July 14, 2016 Reference No. 002012

Mr. Fred Campbell
Minnesota Pollution Control Agency
Remediation Division
Superfund and Emergency Response Section
520 Lafayette Road
St. Paul, Minnesota 55155-4194

Dear Mr. Campbell:

**Re: Data Report**
**April/May 2016 Residential Well Sampling Event**
**North Oaks, Minnesota**

On behalf of Whirlpool Corporation and Reynolds Metals Company, GHD Services Inc. (GHD) (formerly known as Conestoga-Rovers & Associates (CRA)) has prepared the following data report associated with the Residential Well Sampling Event conducted in North Oaks, Minnesota in April/May 2016. The April/May 2016 Residential Well Sampling Event was conducted in general accordance with the long-term monitoring program outlined in CRA's Feasibility Study Report (dated July 26, 2007 and approved by the Minnesota Pollution Control Agency (MPCA) on November 7, 2007) and as proposed in GHD's letter to MPCA dated April 11, 2016.

A discussion of the work performed and summary of the sampling results are presented below.

## 1. Sampling Program

During the period from April 26, 2016 through May 5, 2016, GHD and MPCA attempted to collect samples from a total of 33 residential well locations in North Oaks. Samples were only collected from well locations where expressed permission was obtained and a water source at the residence was accessible (31 locations). Samples were not collected from two proposed locations because the resident declined sampling/did not respond or had their water turned off for the season (see field notes in Table 1).

Where possible, samples were collected from an outside tap and/or from an untreated water source (i.e., not softened or filtered). Prior to sampling, the tap was allowed to run (purge) for approximately 20 minutes to purge the water line and pressure tank of residual water. The purge rate was measured and recorded. If a sample was collected from an outside tap, the water was directed via hose to an area of the yard that minimized the creation of pooled water or ice in an undesirable location. Field measurements for pH, conductivity, temperature, dissolved oxygen, and oxidation reduction potential (ORP) were taken after purging, at the time of sampling. Four (4) duplicate samples, four (4)

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REGISTERED COMPANY FOR ISO 9001 ENGINEERING DESIGN

field blank samples, and two (2) matrix spike/matrix spike duplicate (MS/MSD) samples were collected for quality assurance/quality control (QA/QC) purposes. A sampling summary is provided in Table 1.

Water samples were collected directly from the tap after the purge hose was disconnected. Samples were placed on ice immediately following sample collection and were sent by courier to the laboratory using standard chain-of-custody procedures. Samples were submitted for analysis of VOCs and chloride to TestAmerica Laboratories, Inc. (TAL) in Buffalo, New York. VOC samples were submitted for low level VOC analysis by Method 524.2. Chloride samples were submitted for analysis by Method 300.0A. A trip blank was included with each sample cooler containing VOC samples.

## 2. Sampling Results

Laboratory analytical reports and GHD's Data Quality Assessment and Validation memorandum associated with the April/May 2016 Residential Well Sampling Event are provided as Attachments A and B, respectively. A summary of analytical results from the April/May 2016 Residential Well Sampling Event is presented in Table 2. Table 2 also presents the current Minnesota Department of Health (MDH) Health-Based Guidance (HBG) for comparison.

The April/May 2016 sampling results are generally consistent with results from previous sampling rounds conducted from October 2004 through October 2015.

Vinyl chloride results from the April/May 2016 Residential Well Sampling Event are presented on Figure 1. As shown on Figure 1 and in Table 2, vinyl chloride was not detected in any of the residential well samples collected in April/May 2016. The method detection limit (MDL) associated with the April/May 2016 laboratory results for vinyl chloride is 0.18 µg/L (i.e. any vinyl chloride concentrations detected between the MDL [0.18 µg/L] and the reporting limit (RL) [0.2 µg/L] would have been reported and flagged as estimated [J]). The MDH Health Risk Limit (HRL) for vinyl chloride is 0.2 µg/L.

