TOS012

Sample Receipt Checklist

Client Name TOS

Date and Time Received: 4/17/2013 10:00:00 AM

Work Order Number: 1304A27 RcptNo: 1

Received by Linda Siciliano

Completed by: [signature]

Reviewed by: [signature]

Completed Date: 4/17/2013 10:51:50 AM

Reviewed Date: 4/18/2013 4:36:44 PM

Carrier name: H2M Pickup

Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Are matrices correctly identified on Chain of custody?	Yes ☑	No ☐		
Is it clear what analyses were requested?	Yes ☑	No ☐		
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present	☑
Samples in proper container/bottle?	Yes ☑	No ☐		
Were correct preservatives used and noted?	Yes ☑	No ☐	NA	☐
Preservative added to bottles:				
Sample Condition?	Intact ☑	Broken ☐	Leaking	☐
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
Were container labels complete (ID, Pres, Date)?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Was an attempt made to cool the samples?	Yes ☑	No ☐	NA	☐
All samples received at a temp. of > 0° C to 6.0° C?	Yes ☑	No ☐	NA	☐
Response when temperature is outside of range:				
Sample Temp. taken and recorded upon receipt?	Yes ☑	No ☐	1.6 To	2.8 °
Water - Were bubbles absent in VOC vials?	Yes ☑	No ☐	No Vials	☐
Water - Was there Chlorine Present?	Yes ☐	No ☐	NA	☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	No Water	☐
Are Samples considered acceptable?	Yes ☑	No ☐		
Custody Seals present?	Yes ☐	No ☑		
Airbill or Sticker?	Air Bil ☐	Sticker ☐	Not Present	☑
Airbill No:				

Case Number: SDG: TOS012 SAS:

Any No response should be detailed in the comments section below, if applicable.

Client Contacted? ☐ Yes ☑ No Person Contacted:

Contact Mode: ☐ Phone: ☐ Fax: ☐ Email: ☐ In Person:

Client Instructions:

Date Contacted: Contacted By:

Regarding:

Comments:

CorrectiveAction:

TOS012/012F S19

APPENDIX B

WELL INSPECTION CHECKLISTS

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No.	1A	Date	4/16/2013
Inspected By	BB & AR	Weather Conditions	Overcast/44

WELL EXTERIOR CONDITIONS

CONCRETE PAD	Yes	No	Remarks
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK	X		
Casing/Manhole - Intact:	X		
Lock - Intact:	X		Need Key
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)	104.53
DEPTH TO BOTTOM (FEET)	117.50
PID (ppm)	0.0

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No.	1B	Date	4/16/2013
Inspected By	BB & AR	Weather Conditions	Overcast/44

WELL EXTERIOR CONDITIONS

	Yes	No	Remarks
CONCRETE PAD			
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK	X		
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)	105.77
DEPTH TO BOTTOM (FEET)	164.00
PID (ppm)	0.0

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No.	1C	Date	4/16/2013
Inspected By	BB & AR	Weather Conditions	Overcast/44

WELL EXTERIOR CONDITIONS

	Yes	No	Remarks
CONCRETE PAD			
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK	X		
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)	106.44
DEPTH TO BOTTOM (FEET)	205.00
PID (ppm)	0.0

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No.	3A	Date	4/15/2013
Inspected By	BB & AR	Weather Conditions	Overcast/48

WELL EXTERIOR CONDITIONS

CONCRETE PAD	Yes	No	Remarks
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK	X		
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)	47.93
DEPTH TO BOTTOM (FEET)	65.00
PID (ppm)	0.0

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No.	3B	Date	4/15/2013
Inspected By	BB & AR	Weather Conditions	Overcast/48

WELL EXTERIOR CONDITIONS

	Yes	No	Remarks
CONCRETE PAD			
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK	X		
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)	44.62
DEPTH TO BOTTOM (FEET)	112.00
PID (ppm)	0.0

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No.	3C	Date	4/15/2013
Inspected By	BB & AR	Weather Conditions	Overcast/48

WELL EXTERIOR CONDITIONS

CONCRETE PAD	Yes	No	Remarks
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK	X		
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)	44.22
DEPTH TO BOTTOM (FEET)	180.00
PID (ppm)	0.0

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No.	4A	Date	4/15/2013
Inspected By	BB & AR	Weather Conditions	Overcast/48

WELL EXTERIOR CONDITIONS

CONCRETE PAD	Yes	No	Remarks
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK	X		
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)	13.8
DEPTH TO BOTTOM (FEET)	30.90
PID (ppm)	0.0

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No.	4B	Date	4/15/2013
Inspected By	BB & AR	Weather Conditions	Overcast/48

WELL EXTERIOR CONDITIONS

CONCRETE PAD	Yes	No	Remarks
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK		X	Missing J- Plug
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)	13.89
DEPTH TO BOTTOM (FEET)	80.37
PID (ppm)	0.0

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No.	4C	Date	4/15/2013
Inspected By	BB & AR	Weather Conditions	Overcast/48

