Mr. Glenn May
New York State Department of Environmental Conservation
Region 9
270 Michigan Avenue
Buffalo, New York 14203-2915

# Groundwater Sampling Report: Volatile Organic Compounds

NYSDEC Site #C915293A

Highland Plaza – Off-Site

215 Highland Parkway

Tonawanda, NY

October 8, 2019

Version 1.1

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Highland Plaza – Off-site
215 Highland Parkway
Tonawanda, NY

Prepared for:
Mr. Glenn May
New York State Department of Environmental Conservation
Region 9
270 Michigan Avenue
Buffalo, New York 14203-2915

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Date:
October 8, 2019

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Date: 2019.10.08 14:58:05 -04'00'

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Thomas D Palmer
2019.10.08 15:46:43 -04'00'

Thomas Palmer
Project Manager

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# Acronyms

| | |
|---|---|
| ARC | American Recyclers Company |
| DTW | Depth-to-water |
| DUSR | Data Usability Summary Report |
| EDQ | Environmental Data Quality, Inc. |
| EIMS | Environmental Information Management System |
| ESG | Environmental Services Group |
| GES | Groundwater & Environmental Services, Inc. |
| IP | Interface Probe |
| MS | Matrix spike |
| MSD | Matrix spike duplicate |
| NYSDEC | New York State Department of Environmental Conservation |
| PCE | Tetrachloroethene |
| PPE | Personal protective equipment |
| TCE | Trichloroethylene |
| TOGS 1.1.1 | Technical and Operational Guidance Series 1.1.1 |
| µg/L | micrograms per liter |
| VOC | Volatile Organic Compound |

# 1 Introduction

Groundwater & Environmental Services, Inc. (GES) has prepared this report to summarize the groundwater sampling activities conducted at New York State Department of Environmental Conservation (NYSDEC) Site C915293A, Highland Plaza Off-site, located on Highland Parkway in Tonawanda, New York. The work reported herein was performed on behalf of NYSDEC. The work was conducted on June 21, 2019. Sampling activities were completed to analyze groundwater for the presence of volatile organic compounds (VOCs).

# 2 Site Background

The Site is addressed at 215 Highland Parkway in the Town of Tonawanda, between Colvin Boulevard and Englewood Avenue. The Site has been developed with a one story strip plaza building that consist of three attached buildings (divided amongst the businesses that exist at the Site) and an asphalt parking lot. According to the Erie County Real Property Tax Maps, the Site sits on less than an acre of land. The Site lies in a suburban locale which consists of commercial and residential properties. A Site Map is included herein (**Figure 1**).

Historically a dry cleaner operated in the strip plaza. The dry cleaner was no longer operating as of 2010.

# 3 Groundwater Sampling Activities

## 3.1 Groundwater Gauging

On June 21, 2019, prior to sampling, groundwater depth-to-water (DTW) data was collected from monitoring wells MW-1, MW-2, MW-3, MW-4 and MW-5 using an interface probe (IP). DTW measurements were 4.66 feet below grade at MW-1, 3.22 feet below grade at MW-2, 5.91 feet below grade at MW-3, 2.10 feet below grade at MW-4, and 0.05 feet below grade at MW-5. Groundwater elevation calculations compared to the site benchmark were 95.85 feet at MW-1, 96.96 feet at MW-2, 94.17 feet at MW-3, 99.35 feet at MW-4, and 102.01 feet at MW-5. Based on the calculated groundwater elevations reported herein, the groundwater flow direction for the June 2019 sample event was interpreted to the north-northeast direction. A summary of the groundwater gauging data is included in **Table 1**.

## 3.2 Sampling Collection

During the June 2019 groundwater sampling event, low flow sampling was completed at monitoring wells MW-1, MW-2, MW-3, MW-4 and MW-5. Each low flow sampling set-up included an YSI 556 with Flow Cell attachment to monitor groundwater quality stability prior to sampling. To conduct low-flow sampling, a Pine Peristaltic Pump was set up at each monitoring well.

The sampling personnel wore personal protective equipment (PPE) and field clothing, including nitrile gloves worn at all times during the sampling event and changed as needed, noting that

nitrile gloves were always changed out prior to sample collection into laboratory supplied containers.

Any equipment that was not dedicated to the well during the sampling event was decontaminated using the two bucket method (i.e. the IP and YSI). Alconox was used in the first bucket to decontaminate equipment and clean water was used to rinse the equipment in the second bucket. This decontamination method was used before and after sampling at each monitoring well.

Recovered groundwater was sampled using laboratory supplied bottleware with a dedicated cooler for the VOC samples. Upon completion of sampling activities, the coolers were delivered via courier to the TestAmerica Laboratories Amherst, New York facility. The methods for VOC analysis were ran at the TestAmerica Amherst lab.

## 3.3 Sample Analysis

TestAmerica Laboratories in Amherst, New York analyzed the groundwater samples collected at the Site. TestAmerica Laboratories provided a full Category B deliverable with laboratory analytical data for the analysis of VOCs which is included as **Appendix A**. The analytical data included in the full category B deliverable is summarized in **Table 2** as well as presented on **Figure 2.** Additionally, a Quality Assessment Data Usability Summary Report (DUSR) was prepared by Environmental Data Quality, Inc. (EDQ) of Exton, Pennsylvania and are included as **Appendix B**. EDQ found all results for VOCs included in the laboratory reports to be acceptable for use with the exception of MS/MSD results, discussed further in **Section 3.4**. Lastly, field logs from the sampling event are included in **Appendix C**.

Samples were analyzed for VOCs via method 8260B. VOCs were compared to the NYSDEC Technical and Operational Guidance Series 1.1.1 June 1998 Ambient Water Quality Standards and Guidance Values for Groundwater (TOGS 1.1.1). The compound tetrachloroethene (PCE) was detected above TOGS 1.1.1 standards at MW-4 and MW-5; The compounds trichloroethene (TCE), cis-1,2-dichloroethene, and trans-1,2-dichloroethene were detected above TOGS 1.1.1 standards at MW-5; Total VOCs equaled 19 µg/L at MW-1, 0.47 µg/L at MW-3, 52,000 µg/L at MW-4, 928 µg/L at MW-5 and was below detection limits at MW-2.

## 3.4 Quality Assurance/Quality Control

Care was taken during all aspects of the sample collection to ensure that high quality data was obtained. Trip blanks, duplicate samples, and matrix spike and matrix spike duplicate (MS/MSD) samples were submitted for analysis for quality assurance of both the sample collection procedure and the laboratory method. All samples were submitted via courier to the necessary laboratories for analysis under proper chain of custody.

A duplicate sample was collected at monitoring well MW-2. Comparing analytical results from monitoring well MW-2 and the MW-2 Duplicate sample indicate the following:

- There were no positive results for any compound for either the samples collected from MW-2 or the MW-2 Duplicate sample.

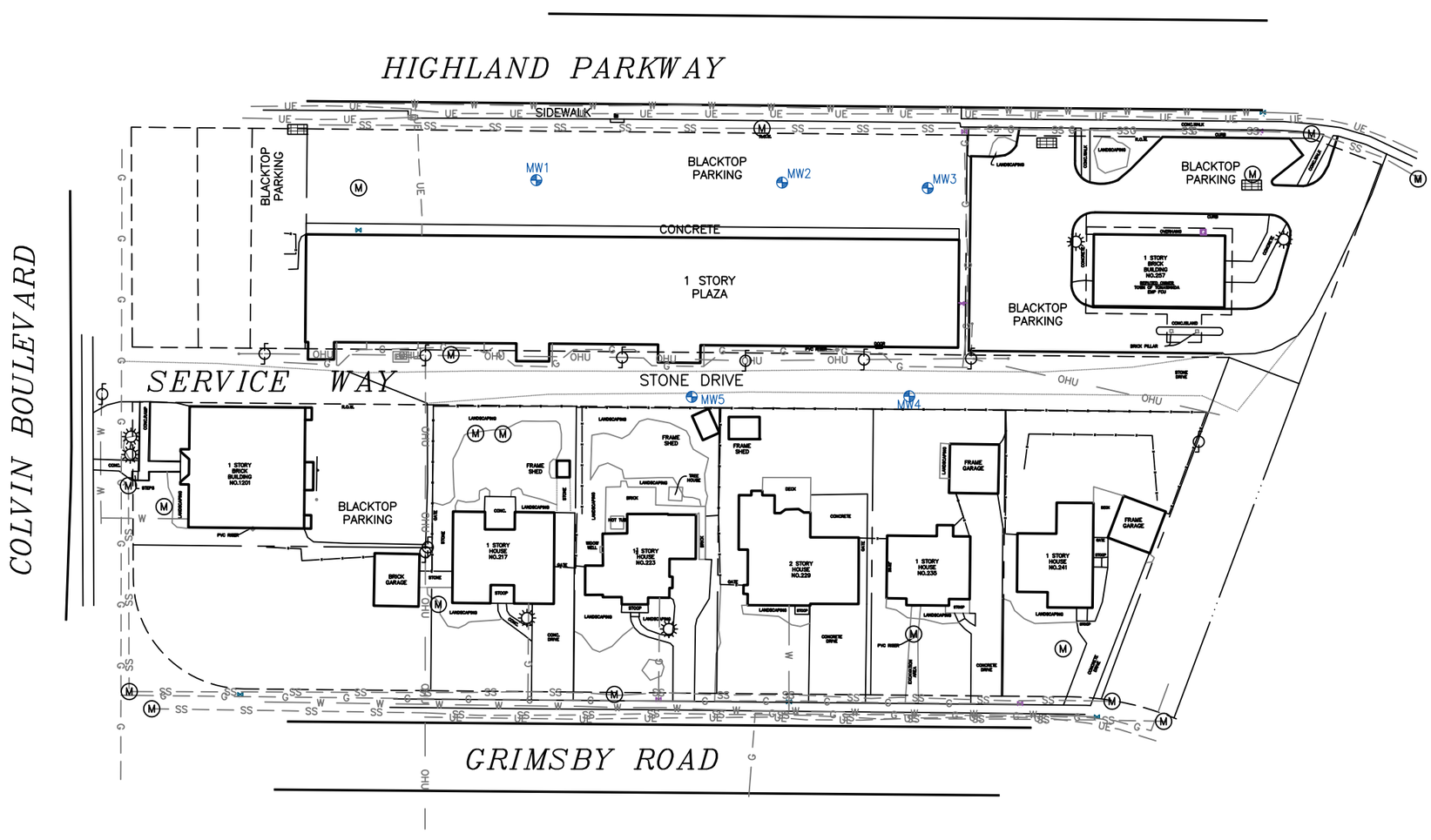
The MS/MSD run for the monitoring well MW-3 sample met the quality criteria with the exception of recoveries for the compound 1,2,4-Trichlorobenzene, which did not meet the quality control limits. This implies that matrix interference for the parent sample MW-3. These results were flagged by EDQ as indicated in the DUSR.