Updated graphs of historical vinyl chloride sampling results at residential wells where vinyl chloride has been detected previously are provided in Attachment C.

No additional Site-related VOC[1] or other frequently-detected compounds were detected in residential well samples collected in April/May 2016.

Chloride concentrations in residential well samples collected in April/May 2016 ranged from 5.9 mg/L (8 West Shore Road) to 104 mg/L (4 Thompson Lane) (see Table 2). Chloride has historically been detected in residential wells at similar concentrations.

---

[1] As identified on Table 1 of MPCA's MDD Amendment dated August 26, 2008 (1,1,2-trichloroethene (TCE), vinyl chloride, trans-1,2-dichloroethene, 1,1-dichloroethane, benzene, toluene, and methyl ethyl keytone).

## 3. Future Sampling

The next residential well sampling event in North Oaks is scheduled for October 2016.

If you have any questions or require additional information, please call me at (651) 639-0913.

Sincerely,

GHD

Sarah Illi, P.E.

MLR/sb/78

Encl.

cc: Emily Hansen, Minnesota Department of Health
Mayor, City of North Oaks
Mike Robertson, City of North Oaks
Michelle Hosfield, Wenck Associates
North Oaks Homeowners' Association
Highway 96 Group

# Figures

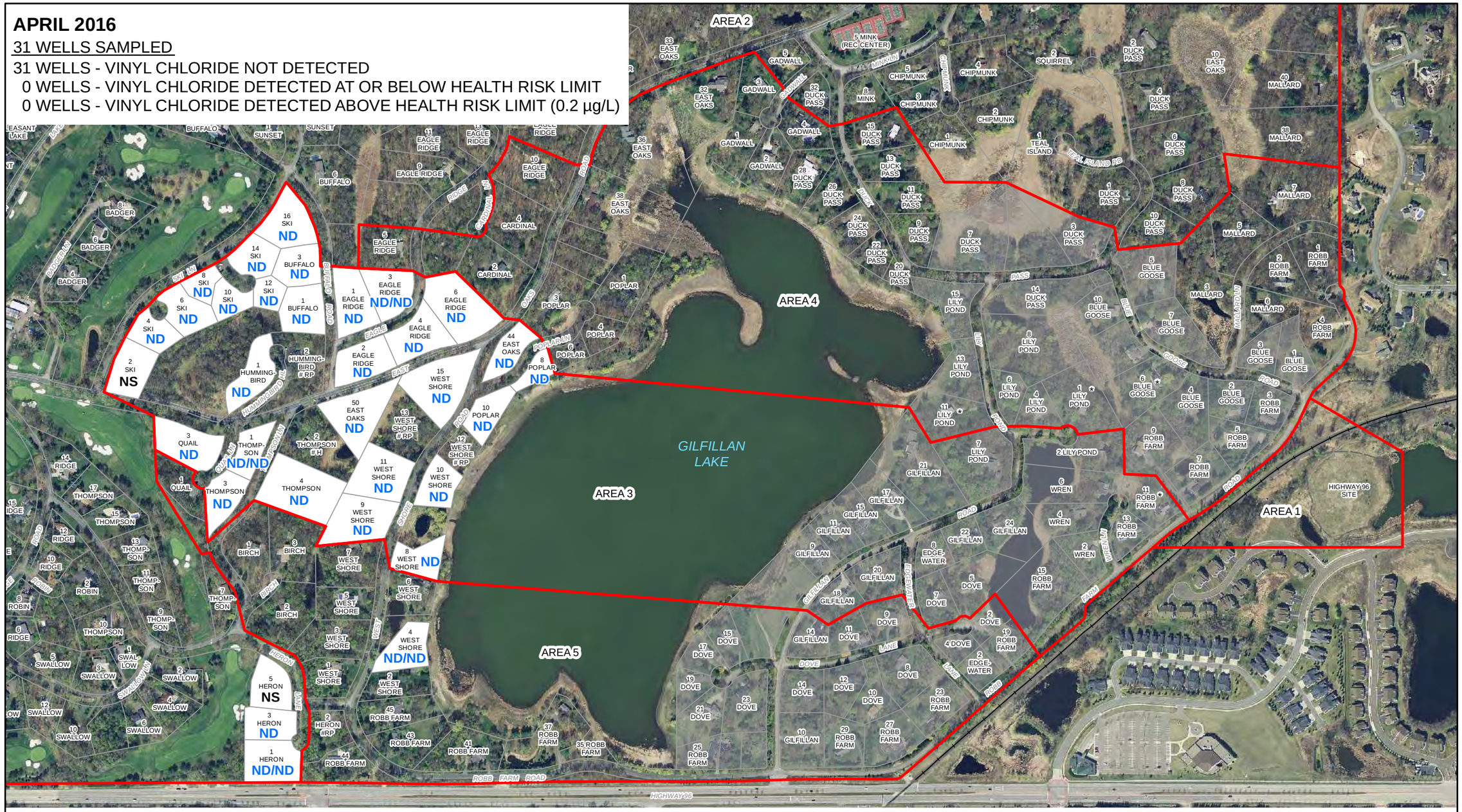
**APRIL 2016**

31 WELLS SAMPLED

31 WELLS - VINYL CHLORIDE NOT DETECTED

0 WELLS - VINYL CHLORIDE DETECTED AT OR BELOW HEALTH RISK LIMIT

0 WELLS - VINYL CHLORIDE DETECTED ABOVE HEALTH RISK LIMIT (0.2 µg/L)




LEGEND

| | |
|---|---|
| ND | VINYL CHLORIDE NOT DETECTED (DETECTION LIMIT = 0.18 µg/L) |
| ND/ND | DUPLICATE SAMPLE RESULT |
| NS | NOT SAMPLED (NO RESPONSE/DECLINED/WATER OFF) |
| | CONNECTED TO MUNICIPAL WATER SUPPLY |
| # RP | NEW (DEEPER) REPLACEMENT WELL INSTALLED BY RPs |
| # H | NEW (DEEPER) REPLACEMENT WELL INSTALLED BY HOMEOWNER |
| * | CONVERTED RESIDENTIAL MONITORING WELL LOCATION |
| | GEOGRAPHIC AREAS |

N

0 250 500 ft

figure 1

VINYL CHLORIDE CONCENTRATIONS (APRIL 2016)