WELL EXTERIOR CONDITIONS

	Yes	No	Remarks
CONCRETE PAD			
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK	X		
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)	9.40
DEPTH TO BOTTOM (FEET)	153.60
PID (ppm)	5.1

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No.	6AR	Date	4/16/2013
Inspected By	BB & AR	Weather Conditions	Overcast/44

WELL EXTERIOR CONDITIONS

	Yes	No	Remarks
CONCRETE PAD			
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK	X		
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)	91.99
DEPTH TO BOTTOM (FEET)	111.64
PID (ppm)	0.0

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No.	6B	Date	4/16/2013
Inspected By	BB & AR	Weather Conditions	Overcast/44

WELL EXTERIOR CONDITIONS

	Yes	No	Remarks
CONCRETE PAD			
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK	X		
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)	94.32
DEPTH TO BOTTOM (FEET)	145.00
PID (ppm)	0.0

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No.	7A	Date	4/16/2013
Inspected By	BB & AR	Weather Conditions	Overcast/44

WELL EXTERIOR CONDITIONS

CONCRETE PAD	Yes	No	Remarks
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK	X		
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)	83.69
DEPTH TO BOTTOM (FEET)	101.28
PID (ppm)	0.0

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No.	7B	Date	4/16/2013
Inspected By	BB & AR	Weather Conditions	Overcast/44

WELL EXTERIOR CONDITIONS

	Yes	No	Remarks
CONCRETE PAD			
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK	X		
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)	83.82
DEPTH TO BOTTOM (FEET)	148.79
PID (ppm)	0.0

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No.	7C	Date	4/15/2013
Inspected By	BB & AR	Weather Conditions	Overcast/48

WELL EXTERIOR CONDITIONS

	Yes	No	Remarks
CONCRETE PAD			
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK	X		
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)	85.03
DEPTH TO BOTTOM (FEET)	178.65
PID (ppm)	0.1

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No.	8	Date	4/16/2013
Inspected By	BB & AR	Weather Conditions	Sunny/48

WELL EXTERIOR CONDITIONS

	Yes	No	Remarks
CONCRETE PAD			
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK	X		
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)	76.91
DEPTH TO BOTTOM (FEET)	84.00
PID (ppm)	0.0

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No.	9	Date	4/16/2013
Inspected By	BB & AR	Weather Conditions	Sunny/48

WELL EXTERIOR CONDITIONS

CONCRETE PAD	Yes	No	Remarks
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK	X		
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)	73.81
DEPTH TO BOTTOM (FEET)	85.83
PID (ppm)	1.8

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No.	11A	Date	4/16/2013
Inspected By	BB & AR	Weather Conditions	Sunny/48

WELL EXTERIOR CONDITIONS

	Yes	No	Remarks
CONCRETE PAD			
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK	X		
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)	73.59
DEPTH TO BOTTOM (FEET)	77.71
PID (ppm)	0.0

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No.	11B	Date	4/16/2013
Inspected By	BB & AR	Weather Conditions	Sunny/48

WELL EXTERIOR CONDITIONS

	Yes	No	Remarks
CONCRETE PAD			
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK	X		
Casing/Manhole - Intact:	X		
Lock - Intact:		X	Bolt Only
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)	73.59
DEPTH TO BOTTOM (FEET)	121.40
PID (ppm)	0.0

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No. 12A Date 4/16/2013

Inspected By BB & AR Weather Conditions Sunny/48

WELL EXTERIOR CONDITIONS

	Yes	No	Remarks
CONCRETE PAD			
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK	X		
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)	79.96
DEPTH TO BOTTOM (FEET)	91.00
PID (ppm)	0.0

P.W. GROSSER CONSULTING, INC.

WELL INSPECTION CHECKLIST

Well No.	12B	Date	4/16/2013
Inspected By	BB & AR	Weather Conditions	Sunny/48

WELL EXTERIOR CONDITIONS

	Yes	No	Remarks
CONCRETE PAD			
Intact:	X		
Cracked:		X	
Missing:		X	
PONDING OF WATER AROUND WELL		X	
PROTECTIVE CASING/MANHOLE/LOCK	X		
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)	80.57
DEPTH TO BOTTOM (FEET)	116
PID (ppm)	0.0

APPENDIX C

MONITORING WELL SAMPLING LOGS

P.W. GROSSER CONSULTING, INC.

WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP1301		
WELL No./OWNER	1A / Town of Southhampton		
SAMPLE I.D.	MW- 1A		
SAMPLING POINT	TOC	SAMPLED BY	BB & AR
DATE SAMPLED	4/16/2013	TIME SAMPLED	11:20
WELL USE	Monitoring		
STATIC WATER ELEVATION	104.53	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4 Inches		
TOTAL WELL DEPTH	117.50	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Bailer
PURGE RATE	5 GPM	PURGE TIME	5
CASING VOLUMES REMOVED	3	GALLONS	26
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	No Odor
PID (ppm)	0.0		
ANALYSIS	Baseline Parameters	DATE SHIPPED	4/17/2013

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre- sampling
pH	7.29	7.29	7.17	7.47	7.40
COND	0.001	0.000	0.188	0.204	0.212
T	16.78	17.00	17.11	12.90	12.57
EH	203	202	195	163	178
TURB	257	263	15.9	0.0	0.00
D.O.	7.78	7.72	5.52	6.66	6.37

P.W. GROSSER CONSULTING, INC.

WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP1301		
WELL No./OWNER	1B / Town of Southhampton		
SAMPLE I.D.	MW- 1B		
SAMPLING POINT	TOC	SAMPLED BY	BB & AR
DATE SAMPLED	4/16/2013	TIME SAMPLED	11:00
WELL USE	Monitoring		
STATIC WATER ELEVATION	105.77	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4 Inches		
TOTAL WELL DEPTH	164.00	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Bailer
PURGE RATE	5 GPM	PURGE TIME	23
CASING VOLUMES REMOVED	3	GALLONS	116
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	No Odor
PID (ppm)	0.0		
ANALYSIS	Baseline Parameters	DATE SHIPPED	4/17/2013

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre- sampling
pH	7.57	7.39	7.39	7.42	8.12
COND	0.090	0.087	0.088	0.088	0.001
T	13.24	11.82	11.77	11.80	12.39
EH	171	162	161	164	110
TURB	2.10	5.40	0.70	4.90	1.24
D.O.	9.20	8.93	8.67	8.60	8.59

P.W. GROSSER CONSULTING, INC.

WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP1301		
WELL No./OWNER	1C / Town of Southhampton		
SAMPLE I.D.	MW- 1C		
SAMPLING POINT	TOC	SAMPLED BY	BB & AR
DATE SAMPLED	4/16/2013	TIME SAMPLED	10:25
WELL USE	Monitoring		
STATIC WATER ELEVATION	106.44	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4 Inches		
TOTAL WELL DEPTH	205	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Bailer
PURGE RATE	5 GPM	PURGE TIME	40
CASING VOLUMES REMOVED	3	GALLONS	198
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	No Odor
PID (ppm)	0.0		
ANALYSIS	Baseline Paramters	DATE SHIPPED	4/17/2013

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre- sampling
pH	6.02	7.15	7.10	7.42	7.24
COND	0.152	0.095	0.096	0.095	0.079
T	11.40	11.80	12.14	12.16	12.56
EH	191	181	186	187	198
TURB	21.8	4.60	0.90	0.60	121
D.O.	9.81	9.22	11.72	9.37	8.53

P.W. GROSSER CONSULTING, INC.

WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP1301		
WELL No./OWNER	3A / Town of Southhampton		
SAMPLE I.D.	MW- 3A		
SAMPLING POINT	TOC	SAMPLED BY	BB & AR
DATE SAMPLED	4/15/2013	TIME SAMPLED	12:10
WELL USE	Monitoring		
STATIC WATER ELEVATION	47.93	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4 Inches		
TOTAL WELL DEPTH	65.00	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Bailer
PURGE RATE	5 GPM	PURGE TIME	7
CASING VOLUMES REMOVED	3	GALLONS	34
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	No Odor
PID (ppm)	0.0		
ANALYSIS	Baseline Parameters	DATE SHIPPED	4/16/2013

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre- sampling
pH	7.39	7.26	7.20	7.12	7.10
COND	0.294	0.271	0.264	0.260	0.258
T	13.02	13.19	13.19	13.19	13.18
EH	124	156	163	166	168
TURB	94.7	19.8	7.20	3.00	1.60
D.O.	10.33	6.31	5.72	5.31	5.20

P.W. GROSSER CONSULTING, INC.

WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP1301		
WELL No./OWNER	3B / Town of Southhampton		
SAMPLE I.D.	MW- 3B (MW- 3B- MS, MW- 3B- MSD)		
SAMPLING POINT	TOC	SAMPLED BY	BB & AR
DATE SAMPLED	4/15/2013	TIME SAMPLED	10:20
WELL USE	Monitoring		
STATIC WATER ELEVATION	44.62	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4 Inches		
TOTAL WELL DEPTH	112.00	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Bailer
PURGE RATE	5 GPM	PURGE TIME	28
CASING VOLUMES REMOVED	3	GALLONS	135
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	No Odor
PID (ppm)	0.0		
ANALYSIS	Baseline Paramaters	DATE SHIPPED	4/16/2013

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre- sampling
pH	8.44	6.10	5.65	5.99	6.44
COND	0.183	0.238	0.234	0.232	0.231
T	12.50	12.64	12.60	12.59	12.58
EH	16	- 69	- 70	- 69	- 69
TURB	17.7	6.00	0.40	0.00	0.00
D.O.	4.29	0.95	0.78	0.70	0.67

P.W. GROSSER CONSULTING, INC.

WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP1301		
WELL No./OWNER	3C / Town of Southhampton		
SAMPLE I.D.	MW- 3C		
SAMPLING POINT	TOC	SAMPLED BY	BB & AR
DATE SAMPLED	4/15/2013	TIME SAMPLED	11:40
WELL USE	Monitoring		
STATIC WATER ELEVATION	44.22	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4 Inches		
TOTAL WELL DEPTH	180	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Bailer
PURGE RATE	5 GPM	PURGE TIME	55
CASING VOLUMES REMOVED	3	GALLONS	270
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	No Odor
PID (ppm)	0.0		
ANALYSIS	Baseline Parameters	DATE SHIPPED	4/16/2013

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre- sampling
pH	7.24	7.35	7.13	6.96	7.15
COND	0.205	0.201	0.194	0.193	0.191
T	13.61	12.62	12.54	12.53	12.57
EH	- 21	16	69	85	98
TURB	5.00	0.00	0.00	0.00	0.00
D.O.	4.55	0.93	3.89	1.67	1.67

P.W. GROSSER CONSULTING, INC.

WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP1301		
WELL No./OWNER	4A / Town of Southhampton		
SAMPLE I.D.	MW- 4A		
SAMPLING POINT	TOC	SAMPLED BY	BB & AR
DATE SAMPLED	4/15/2013	TIME SAMPLED	13:15
WELL USE	Monitoring		
STATIC WATER ELEVATION	13.8	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4 Inches		
TOTAL WELL DEPTH	30.90	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Bailer
PURGE RATE	5 GPM	PURGE TIME	7
CASING VOLUMES REMOVED	3	GALLONS	34
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	No Odor
PID (ppm)	0.0		
ANALYSIS	Baseline Parameters	DATE SHIPPED	4/16/2013

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre- sampling
pH	6.06	5.85	5.87	5.93	6.04
COND	0.255	0.258	0.267	0.268	0.268
T	11.72	11.14	11.14	11.13	11.17
EH	166	225	231	234	235
TURB	76.4	7.90	3.80	1.60	0.10
D.O.	12.66	7.53	7.49	7.38	7.33

P.W. GROSSER CONSULTING, INC.

WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP1301		
WELL No./OWNER	4B / Town of Southhampton		
SAMPLE I.D.	MW- 4B		
SAMPLING POINT	TOC	SAMPLED BY	BB & AR
DATE SAMPLED	4/15/2013	TIME SAMPLED	14:00
WELL USE	Monitoring		
STATIC WATER ELEVATION	13.89	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4 Inches		
TOTAL WELL DEPTH	80.37	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Bailer
PURGE RATE	5 GPM	PURGE TIME	27
CASING VOLUMES REMOVED	3	GALLONS	133
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	No Odor
PID (ppm)	0.0		
ANALYSIS	Baseline Parameters	DATE SHIPPED	4/16/2013

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre- sampling
pH	5.83	6.87	7.21	7.28	7.36
COND	0.301	0.305	0.327	0.353	0.362
T	13.15	13.12	13.20	13.20	13.19
EH	182	161	76	16	10
TURB	1.10	0.00	0.00	0.00	0.00
D.O.	7.69	4.37	2.07	1.67	1.44

P.W. GROSSER CONSULTING, INC.

WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP1301		
WELL No./OWNER	4C / Town of Southhampton		
SAMPLE I.D.	MW- 4C		
SAMPLING POINT	TOC	SAMPLED BY	BB & AR
DATE SAMPLED	4/15/2013	TIME SAMPLED	15:10
WELL USE	Monitoring		
STATIC WATER ELEVATION	9.4	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4 Inches		
TOTAL WELL DEPTH	153.60	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Bailer
PURGE RATE	5 GPM	PURGE TIME	58
CASING VOLUMES REMOVED	3	GALLONS	288
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	No Odor
PID (ppm)	5.0		
ANALYSIS	Baseline Parameters	DATE SHIPPED	4/16/2013

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre- sampling
pH	7.93	8.02	8.20	8.09	8.08
COND	0.322	0.323	0.415	0.393	0.391
T	13.12	13.09	12.87	12.85	12.85
EH	10	86	55	58	59
TURB	3.40	0.40	7.60	2.20	1.40
D.O.	5.15	3.39	4.01	3.78	3.80

P.W. GROSSER CONSULTING, INC.

WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP1301		
WELL No./OWNER	11A / Town of Southhampton		
SAMPLE I.D.	MW- 11A		
SAMPLING POINT	TOC	SAMPLED BY	BB & AR
DATE SAMPLED	4/16/2013	TIME SAMPLED	15:05
WELL USE	Monitoring		
STATIC WATER ELEVATION	73.59	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4 Inches		
TOTAL WELL DEPTH	77.71	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Bailer
PURGE RATE	5 GPM	PURGE TIME	5
CASING VOLUMES REMOVED	3	GALLONS	10
SAMPLE APPEARANCE	Turbid	ODORS OBSERVED	No Odor
PID (ppm)	0.0		
ANALYSIS	Baseline Parameters	DATE SHIPPED	4/17/2013

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre- sampling
pH	6.80	6.76	6.74	6.71	6.70
COND	0.468	0.468	0.468	0.468	0.469
T	13.86	13.86	13.87	13.86	13.86
EH	23	21	20	18	17
TURB	285	208	152	108	79.9
D.O.	0.53	0.47	0.46	0.42	0.42

P.W. GROSSER CONSULTING, INC.

WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP1301		
WELL No./OWNER	11B / Town of Southhampton		
SAMPLE I.D.	MW- 11B		
SAMPLING POINT	TOC	SAMPLED BY	BB & AR
DATE SAMPLED	4/16/2013	TIME SAMPLED	14:40
WELL USE	Monitoring		
STATIC WATER ELEVATION	73.59	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4 Inches		
TOTAL WELL DEPTH	121.4	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Bailer
PURGE RATE	5 GPM	PURGE TIME	19
CASING VOLUMES REMOVED	3	GALLONS	95.62
SAMPLE APPEARANCE	Turbid	ODORS OBSERVED	No Odor
PID (ppm)	0.0		
ANALYSIS	Baseline Parameters	DATE SHIPPED	4/17/2013

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre- sampling
pH	7.89	7.32	7.17	7.36	7.52
COND	0.489	0.514	0.525	0.214	0.167
T	14.85	14.22	13.88	13.44	13.35
EH	132	158	169	168	170
TURB	28.6	10.6	10.1	188	126
D.O.	8.52	8.08	7.93	8.19	8.98

P.W. GROSSER CONSULTING, INC.

WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP1301		
WELL No./OWNER	12A / Town of Southhampton		
SAMPLE I.D.	MW- 12A		
SAMPLING POINT	TOC	SAMPLED BY	BB & AR
DATE SAMPLED	4/16/2013	TIME SAMPLED	13:00
WELL USE	Monitoring		
STATIC WATER ELEVATION	79.96	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4 Inches		
TOTAL WELL DEPTH	91	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Bailer
PURGE RATE	5 GPM	PURGE TIME	4.5
CASING VOLUMES REMOVED	3	GALLONS	22
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	No Odor
PID (ppm)	0.0		
ANALYSIS	Baseline Parameters	DATE SHIPPED	4/17/2013

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre- sampling
pH	7.57	7.54	7.53	7.53	7.53
COND	0.263	0.282	0.288	0.286	0.286
T	14.57	12.85	12.86	12.86	12.86
EH	104	106	106	106	106
TURB	32.3	98.0	92.4	80.0	81.5
D.O.	4.04	2.57	2.33	2.25	2.15

P.W. GROSSER CONSULTING, INC.

WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP1301		
WELL No./OWNER	12B / Town of Southhampton		
SAMPLE I.D.	MW- 12B		
SAMPLING POINT	TOC	SAMPLED BY	BB & AR
DATE SAMPLED	4/16/2013	TIME SAMPLED	12:40
WELL USE	Monitoring		
STATIC WATER ELEVATION	80.57	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4 Inches		
TOTAL WELL DEPTH	116	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	Submersible Pump	SAMPLE METHOD	Bailer
PURGE RATE	5 GPM	PURGE TIME	14.5
CASING VOLUMES REMOVED	3	GALLONS	72
SAMPLE APPEARANCE	Clear	ODORS OBSERVED	No Odor
PID (ppm)	0.0		
ANALYSIS	Baseline Parameters	DATE SHIPPED	4/17/2013

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre- sampling
pH	7.30	7.72	7.73	7.73	7.67
COND	0.128	0.320	0.322	0.324	0.002
T	14.07	12.62	12.60	12.60	13.85
EH	184	168	165	161	176
TURB	5.70	0.10	0.30	0.00	1.32
D.O.	6.40	0.66	0.54	0.48	8.09

P.W. GROSSER CONSULTING, INC.

WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP1301		
WELL No./OWNER	LEA- PRI / Town of Southhampton		
SAMPLE I.D.	LEA- PRI		
SAMPLING POINT	TOC	SAMPLED BY	BB & AR
DATE SAMPLED	4/15/2013	TIME SAMPLED	8:55
WELL USE	NA		
STATIC WATER ELEVATION	NA	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	NA Inches		
TOTAL WELL DEPTH	NA	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	NA	SAMPLE METHOD	Bailer
PURGE RATE	-	PURGE TIME	-
CASING VOLUMES REMOVED	-	GALLONS	-
SAMPLE APPEARANCE	Turbid	ODORS OBSERVED	Leachate
PID (ppm)	-		
ANALYSIS	Routine Parameters	DATE SHIPPED	4/16/2013

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre- sampling
pH	-	-	-	-	5.42
COND	-	-	-	-	2.620
T	-	-	-	-	13.29
EH	-	-	-	-	- 8
TURB	-	-	-	-	104
D.O.	-	-	-	-	7.62

P.W. GROSSER CONSULTING, INC.

