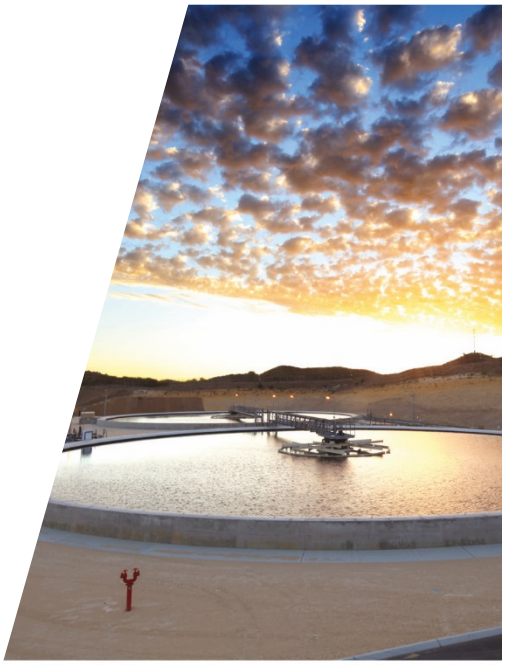
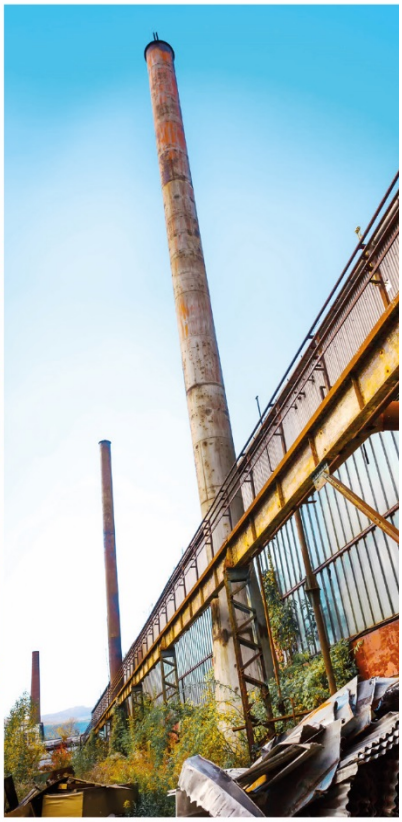


# 2018 Sampling and Analysis Report

Lockport City Landfill
NYSDEC Site No. 9-32-010



## City of Lockport, New York
## Department of Public Works

# Table of Contents

1. Introduction ..... 1
2. Site Inspection ..... 1

# Figure Index

Figure 1 Site Plan

# Table Index

Table 1 Groundwater Analytical Test Results

# Appendix Index

Appendix A Groundwater Field Sampling Logs
Appendix B Analytical Test Results
Appendix C IC-EC Certification

# 1. Introduction

The Lockport City Landfill site is located on Oakhurst Street in the City of Lockport, Niagara County, New York. The landfill, assigned the Site Registry Number 9-32-010, is the subject of this report.

The Remedial Action Design, as approved by the New York State Department of Environmental Conservation (NYSDEC) for the site, included a Long-Term Monitoring Plan and Operation and Maintenance Plan. The purpose of the Long-Term Monitoring Plan is to provide information to evaluate and monitor the long-term effectiveness of the remedial work. The Operation and Maintenance Plan includes regular site inspections and analytical testing to identify any potential problems at the landfill that are not being adequately addressed by routine maintenance, and to document the current condition of the landfill. A site plan of the Lockport City Landfill is presented on Figure 1.

The Long-Term Monitoring Program started in 1997; six (6) events were conducted in the first 5 years (two events in 1997 and one event per year afterwards). This is the 2nd landfill monitoring event of the 3rd Long-Term Monitoring Program contract dated February 14, 2017 between GHD Consulting Services Inc. and the City of Lockport. The present contract includes 5 years of service, with the last year of service scheduled for 2021. The purpose of this report is to present the findings of the 22nd sampling event conducted at the Lockport City Landfill on October 1, 2018.

# 2. Long-Term Monitoring

In accordance with the NYSDEC approved Long-Term Monitoring Plan, and included in the Operation and Maintenance Plan, four (4) groundwater wells were sampled by GHD Consulting Services Inc. on October 1, 2018. During sampling of groundwater at Monitoring Well MW-6D, due to a negligible amount of water in the well, groundwater was not tested. Historically, Monitoring Well MW-6D has not been sampled due to lack of available groundwater present at the time of sampling. The outfall that has been sampled in the past was not sampled during the 2018 sampling event due to no flow of water. The outfall pipe was cut and capped in 2018.

The samples were delivered to Pace Analytical, 12065 Lebanon Road, Mt. Juliet, Tennessee 37122, and analyzed for Target Compound List (TCL) VOCs by United States Environmental Protection Agency (USEPA) CLP Statement of Work (SOW) OLM04.2.

Groundwater Field Sampling Logs are presented in Appendix A and Analytical Test Results are provided in Appendix B. Table 1 summarizes analytical testing data from groundwater samples collected from monitoring wells and the outfall for the past 22 years.

Groundwater sampling and analytical testing is presented for the monitoring years of 1997 through 2018. The established action levels for Monitoring Wells MW-8D, MW-9S and MW-9I, and Outfall L2 are noted on Table 1. Analytical test results presented on Table 1 indicate that there were no exceedances detected above the report action levels. Since exceedances did not occur, contingent sampling and analysis are not required. The next sampling event will be scheduled for September 2019 representing year 23 of the Long-Term Monitoring Plan.

In past reporting, 1,2-Dichloroethene (total) was reported in years 1997-2006 as the sum of the detected concentrations of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene. Reporting in 2007 was the first year GHD conducted sampling and reporting. For purposes of presenting the analytical test results in a more definitive manner, analytical test results for reporting years 2007 through 2018 are reported to include detected concentrations of cis-1,2-Dichloroethene and not reported as concentrations of 1,2-Dichloroethene (total).

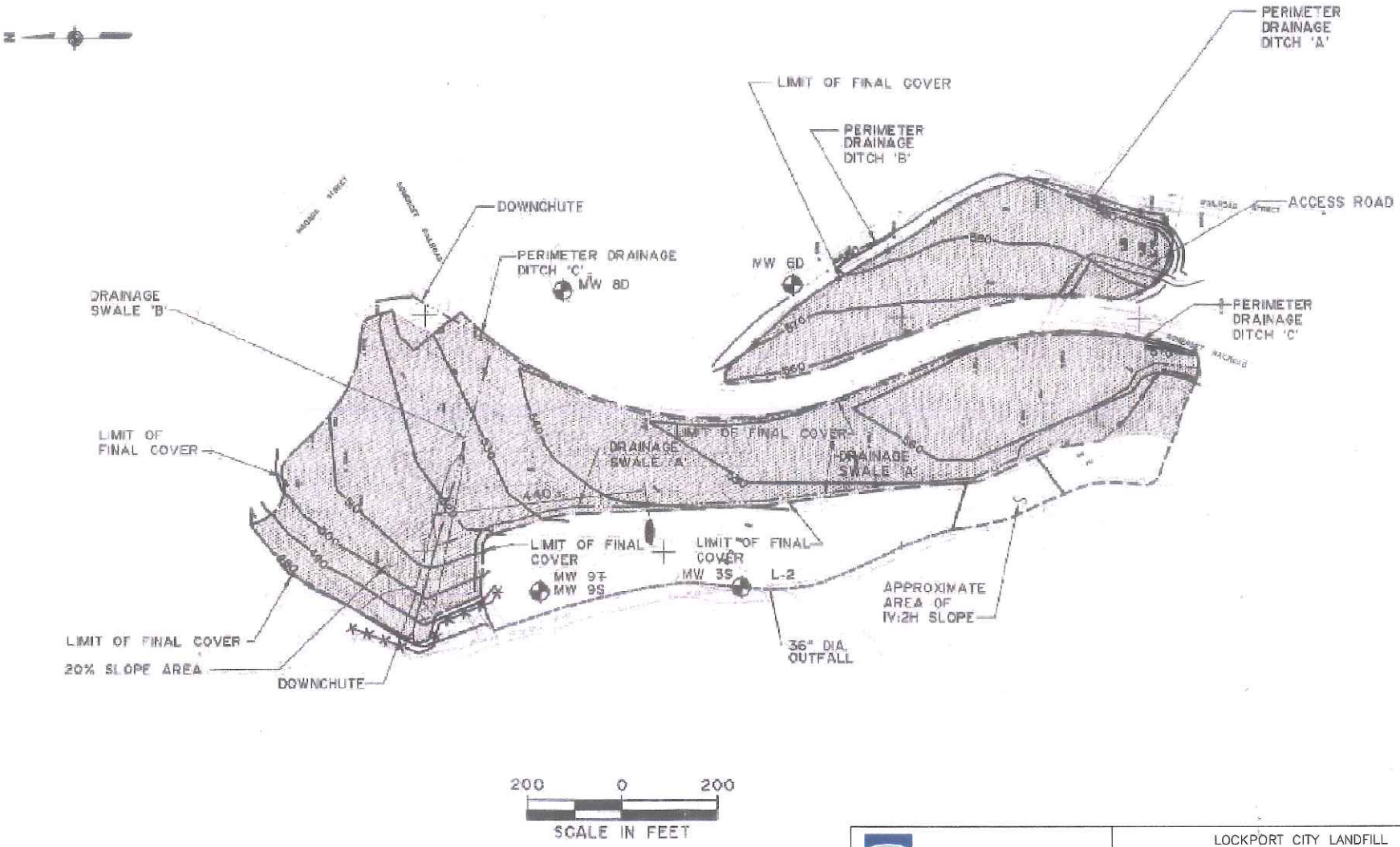
In 2015, volatile organic analytical test results detected concentrations of Carton Disulfide and 1,1-Dichloroethane in Groundwater sampled from Monitoring Well MW-3S. As reported in 2016 and 2017, Carbon Disulfide and 1,1-Dichloroethane were not detected and reported as non-detectable results in groundwater sampled from Monitoring Well MW-3S. In 2018, volatile organic analytical test results detected concentrations of vinyl chloride, 1,1-Dichloroethane, cis-1,2-Dichloroethene in groundwater sampled from Monitoring Well MW-3S.