Overall, the DUSR concluded that aside from the aforementioned MS/MSD quality criteria, the data is qualitatively and quantitatively valid. Thus, when used with the qualifiers as presented in the DUSR, the laboratory data as circumscribed is usable and valid. Validated and qualified data as reported herein was sent to NYSDEC on August 7, 2019 for upload to the NYSDEC Environmental Information Management System (EIMS) database.

## 3.5 Investigation Derived Waste

One 55-gallon drum of purged groundwater was generated during the groundwater sampling event. Additionally, two drums with soil cuttings from previous subsurface investigation work were identified at the site. The drums were staged onsite until they were picked up for disposal by the Environmental Services Group (ESG) of Tonawanda, New York on August 15, 2019. The drums were transported by ESG to the American Recyclers Company (ARC) of Tonawanda, New York for disposal. The completed manifest is located in **Appendix D**.

# Figures




## LEGEND

- PROPERTY BOUNDARY
- RIGHT OF WAY
- FENCE
- GUARD RAIL
- CATCH BASIN
- UTILITY MANHOLE
- LIGHT POLE
- UTILITY POLE
- MONITORING WELL
- UNDERGROUND SANITARY SEWER LINE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND WATER LINE
- UNDERGROUND GAS LINE
- OVERHEAD UTILITIES

Site Map

NYSDEC
Highland Plaza
215 Highland Parkway
Tonawanda, New York

Drawn
W.G.S.
Designed

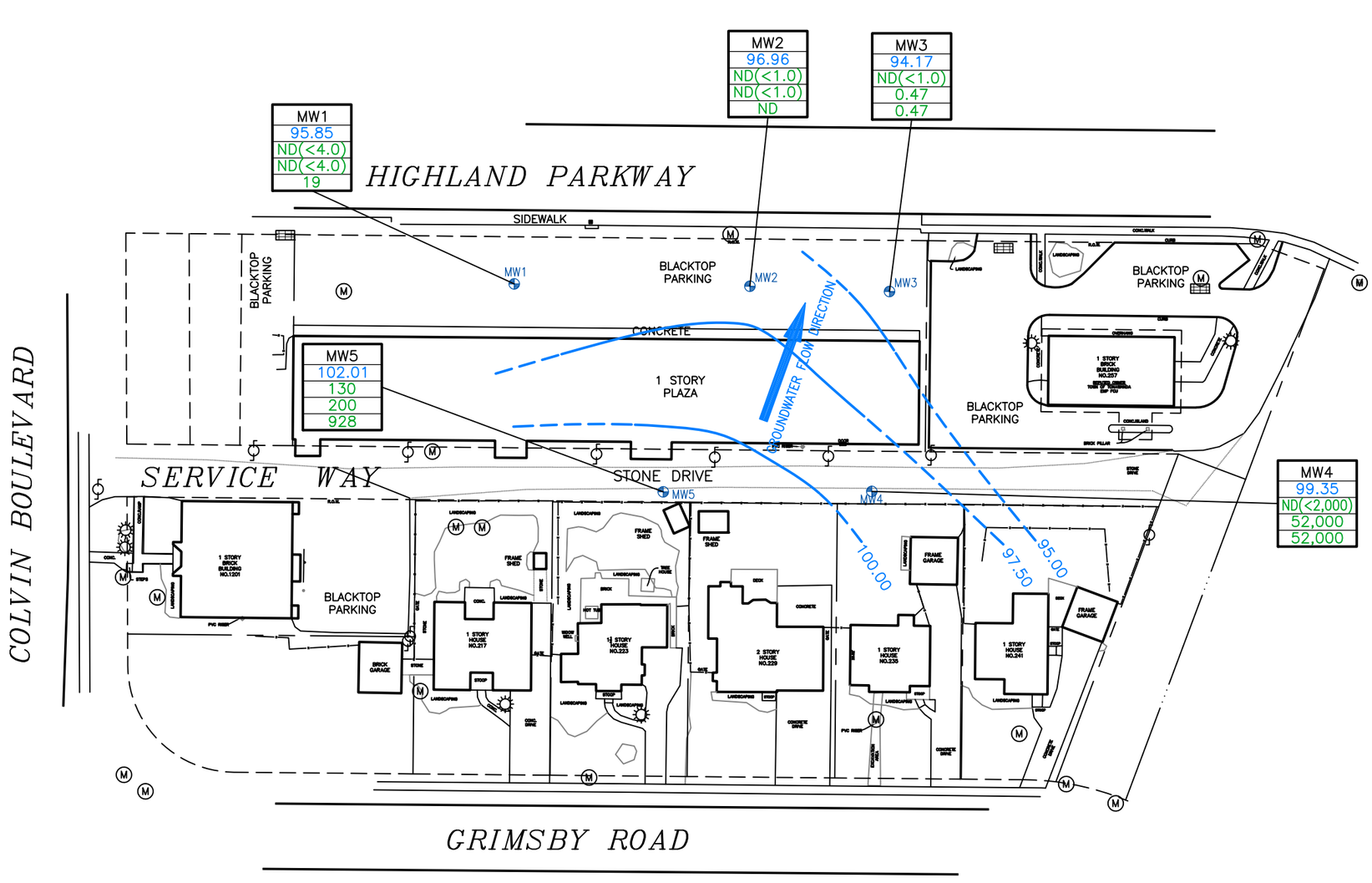
Approved

Date
9/16/19
Figure
1

Scale In Feet
0 60

GES
Groundwater & Environmental Services, Inc.

M:\Graphics\0900-Buffalo\NYSDEC\Tonawanda (Highland Plaza)\Tonawanda (Highland Plaza) SM.dwg, B SM, WSHEA




## LEGEND

- PROPERTY BOUNDARY
- RIGHT OF WAY
- FENCE
- GUARD RAIL
- CATCH BASIN
- UTILITY MANHOLE
- LIGHT POLE
- UTILITY POLE
- MONITORING WELL

| | |
|---|---|
| MW1 | WELL IDENTIFICATION |
| 95.85 | GROUNDWATER ELEVATION (feet) |
| ND(<4.0) | TCE CONCENTRATION (ug/L) |
| ND(<4.0) | PCE CONCENTRATION (ug/L) |
| 19 | TOTAL VOCs (ug/L) |

| | |
|---|---|
| ug/L | MICROGRAMS PER LITER |
| TCE | TRICHLOROETHENE |
| PCE | TETRACHLOROETHENE |
| VOCs | VOLATILE ORGANIC COMPOUNDS |
| ND(<#) | WHERE AN ANALYTE IS NOT DETECTED, A METHOD DETECTION LIMIT IS GIVEN |
| ND | NOT DETECTED |

- GROUNDWATER CONTOUR (feet)

Groundwater Monitoring Map
June 21, 2019

NYSDEC
Highland Plaza
215 Highland Parkway
Tonawanda, New York

Drawn
W.G.S.
Designed

Approved

Date
9/16/19
Figure
2

Scale In Feet
0 60

Groundwater & Environmental Services, Inc.

M:\Graphics\0900-Buffalo\NYSDEC\Tonawanda (Highland Plaza)\Tonawanda (Highland Plaza) SM.dwg, B SM, WSHEA

# Tables

## Table 1

## Liquid Level Data - June 21, 2019

| Monitoring Well | Date | Well Total Depth (ft) | Top of Casing Elevation (ft) | Depth to Water (ft) | Groundwater Elevation (ft) | Depth to Product | Thickness |
|---|---|---|---|---|---|---|---|
| MW-1 | 6/21/2019 | 23.30 | 100.51 | 4.66 | 95.85 | - | - |
| MW-2 | 6/21/2019 | 23.30 | 100.18 | 3.22 | 96.96 | - | - |
| MW-3 | 6/21/2019 | 23.30 | 100.08 | 5.91 | 94.17 | - | |
| MW-4 | 6/21/2019 | 20.48 | 101.45 | 2.10 | 99.35 | - | - |
| MW-5 | 6/21/2019 | 23.51 | 102.06 | 0.05 | 102.01 | - | - |

Notes:
All measurements reported in feet.