*North Oaks, Minnesota*

002012-00(CAMP078)GIS-SP001 JUN 01/2016

# Tables

**Table 1**

**Sampling Summary**
**April/May 2016**
**Residential Well Sampling Event**
**North Oaks, Minnesota**

| Well Address | ID | Sampled By | Date (mm/dd/yyyy) | Purge Time (min) | Flow Rate (gpm) | pH | Temp (℃) | Cond (µs/cm) | DO (mg/L) | ORP (mV ) | Clarity | QA/QC | QA/QC ID | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Buffalo Road | W-160427-MB-24 | GHD | 04/27/2016 | 23 | 6 | 7.27 | 9.86 | 684 | 0.66 | -122 | Clear | - - | - - | - - |
| 3 Buffalo Road | W-160427-MB-23 | GHD | 04/27/2016 | 20 | 12 | 7.27 | 9.74 | 645 | 0.00 | -112 | Clear | - - | - - | - - |
| 1 Eagle Ridge Road | W-160428-MB-27 | GHD | 04/28/2016 | 22 | 5 | 7.41 | 14.20 | 606 | 4.40 | -143 | Clear | - - | - - | Treated sample (iron filter not bypassed per resident's request). |
| 2 Eagle Ridge Road | W-160505-MLR-06 | GHD | 05/05/2016 | 20 | 4 | 7.59 | 10.96 | 505 | 3.08 | -95 | Clear | - - | - - | - - |
| 3 Eagle Ridge Road | W-160505-MLR-04 | GHD | 05/05/2016 | 20 | 6 | 7.60 | 11.04 | 498 | 4.37 | -104 | Clear | DUP | W-160505-MLR-05 | - - |
| 4 Eagle Ridge Road | W-160428-MB-28 | GHD | 04/28/2016 | 23 | 6 | 7.37 | 11.56 | 666 | 2.16 | -141 | Clear | FB | W-160428-MB-29 | - - |
| 6 Eagle Ridge Road | W-160428-MB-30 | GHD | 04/28/2016 | 24 | 10 | 7.29 | 10.40 | 814 | 7.09 | -125 | Clear | MS/MSD | - - | - - |
| 44 East Oaks Road | W-160426-MB-12 | GHD | 04/26/2016 | 20 | 9 | 7.12 | 10.69 | 580 | 0.63 | -111 | Clear | - - | - - | - - |
| 50 East Oaks Road | W-160428-MB-40 | MPCA | 04/28/2016 | 18 | 9 | NM | 6.0 | NM | NM | NM | NR | - - | - - | - - |
| 1 Heron Lane | W-160426-MB-13 | GHD | 04/26/2016 | 22 | 6 | 7.03 | 10.73 | 690 | 0.00 | -59 | Clear | DUP | W-160426-MB-14 | - - |
| 3 Heron Lane | W-160426-MB-05 | GHD | 04/26/2016 | 6 | 3 | 7.05 | 11.92 | 739 | 5.40 | -140 | Clear | - - | - - | Decreased purge time per resident's request. (Resident indicated they had been running water all morning). |