In 2017, volatile organic analytical test results detected concentrations of Toluene in groundwater sampled from Monitoring Well MW-6D for the first time since initiating the Long-Term Monitoring Program. It should be noted that historically, Monitoring Well MW-6D has not been sampled in the past due to lack of available groundwater present at the time of sampling. In 2018, purging the well was not completed due to the lack of available groundwater. Samples were not collected from the minimal amount of water that was present in the well at the time of sampling.

In 2018, the volatile organic analytical test results detected concentrations of cis-1,2-Dichloroethene in groundwater sampled from Monitoring Wells MW-3S, MW-8D, and MW-9I. Non-detectable test results were reported from groundwater sampled from Monitoring Wells MW-3S and MW-9S.

The outfall pipe was cut and capped in 2018. No water was available for sampling at Outfall L-2.

# Figures

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LOCKPORT CITY LANDFILL
LOCKPORT, NEW YORK
CITY OF LOCKPORT

FIGURE 1
SITE PLAN

# Tables

**TABLE 1**
**MONITORING WELL 3S**
**GROUNDWATER ANALYTICAL TEST RESULTS**
**LOCKPORT CITY LANDFILL**

| Volatile Compounds | Units | Action Level | Jun-97 | Nov-97 | Sep-98 | Sep-99 | Sep-00 | Sep-01 | Oct-02 | Dec-03 | Oct-04 | Oct-05 | Oct-06 | Oct-07 | Oct-08 | Oct-09 | Oct-10 | Oct-11 | Oct-12 | Oct-13 | Oct-14 | Oct-15 | Oct-16 | Oct-17 | Oct-18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloromethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Vinyl chloride | µg/L | NS | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | 1.17 |
| Bromomethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Chloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Acetone | µg/L | NS | U | U | U | U | U | U | U | U | U | U | 6 J | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1-Dichloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Carbon disulfide | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | 1.2 | 1.1 | U | U | U |
| Methylene chloride | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,2-Dichloroethene (total) | µg/L | NS | U | U | U | U | U | U | U | U | U | U | U | - | - | - | - | - | - | - | - | - | - | - | - |
| trans-1, 2-Dichloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1-Dichloroethane | µg/L | NS | U | U | U | U | U | U | U | U | U | 1 J | U | U | 3J | 2J | 3J | 2.8 J | U | 1.8 | 1.4 | 1.6 | U | U | 2.5 |
| 2-Butanone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| cis-1,2-Dichloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | 4 J | 3J | 2J | 4J | 3.2 J | U | U | U | U | U | U | 1.8 |
| Chloroform | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1,1-Trichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Carbon tetrachloride | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Benzene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,2-Dichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Trichloroethene | µg/L | NS | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,2-Dichloropropane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Bromodichloromethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 4-Methyl-2-pentanone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| cis-1,3-Dichloropropene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Toluene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| trans-1,3-Dichloropropene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1,2-Trichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 2-Hexanone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Tetrachloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Dibromochloromethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Chlorobenzene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Ethylbenzene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| m,p-Xylene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| o-Xylene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Styrene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Bromoform | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1,2,2-Tetrachloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |

**Notes:**

VOC analysis by USEPA CLP SOW OLM04.2

U = not detected above the quantitation limit

J = estimated concentration

NS = no standard

- = not sampled

1,2-Dichloroethene (Total) is reported in years (1997-2006) as the sum of the detected concentrations of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene

**TABLE 1 (Cont'd)**
**MONITORING WELL 6D**
**GROUNDWATER ANALYTICAL RESULTS**
**LOCKPORT CITY LANDFILL**

| Volatile Compounds | Units | Action Level | Jun-97 | Nov-97 | Sep-98 | Sep-99 | Sep-00 | Sep-01 | Oct-02 | Dec-03 | Oct-04 | Oct-05 | Oct-06 | Oct-07 | Oct-08 | Oct-09 | Oct-10 | Oct-11 | Oct-12 | Oct-13 | Oct-14 | Oct-15 | Oct-16 | Oct-17 | Oct-18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloromethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| Vinyl chloride | µg/L | NS | U | U | U | U | U | U | U | U | U | U | U | - | - | - | - | - | - | U | U | U | - | U | - |
| Bromomethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| Chloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| Acetone | µg/L | NS | U | U | U | U | U | U | U | U | U | 2 J | 16 | - | - | - | - | - | - | U | U | U | - | U | - |
| 1,1-Dichloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| Carbon disulfide | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| Methylene chloride | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| 1,2-Dichloroethene (total) | µg/L | NS | U | U | U | U | U | U | U | U | U | U | U | - | - | - | - | - | - | - | - | - | - | - | - |
| trans-1, 2-Dichloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| 1,1-Dichloroethane | µg/L | NS | U | U | U | U | U | U | U | U | U | U | U | - | - | - | - | - | - | U | U | U | - | U | - |
| 2-Butanone | µg/L | NS | U | U | U | U | U | U | U | U | U | U | 1 J | - | - | - | - | - | - | U | U | U | - | U | - |
| cis-1,2-Dichloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| Chloroform | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| 1,1,1-Trichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| Carbon tetrachloride | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| Benzene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| 1,2-Dichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| Trichloroethene | µg/L | NS | U | U | U | U | U | U | U | U | U | U | U | - | - | - | - | - | - | U | U | U | - | U | - |
| 1,2-Dichloropropane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| Bromodichloromethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| 4-Methyl-2-pentanone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| cis-1,3-Dichloropropene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| Toluene | µg/L | NS | U | U | U | U | U | U | U | U | U | 2 J | 2 J | - | - | - | - | - | - | U | U | U | - | 1.62 | - |
| trans-1,3-Dichloropropene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| 1,1,2-Trichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| 2-Hexanone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| Tetrachloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| Dibromochloromethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| Chlorobenzene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| Ethylbenzene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| Xylene (Total) | µg/L | NS | U | U | U | U | U | U | U | U | U | U | U | - | - | - | - | - | - | U | U | U | - | U | - |
| Styrene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| Bromoform | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |
| 1,1,2,2-Tetrachloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | U | U | U | - | U | - |

**Notes:**
VOC analysis by USEPA CLP SOW OLM04.2
U = not detected above the quantitation limit
J = estimated concentration
- = not sampled
NS = no standard
2007, 2008, 2009, 2010, 2011, 2012 : MW-6D not sampled due to dry conditions, no groundwater available

**TABLE 1 (Cont'd)**
**MONITORING WELL 8D**
**GROUNDWATER ANALYTICAL TEST RESULTS**
**LOCKPORT CITY LANDFILL**

| Volatile Compounds | Units | Action Level | Jun-97 | Nov-97 | Sep-98 | Sep-99 | Sep-00 | Sep-01 | Oct-02 | Dec-03 | Oct-04 | Oct-05 | Oct-06 | Oct-07 | Oct-08 | Oct-09 | Oct-10 | Oct-11 | Oct-12 | Oct-13 | Oct-14 | Oct-15 | Oct-16 | Oct-17 | Oct-18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloromethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Vinyl chloride | µg/L | 162 | U | U | U | U | U | 7 | 33 | 6 | 4 J | U | U | U | U | U | U | U | 11 | 11 | 2.1 | U | U | U | U |
| Bromomethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Chloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Acetone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1-Dichloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Carbon disulfide | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Methylene chloride | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,2-Dichloroethene (total) | µg/L | 1,580 | 100 | 90 | 110 | 18 | 25 | 41 | 120 | 7 | 28 | 27 J | 40 | - | - | - | - | - | - | - | - | - | - | - | - |
| trans-1, 2-Dichloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1-Dichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 2-Butanone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| cis-1,2-Dichloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | 32 | 34 | 26 | 23 | 24 | 65 | 26 | 21 | 22 | 20 | 9 | 19 |
| Chloroform | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1,1-Trichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Carbon tetrachloride | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Benzene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,2-Dichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Trichloroethene | µg/L | 260 | 2 | 4 | 5 | 2 | 2 | 2 | U | U | U | U | 1 J | U | U | U | U | 3.2 J | U | U | U | U | U | U | U |
| 1,2-Dichloropropane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Bromodichloromethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 4-Methyl-2-pentanone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| cis-1,3-Dichloropropene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Toluene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| trans-1,3-Dichloropropene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1,2-Trichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 2-Hexanone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Tetrachloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Dibromochloromethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Chlorobenzene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Ethylbenzene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| m,p-Xylene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| o-Xylene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Styrene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Bromoform | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1,2,2-Tetrachloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |

**Notes:**

VOC analysis by USEPA CLP SOW OLM04.2

U = not detected above the quantitation limit

J = estimated concentration

NS = no standard

- = not sampled

1,2-Dichloroethene (Total) is reported in years (1997-2006) as the sum of the detected concentrations of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene

**TABLE 1 (Cont'd)**
**MONITORING WELL 9S**
**GROUNDWATER ANALYTICAL TEST RESULTS**
**LOCKPORT CITY LANDFILL**

| Volatile Compounds | Units | Action Level | Jun-97 | Nov-97 | Sep-98 | Sep-99 | Sep-00 | Sep-01 | Oct-02 | Dec-03 | Oct-04 | Oct-05 | Oct-06 | Oct-07 | Oct-08 | Oct-09 | Oct-10 | Oct-11 | Oct-12 | Oct-13 | Oct-14 | Oct-15 | Oct-16 | Oct-17 | Oct-18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloromethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Vinyl chloride | µg/L | 162 | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U |
| Bromomethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Chloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Acetone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1-Dichloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Carbon disulfide | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Methylene chloride | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,2-Dichloroethene (total) | µg/L | 1,580 | U | U | U | U | U | U | U | U | U | U | U | - | - | - | - | - | - | - | - | - | - | - | - |
| trans-1, 2-Dichloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1-Dichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 2-Butanone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| cis-1,2-Dichloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | 2 | U | U | U | U |
| Chloroform | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1,1-Trichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Carbon tetrachloride | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Benzene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,2-Dichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Trichloroethene | µg/L | 260 | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,2-Dichloropropane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Bromodichloromethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 4-Methyl-2-pentanone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| cis-1,3-Dichloropropene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Toluene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| trans-1,3-Dichloropropene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1,2-Trichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 2-Hexanone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Tetrachloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Dibromochloromethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Chlorobenzene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Ethylbenzene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| m,p-Xylene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| o-Xylene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Styrene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Bromoform | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1,2,2-Tetrachloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |

**Notes:**

VOC analysis by USEPA CLP SOW OLM04.2

U = not detected above the quantitation limit

J = estimated concentration

NS = no standard

- = not sampled

1,2-Dichloroethene (Total) is reported in years (1997-2006) as the sum of the detected concentrations of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene

**TABLE 1 (Cont'd)**
**MONITORING WELL 9I**
**GROUNDWATER ANALYTICAL TEST RESULTS**
**LOCKPORT CITY LANDFILL**

| Volatile Compounds | Units | Action Level | Jun-97 | Nov-97 | Sep-98 | Sep-99 | Sep-00 | Sep-01 | Oct-02 | Dec-03 | Oct-04 | Oct-05 | Oct-06 | Oct-07 | Oct-08 | Oct-09 | Oct-10 | Oct-11 | Oct-12 | Oct-13 | Oct-14 | Oct-15 | Oct-16 | Oct-17 | Oct-18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloromethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Vinyl chloride | µg/L | 24 | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U |
| Bromomethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Chloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Acetone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1-Dichloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Carbon disulfide | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Methylene chloride | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,2-Dichloroethene (total) | µg/L | 42 | 8.4 | 6 | 6 | 5 | 4 J | 4 J | 4 J | 4 J | 3 J | 3 J | 2 J | - | - | - | - | - | - | - | - | - | - | - | - |
| trans-1, 2-Dichloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1-Dichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 2-Butanone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| cis-1,2-Dichloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | 3 J | 2J | U | 2J | U | U | 1.3 | U | 1.8 | 1.9 | 1.4 | 1.8 |
| Chloroform | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1,1-Trichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Carbon tetrachloride | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Benzene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,2-Dichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Trichloroethene | µg/L | NS | 1.6 | 2 | 2 | 1 J | 1 J | 1 J | 1 J | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,2-Dichloropropane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Bromodichloromethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 4-Methyl-2-pentanone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| cis-1,3-Dichloropropene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Toluene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| trans-1,3-Dichloropropene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1,2-Trichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 2-Hexanone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Tetrachloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Dibromochloromethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Chlorobenzene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Ethylbenzene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| m,p-Xylene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| o-Xylene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Styrene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| Bromoform | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |
| 1,1,2,2-Tetrachloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | U |

**Notes:**

VOC analysis by USEPA CLP SOW OLM04.2

U = not detected above the quantitation limit

J = estimated concentration

NS = no standard

- = not sampled

1,2-Dichloroethene (Total) is reported in years (1997-2006) as the sum of the detected concentrations of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene

**TABLE 1 (Cont'd)**
**OUTFALL L-2**
**GROUNDWATER ANALYTICAL TEST RESULTS**
**LOCKPORT CITY LANDFILL**

| Volatile Compounds | Units | Action Level | Jun-97 | Nov-97 | Sep-98 | Sep-99 | Sep-00 | Sep-01 | Oct-02 | Dec-03 | Oct-04 | Oct-05 | Oct-06 | Oct-07 | Oct-08 | Oct-09 | Oct-10 | Oct-11 | Oct-12 | Oct-13 | Oct-14 | Oct-15 | Oct-16 | Oct-17 | Oct-18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloromethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| Vinyl chloride | µg/L | 94 | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | - |
| Bromomethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| Chloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| Acetone | µg/L | NS | U | U | U | U | U | U | U | U | U | 2 J | U | U | U | U | U | U | U | U | U | U | U | U | - |
| 1,1-Dichloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| Carbon disulfide | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| Methylene chloride | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| 1,2-Dichloroethene (total) | µg/L | 280 | U | 2 | U | U | U | U | U | U | U | U | U | - | - | - | - | - | - | - | - | - | - | - | - |
| trans-1, 2-Dichloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| 1,1-Dichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| 2-Butanone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| cis-1,2-Dichloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| Chloroform | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| 1,1,1-Trichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| Carbon tetrachloride | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| Benzene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| 1,2-Dichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| Trichloroethene | µg/L | NS | U | 3 | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | - |
| 1,2-Dichloropropane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| Bromodichloromethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| 4-Methyl-2-pentanone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| cis-1,3-Dichloropropene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| Toluene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| trans-1,3-Dichloropropene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| 1,1,2-Trichloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| 2-Hexanone | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| Tetrachloroethene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| Dibromochloromethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| Chlorobenzene | µg/L | NS | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | U | - |
| Ethylbenzene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| m,p-Xylene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| o-Xylene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| Styrene | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| Bromoform | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |
| 1,1,2,2-Tetrachloroethane | µg/L | NS | - | - | - | - | - | - | - | - | - | - | - | U | U | U | U | U | U | U | U | U | U | U | - |

**Notes:**

VOC analysis by USEPA CLP SOW OLM04.2

U = not detected above the quantitation limit

J = estimated concentration

NS = no standard

- = not sampled for

1,2-Dichloroethene (Total) is reported in years (1997-2006) as the sum of the detected concentrations of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene

# Appendices

# Appendix A
# Groundwater Sampling and Well Logs

**GHD INC.**
**GROUNDWATER FIELD SAMPLING RECORD**

SITE: Lockport City Landfill | DATE: 10/01/18

Sampler: Chad Johnson | SAMPLE ID: MW-8D

Depth of well (from top of casing)..... 76.64 ft
Initial static water level (from top of casing).... 72.3 ft

Evacuation Method:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Submersible | | Centrifugal | | 2in. casing: | 4.34 | ft. of water x .16 = | 0.69 gallons |
| Airlift | | Pos. Displ. | | 3in. casing: | | ft. of water x .36 = | gallons |
| Bailer | X | >>> No. of bails | | 4in. casing: | | ft. of water x .65 = | gallons |

Well Volume Calculation

Volume of water removed: 1.00 gals.

> 3 volumes: yes **no**

dry: **yes** no

Field Tests:

| | | |
|---|---|---|
| Temp: | 10.8 | C |
| pH | 5.89 | |
| Conductivity | 2.29 | mS/cm |
| DO | 6.81 | mg/l |
| Turbidity | N/A | NTUs |
| Salinity | 0.1 | % |

Sampling: Time: 12:53 pm

Sampling Method:

| | |
|---|---|
| Stainless Steel Bailer | |
| Disposable Bailer | X |
| Disposable Pump | |
| Other | |

Observations:

Weather/Temperature: Rain, overcast, 51°

Physical Appearance and Odor of Sample: Clear

Comments: Well purged dry after 1.0 gallons.
Well pad is intact and the stickup protective cover is in good condition.

**GHD INC.**
**GROUNDWATER FIELD SAMPLING RECORD**

SITE: Lockport City Landfill | DATE: 10/01/18

Sampler: Chad Johnson | SAMPLE ID: MW-6D

Depth of well (from top of casing)..... 77.12 ft
Initial static water level (from top of casing).... 77.1 ft

Evacuation Method:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Submersible | | Centrifugal | | 2in. casing: | 0.00 | ft. of water x .16 = | 0.00 gallons |
| Airlift | | Pos. Displ. | | 3in. casing: | | ft. of water x .36 = | gallons |
| Bailer | X | >>> No. of bails | | 4in. casing: | | ft. of water x .65 = | gallons |

Well Volume Calculation

Volume of water removed: 0.00 gals.