**Table 2**

**Groundwater Data Summary - VOCs**
**June 21, 2019**

| EPA Method 8260C | NYSDEC TOGS 1.1.1 | Sample ID: | MW-1 | MW-2 | MW-3 | MW-4 | MW-5 |
|---|---|---|---|---|---|---|---|
| | | Date Sampled: | 6/21/2019 | 6/21/2019 | 6/21/2019 | 6/21/2019 | 6/21/2019 |
| VOLATILE ORGANIC COMPOUNDS | | UNITS | | | | | |
| 1,1,1-Trichloroethane | 5 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| 1,1,2,2-Tetrachloroethane | 5 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 5 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| 1,1,2-Trichloroethane | 1 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| 1,1-Dichloroethane | 5 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| 1,1-Dichloroethene | 5 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| 1,2,4-Trichlorobenzene | NS | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| 1,2-Dibromo-3-chloropropane | 0.04 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| 1,2-Dibromoethane | NS | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| 1,2-Dichlorobenzene | 3 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| 1,2-Dichloroethane | 0.6 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| 1,2-Dichloropropane | 1 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| 1,3-Dichlorobenzene | 3 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| 1,4-Dichlorobenzene | 3 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| 2-Butanone | NS | (µg/l) | ND (<10) | ND (<10) | ND (<10) | ND (<20000) | ND (<80) |
| 2-Hexanone | 50 | (µg/l) | ND (<5.0) | ND (<5.0) | ND (<5.0) | ND (<10000) | ND (<40) |
| 4-Methyl-2-pentanone | NS | (µg/l) | ND (<5.0) | ND (<5.0) | ND (<5.0) | ND (<10000) | ND (<40) |
| Acetone | 50 | (µg/l) | 19 | ND (<10) | ND (<10) | ND (<20000) | ND (<80) |
| Benzene | 1 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Bromodichloromethane | 50 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Bromoform | 50 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Bromomethane | 5 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Carbon Disulfide | 60 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Carbon tetrachloride | 5 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Chlorobenzene | 5 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Chloroethane | 5 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Chloroform | 7 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Chloromethane | NS | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| cis-1,2-Dichloroethene | 5 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | **580** |
| cis-1,3-Dichloropropene | NS | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Cyclohexane | NS | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Dibromochloromethane | 50 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Dichlorodifluoromethane | 5 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Ethylbenzene | 5 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Isopropylbenzene | 5 | (µg/l) | ND (<1.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Methyl acetate | NS | (µg/l) | ND (<2.5) | ND (<2.5) | ND (<2.5) | ND (<5000) | ND (<20) |
| Methyl tert-butyl ether | 10 | (µg/l) | ND (<4.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Methylcyclohexane | NS | (µg/l) | ND (<4.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Methylene chloride | 5 | (µg/l) | ND (<4.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Styrene | 5 | (µg/l) | ND (<4.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Tetrachloroethene | 5 | (µg/l) | ND (<4.0) | ND (<1.0) | 0.47 J | **52,000** | **200** |
| Toluene | 5 | (µg/l) | ND (<4.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| trans-1,2-Dichloroethene | 5 | (µg/l) | ND (<4.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | **18** |
| trans-1,3-Dichloropropene | 0.4 | (µg/l) | ND (<4.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Trichloroethene | 5 | (µg/l) | ND (<4.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | **130** |
| Trichlorofluoromethane | 5 | (µg/l) | ND (<4.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Vinyl Chloride | 2 | (µg/l) | ND (<4.0) | ND (<1.0) | ND (<1.0) | ND (<2000) | ND (<8.0) |
| Xylenes, Total | 5 | (µg/l) | ND (<2.0) | ND (<2.0) | ND (<2.0) | ND (<4000) | ND (<16) |
| Total VOCs | NS | (µg/l) | 19 | ND | 0.47 | 52,000 | 928 |

NYSDEC TOGS 1.1.1 = New York State Department of Environmental Conservation Technical and Operational Guidance Series 1.1.1
µg/L = Micrograms/Liter
NS = No Standard
J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
F1 = MS and/or MSD recovery is outside acceptance limits
**Bold** = Result is above the NYSDEC TOGS 1.1.1 Guidance Value
VOCs = Volatile Organic Compounds

# Appendix A – Laboratory Analytical Reports

# Appendix B – Data Usability Summary Report

**Project:** NYSDEC Highland Plaza Site
Groundwater Sampling
**Laboratory:** Test America
**Job No:** 480-155317-1
**Fraction:** Organic
**Matrix:** Groundwater
**Report Date:** 7/22/019

This data usability summary report is based upon a review of analytical data generated for groundwater samples. New York State Department of Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category B format data packages were provided by the laboratory.

The sample locations, laboratory identification numbers, sample collection dates, sample matrix, and analyses performed are presented in Table 1.

The sample was analyzed for volatile organic compounds. The sample analyses were performed in accordance with the procedures referenced at the end of this report.

All sample analyses have undergone an analytical validation review to ensure adherence to the required protocols. Results have been validated or qualified according to general guidance provided in the "National Functional Guidelines for Organic Superfund Methods Data Review", USEPA January 2017. Region II references this guidance for validation requirements. The quality control requirements specified in the analysis method and associated acceptance criteria were also used to evaluate the data. The following parameters were evaluated.

| | | |
|---|---|---|
| X | • | Data Completeness |
| X | • | Chain of Custody Documentation/Sample Receipt |
| X | • | Holding Times |
| X | • | Instrument Performance |
| X | • | Initial and Continuing Calibrations |
| X | • | Laboratory and Field Blank Analysis Results |
| X | • | Surrogate Compound Recoveries |
| X | • | Summaries of Matrix Spike/Matrix Spike Duplicate Recoveries and Reproducibility |
| X | • | Field Duplicate Analysis Results |
| X | • | Laboratory Fortified Blank Results |
| X | • | Internal Standard Performance |
| X | • | Qualitative Identification |
| X | • | Quantitation/Reporting Limits |

X - Denotes parameter evaluated.

It is recommended that the data only be used according to the qualifiers presented, and discussed in this report. All other data should be considered qualitatively and quantitatively valid as reported by the laboratory, based on the items evaluated.

Report Approved By:

Shawne M. Rodgers
President

July 22, 2019

## *1.0 DATA COMPLETENESS*

The data deliverables provided by the laboratory were New York State Department of Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category B format.

A completeness review of the data package revealed no missing items or issues.

## *2.0 CHAIN OF CUSTODY DOCUMENTATION/SAMPLE RECEIPT*

The chain of custody was complete. No problems were noted at sample receipt.

## *3.0 HOLDING TIMES*

All criteria were met. No qualifiers were applied.

## *4.0 INSTRUMENT PERFORMANCE*

All criteria were met. No qualifiers were applied.

## *5.0 INITIAL AND CONTINUING CALIBRATIONS*

All criteria were met. No qualifiers were applied.

## *6.0 LABORATORY AND FIELD BLANK ANALYSIS RESULTS*

No compounds were detected in the associated volatile laboratory method blank.

Trip, field, or equipment blanks were not submitted with the samples. This should be noted when assessing the data.

## *7.0 SURROGATE COMPOUNDS*

All criteria were met. No qualifiers were applied.

## *8.0 SUMMARIES OF MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES AND REPRODUCIBILITY*

The volatile matrix spike/matrix spike duplicate (MS/MSD) results that did not meet the indicated quality control (QC) limits in the MS/MSD analysis of sample MW-3 are presented below.

| Compound | MS %REC | MSD %REC | QC Limits | RPD | QC Limits |
|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 77 | | 79-122 | | 20 |

The unacceptable result indicates the presence of interferences for parent sample MW-3. The result for this compound for the sample is considered a biased low quantitative estimate, and may by higher than reported. The nondect result is marked "UJ" to indicate that it is an estimate.

## *9.0 FIELD DUPLICATE RESULTS*

Duplicate samples MW-2 and HIGHLAND GW DUP were submitted to the laboratory to evaluate sampling and analytical precision for those organic compounds determined to be present. There were no positive results for the duplicate samples.

## *10.0 LABORATORY FORTIFIED BLANK RESULTS*

All criteria were met. No qualifiers were applied.

## *11.0 INTERNAL STANDARD PERFORMANCE*

All criteria were met. No qualifiers were applied.

## *13.0 QUALITATIVE IDENTIFICATION*

All criteria were met. No qualifiers were applied.

## *14.0 QUANTITATION/REPORTING LIMITS*

The following samples were analyzed at dilutions for volatile organic compounds. The dilution analyses were performed because of the suspected presence of high levels of target compounds and/or interferences. Reporting limits (RLs) are elevated by the dilution factor for the samples for target compounds that were not detected. The elevated RLs should be noted when assessing the data for the samples.

| Sample | Dilution Factor |
|---|---|
| MW-4 | 2000 |
| MW-5 | 8.0 |

As required by USEPA protocol, all compounds, which were qualitatively identified at concentrations below their respective RLs, have been marked with "J" qualifiers to indicate that they are quantitative estimates.