WELL SAMPLING LOG

CLIENT/PROJECT No.	Town of Southhampton / SHP1301		
WELL No./OWNER	LEA- SEC / Town of Southhampton		
SAMPLE I.D.	LEA- SEC		
SAMPLING POINT	TOC	SAMPLED BY	BB & AR
DATE SAMPLED	4/15/2013	TIME SAMPLED	9:00
WELL USE	NA		
STATIC WATER ELEVATION	NA	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	NA Inches		
TOTAL WELL DEPTH	NA	FT. BELOW MEASURING POINT	TOC

SAMPLING INFORMATION

PURGE METHOD	NA	SAMPLE METHOD	Bailer
PURGE RATE	-	PURGE TIME	-
CASING VOLUMES REMOVED	-	GALLONS	-
SAMPLE APPEARANCE	Turbid	ODORS OBSERVED	No Odor
PID (ppm)	-		
ANALYSIS	Routine Parameters	DATE SHIPPED	4/16/2013

SAMPLING PARAMETERS

	Initial	1 Vol	2 Vol	3 Vol	Pre- sampling
pH	-	-	-	-	6.53
COND	-	-	-	-	0.639
T	-	-	-	-	9.82
EH	-	-	-	-	45
TURB	-	-	-	-	21.1
D.O.	-	-	-	-	5.43

APPENDIX D

6 NYCRR Part 360-2: LANDFILLS

New York State

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

Reprinted March 2001

New York State Department of Environmental Conservation

George E. Pataki, ***Governor*** **Erin M. Crotty,** ***Acting Commissioner***

6 NYCRR PART 360

SOLID WASTE MANAGEMENT FACILITIES

TABLE OF CONTENTS

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 modelled 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

NYS DEC **REGION 1**

COUNTY **Suffolk**

Babylon Southern Ashfill **52A01**

OWNER TYPE:	Municipal			360 PERMIT NUMBER:	1472000778000010		
REGULATORY STATUS:	Permit			PERMIT ISSUED:	05/04/97		
OWNER:	Town of Babylon			PERMIT EXPIRES:	05/03/02		
ADDRESS:	200 East Sunrise Hwy			CONTACT:	Ronald Kluesener		
(MAILING)	Lindenhurst	NY	11757	ADDRESS:	Gleam Street		
PHONE:	(516) 957-3072				West Babylon	NY	11704
WASTE TYPE:	RR Ash			PHONE:	(631) 422-7640		
				UTMEAST:	636645	UTMNORTH:	4510592

Brookhaven SLF Cell 5 **52A03**

OWNER TYPE:	Municipal			360 PERMIT NUMBER:	1472200030000040		
REGULATORY STATUS:	Permit			PERMIT ISSUED:	11/17/98		
OWNER:	Town of Brookhaven			PERMIT EXPIRES:	08/31/05		
ADDRESS:	3233 Route 112			CONTACT:	Dennis Lynch		
(MAILING)	Medford	NY	11763	ADDRESS:	3233 Route 112		
PHONE:	(516) 451-6224				Medford	NY	11763
WASTE TYPE:	RR Ash			PHONE:	(516) 451-6224		
				UTMEAST:	674593	UTMNORTH:	4518097

Northern U **52A39**

OWNER TYPE:	Municipal			360 PERMIT NUMBER:	1472000628000010		
REGULATORY STATUS:	Permit			PERMIT ISSUED:	10/19/94		
OWNER:	Town of Babylon			PERMIT EXPIRES:	04/30/05		
ADDRESS:	200 East Sunrise Highway			CONTACT:	Ronald Kluesener		
(MAILING)	Lindenhurst	NY	11757	ADDRESS:	200 East Sunrise Highway		
PHONE:	(516) 957-3072				Lindenhurst	NY	11757
WASTE TYPE:	RR Ash			PHONE:	(631) 422-7640		
				UTMEAST:	637078	UTMNORTH:	4510803

NYS DEC **REGION 3**

COUNTY **Westchester**

Sprout Brook LF **60A20**

OWNER TYPE:	County			360 PERMIT NUMBER:	3552200097000020		
REGULATORY STATUS:	Permit			PERMIT ISSUED:	10/01/97		
OWNER:	Westchester County DPW			PERMIT EXPIRES:	10/01/02		
ADDRESS:	270 North Avenue			CONTACT:	mario Parise		
(MAILING)	New Rochelle	NY	10801	ADDRESS:	Old Albany Post Road		
PHONE:	(914) 637-3000				Peekskill	NY	10601
WASTE TYPE:	Bottom Ash, Fly Ash, RR Ash			PHONE:	(914) 637-3000		
				UTMEAST:	590560	UTMNORTH:	4573986