> 3 volumes: yes **no**

dry: **yes** no

Field Tests:

| | | |
|---|---|---|
| Temp: | | C |
| pH | | |
| Conductivity | | mS/cm |
| DO | | mg/l |
| Turbidity | | NTUs |
| Oxidation Reduction Potential(ORP) | | mV |
| Salinity | | % |

Sampling: Time: 1:23 pm

Sampling Method:

| | |
|---|---|
| Stainless Steel Bailer | |
| Disposable Bailer | X |
| Disposable Pump | |
| Other | |

Observations:

Weather/Temperature: Rain, 45°

Physical Appearance and Odor of Sample: Clear

Comments: Well was dry upon inspection, no water collected, samples could not be taken.
Well pad is intact and the stickup protective cover is in good condition.

**GHD INC.**
**GROUNDWATER FIELD SAMPLING RECORD**

SITE: Lockport City Landfill | DATE: 10/01/18

Sampler: Chad Johnson | SAMPLE ID: MW-9S

Depth of well (from top of casing)..... 12.3 ft
Initial static water level (from top of casing).... 7.1 ft

Evacuation Method:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Submersible | | Centrifugal | | 2in. casing: | 5.21 | ft. of water x .16 = | 0.83 gallons |
| Airlift | | Pos. Displ. | | 3in. casing: | | ft. of water x .36 = | gallons |
| Bailer | X | >>> No. of bails | | 4in. casing: | | ft. of water x .65 = | gallons |

Well Volume Calculation

Volume of water removed: 2.50 gals.

> 3 volumes: **yes** / no

dry: yes / **no**

Field Tests:

| | | |
|---|---|---|
| Temp: | 15.5 | C |
| pH | 5.66 | |
| Conductivity | 2.05 | mS/cm |
| DO | 5.05 | mg/l |
| Turbidity | N/A | NTUs |
| Salinity | 0.1 | % |

Sampling: Time: 11:35 am

Sampling Method:

| | |
|---|---|
| Stainless Steel Bailer | |
| Disposable Bailer | X |
| Disposable Pump | |
| Other | |

Observations:

Weather/Temperature: Rain, 45°

Physical Appearance and Odor of Sample: Light brown, then very turbid yellow, no odor.

Comments: Well pad is intact and the stickup protective cover is in good condition.

**GHD INC.**
**GROUNDWATER FIELD SAMPLING RECORD**

SITE: Lockport City Landfill — DATE: 10/01/18

Sampler: Chad Johnson — SAMPLE ID: MW-9I

Depth of well (from top of casing)..... 19.95 ft
Initial static water level (from top of casing).... 6.2 ft

Evacuation Method:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Submersible | | Centrifugal | | 2in. casing: | 13.75 | ft. of water x .16 = | 2.20 gallons |
| Airlift | | Pos. Displ. | | 3in. casing: | | ft. of water x .36 = | gallons |
| Bailer | X | >>> No. of bails | | 4in. casing: | | ft. of water x .65 = | gallons |

Well Volume Calculation

Volume of water removed: 6.60 gals.

> 3 volumes: **yes** / no

dry: yes / **no**

Field Tests:

| | | |
|---|---|---|
| Temp: | 13.08 | C |
| pH | 5.73 | |
| Conductivity | 1.72 | mS/cm |
| DO | 5.62 | mg/l |
| Turbidity | N/A | NTUs |
| Salinity | 0.1 | % |

Sampling: Time: 12:16 P.M.

Sampling Method:

| | |
|---|---|
| Stainless Steel Bailer | |
| Disposable Bailer | X |
| Disposable Pump | |
| Other | |

Observations:

Weather/Temperature: Rain, 51°

Physical Appearance and Odor of Sample: no odor, yellow, then mostly clear

Comments: Well pad is intact and the stickup protective cover is in good condition. No lock present on MW. Lock needs replacement.

**GHD INC.**
**GROUNDWATER FIELD SAMPLING RECORD**

SITE: Lockport City Landfill | DATE: 10/01/18

Sampler: Chad Johnson | SAMPLE ID: MW-3S

Depth of well (from top of casing)..... 13.2 ft
Initial static water level (from top of casing).... 3.6 ft

Evacuation Method:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Submersible | | Centrifugal | | 2in. casing: | 9.62 | ft. of water x .16 = | 1.54 gallons |
| Airlift | | Pos. Displ. | | 3in. casing: | | ft. of water x .36 = | gallons |
| Bailer | X | >>> No. of bails | | 4in. casing: | | ft. of water x .65 = | gallons |

Well Volume Calculation

Volume of water removed: 4.62 gals.

> 3 volumes: **yes** / no

dry: yes / **no**

Field Tests:

| | | |
|---|---|---|
| Temp: | 14.83 | C |
| pH | 5.78 | |
| Conductivity | 3.85 | mS/cm |
| DO | 3.41 | mg/l |
| Turbidity | N/A | NTUs |
| Salinity | 0.20 | % |

Sampling: Time: 10:45 am

Sampling Method:

| | |
|---|---|
| Stainless Steel Bailer | |
| Disposable Bailer | X |
| Disposable Pump | |
| Other | |

Observations:

Weather/Temperature: Rain, Overcast, 52°

Physical Appearance and Odor of Sample: No odor, reddish-brown color, then dark brown, then brown

Comments: No obstruction in well was encountered.
Debris around monitoring well. Well pad is intact and the stickup protective cover is in good condition.
There are two monitoring wells at this location. MW-3S should be more clearly identifiable with label.
Vegetation around wells should be removed for better access and visibility.

**GHD INC.**
**SURFACE WATER FIELD SAMPLING RECORD**

SITE Lockport City Landfill DATE 10/01/18

Samplers: Chad Johnson SAMPLE ID Outfall L-2

Sampling Method: **WATER COULD NOT BE COLLECTED**

| | | | |
|---|---|---|---|
| Submersible | | Centrifugal | |
| Airlift | | Pos. Displ. | |
| Bailer | | >>> No. of bails | |

Field Tests:

| | | |
|---|---|---|
| Temp: | | C |
| pH | | |
| Conductivity | | mS/cm |
| DO | | mg/l |
| Turbidity | | NTUs |
| Salinity | | % |

Sampling: Time: 9:30 am

Sampling Method:

| | |
|---|---|
| Stainless Steel Bailer | |
| Teflon Bailer | |
| Disposable Pump | |
| Other | |

Observations:

Weather/Temperature: Rain, overcast, 51°

Physical Appearance and Odor of Sample: No observable water

Comments: Outfall pipe was cut and plugged by City, no flow, water could not be collected or sampled.

# Appendix B
# Analytical Test Results

Pace Analytical®
National Center for Testing & Innovation

# ANALYTICAL REPORT

October 05, 2018

## GHD

| | |
|---|---|
| Sample Delivery Group: | L1030910 |
| Samples Received: | 10/02/2018 |
| Project Number: | 8612191-01- |
| Description: | Lockport Landfill |
| Site: | LANDFILL |
| Report To: | Mr. Dave Rowlinson<br>285 Delaware Ave.<br>Suite 500<br>Buffalo, NY 14202 |

Entire Report Reviewed By:

T. Alan Harvill
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

# TABLE OF CONTENTS




Cp: Cover Page 1

Tc: Table of Contents 2

Ss: Sample Summary 3

Cn: Case Narrative 4

Sr: Sample Results 5

MW-9S L1030910-01 5

MW-9I L1030910-02 6

MW-3S L1030910-03 7

MW-8D L1030910-04 8

TRIP BLANK L1030910-05 9

Qc: Quality Control Summary 10

Volatile Organic Compounds (GC/MS) by Method 8260C 10

Gl: Glossary of Terms 13

Al: Accreditations & Locations 14

Sc: Sample Chain of Custody 15

## MW-9S L1030910-01 GW

Collected by: Chad Johnson | Collected date/time: 10/01/18 11:35 | Received date/time: 10/02/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260C | WG1175758 | 1 | 10/04/18 14:37 | 10/04/18 14:37 | DWR |

## MW-9I L1030910-02 GW

Collected by: Chad Johnson | Collected date/time: 10/01/18 12:16 | Received date/time: 10/02/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260C | WG1175758 | 1 | 10/04/18 14:57 | 10/04/18 14:57 | DWR |

## MW-3S L1030910-03 GW

Collected by: Chad Johnson | Collected date/time: 10/01/18 10:45 | Received date/time: 10/02/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260C | WG1175758 | 1 | 10/04/18 15:18 | 10/04/18 15:18 | DWR |

## MW-8D L1030910-04 GW

Collected by: Chad Johnson | Collected date/time: 10/01/18 12:53 | Received date/time: 10/02/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260C | WG1175758 | 1 | 10/04/18 15:38 | 10/04/18 15:38 | DWR |

## TRIP BLANK L1030910-05 GW

Collected by: Chad Johnson | Collected date/time: 10/01/18 00:00 | Received date/time: 10/02/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260C | WG1175758 | 1 | 10/04/18 11:16 | 10/04/18 11:16 | BMB |