## *METHODOLOGY REFERENCES*

| Analysis | Reference |
|---|---|
| Volatile Organic Compounds | Method 8260C, "Test Methods for Evaluating Solid Wastes", SW-846, third edition, Promulgated Updates I, II, IIA, IIB, III, IIIA, IIIB, IVA and IVB, and V, October 2013 |

Table 1 Data Usability Summary Report
NYSDEC Highland Plaza Site
Groundwater Sampling
Test America Job ID 480-155317-1

| | | | | | Analyses Performed |
|---|---|---|---|---|---|
| Sample ID | Lab ID | | Collection Date | Matrix | VOC |
| MW-1 | 480-155317 | 1 | 6/21/2019 | Groundwater | X |
| MW-2 | 480-155317 | 2 | 6/21/2019 | Groundwater | X |
| MW-3 | 480-155317 | 3 | 6/21/2019 | Groundwater | X |
| MW-4 | 480-155317 | 4 | 6/21/2019 | Groundwater | X |
| MW-5 | 480-155317 | 5 | 6/21/2019 | Groundwater | X |
| HIGHLAND GW DUP | 480-155317 | 6 | 6/21/2019 | Groundwater | X |

**Data Validation Qualifier Code Glossary**

**J - The positive result reported for this analyte is a quantitative estimate.**

**J+ - The positive result reported for this analyte is a quantitative estimate, but may be biased high.**

**J- - The positive result reported for this analyte is a quantitative estimate, but may be biased low.**

**U - This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.**

**UJ - This analyte was not detected in the sample. The actual quantitation/detection limit may be higher than reported.**

**N - This analyte has been "tentatively" identified. The numeric value represents its approximate concentration.**

**Y - This analyte coelutes with another target compound on the two chromatographic columns used for analysis.**

**R - The result for this analyte is unreliable. Additional data is needed to confirm or disprove the presence of this compound/analyte in the sample.**

**<u>Other Codes</u>:**

**ND - There were no positive results for this analytical fraction.**

**NA - This parameter is not applicable to this sample.**

**NR - This analysis parameter was not required for this sample.**

## Client Sample ID: MW-1
**Date Collected: 06/21/19 12:00**
**Date Received: 06/21/19 16:45**

## Lab Sample ID: 480-155317-1
**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.82 | ug/L | | | 06/25/19 13:25 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 | ug/L | | | 06/25/19 13:25 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 | ug/L | | | 06/25/19 13:25 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 | ug/L | | | 06/25/19 13:25 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.38 | ug/L | | | 06/25/19 13:25 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.29 | ug/L | | | 06/25/19 13:25 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | 0.41 | ug/L | | | 06/25/19 13:25 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 | ug/L | | | 06/25/19 13:25 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 | ug/L | | | 06/25/19 13:25 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.21 | ug/L | | | 06/25/19 13:25 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.72 | ug/L | | | 06/25/19 13:25 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 | ug/L | | | 06/25/19 13:25 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 | ug/L | | | 06/25/19 13:25 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 1.3 | ug/L | | | 06/25/19 13:25 | 1 |
| 2-Hexanone | ND | | 5.0 | 1.2 | ug/L | | | 06/25/19 13:25 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 | ug/L | | | 06/25/19 13:25 | 1 |
| **Acetone** | **19** | | 10 | 3.0 | ug/L | | | 06/25/19 13:25 | 1 |
| Benzene | ND | | 1.0 | 0.41 | ug/L | | | 06/25/19 13:25 | 1 |
| Bromodichloromethane | ND | | 1.0 | 0.39 | ug/L | | | 06/25/19 13:25 | 1 |
| Bromoform | ND | | 1.0 | 0.26 | ug/L | | | 06/25/19 13:25 | 1 |
| Bromomethane | ND | | 1.0 | 0.69 | ug/L | | | 06/25/19 13:25 | 1 |
| Carbon disulfide | ND | | 1.0 | 0.19 | ug/L | | | 06/25/19 13:25 | 1 |
| Carbon tetrachloride | ND | | 1.0 | 0.27 | ug/L | | | 06/25/19 13:25 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.75 | ug/L | | | 06/25/19 13:25 | 1 |
| Dibromochloromethane | ND | | 1.0 | 0.32 | ug/L | | | 06/25/19 13:25 | 1 |
| Chloroethane | ND | | 1.0 | 0.32 | ug/L | | | 06/25/19 13:25 | 1 |
| Chloroform | ND | | 1.0 | 0.34 | ug/L | | | 06/25/19 13:25 | 1 |
| Chloromethane | ND | | 1.0 | 0.35 | ug/L | | | 06/25/19 13:25 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 | ug/L | | | 06/25/19 13:25 | 1 |
| cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 | ug/L | | | 06/25/19 13:25 | 1 |
| Cyclohexane | ND | | 1.0 | 0.18 | ug/L | | | 06/25/19 13:25 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | 0.68 | ug/L | | | 06/25/19 13:25 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.74 | ug/L | | | 06/25/19 13:25 | 1 |
| 1,2-Dibromoethane | ND | | 1.0 | 0.73 | ug/L | | | 06/25/19 13:25 | 1 |
| Isopropylbenzene | ND | | 1.0 | 0.79 | ug/L | | | 06/25/19 13:25 | 1 |
| Methyl acetate | ND | | 2.5 | 1.3 | ug/L | | | 06/25/19 13:25 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | 0.16 | ug/L | | | 06/25/19 13:25 | 1 |
| Methylcyclohexane | ND | | 1.0 | 0.16 | ug/L | | | 06/25/19 13:25 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.44 | ug/L | | | 06/25/19 13:25 | 1 |
| Styrene | ND | | 1.0 | 0.73 | ug/L | | | 06/25/19 13:25 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.36 | ug/L | | | 06/25/19 13:25 | 1 |
| Toluene | ND | | 1.0 | 0.51 | ug/L | | | 06/25/19 13:25 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 | ug/L | | | 06/25/19 13:25 | 1 |
| trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 | ug/L | | | 06/25/19 13:25 | 1 |
| Trichloroethene | ND | | 1.0 | 0.46 | ug/L | | | 06/25/19 13:25 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | 0.88 | ug/L | | | 06/25/19 13:25 | 1 |
| Vinyl chloride | ND | | 1.0 | 0.90 | ug/L | | | 06/25/19 13:25 | 1 |
| Xylenes, Total | ND | | 2.0 | 0.66 | ug/L | | | 06/25/19 13:25 | 1 |

7/22/2019
Eurofins TestAmerica, Buffalo

## Client Sample ID: MW-1
**Lab Sample ID: 480-155317-1**

**Date Collected: 06/21/19 12:00**
**Matrix: Water**
**Date Received: 06/21/19 16:45**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Toluene-d8 (Surr) | 90 | | 80 - 120 | | 06/25/19 13:25 | 1 |
| 1,2-Dichloroethane-d4 (Surr) | 103 | | 77 - 120 | | 06/25/19 13:25 | 1 |
| 4-Bromofluorobenzene (Surr) | 81 | | 73 - 120 | | 06/25/19 13:25 | 1 |
| Dibromofluoromethane (Surr) | 103 | | 75 - 123 | | 06/25/19 13:25 | 1 |

## Client Sample ID: MW-2
**Lab Sample ID: 480-155317-2**

**Date Collected: 06/21/19 13:10**
**Matrix: Water**
**Date Received: 06/21/19 16:45**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.82 | ug/L | | | 06/25/19 13:48 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 | ug/L | | | 06/25/19 13:48 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 | ug/L | | | 06/25/19 13:48 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 | ug/L | | | 06/25/19 13:48 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.38 | ug/L | | | 06/25/19 13:48 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.29 | ug/L | | | 06/25/19 13:48 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | 0.41 | ug/L | | | 06/25/19 13:48 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 | ug/L | | | 06/25/19 13:48 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 | ug/L | | | 06/25/19 13:48 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.21 | ug/L | | | 06/25/19 13:48 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.72 | ug/L | | | 06/25/19 13:48 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 | ug/L | | | 06/25/19 13:48 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 | ug/L | | | 06/25/19 13:48 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 1.3 | ug/L | | | 06/25/19 13:48 | 1 |
| 2-Hexanone | ND | | 5.0 | 1.2 | ug/L | | | 06/25/19 13:48 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 | ug/L | | | 06/25/19 13:48 | 1 |
| Acetone | ND | | 10 | 3.0 | ug/L | | | 06/25/19 13:48 | 1 |
| Benzene | ND | | 1.0 | 0.41 | ug/L | | | 06/25/19 13:48 | 1 |
| Bromodichloromethane | ND | | 1.0 | 0.39 | ug/L | | | 06/25/19 13:48 | 1 |
| Bromoform | ND | | 1.0 | 0.26 | ug/L | | | 06/25/19 13:48 | 1 |
| Bromomethane | ND | | 1.0 | 0.69 | ug/L | | | 06/25/19 13:48 | 1 |
| Carbon disulfide | ND | | 1.0 | 0.19 | ug/L | | | 06/25/19 13:48 | 1 |
| Carbon tetrachloride | ND | | 1.0 | 0.27 | ug/L | | | 06/25/19 13:48 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.75 | ug/L | | | 06/25/19 13:48 | 1 |
| Dibromochloromethane | ND | | 1.0 | 0.32 | ug/L | | | 06/25/19 13:48 | 1 |
| Chloroethane | ND | | 1.0 | 0.32 | ug/L | | | 06/25/19 13:48 | 1 |
| Chloroform | ND | | 1.0 | 0.34 | ug/L | | | 06/25/19 13:48 | 1 |
| Chloromethane | ND | | 1.0 | 0.35 | ug/L | | | 06/25/19 13:48 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 | ug/L | | | 06/25/19 13:48 | 1 |
| cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 | ug/L | | | 06/25/19 13:48 | 1 |
| Cyclohexane | ND | | 1.0 | 0.18 | ug/L | | | 06/25/19 13:48 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | 0.68 | ug/L | | | 06/25/19 13:48 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.74 | ug/L | | | 06/25/19 13:48 | 1 |
| 1,2-Dibromoethane | ND | | 1.0 | 0.73 | ug/L | | | 06/25/19 13:48 | 1 |
| Isopropylbenzene | ND | | 1.0 | 0.79 | ug/L | | | 06/25/19 13:48 | 1 |
| Methyl acetate | ND | | 2.5 | 1.3 | ug/L | | | 06/25/19 13:48 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | 0.16 | ug/L | | | 06/25/19 13:48 | 1 |
| Methylcyclohexane | ND | | 1.0 | 0.16 | ug/L | | | 06/25/19 13:48 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.44 | ug/L | | | 06/25/19 13:48 | 1 |