NYS DEC **REGION 3**

COUNTY **Orange**

Central Hudson Gas & Elec **36N01**

OWNER TYPE: Private
REGULATORY STATUS: Permit
OWNER: Central Hudson Gas & Elec
ADDRESS: 992 River Road
(MAILING) Newburgh NY 12550
PHONE: (914) 452-2000
WASTE TYPE: Coal Ash

360 PERMIT NUMBER: 3334600011000018
PERMIT ISSUED: 05/09/00
PERMIT EXPIRES: 05/09/05
CONTACT: Mark McLean
ADDRESS: 992 River Road
Newburgh NY 12550
PHONE: (914) 563-4805
UTMEAST: 585953 UTMNORTH: 4603521

COUNTY **Rockland**

Tomkins Cove Ash Facility **44N07**

OWNER TYPE: Private
REGULATORY STATUS: None
OWNER: Orange & Rockland Utility
ADDRESS: One Blue Hill Plaza
(MAILING) Pearl River NY 10965
PHONE: (914) 577-2582
WASTE TYPE: Coal Ash, Ash Residue

360 PERMIT NUMBER: 3392800039000010
PERMIT ISSUED: 06/30/94
PERMIT EXPIRES: 06/30/99
CONTACT: C.A. Herbst
ADDRESS: One Blue Hill Plaza
Pearl River NY 10965
PHONE: (914) 786-8150
UTMEAST: 585526 UTMNORTH: 4567869

NYS DEC **REGION 6**

COUNTY **Jefferson**

Deferiet Paper **23N06**

OWNER TYPE: Private
REGULATORY STATUS: Permit
OWNER: Deferiet Paper Company
ADDRESS: 400 Anderson Avenue
(MAILING) Deferiet NY 13628
PHONE: (315) 493-3540
WASTE TYPE: Caol Ash, Paper Sludge, Coal Rejects, Wood Yard Debris

360 PERMIT NUMBER: 6224000030000000
PERMIT ISSUED: 02/15/94
PERMIT EXPIRES: 11/01/03
CONTACT: Todd Furnia
ADDRESS: 400 Anderson Avenue
Deferiet NY 13628
PHONE: (315) 493-3540
UTMEAST: 439729 UTMNORTH: 4884523

DANC Landfill **23S13**

OWNER TYPE: Municipal
REGULATORY STATUS: Permit
OWNER: Develop. Authority N. Country
ADDRESS: 317 Washington Street
(MAILING) Watertown NY 13601
PHONE: (315) 785-2592
WASTE TYPE: Residential, Demo, Asbestos, Indus, Coal Ash, Cont. Soil, Sludge

360 PERMIT NUMBER: 6225200007000006
PERMIT ISSUED: 02/27/96
PERMIT EXPIRES: 02/27/06
CONTACT: E. William Seifried
ADDRESS: NYS Route 177
Rodman NY 13682
PHONE: (315) 232-3236
UTMEAST: 427037 UTMNORTH: 4852232

NYS DEC **REGION 7**

COUNTY **Broome**

Weber Ash Disposal Site **04N08**

OWNER TYPE: Private
REGULATORY STATUS: Consent Order
OWNER: AES Creative Resources
ADDRESS: 720 Riverside Dr.
(MAILING) Johnson City NY 13790
PHONE: (607) 729-6950
WASTE TYPE: Coal Ash, Sludge

360 PERMIT NUMBER: 7033200020000010
PERMIT ISSUED: 10/01/80
PERMIT EXPIRES: 09/30/83
CONTACT: Peter Huff
ADDRESS: 720 Riverside Dr.
Johnson City NY 13790
PHONE: (607) 729-6950
UTMEAST: 431941 UTMNORTH: 4673115

COUNTY **Tompkins**

Cayuga **55N02**

OWNER TYPE:	Private			360 PERMIT NUMBER:	7503200069000010
REGULATORY STATUS:	Permit			PERMIT ISSUED:	04/17/97
				PERMIT EXPIRES:	04/17/02
OWNER:	AES Cayuga, L.L.C.			CONTACT:	Daniel Hill
ADDRESS:	228 Cayuga Drive			ADDRESS:	Milliken Road
(MAILING)	Lansing	NY	14882		NY
PHONE:	(607) 533-7913			PHONE:	(607) 533-7913
WASTE TYPE:	Coal Ash, Sludge			UTMEAST:	366998 UTMNORTH: 4718715

NYS DEC **REGION 9**

COUNTY **Chautauqua**

Chautauqua Landfill **07S12**

OWNER TYPE:	County			360 PERMIT NUMBER:	906360000600013
REGULATORY STATUS:	Permit			PERMIT ISSUED:	07/22/99
				PERMIT EXPIRES:	07/23/09
OWNER:	County of Chautauqua DPW			CONTACT:	Theodore Osborne
ADDRESS:	Grace Office Building			ADDRESS:	3889 Towerville Road
(MAILING)	Mayville	NY	14757		Jamestown NY 14701-9653
PHONE:	(716) 985-4211			PHONE:	(716) 985-4785
WASTE TYPE:	Residential, C&D, Asbestos, Sludge, Industrial, Cont.Soil, Coal Ash			UTMEAST:	143329 UTMNORTH: 4681819