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

T. Alan Harvill
Project Manager

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

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 10/04/2018 14:37 | WG1175758 |
| Benzene | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Bromochloromethane | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Bromodichloromethane | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Bromoform | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Bromomethane | ND | | 5.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Carbon disulfide | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Chlorobenzene | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Chloroethane | ND | | 5.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Chloroform | ND | | 5.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Chloromethane | ND | | 2.50 | 1 | 10/04/2018 14:37 | WG1175758 |
| Cyclohexane | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| 1,1-Dichloroethene | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| cis-1,2-Dichloroethene | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Ethylbenzene | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| 2-Hexanone | ND | | 10.0 | 1 | 10/04/2018 14:37 | WG1175758 |
| Isopropylbenzene | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 10/04/2018 14:37 | WG1175758 |
| Methyl Acetate | ND | | 20.0 | 1 | 10/04/2018 14:37 | WG1175758 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Methylene Chloride | ND | | 5.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 10/04/2018 14:37 | WG1175758 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Styrene | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Tetrachloroethene | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Toluene | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Trichloroethene | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Vinyl chloride | ND | | 1.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| Xylenes, Total | ND | | 3.00 | 1 | 10/04/2018 14:37 | WG1175758 |
| *(S) Toluene-d8* | *106* | | *80.0-120* | | *10/04/2018 14:37* | WG1175758 |
| *(S) Dibromofluoromethane* | *102* | | *75.0-120* | | *10/04/2018 14:37* | WG1175758 |
| *(S) a,a,a-Trifluorotoluene* | *104* | | *80.0-120* | | *10/04/2018 14:37* | WG1175758 |
| *(S) 4-Bromofluorobenzene* | *92.8* | | *77.0-126* | | *10/04/2018 14:37* | WG1175758 |

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

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 10/04/2018 14:57 | WG1175758 |
| Benzene | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Bromochloromethane | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Bromodichloromethane | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Bromoform | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Bromomethane | ND | | 5.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Carbon disulfide | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Chlorobenzene | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Chloroethane | ND | | 5.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Chloroform | ND | | 5.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Chloromethane | ND | | 2.50 | 1 | 10/04/2018 14:57 | WG1175758 |
| Cyclohexane | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| 1,1-Dichloroethene | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| cis-1,2-Dichloroethene | 1.79 | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Ethylbenzene | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| 2-Hexanone | ND | | 10.0 | 1 | 10/04/2018 14:57 | WG1175758 |
| Isopropylbenzene | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 10/04/2018 14:57 | WG1175758 |
| Methyl Acetate | ND | | 20.0 | 1 | 10/04/2018 14:57 | WG1175758 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Methylene Chloride | ND | | 5.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 10/04/2018 14:57 | WG1175758 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Styrene | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Tetrachloroethene | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Toluene | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Trichloroethene | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Vinyl chloride | ND | | 1.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| Xylenes, Total | ND | | 3.00 | 1 | 10/04/2018 14:57 | WG1175758 |
| *(S) Toluene-d8* | *111* | | *80.0-120* | | *10/04/2018 14:57* | WG1175758 |
| *(S) Dibromofluoromethane* | *104* | | *75.0-120* | | *10/04/2018 14:57* | WG1175758 |
| *(S) a,a,a-Trifluorotoluene* | *104* | | *80.0-120* | | *10/04/2018 14:57* | WG1175758 |
| *(S) 4-Bromofluorobenzene* | *95.5* | | *77.0-126* | | *10/04/2018 14:57* | WG1175758 |

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

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 10/04/2018 15:18 | WG1175758 |
| Benzene | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Bromochloromethane | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Bromodichloromethane | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Bromoform | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Bromomethane | ND | | 5.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Carbon disulfide | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Chlorobenzene | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Chloroethane | ND | | 5.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Chloroform | ND | | 5.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Chloromethane | ND | | 2.50 | 1 | 10/04/2018 15:18 | WG1175758 |
| Cyclohexane | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| 1,1-Dichloroethane | 2.52 | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| 1,1-Dichloroethene | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| cis-1,2-Dichloroethene | 1.84 | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Ethylbenzene | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| 2-Hexanone | ND | | 10.0 | 1 | 10/04/2018 15:18 | WG1175758 |
| Isopropylbenzene | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 10/04/2018 15:18 | WG1175758 |
| Methyl Acetate | ND | | 20.0 | 1 | 10/04/2018 15:18 | WG1175758 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Methylene Chloride | ND | | 5.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 10/04/2018 15:18 | WG1175758 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Styrene | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Tetrachloroethene | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Toluene | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Trichloroethene | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Vinyl chloride | 1.17 | | 1.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| Xylenes, Total | ND | | 3.00 | 1 | 10/04/2018 15:18 | WG1175758 |
| *(S) Toluene-d8* | *99.9* | | *80.0-120* | | *10/04/2018 15:18* | WG1175758 |
| *(S) Dibromofluoromethane* | *104* | | *75.0-120* | | *10/04/2018 15:18* | WG1175758 |
| *(S) a,a,a-Trifluorotoluene* | *99.8* | | *80.0-120* | | *10/04/2018 15:18* | WG1175758 |
| *(S) 4-Bromofluorobenzene* | *102* | | *77.0-126* | | *10/04/2018 15:18* | WG1175758 |

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

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 10/04/2018 15:38 | WG1175758 |
| Benzene | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Bromochloromethane | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Bromodichloromethane | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Bromoform | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Bromomethane | ND | | 5.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Carbon disulfide | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Chlorobenzene | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Chloroethane | ND | | 5.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Chloroform | ND | | 5.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Chloromethane | ND | | 2.50 | 1 | 10/04/2018 15:38 | WG1175758 |
| Cyclohexane | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| 1,1-Dichloroethene | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| cis-1,2-Dichloroethene | 19.4 | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Ethylbenzene | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| 2-Hexanone | ND | | 10.0 | 1 | 10/04/2018 15:38 | WG1175758 |
| Isopropylbenzene | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 10/04/2018 15:38 | WG1175758 |
| Methyl Acetate | ND | | 20.0 | 1 | 10/04/2018 15:38 | WG1175758 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Methylene Chloride | ND | | 5.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 10/04/2018 15:38 | WG1175758 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Styrene | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Tetrachloroethene | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Toluene | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Trichloroethene | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Vinyl chloride | ND | | 1.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| Xylenes, Total | ND | | 3.00 | 1 | 10/04/2018 15:38 | WG1175758 |
| *(S) Toluene-d8* | *108* | | *80.0-120* | | *10/04/2018 15:38* | WG1175758 |
| *(S) Dibromofluoromethane* | *110* | | *75.0-120* | | *10/04/2018 15:38* | WG1175758 |
| *(S) a,a,a-Trifluorotoluene* | *105* | | *80.0-120* | | *10/04/2018 15:38* | WG1175758 |
| *(S) 4-Bromofluorobenzene* | *111* | | *77.0-126* | | *10/04/2018 15:38* | WG1175758 |

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

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 10/04/2018 11:16 | WG1175758 |
| Benzene | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Bromochloromethane | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Bromodichloromethane | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Bromoform | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Bromomethane | ND | | 5.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Carbon disulfide | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Chlorobenzene | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Chloroethane | ND | | 5.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Chloroform | ND | | 5.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Chloromethane | ND | | 2.50 | 1 | 10/04/2018 11:16 | WG1175758 |
| Cyclohexane | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| 1,1-Dichloroethene | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| cis-1,2-Dichloroethene | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Ethylbenzene | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| 2-Hexanone | ND | | 10.0 | 1 | 10/04/2018 11:16 | WG1175758 |
| Isopropylbenzene | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 10/04/2018 11:16 | WG1175758 |
| Methyl Acetate | ND | | 20.0 | 1 | 10/04/2018 11:16 | WG1175758 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Methylene Chloride | ND | | 5.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 10/04/2018 11:16 | WG1175758 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Styrene | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Tetrachloroethene | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Toluene | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Trichloroethene | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Vinyl chloride | ND | | 1.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| Xylenes, Total | ND | | 3.00 | 1 | 10/04/2018 11:16 | WG1175758 |
| *(S) Toluene-d8* | *97.9* | | *80.0-120* | | *10/04/2018 11:16* | WG1175758 |
| *(S) Dibromofluoromethane* | *106* | | *75.0-120* | | *10/04/2018 11:16* | WG1175758 |
| *(S) a,a,a-Trifluorotoluene* | *91.7* | | *80.0-120* | | *10/04/2018 11:16* | WG1175758 |
| *(S) 4-Bromofluorobenzene* | *92.0* | | *77.0-126* | | *10/04/2018 11:16* | WG1175758 |