## Client Sample ID: MW-2
**Lab Sample ID: 480-155317-2**

**Date Collected: 06/21/19 13:10**
**Matrix: Water**
**Date Received: 06/21/19 16:45**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Styrene | ND | | 1.0 | 0.73 | ug/L | | | 06/25/19 13:48 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.36 | ug/L | | | 06/25/19 13:48 | 1 |
| Toluene | ND | | 1.0 | 0.51 | ug/L | | | 06/25/19 13:48 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 | ug/L | | | 06/25/19 13:48 | 1 |
| trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 | ug/L | | | 06/25/19 13:48 | 1 |
| Trichloroethene | ND | | 1.0 | 0.46 | ug/L | | | 06/25/19 13:48 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | 0.88 | ug/L | | | 06/25/19 13:48 | 1 |
| Vinyl chloride | ND | | 1.0 | 0.90 | ug/L | | | 06/25/19 13:48 | 1 |
| Xylenes, Total | ND | | 2.0 | 0.66 | ug/L | | | 06/25/19 13:48 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *88* | | *80 - 120* | | *06/25/19 13:48* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *96* | | *77 - 120* | | *06/25/19 13:48* | *1* |
| *4-Bromofluorobenzene (Surr)* | *79* | | *73 - 120* | | *06/25/19 13:48* | *1* |
| *Dibromofluoromethane (Surr)* | *91* | | *75 - 123* | | *06/25/19 13:48* | *1* |

## Client Sample ID: MW-3
**Lab Sample ID: 480-155317-3**

**Date Collected: 06/21/19 13:35**
**Matrix: Water**
**Date Received: 06/21/19 16:45**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.82 | ug/L | | | 06/25/19 14:12 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 | ug/L | | | 06/25/19 14:12 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 | ug/L | | | 06/25/19 14:12 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 | ug/L | | | 06/25/19 14:12 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.38 | ug/L | | | 06/25/19 14:12 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.29 | ug/L | | | 06/25/19 14:12 | 1 |
| 1,2,4-Trichlorobenzene | ~~ND~~ F1 CCJ | | 1.0 | 0.41 | ug/L | | | 06/25/19 14:12 | MSL |
| 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 | ug/L | | | 06/25/19 14:12 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 | ug/L | | | 06/25/19 14:12 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.21 | ug/L | | | 06/25/19 14:12 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.72 | ug/L | | | 06/25/19 14:12 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 | ug/L | | | 06/25/19 14:12 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 | ug/L | | | 06/25/19 14:12 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 1.3 | ug/L | | | 06/25/19 14:12 | 1 |
| 2-Hexanone | ND | | 5.0 | 1.2 | ug/L | | | 06/25/19 14:12 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 | ug/L | | | 06/25/19 14:12 | 1 |
| Acetone | ND | | 10 | 3.0 | ug/L | | | 06/25/19 14:12 | 1 |
| Benzene | ND | | 1.0 | 0.41 | ug/L | | | 06/25/19 14:12 | 1 |
| Bromodichloromethane | ND | | 1.0 | 0.39 | ug/L | | | 06/25/19 14:12 | 1 |
| Bromoform | ND | | 1.0 | 0.26 | ug/L | | | 06/25/19 14:12 | 1 |
| Bromomethane | ND | | 1.0 | 0.69 | ug/L | | | 06/25/19 14:12 | 1 |
| Carbon disulfide | ND | | 1.0 | 0.19 | ug/L | | | 06/25/19 14:12 | 1 |
| Carbon tetrachloride | ND | | 1.0 | 0.27 | ug/L | | | 06/25/19 14:12 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.75 | ug/L | | | 06/25/19 14:12 | 1 |
| Dibromochloromethane | ND | | 1.0 | 0.32 | ug/L | | | 06/25/19 14:12 | 1 |
| Chloroethane | ND | | 1.0 | 0.32 | ug/L | | | 06/25/19 14:12 | 1 |
| Chloroform | ND | | 1.0 | 0.34 | ug/L | | | 06/25/19 14:12 | 1 |
| Chloromethane | ND | | 1.0 | 0.35 | ug/L | | | 06/25/19 14:12 | 1 |

## Client Sample ID: MW-3
**Date Collected: 06/21/19 13:35**
**Date Received: 06/21/19 16:45**

## Lab Sample ID: 480-155317-3
**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 | ug/L | | | 06/25/19 14:12 | 1 |
| cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 | ug/L | | | 06/25/19 14:12 | 1 |
| Cyclohexane | ND | | 1.0 | 0.18 | ug/L | | | 06/25/19 14:12 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | 0.68 | ug/L | | | 06/25/19 14:12 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.74 | ug/L | | | 06/25/19 14:12 | 1 |
| 1,2-Dibromoethane | ND | | 1.0 | 0.73 | ug/L | | | 06/25/19 14:12 | 1 |
| Isopropylbenzene | ND | | 1.0 | 0.79 | ug/L | | | 06/25/19 14:12 | 1 |
| Methyl acetate | ND | | 2.5 | 1.3 | ug/L | | | 06/25/19 14:12 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | 0.16 | ug/L | | | 06/25/19 14:12 | 1 |
| Methylcyclohexane | ND | | 1.0 | 0.16 | ug/L | | | 06/25/19 14:12 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.44 | ug/L | | | 06/25/19 14:12 | 1 |
| Styrene | ND | | 1.0 | 0.73 | ug/L | | | 06/25/19 14:12 | 1 |
| **Tetrachloroethene** | **0.47** | **J** | 1.0 | 0.36 | ug/L | | | 06/25/19 14:12 | 1 |
| Toluene | ND | | 1.0 | 0.51 | ug/L | | | 06/25/19 14:12 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 | ug/L | | | 06/25/19 14:12 | 1 |
| trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 | ug/L | | | 06/25/19 14:12 | 1 |
| Trichloroethene | ND | | 1.0 | 0.46 | ug/L | | | 06/25/19 14:12 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | 0.88 | ug/L | | | 06/25/19 14:12 | 1 |
| Vinyl chloride | ND | | 1.0 | 0.90 | ug/L | | | 06/25/19 14:12 | 1 |
| Xylenes, Total | ND | | 2.0 | 0.66 | ug/L | | | 06/25/19 14:12 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *89* | | *80 - 120* | | *06/25/19 14:12* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *96* | | *77 - 120* | | *06/25/19 14:12* | *1* |
| *4-Bromofluorobenzene (Surr)* | *81* | | *73 - 120* | | *06/25/19 14:12* | *1* |
| *Dibromofluoromethane (Surr)* | *98* | | *75 - 123* | | *06/25/19 14:12* | *1* |

## Client Sample ID: MW-4
**Date Collected: 06/21/19 14:50**
**Date Received: 06/21/19 16:45**

## Lab Sample ID: 480-155317-4
**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 2000 | 1600 | ug/L | | | 06/25/19 14:37 | 2000 |
| 1,1,2,2-Tetrachloroethane | ND | | 2000 | 420 | ug/L | | | 06/25/19 14:37 | 2000 |
| 1,1,2-Trichloroethane | ND | | 2000 | 460 | ug/L | | | 06/25/19 14:37 | 2000 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 2000 | 620 | ug/L | | | 06/25/19 14:37 | 2000 |
| 1,1-Dichloroethane | ND | | 2000 | 760 | ug/L | | | 06/25/19 14:37 | 2000 |
| 1,1-Dichloroethene | ND | | 2000 | 580 | ug/L | | | 06/25/19 14:37 | 2000 |
| 1,2,4-Trichlorobenzene | ND | | 2000 | 820 | ug/L | | | 06/25/19 14:37 | 2000 |
| 1,2-Dibromo-3-Chloropropane | ND | | 2000 | 780 | ug/L | | | 06/25/19 14:37 | 2000 |
| 1,2-Dichlorobenzene | ND | | 2000 | 1600 | ug/L | | | 06/25/19 14:37 | 2000 |
| 1,2-Dichloroethane | ND | | 2000 | 420 | ug/L | | | 06/25/19 14:37 | 2000 |
| 1,2-Dichloropropane | ND | | 2000 | 1400 | ug/L | | | 06/25/19 14:37 | 2000 |
| 1,3-Dichlorobenzene | ND | | 2000 | 1600 | ug/L | | | 06/25/19 14:37 | 2000 |
| 1,4-Dichlorobenzene | ND | | 2000 | 1700 | ug/L | | | 06/25/19 14:37 | 2000 |
| 2-Butanone (MEK) | ND | | 20000 | 2600 | ug/L | | | 06/25/19 14:37 | 2000 |
| 2-Hexanone | ND | | 10000 | 2500 | ug/L | | | 06/25/19 14:37 | 2000 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10000 | 4200 | ug/L | | | 06/25/19 14:37 | 2000 |
| Acetone | ND | | 20000 | 6000 | ug/L | | | 06/25/19 14:37 | 2000 |