| 5 Heron Lane | - - | - - | - - | - - | - - | - - | - - | - - | - - | - - | - - | - - | - - | Not Sampled - Resident declined. |

**Table 1**

**Sampling Summary**
**April/May 2016**
**Residential Well Sampling Event**
**North Oaks, Minnesota**

| Well Address | ID | Sampled By | Date (mm/dd/yyyy) | Purge Time (min) | Flow Rate (gpm) | pH | Temp (℃) | Cond (µs/cm) | DO (mg/L) | ORP (mV ) | Clarity | QA/QC | QA/QC ID | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Hummingbird Hill | W-160426-MB-41 | MPCA | 04/28/2016 | 15 | 8.5 | NM | 6.5 | NM | NM | NM | NR | - - | - - | - - |
| 8 Poplar Lane | W-160426-MB-11 | GHD | 04/26/2016 | 26 | 8 | 6.92 | 10.96 | 645 | 1.06 | -110 | Clear | - - | - - | - - |
| 10 Poplar Lane | W-160426-MB-10 | GHD | 04/26/2016 | 25 | 8 | 6.84 | 10.86 | 630 | 3.84 | -93 | Clear | - - | - - | - - |
| 3 Quail Lane | W-160505-MLR-01 | GHD | 05/05/2016 | 23 | 10 | 6.08 | 10.78 | 528 | 4.73 | -115 | Clear | FB | W-160505-MLR-02 | - - |
| 2 Ski Lane | - - | - - | - - | - - | - - | - - | - - | - - | - - | - - | - - | - - | - - | Not Sampled - Water was turned off for the winter. |
| 4 Ski Lane | W-160427-MB-22 | GHD | 04/27/2016 | 20 | 4 | 7.30 | 10.41 | 656 | 3.94 | -107 | Clear | - - | - - | - - |
| 6 Ski Lane | W-160427-MB-15 | GHD | 04/27/2016 | 20 | 4 | 7.05 | 9.61 | 666 | 5.68 | -84 | Clear | - - | - - | - - |
| 8 Ski Lane | W-160427-MB-16 | GHD | 04/27/2016 | 22 | 12 | 7.68 | 9.52 | 627 | 7.98 | -150 | Clear | - - | - - | - - |
| 10 Ski Lane | W-160427-MB-17 | GHD | 04/27/2016 | 25 | 12 | 7.57 | 9.47 | 657 | 1.84 | -127 | Clear | FB | W-160427-MB-18 | - - |
| 12 Ski Lane | W-160427-MB-19 | GHD | 04/27/2016 | 20 | 6 | 7.33 | 9.83 | 618 | 0.00 | -112 | Clear | - - | - - | - - |
| 14 Ski Lane | W-160427-MB-20 | GHD | 04/27/2016 | 20 | 8 | 7.38 | 9.71 | 635 | 0.00 | -122 | Clear | - - | - - | - - |
| 16 Ski Lane | W-160427-MB-21 | GHD | 04/27/2016 | 22 | 12 | 7.43 | 9.58 | 610 | 6.17 | -116 | Clear | - - | - - | - - |
| 1 Thompson Lane | W-160426-MB-01 | GHD | 04/26/2016 | 21 | 3 | 7.64 | 13.50 | 721 | 4.58 | -112 | Clear | DUP | W-160426-MB-02 | - - |