## Method Blank (MB)

(MB) R3347782-3 10/04/18 10:36

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Acetone | U | | 10.0 | 50.0 |
| Benzene | U | | 0.331 | 1.00 |
| Bromodichloromethane | U | | 0.380 | 1.00 |
| Bromochloromethane | U | | 0.520 | 1.00 |
| Bromoform | U | | 0.469 | 1.00 |
| Bromomethane | U | | 0.866 | 5.00 |
| Carbon disulfide | U | | 0.275 | 1.00 |
| Carbon tetrachloride | U | | 0.379 | 1.00 |
| Chlorobenzene | U | | 0.348 | 1.00 |
| Chlorodibromomethane | U | | 0.327 | 1.00 |
| Chloroethane | U | | 0.453 | 5.00 |
| Chloroform | U | | 0.324 | 5.00 |
| Chloromethane | U | | 0.276 | 2.50 |
| Cyclohexane | U | | 0.390 | 1.00 |
| 1,2-Dibromo-3-Chloropropane | U | | 1.33 | 5.00 |
| 1,2-Dibromoethane | U | | 0.381 | 1.00 |
| 1,2-Dichlorobenzene | U | | 0.349 | 1.00 |
| 1,3-Dichlorobenzene | U | | 0.220 | 1.00 |
| 1,4-Dichlorobenzene | U | | 0.274 | 1.00 |
| Dichlorodifluoromethane | U | | 0.551 | 5.00 |
| 1,1-Dichloroethane | U | | 0.259 | 1.00 |
| 1,2-Dichloroethane | U | | 0.361 | 1.00 |
| 1,1-Dichloroethene | U | | 0.398 | 1.00 |
| cis-1,2-Dichloroethene | U | | 0.260 | 1.00 |
| trans-1,2-Dichloroethene | U | | 0.396 | 1.00 |
| 1,2-Dichloropropane | U | | 0.306 | 1.00 |
| cis-1,3-Dichloropropene | U | | 0.418 | 1.00 |
| trans-1,3-Dichloropropene | U | | 0.419 | 1.00 |
| Ethylbenzene | U | | 0.384 | 1.00 |
| 2-Hexanone | U | | 3.82 | 10.0 |
| Isopropylbenzene | U | | 0.326 | 1.00 |
| 2-Butanone (MEK) | U | | 3.93 | 10.0 |
| Methyl Acetate | U | | 4.30 | 20.0 |
| Methyl Cyclohexane | U | | 0.380 | 1.00 |
| Methylene Chloride | U | | 1.00 | 5.00 |
| 4-Methyl-2-pentanone (MIBK) | U | | 2.14 | 10.0 |
| Methyl tert-butyl ether | U | | 0.367 | 1.00 |
| Styrene | U | | 0.307 | 1.00 |
| 1,1,2,2-Tetrachloroethane | U | | 0.130 | 1.00 |
| Tetrachloroethene | U | | 0.372 | 1.00 |

## Method Blank (MB)

(MB) R3347782-3 10/04/18 10:36

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Toluene | U | | 0.412 | 1.00 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.303 | 1.00 |
| 1,2,3-Trichlorobenzene | U | | 0.230 | 1.00 |
| 1,2,4-Trichlorobenzene | U | | 0.355 | 1.00 |
| 1,1,1-Trichloroethane | U | | 0.319 | 1.00 |
| 1,1,2-Trichloroethane | U | | 0.383 | 1.00 |
| Trichloroethene | U | | 0.398 | 1.00 |
| Trichlorofluoromethane | U | | 1.20 | 5.00 |
| Vinyl chloride | U | | 0.259 | 1.00 |
| Xylenes, Total | U | | 1.06 | 3.00 |
| *(S) Toluene-d8* | *114* | | | *80.0-120* |
| *(S) Dibromofluoromethane* | *111* | | | *75.0-120* |
| *(S) a,a,a-Trifluorotoluene* | *106* | | | *80.0-120* |
| *(S) 4-Bromofluorobenzene* | *100* | | | *77.0-126* |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3347782-1 10/04/18 09:36 • (LCSD) R3347782-2 10/04/18 09:56

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | 125 | 141 | 135 | 113 | 108 | 19.0-160 | | | 4.20 | 27 |
| Benzene | 25.0 | 22.8 | 22.0 | 91.2 | 87.9 | 70.0-123 | | | 3.69 | 20 |
| Bromodichloromethane | 25.0 | 22.5 | 24.1 | 89.9 | 96.6 | 75.0-120 | | | 7.15 | 20 |
| Bromochloromethane | 25.0 | 25.1 | 25.8 | 100 | 103 | 76.0-122 | | | 2.91 | 20 |
| Bromoform | 25.0 | 21.7 | 22.5 | 86.9 | 89.8 | 68.0-132 | | | 3.31 | 20 |
| Bromomethane | 25.0 | 22.1 | 22.3 | 88.5 | 89.2 | 10.0-160 | | | 0.781 | 25 |
| Carbon disulfide | 25.0 | 20.9 | 20.9 | 83.5 | 83.5 | 61.0-128 | | | 0.100 | 20 |
| Carbon tetrachloride | 25.0 | 24.6 | 25.6 | 98.3 | 103 | 68.0-126 | | | 4.22 | 20 |
| Chlorobenzene | 25.0 | 27.6 | 26.1 | 111 | 104 | 80.0-121 | | | 5.87 | 20 |
| Chlorodibromomethane | 25.0 | 28.0 | 26.6 | 112 | 107 | 77.0-125 | | | 4.92 | 20 |
| Chloroethane | 25.0 | 22.5 | 22.6 | 90.0 | 90.6 | 47.0-150 | | | 0.623 | 20 |
| Chloroform | 25.0 | 24.5 | 25.4 | 98.0 | 102 | 73.0-120 | | | 3.70 | 20 |
| Chloromethane | 25.0 | 27.2 | 27.1 | 109 | 108 | 41.0-142 | | | 0.384 | 20 |
| Cyclohexane | 25.0 | 24.7 | 25.8 | 98.7 | 103 | 71.0-124 | | | 4.58 | 20 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 22.0 | 21.4 | 88.0 | 85.6 | 58.0-134 | | | 2.82 | 20 |
| 1,2-Dibromoethane | 25.0 | 26.2 | 26.1 | 105 | 104 | 80.0-122 | | | 0.747 | 20 |
| 1,2-Dichlorobenzene | 25.0 | 24.4 | 23.1 | 97.4 | 92.6 | 79.0-121 | | | 5.10 | 20 |
| 1,3-Dichlorobenzene | 25.0 | 23.7 | 23.3 | 94.7 | 93.4 | 79.0-120 | | | 1.42 | 20 |
| 1,4-Dichlorobenzene | 25.0 | 24.3 | 24.3 | 97.4 | 97.4 | 79.0-120 | | | 0.0395 | 20 |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3347782-1 10/04/18 09:36 • (LCSD) R3347782-2 10/04/18 09:56

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 25.0 | 28.6 | 28.7 | 114 | 115 | 51.0-149 | | | 0.488 | 20 |
| 1,1-Dichloroethane | 25.0 | 23.3 | 25.6 | 93.2 | 102 | 70.0-126 | | | 9.40 | 20 |
| 1,2-Dichloroethane | 25.0 | 25.7 | 26.5 | 103 | 106 | 70.0-128 | | | 2.91 | 20 |
| 1,1-Dichloroethene | 25.0 | 25.9 | 26.1 | 104 | 104 | 71.0-124 | | | 0.629 | 20 |
| cis-1,2-Dichloroethene | 25.0 | 23.7 | 24.2 | 94.6 | 96.8 | 73.0-120 | | | 2.25 | 20 |
| trans-1,2-Dichloroethene | 25.0 | 24.8 | 24.7 | 99.4 | 98.9 | 73.0-120 | | | 0.444 | 20 |
| 1,2-Dichloropropane | 25.0 | 24.0 | 25.0 | 96.1 | 99.9 | 77.0-125 | | | 3.85 | 20 |
| cis-1,3-Dichloropropene | 25.0 | 23.3 | 24.7 | 93.4 | 98.8 | 80.0-123 | | | 5.64 | 20 |
| trans-1,3-Dichloropropene | 25.0 | 25.3 | 25.5 | 101 | 102 | 78.0-124 | | | 0.810 | 20 |
| Ethylbenzene | 25.0 | 28.4 | 25.1 | 114 | 100 | 79.0-123 | | | 12.5 | 20 |
| 2-Hexanone | 125 | 155 | 146 | 124 | 117 | 67.0-149 | | | 5.75 | 20 |
| Isopropylbenzene | 25.0 | 24.4 | 24.1 | 97.7 | 96.2 | 76.0-127 | | | 1.49 | 20 |
| 2-Butanone (MEK) | 125 | 153 | 148 | 122 | 118 | 44.0-160 | | | 3.20 | 20 |
| Methyl Acetate | 125 | 153 | 149 | 122 | 119 | 57.0-148 | | | 2.19 | 20 |
| Methyl Cyclohexane | 25.0 | 24.1 | 23.9 | 96.5 | 95.5 | 68.0-126 | | | 1.02 | 20 |
| Methylene Chloride | 25.0 | 22.4 | 22.1 | 89.6 | 88.5 | 67.0-120 | | | 1.19 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 163 | 156 | 130 | 125 | 68.0-142 | | | 4.29 | 20 |
| Methyl tert-butyl ether | 25.0 | 22.7 | 22.3 | 90.8 | 89.3 | 68.0-125 | | | 1.67 | 20 |
| Styrene | 25.0 | 23.4 | 24.3 | 93.4 | 97.4 | 73.0-130 | | | 4.18 | 20 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 22.1 | 22.9 | 88.4 | 91.8 | 65.0-130 | | | 3.76 | 20 |
| Tetrachloroethene | 25.0 | 26.1 | 27.4 | 104 | 110 | 72.0-132 | | | 4.86 | 20 |
| Toluene | 25.0 | 25.7 | 25.3 | 103 | 101 | 79.0-120 | | | 1.94 | 20 |
| 1,1,2-Trichlorotrifluoroethane | 25.0 | 26.1 | 26.4 | 104 | 106 | 69.0-132 | | | 1.18 | 20 |
| 1,2,3-Trichlorobenzene | 25.0 | 20.7 | 21.0 | 82.9 | 83.9 | 50.0-138 | | | 1.24 | 20 |
| 1,2,4-Trichlorobenzene | 25.0 | 21.0 | 22.9 | 84.0 | 91.8 | 57.0-137 | | | 8.84 | 20 |
| 1,1,1-Trichloroethane | 25.0 | 26.7 | 26.3 | 107 | 105 | 73.0-124 | | | 1.28 | 20 |
| 1,1,2-Trichloroethane | 25.0 | 26.4 | 25.5 | 106 | 102 | 80.0-120 | | | 3.54 | 20 |
| Trichloroethene | 25.0 | 24.6 | 24.9 | 98.4 | 99.5 | 78.0-124 | | | 1.07 | 20 |
| Trichlorofluoromethane | 25.0 | 27.2 | 27.0 | 109 | 108 | 59.0-147 | | | 0.432 | 20 |
| Vinyl chloride | 25.0 | 24.2 | 24.0 | 96.7 | 96.0 | 67.0-131 | | | 0.768 | 20 |
| Xylenes, Total | 75.0 | 83.1 | 80.7 | 111 | 108 | 79.0-123 | | | 2.93 | 20 |
| *(S) Toluene-d8* | | | | *113* | *111* | *80.0-120* | | | | |
| *(S) Dibromofluoromethane* | | | | *103* | *105* | *75.0-120* | | | | |
| *(S) a,a,a-Trifluorotoluene* | | | | *98.8* | *102* | *80.0-120* | | | | |
| *(S) 4-Bromofluorobenzene* | | | | *97.5* | *95.8* | *77.0-126* | | | | |

## Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

## Abbreviations and Definitions

| | |
|---|---|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|---|---|

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.