## Client Sample ID: MW-4
**Lab Sample ID: 480-155317-4**

**Date Collected: 06/21/19 14:50**
**Matrix: Water**
**Date Received: 06/21/19 16:45**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 2000 | 820 | ug/L | | | 06/25/19 14:37 | 2000 |
| Bromodichloromethane | ND | | 2000 | 780 | ug/L | | | 06/25/19 14:37 | 2000 |
| Bromoform | ND | | 2000 | 520 | ug/L | | | 06/25/19 14:37 | 2000 |
| Bromomethane | ND | | 2000 | 1400 | ug/L | | | 06/25/19 14:37 | 2000 |
| Carbon disulfide | ND | | 2000 | 380 | ug/L | | | 06/25/19 14:37 | 2000 |
| Carbon tetrachloride | ND | | 2000 | 540 | ug/L | | | 06/25/19 14:37 | 2000 |
| Chlorobenzene | ND | | 2000 | 1500 | ug/L | | | 06/25/19 14:37 | 2000 |
| Dibromochloromethane | ND | | 2000 | 640 | ug/L | | | 06/25/19 14:37 | 2000 |
| Chloroethane | ND | | 2000 | 640 | ug/L | | | 06/25/19 14:37 | 2000 |
| Chloroform | ND | | 2000 | 680 | ug/L | | | 06/25/19 14:37 | 2000 |
| Chloromethane | ND | | 2000 | 700 | ug/L | | | 06/25/19 14:37 | 2000 |
| cis-1,2-Dichloroethene | ND | | 2000 | 1600 | ug/L | | | 06/25/19 14:37 | 2000 |
| cis-1,3-Dichloropropene | ND | | 2000 | 720 | ug/L | | | 06/25/19 14:37 | 2000 |
| Cyclohexane | ND | | 2000 | 360 | ug/L | | | 06/25/19 14:37 | 2000 |
| Dichlorodifluoromethane | ND | | 2000 | 1400 | ug/L | | | 06/25/19 14:37 | 2000 |
| Ethylbenzene | ND | | 2000 | 1500 | ug/L | | | 06/25/19 14:37 | 2000 |
| 1,2-Dibromoethane | ND | | 2000 | 1500 | ug/L | | | 06/25/19 14:37 | 2000 |
| Isopropylbenzene | ND | | 2000 | 1600 | ug/L | | | 06/25/19 14:37 | 2000 |
| Methyl acetate | ND | | 5000 | 2600 | ug/L | | | 06/25/19 14:37 | 2000 |
| Methyl tert-butyl ether | ND | | 2000 | 320 | ug/L | | | 06/25/19 14:37 | 2000 |
| Methylcyclohexane | ND | | 2000 | 320 | ug/L | | | 06/25/19 14:37 | 2000 |
| Methylene Chloride | ND | | 2000 | 880 | ug/L | | | 06/25/19 14:37 | 2000 |
| Styrene | ND | | 2000 | 1500 | ug/L | | | 06/25/19 14:37 | 2000 |
| **Tetrachloroethene** | **52000** | | 2000 | 720 | ug/L | | | 06/25/19 14:37 | 2000 |
| Toluene | ND | | 2000 | 1000 | ug/L | | | 06/25/19 14:37 | 2000 |
| trans-1,2-Dichloroethene | ND | | 2000 | 1800 | ug/L | | | 06/25/19 14:37 | 2000 |
| trans-1,3-Dichloropropene | ND | | 2000 | 740 | ug/L | | | 06/25/19 14:37 | 2000 |
| Trichloroethene | ND | | 2000 | 920 | ug/L | | | 06/25/19 14:37 | 2000 |
| Trichlorofluoromethane | ND | | 2000 | 1800 | ug/L | | | 06/25/19 14:37 | 2000 |
| Vinyl chloride | ND | | 2000 | 1800 | ug/L | | | 06/25/19 14:37 | 2000 |
| Xylenes, Total | ND | | 4000 | 1300 | ug/L | | | 06/25/19 14:37 | 2000 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *88* | | *80 - 120* | | *06/25/19 14:37* | *2000* |
| *1,2-Dichloroethane-d4 (Surr)* | *99* | | *77 - 120* | | *06/25/19 14:37* | *2000* |
| *4-Bromofluorobenzene (Surr)* | *80* | | *73 - 120* | | *06/25/19 14:37* | *2000* |
| *Dibromofluoromethane (Surr)* | *98* | | *75 - 123* | | *06/25/19 14:37* | *2000* |

## Client Sample ID: MW-5
**Lab Sample ID: 480-155317-5**

**Date Collected: 06/21/19 15:00**
**Matrix: Water**
**Date Received: 06/21/19 16:45**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 8.0 | 6.6 | ug/L | | | 06/25/19 15:00 | 8 |
| 1,1,2,2-Tetrachloroethane | ND | | 8.0 | 1.7 | ug/L | | | 06/25/19 15:00 | 8 |
| 1,1,2-Trichloroethane | ND | | 8.0 | 1.8 | ug/L | | | 06/25/19 15:00 | 8 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 8.0 | 2.5 | ug/L | | | 06/25/19 15:00 | 8 |
| 1,1-Dichloroethane | ND | | 8.0 | 3.0 | ug/L | | | 06/25/19 15:00 | 8 |
| 1,1-Dichloroethene | ND | | 8.0 | 2.3 | ug/L | | | 06/25/19 15:00 | 8 |

## Client Sample ID: MW-5
**Date Collected: 06/21/19 15:00**
**Date Received: 06/21/19 16:45**

## Lab Sample ID: 480-155317-5
**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ND | | 8.0 | 3.3 | ug/L | | | 06/25/19 15:00 | 8 |
| 1,2-Dibromo-3-Chloropropane | ND | | 8.0 | 3.1 | ug/L | | | 06/25/19 15:00 | 8 |
| 1,2-Dichlorobenzene | ND | | 8.0 | 6.3 | ug/L | | | 06/25/19 15:00 | 8 |
| 1,2-Dichloroethane | ND | | 8.0 | 1.7 | ug/L | | | 06/25/19 15:00 | 8 |
| 1,2-Dichloropropane | ND | | 8.0 | 5.8 | ug/L | | | 06/25/19 15:00 | 8 |
| 1,3-Dichlorobenzene | ND | | 8.0 | 6.2 | ug/L | | | 06/25/19 15:00 | 8 |
| 1,4-Dichlorobenzene | ND | | 8.0 | 6.7 | ug/L | | | 06/25/19 15:00 | 8 |
| 2-Butanone (MEK) | ND | | 80 | 11 | ug/L | | | 06/25/19 15:00 | 8 |
| 2-Hexanone | ND | | 40 | 9.9 | ug/L | | | 06/25/19 15:00 | 8 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 40 | 17 | ug/L | | | 06/25/19 15:00 | 8 |
| Acetone | ND | | 80 | 24 | ug/L | | | 06/25/19 15:00 | 8 |
| Benzene | ND | | 8.0 | 3.3 | ug/L | | | 06/25/19 15:00 | 8 |
| Bromodichloromethane | ND | | 8.0 | 3.1 | ug/L | | | 06/25/19 15:00 | 8 |
| Bromoform | ND | | 8.0 | 2.1 | ug/L | | | 06/25/19 15:00 | 8 |
| Bromomethane | ND | | 8.0 | 5.5 | ug/L | | | 06/25/19 15:00 | 8 |
| Carbon disulfide | ND | | 8.0 | 1.5 | ug/L | | | 06/25/19 15:00 | 8 |
| Carbon tetrachloride | ND | | 8.0 | 2.2 | ug/L | | | 06/25/19 15:00 | 8 |
| Chlorobenzene | ND | | 8.0 | 6.0 | ug/L | | | 06/25/19 15:00 | 8 |
| Dibromochloromethane | ND | | 8.0 | 2.6 | ug/L | | | 06/25/19 15:00 | 8 |
| Chloroethane | ND | | 8.0 | 2.6 | ug/L | | | 06/25/19 15:00 | 8 |
| Chloroform | ND | | 8.0 | 2.7 | ug/L | | | 06/25/19 15:00 | 8 |
| Chloromethane | ND | | 8.0 | 2.8 | ug/L | | | 06/25/19 15:00 | 8 |
| **cis-1,2-Dichloroethene** | **580** | | 8.0 | 6.5 | ug/L | | | 06/25/19 15:00 | 8 |
| cis-1,3-Dichloropropene | ND | | 8.0 | 2.9 | ug/L | | | 06/25/19 15:00 | 8 |
| Cyclohexane | ND | | 8.0 | 1.4 | ug/L | | | 06/25/19 15:00 | 8 |
| Dichlorodifluoromethane | ND | | 8.0 | 5.4 | ug/L | | | 06/25/19 15:00 | 8 |
| Ethylbenzene | ND | | 8.0 | 5.9 | ug/L | | | 06/25/19 15:00 | 8 |
| 1,2-Dibromoethane | ND | | 8.0 | 5.8 | ug/L | | | 06/25/19 15:00 | 8 |
| Isopropylbenzene | ND | | 8.0 | 6.3 | ug/L | | | 06/25/19 15:00 | 8 |
| Methyl acetate | ND | | 20 | 10 | ug/L | | | 06/25/19 15:00 | 8 |
| Methyl tert-butyl ether | ND | | 8.0 | 1.3 | ug/L | | | 06/25/19 15:00 | 8 |
| Methylcyclohexane | ND | | 8.0 | 1.3 | ug/L | | | 06/25/19 15:00 | 8 |
| Methylene Chloride | ND | | 8.0 | 3.5 | ug/L | | | 06/25/19 15:00 | 8 |
| Styrene | ND | | 8.0 | 5.8 | ug/L | | | 06/25/19 15:00 | 8 |
| **Tetrachloroethene** | **200** | | 8.0 | 2.9 | ug/L | | | 06/25/19 15:00 | 8 |
| Toluene | ND | | 8.0 | 4.1 | ug/L | | | 06/25/19 15:00 | 8 |
| **trans-1,2-Dichloroethene** | **18** | | 8.0 | 7.2 | ug/L | | | 06/25/19 15:00 | 8 |
| trans-1,3-Dichloropropene | ND | | 8.0 | 3.0 | ug/L | | | 06/25/19 15:00 | 8 |
| **Trichloroethene** | **130** | | 8.0 | 3.7 | ug/L | | | 06/25/19 15:00 | 8 |
| Trichlorofluoromethane | ND | | 8.0 | 7.0 | ug/L | | | 06/25/19 15:00 | 8 |
| Vinyl chloride | ND | | 8.0 | 7.2 | ug/L | | | 06/25/19 15:00 | 8 |
| Xylenes, Total | ND | | 16 | 5.3 | ug/L | | | 06/25/19 15:00 | 8 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *90* | | *80 - 120* | | *06/25/19 15:00* | *8* |
| *1,2-Dichloroethane-d4 (Surr)* | *96* | | *77 - 120* | | *06/25/19 15:00* | *8* |
| *4-Bromofluorobenzene (Surr)* | *81* | | *73 - 120* | | *06/25/19 15:00* | *8* |
| *Dibromofluoromethane (Surr)* | *96* | | *75 - 123* | | *06/25/19 15:00* | *8* |