COUNTY **Niagara**

Niagara Recycling Inc. **32S11**

OWNER TYPE:	Private			360 PERMIT NUMBER:	9291100119000050
REGULATORY STATUS:	Permit			PERMIT ISSUED:	04/25/95
				PERMIT EXPIRES:	04/30/05
OWNER:	BFI (Allied Waste)			CONTACT:	David Hanson
ADDRESS:	P.O. Box 344 LPO			ADDRESS:	56th St. & Niagara Falls Blvd.
(MAILING)	Niagara Falls	NY	14304-0344		Niagara Falls NY 14304-0344
PHONE:	(716) 285-3344			PHONE:	(716) 285-3344
WASTE TYPE:	Industrial, C&D, RR & Coal Ash, Sludge, Asbestos, Cont. Soil, MSW			UTMEAST:	175230 UTMNORTH: 4779955

Modern Landfill **32S30**

OWNER TYPE:	Private			360 PERMIT NUMBER:	9292400016000310
REGULATORY STATUS:	Permit			PERMIT ISSUED:	12/29/95
				PERMIT EXPIRES:	12/31/05
OWNER:	Modern Landfill, Inc.			CONTACT:	James Goehrig
ADDRESS:	P.O. Box 209			ADDRESS:	Pletcher & Harold Roads
(MAILING)	Model City	NY	14107-0209		Model City NY 14107-0209
PHONE:	(716) 754-8226			PHONE:	(716) 754-8226
WASTE TYPE:	MSW, Industrial, Asbestos, Sludge, RR & Coal Ash, C&D, Cont. Soil			UTMEAST:	176999 UTMNORTH: 4792194

DEC FACILITY NUMBER	FACILITY NAME	LINER TYPE 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 Subpart10: 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]

[This is page 2 of 3 of this Subpart. A complete list of Subparts in this regulation appears in the Chapter 4 contents page.]

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Sec.

§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 landfilling, 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 andlocation 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 PARAMETERS[1]

Field Parameters:			
Static water level(in wells and sumps)			
Specific Conductance		9050	
Temperature			
Floaters 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) (Total)	7450 7460	4 40
Potassium.....		7461	0.8
Sodium.....	(Total) (Total)	7610 7770	40 8

The department may modify this list as necessary.

Notes

[1]This 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.

[2]Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

[3]Chemical Abstracts Service Registry Number. Where "Total" is entered, all species in the groundwater that contain this element are included.

[4]Practical 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.

[5]Any floaters or sinkers found must be analyzed separately for baseline parameters.

[6]Surface water only.

[7]Any unusual conditions (colors, odors, surface sheens, etc.) noticed during well development, purging, or sampling must be reported.

BASELINE PARAMETERS[1]

Field Parameters:			
Static water level..... (in wells and sumps)			
Specific Conductance.....		9050	
Temperature.....			
Floaters or Sinkers5.....			
pH.....		9040 9041	

Eh.....			
Dissolved Oxygen[6].....			
Field Observations[7].....		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-chloropro-pane; 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-bu- tene.....		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
Pro-pylene 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

		8260	5

The department may modify this list as necessary.

Notes

[1]This 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.

[2]Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

[3]Chemical Abstracts Service Registry Number. Where "Total" is entered, all species in the groundwater that contain this element are included.

[4]Practical 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.

[5]Any floaters or sinkers found must be analyzed separately for baseline parameters.

[6]Surface water only.

[7]Any 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 PARAMETERS[1]

Field Parameters:			
Static water level..... (in wells and sumps)			
Specific Conductance.....		9050	
Temperature.....			
Floaters or Sinkers[5].....			
pH.....		9040 9041	

Eh.....			
Dissolved Oxygen[6].....			
Field Observations[7].....		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; Ethyldidene 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 PARAMETERS[1]

Notes

[1]The 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.

[2]Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

[3]Chemical Abstracts Service registry number. Where "Total" is entered, all species in the groundwater that contain this element are included.

[4]Suggested 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.

[5]Practical 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. [6]Any floaters or sinkers found must be analyzed separately for baseline parameters.

[7]Surface water only.

[8]Any unusual conditions (colors, odors, surface sheens, etc.) noticed during well development, purging, or sampling must be reported.

[9]This 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).

[10]Chlordane: 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.

[11]Polychlorinated 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.

[12]Polychlorinated 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.

[13]Polychlorinated dibenzofurans: This category contains congener chemicals, including tetrachlrodibenzofurans, 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.

[14]Toxaphene: This entry includes congener chemicals contained in technical toxaphene (CAS RN 8001-35-2), i.e., chlorinated camphene.

[15]Xylene (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 x 10-6 centimeters per second, with no appreciable continuous deposits having a maximum coefficient of permeability of 5 x 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 offly 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 ornatural 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.