## State Accreditations

| | | | |
|---|---|---|---|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey–NELAP | TN002 |
| California | 2932 | New Mexico [1] | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina [1] | DW21704 |
| Georgia | NELAP | North Carolina [3] | 41 |
| Georgia [1] | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio–VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LAO00356 |
| Kentucky [1 6] | 90010 | South Carolina | 84004 |
| Kentucky [2] | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee [1 4] | 2006 |
| Louisiana [1] | LA180010 | Texas | T 104704245-17-14 |
| Maine | TN0002 | Texas [5] | LAB0152 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 460132 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9980939910 |
| Montana | CERT0086 | Wyoming | A2LA |

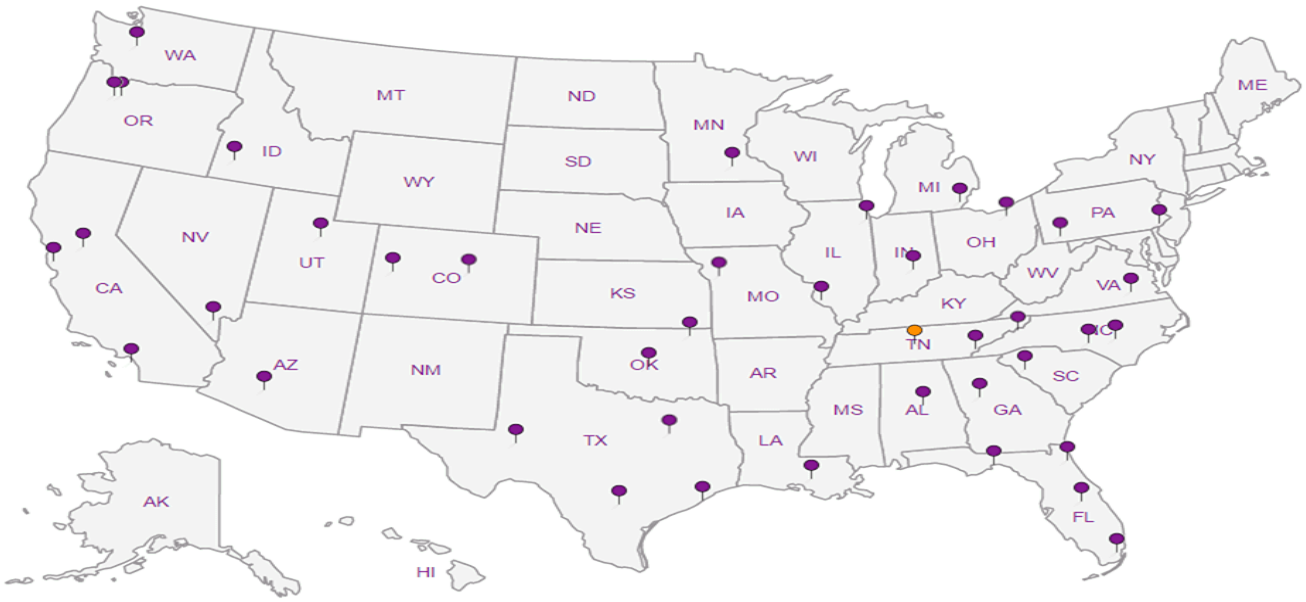
## Third Party Federal Accreditations

| | | | |
|---|---|---|---|
| A2LA – ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA – ISO 17025 [5] | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA–Crypto | TN00003 | | |

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

## Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



# CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

L1030910

**ALL SHADED AREAS are for LAB USE ONLY**

| | |
|---|---|
| Company: **GHD** | Billing Information: **Mr. Dave Rowlinson, 285 Delaware Ave., Suite 500** |
| Address: **285 Delaware Ave. Suite 500 Buffalo, NY 14202** | |
| Report To: **Mr. Dave Rowlinson** | Email To: **dave.rowlinson@ghd.com; ~~brian.doyle@ghd.com~~** |
| Copy To: | Site Collection Info/Address: (C) LOCKPORT |
| Customer Project Name/Number: **71136 City of Lockport Landfill 8612191-01-** | State: NY County/City: NIAGARA Time Zone Collected: PT MT CT (ET) |
| Phone: **716-748-6624** Email: | Site/Facility ID #: LANDFILL |
| Collected by (print): Chad Johnson | Purchase Order #: **33700542** Quote #: |
| Collected by (signature): CHAD JOHNSON | Turnaround Date Required: |
| Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive [ ] Hold | Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply) |

Compliance Monitoring? [X] Yes [ ] No

DW PWS ID #: DW Location Code:

Immediately Packed on Ice: [X] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

Container Preservative Type **

Lab Project Manager: **364 - T. Alan Harvill**

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Profile/Line: **STEARNSANY-LOCKPORT**

Lab Sample Receipt Checklist:

| | | | |
|---|---|---|---|
| Custody Seals Present/Intact | Y | N | NA |
| Custody Signatures Present | Y | N | NA |
| Collector Signature Present | Y | N | NA |
| Bottles Intact | Y | N | NA |
| Correct Bottles | Y | N | NA |
| Sufficient Volume | Y | N | NA |
| Samples Received on Ice | Y | N | NA |
| VOA - Headspace Acceptable | Y | N | NA |
| USDA Regulated Soils | Y | N | NA |
| Samples in Holding Time | Y | N | NA |
| Residual Chlorine Present | Y | N | NA |
| Cl Strips: | | | |
| Sample pH Acceptable | Y | N | NA |
| pH Strips: | | | |
| Sulfide Present | Y | N | NA |
| Lead Acetate Strips: | | | |

LAB USE ONLY: Lab Sample # / Comments

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

| Customer Sample ID | Matrix * | Comp / Grab | Collected (or Composite Start) Date | Collected (or Composite Start) Time | ~~Composite End~~ Date | ~~Composite End~~ Time | Res Cl | # of Ctns | V8260TCLC 40ml Amb-HCl | V8260TCLC 40ml Amb-HCl-Blk | Lab Sample # / Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-95 | GW | GRAB | 10/1/18 | 1135 | | | | 2 | X | | -01 |
| MW-9I | GW | | | 1216 | | | | 2 | X | | -02 |
| MW-35 | GW | | | 1045 | | | | 2 | X | | -03 |
| ~~MW-8S~~ | GW | | | 1253 | | | | 2 | X | | |
| MW-8D | GW | | | 1253 | | | | 2 | X | | -04 |
| ~~DUPLICATE 1-1~~ | GW | | | | | | | 2 | X | | |
| | GW | | 10/1/18 | | | | | 2 | X | | |
| TRIP BLANK | GW | | | | | | | 1 | | X | -05 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Customer Remarks / Special Conditions / Possible Hazards: SAMPLES COLLECTED 10/1/18

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

LAB Tracking #: 4492 6230 5554

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:

Temp Blank Received: Y N NA

Therm ID#: 7

Cooler 1 Temp Upon Receipt 2.9 oC

Cooler 1 Therm Corr. Factor 0 oC

Cooler 1 Corrected Temp 2.9 oC

Comments:

Trip Blank Received: Y N NA HCL MeOH TSP Other

NonConformance(s): YES / NO

Page ____ of ____

| | | | |
|---|---|---|---|
| Relinquished by/Company: (Signature) Chad Johnson (GHD) | Date/Time: | Received by/Company: (Signature) | Date/Time: 10/2/18 8:45 |
| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: |
| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: |

D221

Acctnum: **STEARNSANY**

Template: **T89880**

Prelogin: **P672049**

PM: **364 - T. Alan Harvill**

PB: G 10-2-18 AB

# Appendix C
# IC-EC Certification

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Environmental Remediation
625 Broadway, 11th Floor, Albany, NY 12233-7020
P: (518)402-9543 | F: (518)402-9547
www.dec.ny.gov

12/5/2018

Mr. Rolando Moreno
Director of Engineering
City of Lockport
Lockport Municipal Building
One Locks Plaza
Lockport, NY 14094

**Re: Reminder Notice: Site Management Periodic Review Report and IC/EC Certification Submittal**
**Site Name:** Lockport City Landfill
**Site No.:** 932010
Site Address: Oakhurst Road
Lockport, NY 14094

Dear Mr. Rolando Moreno:

This letter serves as a reminder that sites in active Site Management (SM) require the submittal of a periodic progress report. This report, referred to as the Periodic Review Report (PRR), must document the implementation of, and compliance with, site-specific SM requirements. Section 6.3(b) of DER-10 *Technical Guidance for Site Investigation and Remediation* (available online at http://www.dec.ny.gov/regulations/67386.html) provides guidance regarding the information that must be included in the PRR. Further, if the site is comprised of multiple parcels, then you as the Certifying Party must arrange to submit one PRR for all parcels that comprise the site. The PRR must be received by the Department no later than **February 14, 2019**. Guidance on the content of a PRR is enclosed.