7/22/2019

## Client Sample ID: HIGHLAND GW DUP
**Lab Sample ID: 480-155317-6**

**Date Collected: 06/21/19 00:00**
**Matrix: Water**
**Date Received: 06/21/19 16:45**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.82 | ug/L | | | 06/25/19 15:24 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 | ug/L | | | 06/25/19 15:24 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 | ug/L | | | 06/25/19 15:24 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 | ug/L | | | 06/25/19 15:24 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.38 | ug/L | | | 06/25/19 15:24 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.29 | ug/L | | | 06/25/19 15:24 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | 0.41 | ug/L | | | 06/25/19 15:24 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 | ug/L | | | 06/25/19 15:24 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 | ug/L | | | 06/25/19 15:24 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.21 | ug/L | | | 06/25/19 15:24 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.72 | ug/L | | | 06/25/19 15:24 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 | ug/L | | | 06/25/19 15:24 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 | ug/L | | | 06/25/19 15:24 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 1.3 | ug/L | | | 06/25/19 15:24 | 1 |
| 2-Hexanone | ND | | 5.0 | 1.2 | ug/L | | | 06/25/19 15:24 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 | ug/L | | | 06/25/19 15:24 | 1 |
| Acetone | ND | | 10 | 3.0 | ug/L | | | 06/25/19 15:24 | 1 |
| Benzene | ND | | 1.0 | 0.41 | ug/L | | | 06/25/19 15:24 | 1 |
| Bromodichloromethane | ND | | 1.0 | 0.39 | ug/L | | | 06/25/19 15:24 | 1 |
| Bromoform | ND | | 1.0 | 0.26 | ug/L | | | 06/25/19 15:24 | 1 |
| Bromomethane | ND | | 1.0 | 0.69 | ug/L | | | 06/25/19 15:24 | 1 |
| Carbon disulfide | ND | | 1.0 | 0.19 | ug/L | | | 06/25/19 15:24 | 1 |
| Carbon tetrachloride | ND | | 1.0 | 0.27 | ug/L | | | 06/25/19 15:24 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.75 | ug/L | | | 06/25/19 15:24 | 1 |
| Dibromochloromethane | ND | | 1.0 | 0.32 | ug/L | | | 06/25/19 15:24 | 1 |
| Chloroethane | ND | | 1.0 | 0.32 | ug/L | | | 06/25/19 15:24 | 1 |
| Chloroform | ND | | 1.0 | 0.34 | ug/L | | | 06/25/19 15:24 | 1 |
| Chloromethane | ND | | 1.0 | 0.35 | ug/L | | | 06/25/19 15:24 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 | ug/L | | | 06/25/19 15:24 | 1 |
| cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 | ug/L | | | 06/25/19 15:24 | 1 |
| Cyclohexane | ND | | 1.0 | 0.18 | ug/L | | | 06/25/19 15:24 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | 0.68 | ug/L | | | 06/25/19 15:24 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.74 | ug/L | | | 06/25/19 15:24 | 1 |
| 1,2-Dibromoethane | ND | | 1.0 | 0.73 | ug/L | | | 06/25/19 15:24 | 1 |
| Isopropylbenzene | ND | | 1.0 | 0.79 | ug/L | | | 06/25/19 15:24 | 1 |
| Methyl acetate | ND | | 2.5 | 1.3 | ug/L | | | 06/25/19 15:24 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | 0.16 | ug/L | | | 06/25/19 15:24 | 1 |
| Methylcyclohexane | ND | | 1.0 | 0.16 | ug/L | | | 06/25/19 15:24 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.44 | ug/L | | | 06/25/19 15:24 | 1 |
| Styrene | ND | | 1.0 | 0.73 | ug/L | | | 06/25/19 15:24 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.36 | ug/L | | | 06/25/19 15:24 | 1 |
| Toluene | ND | | 1.0 | 0.51 | ug/L | | | 06/25/19 15:24 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 | ug/L | | | 06/25/19 15:24 | 1 |
| trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 | ug/L | | | 06/25/19 15:24 | 1 |
| Trichloroethene | ND | | 1.0 | 0.46 | ug/L | | | 06/25/19 15:24 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | 0.88 | ug/L | | | 06/25/19 15:24 | 1 |
| Vinyl chloride | ND | | 1.0 | 0.90 | ug/L | | | 06/25/19 15:24 | 1 |
| Xylenes, Total | ND | | 2.0 | 0.66 | ug/L | | | 06/25/19 15:24 | 1 |

Client: New York State D.E.C.
Job ID: 480-155317-1
Project/Site: Highland Plaza - OffSite C915293A

**Client Sample ID: HIGHLAND GW DUP**
**Lab Sample ID: 480-155317-6**
**Date Collected: 06/21/19 00:00**
**Matrix: Water**
**Date Received: 06/21/19 16:45**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Toluene-d8 (Surr) | 87 | | 80 - 120 | | 06/25/19 15:24 | 1 |
| 1,2-Dichloroethane-d4 (Surr) | 105 | | 77 - 120 | | 06/25/19 15:24 | 1 |
| 4-Bromofluorobenzene (Surr) | 80 | | 73 - 120 | | 06/25/19 15:24 | 1 |
| Dibromofluoromethane (Surr) | 101 | | 75 - 123 | | 06/25/19 15:24 | 1 |

# Appendix C – Field Notes

# LOW FLOW SAMPLING LOG

TASK : **Groundwater Monitoring & Sampling**

PSID 785876

| | | | |
|---|---|---|---|
| **Project Name:** | NYSDEC/Tonawanda/NY/HighlandPkwy/215 | Date: | 6-21-19 |
| **Project Address:** | 215 Highland Parkway, Tonawanda, NY | Sampler(s): | PC |
| **Project #/Phase/Task/Org:** | 0901703/02/206/1109 | Sampling Method: | Low Flow |

Well ID: MW-1
Well Diameter:
Initial Depth to Water (ft): 4.66
Depth to Bottom (ft): 23.3

Pump Type/Model: Geo Pump
Water Quality Meter Model/SN: YSI DO2 PRO
Date Meter Calibrated:

| Clock Time (24 Hour) | Depth to Water (ft) | Pump Rate (ml/min) | Purge Rate (ml/min) | Cumulative Volume Purged (Liters) | Temp. (°C) | Spec. Cond. (uS/cm or umhos/cm) | pH | ORP/Eh (mV) | DO (mg/L) | Turbidity (NTU) | Comments (Clear/Turbid, Sheen, Color, Well Dry) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1100 | 6.15 | | | | 18.9 | .201 | 8.50 | 98.9 | 5.47 | 44.17 | |
| 1110 | 11.3 | | | | 20.5 | .201 | 7.22 | 1050 | 5.62 | 46.10 | Dry Ready just tubing |
| 1130 | 13.85 | | | | 14.8 | 2.730 | 7.55 | 111.3 | 2.95 | 74.51 | |
| 1135 | ↓ | | | | 14.5 | 1.182 | 7.55 | 92.1 | 3.41 | 87.31 | |
| 1140 | | | | | 14.6 | 1.715 | 7.34 | 102.7 | 4.50 | 66.02 | |
| 1145 | | | | | 14.7 | 1.982 | 7.32 | 107.3 | 5.13 | 63.91 | |
| 1150 | | | | | 14.7 | 1.987 | 7.32 | 103.1 | 5.12 | 62.10 | |
| 1155 | ↓ | | | | 14.7 | 1.984 | 7.33 | 107.2 | 5.17 | 62.01 | |
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**Stabilization Target Ranges:**
Temp: +/- 3%
Specific Conductivity: +/- 3%
pH: +/- 0.1 units
ORP/EH: +/- 10 mv
DO: +/- 10%
Turbidity: +/- 10% for >1 NTU

**Target Range Achieved? (Y/N)**

Comments: 2gal purged ~~it~~ and well went dry Samples collected @ 1200

Page _____ OF _____

# LOW FLOW SAMPLING LOG

TASK : Groundwater Monitoring & Sampling

| | | | |
|---|---|---|---|
| Project Name: | NYSDEC/Tonawanda/NY/HighlandPkwy/215 | PSID | 785876 |
| Project Address: | 215 Highland Parkway, Tonawanda, NY | Date: | 6-21-19 |
| Project #/Phase/Task/Org: | 0901703/02/206/1109 | Sampler(s): | PC |
| | | Sampling Method: | |

Well ID: MW-2
Well Diameter:
Initial Depth to Water (ft): 3.22
Depth to Bottom (ft): 23.3