**Table 1**

**Sampling Summary**
**April/May 2016**
**Residential Well Sampling Event**
**North Oaks, Minnesota**

| Well Address | ID | Sampled By | Date (mm/dd/yyyy) | Purge Time (min) | Flow Rate (gpm) | pH | Temp (℃) | Cond (µs/cm) | DO (mg/L) | ORP (mV ) | Clarity | QA/QC | QA/QC ID | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 Thompson Lane | W-160426-MB-03 | GHD | 04/26/2016 | 22 | 2.5 | 7.31 | 10.81 | 713 | 6.84 | -113 | Clear | FB | W-160426-MB-04 | - - |
| 4 Thompson Lane | W-160505-MLR-03 | GHD | 05/05/2016 | 20 | 8 | 7.14 | 10.85 | 687 | 3.07 | -70 | Clear | - - | - - | - - |
| 4 West Shore Road | W-160428-MB-25 | GHD | 04/28/2016 | 20 | 6 | 7.66 | 11.14 | 811 | 3.11 | -148 | Clear | DUP | W-160428-MB-26 | - - |
| 8 West Shore Road | W-160428-MB-38 | MPCA | 04/28/2016 | 17 | 8 | NM | 6.5 | NM | NM | NM | NR | - - | - - | - - |
| 9 West Shore Road | W-160426-MB-08 | GHD | 04/26/2016 | 20 | 5 | 7.01 | 10.90 | 719 | 3.85 | -118 | Clear | - - | - - | - - |
| 10 West Shore Road | W-160426-MB-07 | GHD | 04/26/2016 | 20 | 6 | 7.14 | 11.55 | 692 | 0.00 | -135 | Clear | - - | - - | - - |
| 11 West Shore Road | W-160426-MB-06 | GHD | 04/26/2016 | 23 | 6 | 7.00 | 11.55 | 725 | 1.99 | -122 | Clear | MS/MSD | - - | Sample collected through dedicated hose (buried). |
| 15 West Shore Road | W-160426-MB-09 | GHD | 04/26/2016 | 20 | 5 | 7.57 | 10.48 | 757 | 5.42 | -63 | Clear | - - | - - | - - |

Notes:

DO - Dissolved Oxygen
NM - Not Measured
NR - Not Recorded
ORP - Oxidation Reduction Potential
FB - Field Blank
DUP - Duplicate