Site Management is defined in regulation (6 NYCRR 375-1.2(at)) and in Chapter 6 of DER-10. Depending on when the remedial program for your site was completed, SM may be governed by multiple documents (e.g., Operation, Maintenance, and Monitoring Plan; Soil Management Plan) or one comprehensive Site Management Plan.

A Site Management Plan (SMP) may contain one or all of the following elements, as applicable to the site: a plan to maintain institutional controls and/or engineering controls ("IC/EC Plan"); a plan for monitoring the performance and effectiveness of the selected remedy ("Monitoring Plan"); and/or a plan for the operation and maintenance of the selected remedy ("O&M Plan"). Additionally, the technical requirements for SM are stated in the decision document (e.g., Record of Decision) and, in some cases, the legal agreement directing the remediation of the site (e.g., order on consent, voluntary agreement, etc.).

When you submit the PRR (by the due date above), include the enclosed forms documenting that all SM requirements are being met. The Institutional Controls (ICs) portion of the form (Box 6) must be signed by you or your designated representative. The Engineering Controls (ECs) portion of the form (Box 7) must be signed by a Qualified Environmental Professional (QEP). If you cannot certify that all SM requirements are being met, you must submit a Corrective Measures Work Plan that identifies the actions to be taken to restore compliance. The work plan must include a schedule to be approved by the Department. The Periodic Review process will not be considered complete until all necessary corrective measures are completed and all required controls are certified. Instructions for completing the certifications are enclosed.

All site-related documents and data, including the PRR, must be submitted in electronic format to the Department of Environmental Conservation. The required format for documents is an Adobe PDF file with optical character recognition and no password protection. Data must be submitted as an electronic data deliverable (EDD) according to the instructions on the following webpage:

https://www.dec.ny.gov/chemical/62440.html

Documents may be submitted to the project manager either through electronic mail or by using the Department's file transfer service at the following webpage:

https://fts.dec.state.ny.us/fts/

The Department will not approve the PRR unless all documents and data generated in support of the PRR have been submitted using the required formats and protocols.

You may contact Brian Sadowski, the Project Manager, at 716-851-7220 or brian.sadowski@dec.ny.gov with any questions or concerns about the site. Please notify the project manager before conducting inspections or field work. You may also write to the project manager at the following address:

New York State Department of Environmental Conservation
270 Michigan Ave
Buffalo, NY 14203-2915

Enclosures

PRR General Guidance
Certification Form Instructions
Certification Forms

ec: w/ enclosures
Brian Sadowski, Project Manager
Stanley Radon

GHD - Mr. David Rolinson - david.rowlinson@ghd.com

Enclosure 1

## Certification Instructions

### I. Verification of Site Details (Box 1 and Box 2):

Answer the three questions in the Verification of Site Details Section. The Owner and/or Qualified Environmental Professional (QEP) may include handwritten changes and/or other supporting documentation, as necessary.

### II. Certification of Institutional Controls/ Engineering Controls (IC/ECs)(Boxes 3, 4, and 5)

1.1.1. Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party should petition the Department separately to request approval to remove the control.

2. In Box 5, complete certifications for all Plan components, as applicable, by checking the corresponding checkbox.

3. If you cannot certify "YES" for each Control listed in Box 3 & Box 4, sign and date the form in Box 5. Attach supporting documentation that explains why the **Certification** cannot be rendered, as well as a plan of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is completed.

If the Department concurs with the explanation, the proposed corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Department's Project Manager. Once the corrective measures are complete, a new Periodic Review Report (with IC/EC Certification) must be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

### III. IC/EC Certification by Signature (Box 6 and Box 7):

If you certified "YES" for each Control, please complete and sign the IC/EC Certifications page as follows:

- For the Institutional Controls on the use of the property, the certification statement in Box 6 shall be completed and may be made by the property owner or designated representative.

- For the Engineering Controls, the certification statement in Box 7 must be completed by a Professional Engineer or Qualified Environmental Professional, as noted on the form.

Enclosure 2

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**
**Site Management Periodic Review Report Notice**
**Institutional and Engineering Controls Certification Form**

**Site Details** **Box 1**

**Site No.** 932010

**Site Name** Lockport City Landfill

Site Address: Oakhurst Road Zip Code: 14094
City/Town: Lockport
County: Niagara
Site Acreage: 23.400

Reporting Period: January 15, 2018 to January 15, 2019

| | YES | NO |
|---|---|---|
| 1. Is the information above correct? | ☒ | ☐ |
| If NO, include handwritten above or on a separate sheet. | | |
| 2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period? | ☐ | ☒ |
| 3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))? | ☐ | ☒ |
| 4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period? | ☐ | ☒ |
| **If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.** | | |
| 5. Is the site currently undergoing development? | ☐ | ☒ |

**Box 2**

| | YES | NO |
|---|---|---|
| 6. Is the current site use consistent with the use(s) listed below? Closed Landfill | ☒ | ☐ |
| 7. Are all ICs/ECs in place and functioning as designed? | ☒ | ☐ |

**IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

**A Corrective Measures Work Plan must be submitted along with this form to address these issues.**

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. 932010 Box 3

**Description of Institutional Controls**

| Parcel | Owner | Institutional Control |
|---|---|---|
| **108.00-1-14** | City of Lockport | Monitoring Plan<br>O&M Plan<br><br>Landuse Restriction |

Record of Decision (ROD), December 1992.
The remedial components of the ROD have been implemented and are maintained for the protection of human health and the environment.

Declaration of Covenants and Restrictions, Niagara County, February 3, 2010.
Deed restrictions have been implemented to prevent activities that could cause potential exposure of waste material and compromise the integrity of the cap.

Operation and Maintenance Plan, Contingency Plan, March 1994.
Regular inspections and repair of the landfill cap are conducted to insure that the integrity of the cap is maintained.

Long Term Monitoring Program, March 1994.
The monitoring program is in place and used to evaluate the effectiveness of the remedial program.

| | | |
|---|---|---|
| **108.15-1-1** | City of Lockport | Landuse Restriction<br><br>Monitoring Plan<br>O&M Plan |

Record of Decision (ROD), December 1992.
The remedial components of the ROD have been implemented and are maintained for the protection of human health and the environment.

Declaration of Covenants and Restrictions, Niagara County, February 3, 2010.
Deed restrictions have been implemented to prevent activities that could cause potential exposure of waste material and compromise the integrity of the cap.

Operation and Maintenance Plan, Contingency Plan, March 1994.
Regular inspections and repair of the landfill cap are conducted to insure that the integrity of the cap is maintained.

Long Term Monitoring Program, March 1994.
The monitoring program is in place and used to evaluate the effectiveness of the remedial program.

Box 4

**Description of Engineering Controls**

| Parcel | Engineering Control |
|---|---|
| **108.00-1-14** | Cover System<br>Fencing/Access Control |

Landfill Cap:

A Part 360 type clay cap has been installed over the landfill to eliminate direct contact as well as greatly reduce the amount of leachate being generated.

Excavation of steep embankment:

The waste material along the steep embankment (western bounday of the landfill) has been excavated from the embankment and placed under the landfill cap.
**108.15-1-1**

| Parcel | Engineering Control |
|---|---|
| | Cover System<br>Fencing/Access Control |

Landfill Cap:

A Part 360 type clay cap has been installed over the landfill to eliminate direct contact as well as greatly reduce the amount of leachate being generated.

Excavation of steep embankment:

The waste material along the steep embankment (western bounday of the landfill) has been excavated from the embankment and placed under the landfill cap.

Box 5

**Periodic Review Report (PRR) Certification Statements**

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

| YES | NO |
|---|---|
| ☒ | ☐ |

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

| YES | NO |
|---|---|
| ☒ | ☐ |

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

**A Corrective Measures Work Plan must be submitted along with this form to address these issues.**

Signature of Owner, Remedial Party or Designated Representative — Date

**IC CERTIFICATIONS**
**SITE NO. 932010**

**Box 6**

**SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE**

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I ROLANDO MORENO (print name) at ONE LOCKS PLAZA, LOCKPORT N.Y (print business address)

am certifying as OWNER (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

12/11/18
Date

## IC/EC CERTIFICATIONS

**Box 7**

**Qualified Environmental Professional Signature**

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I David M. Britton at 285 Delaware Ave, Buffalo, NY 14202
print name print business address

am certifying as a Qualified Environmental Professional for the Owner
(Owner or Remedial Party)

STATE OF NEW YORK ★ DAVID M. BRITTON ★ 075722 ★ LICENSED PROFESSIONAL ENGINEER ★

Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

12/14/18
Date


# about GHD

GHD is one of the world's leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. We provide engineering, environmental, and construction services to private and public sector clients.

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