Pump Type/ Model:
Water Quality Meter Model/SN:
Date Meter Calibrated:

| Clock Time (24 Hour) | Depth to Water (ft) | Pump Rate (ml/min) | Purge Rate (ml/min) | Cumulative Volume Purged (Liters) | Temp. (°C) | Spec. Cond. (uS/cm or umhos/cm) | pH | ORP/Eh (mV) | DO (mg/L) | Turbidity (NTU) | Comments (Clear/Turbid, Sheen, Color, Well Dry) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1235 | 5.33 | | | | 15.6 | 1.407 | 7.64 | 142.4 | 4.08 | 48.51 | |
| 1240 | 6.66 | | | | 14.9 | 1.385 | 7.35 | 137.7 | 2.16 | 9.23 | |
| 1245 | 8.81 | | | | 14.7 | 1.387 | 7.29 | 131.7 | 2.09 | 9.21 | |
| 1250 | 15.27 | | | | 15.1 | 1.386 | 7.26 | 123.0 | 2.18 | 4.12 | |
| 1255 | 19.12 | | | | 15.7 | 1.420 | 7.27 | 117.1 | 2.48 | 29.92 | |
| 1300 | 22.17 | | | | 15.5 | 1.414 | 7.27 | 114.8 | 2.41 | 29.98 | |
| 1305 | " | | | | 15.5 | 1.414 | 7.28 | 111.8 | 2.42 | 28.97 | |
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**Stabilization Target Ranges:**
Temp: +/- 3%
Specific Conductivity: +/- 3%
pH: +/- 0.1 units
ORP/EH: +/- 10 mv
DO: +/- 10%
Turbidity: +/- 10% for >1 NTU

Target Range Achieved? (Y/N)

Comments: Sampled @ 1310
Teal purged
Dup collected

# LOW FLOW SAMPLING LOG

TASK : **Groundwater Monitoring & Sampling**

| | | | |
|---|---|---|---|
| **Project Name:** | NYSDEC/Tonawanda/NY/HighlandPkwy/215 | PSID | 785876 |
| **Project Address:** | 215 Highland Parkway, Tonawanda, NY | Date: | |
| **Project #/Phase/Task/Org:** | 0901703/02/206/1109 | Sampler(s): | |
| | | Sampling Method: | |

Well ID: MW-3
Well Diameter:
Initial Depth to Water (ft): 5.41
Depth to Bottom (ft): 23.30

Pump Type/Model:
Water Quality Meter Model/SN:
Date Meter Calibrated:

| Clock Time (24 Hour) | Depth to Water (ft) | Pump Rate (ml/min) | Purge Rate (ml/min) | Cumulative Volume Purged (Liters) | Temp. (°C) | Spec. Cond. (uS/cm or umhos/cm) | pH | ORP/Eh (mV) | DO (mg/L) | Turbidity (NTU) | Comments (Clear/Turbid, Sheen, Color, Well Dry) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1320 | 8.21 | | | | 19.7 | 1.536 | 7.65 | 148.1 | 4.23 | 1270.4 | |
| 1325 | 15.42 | | | | 14.1 | 1.485 | 7.32 | 130.1 | 0.19 | 289 | |
| 1330 | — | | | | 14.2 | 1.472 | 7.31 | 132.9 | 2.17 | 281 | |
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**Stabilization Target Ranges:** | **Target Range Achieved? (Y/N)**

Temp: +/- 3%
Specific Conductivity: +/- 3%
pH: +/- 0.1 units
ORP/EH: +/- 10 mv
DO: +/- 10%
Turbidity: +/- 10% for >1 NTU

Comments: Well dry @ .5 gal sampled @ 1335
MS MSD Collected

Page _____ OF _____

# LOW FLOW SAMPLING LOG

TASK : Groundwater Monitoring & Sampling

| | | | |
|---|---|---|---|
| Project Name: | NYSDEC/Tonawanda/NY/HighlandPkwy/215 | PSID | 785876 |
| Project Address: | 215 Highland Parkway, Tonawanda, NY | Date: | |
| Project #/Phase/Task/Org: | 0901703/02/206/1109 | Sampler(s): | |
| | | Sampling Method: | |

Well ID: MW-54
Well Diameter:
Initial Depth to Water (ft): 7.19
Depth to Bottom (ft): 20.48

Pump Type/ Model:
Water Quality Meter Model/SN:
Date Meter Calibrated:

| Clock Time (24 Hour) | Depth to Water (ft) | Pump Rate (ml/min) | Purge Rate (ml/min) | Cumulative Volume Purged (Liters) | Temp. (°C) | Spec. Cond. (uS/cm or umhos/cm) | pH | ORP/Eh (mV) | DO (mg/L) | Turbidity (NTU) | Comments (Clear/Turbid, Sheen, Color, Well Dry) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1320 | 7.21 | | | | 14.9 | 1.346 | 8.01 | 145.1 | 5.06 | 82.27 | |
| 1325 | 9.43 | | | | 12.2 | 1.307 | 7.51 | 113.1 | 2.37 | 12.54 | |
| 1330 | 14.81 | | | | 11.9 | 1.254 | 7.44 | 94.3 | 3.44 | 40.96 | |
| 1335 | 17.22 | | | | 11.8 | 1.158 | 7.37 | 100.5 | 3.43 | 83.00 | |
| 1340 | | | | | 14.4 | 1.199 | 7.47 | 96.8 | 8.80 | 44.04 | |

**Stabilization Target Ranges:**
Temp: +/- 3%
Specific Conductivity: +/- 3%
pH: +/- 0.1 units
ORP/EH: +/- 10 mv
DO: +/- 10%
Turbidity: +/- 10% for >1 NTU

Target Range Achieved? (Y/N)

Comments: Well Dry @ 1340, let recharge & sampled @ 1500

Page _____ OF _____

# LOW FLOW SAMPLING LOG

TASK : **Groundwater Monitoring & Sampling**

| | | | |
|---|---|---|---|
| **Project Name:** | NYSDEC/Tonawanda/NY/HighlandPkwy/215 | PSID | 785876 |
| **Project Address:** | 215 Highland Parkway, Tonawanda, NY | Date: | |
| **Project #/Phase/Task/Org:** | 0901703/02/206/1109 | Sampler(s): | |
| | | Sampling Method: | |

Well ID: MW-5
Well Diameter:
Initial Depth to Water (ft): 7.05
Depth to Bottom (ft): 33.51

Pump Type/Model:
Water Quality Meter Model/SN:
Date Meter Calibrated:

| Clock Time (24 Hour) | Depth to Water (ft) | Pump Rate (ml/min) | Purge Rate (ml/min) | Cumulative Volume Purged (Liters) | Temp. (°C) | Spec. Cond. (uS/cm or umhos/cm) | pH | ORP/Eh (mV) | DO (mg/L) | Turbidity (NTU) | Comments (Clear/Turbid, Sheen, Color, Well Dry) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1435 | 7.21 | | | | 12.6 | 1.052 | 8.38 | 103.8 | 2.66 | 160.97 | |
| 1440 | 12.10 | | | | 12.1 | 0.742 | 9.69 | 47.2 | 3.05 | 96.15 | |
| 1445 | 17.41 | | | | 12.6 | .560 | 7.53 | 103.7 | 3.83 | 211.31 | |
| 1450 | — | | | | 12.1 | .845 | 7.38 | 108.5 | 4.05 | 343.25 | |

**Stabilization Target Ranges:**
Temp: +/- 3%
Specific Conductivity: +/- 3%
pH: +/- 0.1 units
ORP/EH: +/- 10 mv
DO: +/- 10%
Turbidity: +/- 10% for >1 NTU

**Target Range Achieved? (Y/N)**

Comments: Well Dry @ 1450 stopped & let recharge before collecting sample

Page _____ OF _____

# Appendix D – Waste Manifest

| NON-HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Waste Tracking Number |
|---|---|---|---|---|
| | | 1 | 800-535-5053 | 31571 |

**GENERATOR**

5. Generator's Name and Mailing Address
NYSDEC Region 9 Highland Plaza
215 Highland Parkway
Tonawanda, NY 14150
Generator's Phone: 800.287.7857

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Environmental Service Group, Inc 716.695.6720 — U.S. EPA ID Number: NYD986903904

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
American Recyclers Company
177 Wales Avenue
Tonawanda, NY 14150
Facility's Phone: 716.695.6720 — U.S. EPA ID Number: NYR000030809

| | 9. Waste Shipping Name and Description | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | |
|---|---|---|---|---|---|---|
| 1. | Non RCRA Non DOT Regulated, (Soil Cuttings) | 002 | DM | 1000 | P | EST |
| 2. | Non RCRA Non DOT Regulated , -, (Ground Water) | 001 | DM | 55 | G | |
| 3. | | | | | | |
| 4. | | | | | | |

13. Special Handling Instructions and Additional Information

| ERG: | Approval #: | Handling Codes: | 24 Hour Emergency Contact: |
|---|---|---|---|
| 1 - | 1 - A-15532IN | 1 - None | INFOTRAC (Caller Must ID |
| 2 - | 2 - H-15533IN | 2 - None | ESG) |
| 3 - | 3 - | 3 - | |
| 4 - | 4 - | 4 - | |

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: X Patrick Colern — Signature: Patrick OBONYSDEC — Month: 8 — Day: 15 — Year: 19

**INT'L**

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. — Port of entry/exit:
Transporter Signature (for exports only): — Date leaving U.S.:

**TRANSPORTER**

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: JAMES FEDESON — Signature: James Fed — Month: 08 — Day: 15 — Year: 19

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month — Day — Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Julian Mastropoli — Signature — Month: 08 — Day: 15 — Year: 19

DESIGNATED FACILITY TO GENERATOR