**Table 2**

**Summary of Analytical Results**
**April/May 2016**
**Residential Well Sampling Event**
**North Oaks, Minnesota**

| Address | MDH HBG Basis<br>Date | | Chloride<br>--<br>--<br>mg/L | Vinyl Chloride<br>0.2<br>HRL<br>ug/L | All Other Analytes<br>Varies<br>Varies<br>ug/L |
|---|---|---|---|---|---|
| 1 Buffalo Road | 4/27/2016 | | 32.1 | < 0.20 | ND |
| 3 Buffalo Road | 4/27/2016 | | 24.1 | < 0.20 | ND |
| 1 Eagle Ridge Road | 4/28/2016 | | 18.4 | < 0.20 | ND |
| 2 Eagle Ridge Road | 5/5/2016 | | 33.1 | < 0.20 | ND |
| 3 Eagle Ridge Road | 5/5/2016 | | 31.9 | < 0.20 | ND |
| 3 Eagle Ridge Road | 5/5/2016 | D | 31.4 | < 0.20 | ND |
| 4 Eagle Ridge Road | 4/28/2016 | | 25.6 | < 0.20 UJ | ND |
| 6 Eagle Ridge Road | 4/28/2016 | | 60.6 J | < 0.20 UJ | ND |
| 44 East Oaks Road | 4/26/2016 | | 12.2 | < 0.20 | ND |
| 50 East Oaks Road | 4/28/2016 | | 31.4 | < 0.20 UJ | ND |
| 1 Heron Lane | 4/26/2016 | | 27.2 | < 0.20 | ND |
| 1 Heron Lane | 4/26/2016 | D | 26.4 | < 0.20 | ND |
| 3 Heron Lane | 4/26/2016 | | 40.7 | < 0.20 | ND |
| 1 Hummingbird Hill | 4/28/2016 | | 28.1 | < 0.20 UJ | ND |
| 8 Poplar Lane | 4/26/2016 | | 33.3 | < 0.20 | ND |
| 10 Poplar Lane | 4/26/2016 | | 16.4 | < 0.20 | ND |
| 3 Quail Lane | 5/5/2016 | | 25.7 | < 0.20 | ND |
| 4 Ski Lane | 4/27/2016 | | 33.5 | < 0.20 | ND |
| 6 Ski Lane | 4/27/2016 | | 28.9 | < 0.20 | ND |
| 8 Ski Lane | 4/27/2016 | | 18.2 | < 0.20 | ND |
| 10 Ski Lane | 4/27/2016 | | 27.3 | < 0.20 | ND |
| 12 Ski Lane | 4/27/2016 | | 29.2 | < 0.20 | ND |
| 14 Ski Lane | 4/27/2016 | | 22.9 | < 0.20 | ND |
| 16 Ski Lane | 4/27/2016 | | 27.9 | < 0.20 | ND |
| 1 Thompson Lane | 4/26/2016 | | 35.1 | < 0.20 | ND |
| 1 Thompson Lane | 4/26/2016 | D | 34.2 | < 0.20 | ND |
| 3 Thompson Lane | 4/26/2016 | | 29.2 | < 0.20 | ND |
| 4 Thompson Lane | 5/5/2016 | | 104 | < 0.20 | ND |
| 4 West Shore Road | 4/28/2016 | | 49.9 | < 0.20 | ND |

**Table 2**

**Summary of Analytical Results**
**April/May 2016**
**Residential Well Sampling Event**
**North Oaks, Minnesota**

| Address | MDH HBG Basis<br>Date | | Chloride<br>--<br>--<br>mg/L | Vinyl Chloride<br>0.2<br>HRL<br>ug/L | All Other Analytes<br>Varies<br>Varies<br>ug/L |
|---|---|---|---|---|---|
| 4 West Shore Road | 4/28/2016 | D | 49.6 | < 0.20 UJ | ND |
| 8 West Shore Road | 4/28/2016 | | 5.9 | < 0.20 UJ | ND |
| 9 West Shore Road | 4/26/2016 | | 33.7 | < 0.20 | ND |
| 10 West Shore Road | 4/26/2016 | | 28.9 | < 0.20 | ND |
| 11 West Shore Road | 4/26/2016 | | 32.9 | < 0.20 | ND |
| 15 West Shore Road | 4/26/2016 | | 39.8 | < 0.20 | ND |

Notes:

MDH HBG - Health-Based Guidance (HBG) established by the Minnesota Department of Health (MDH)
[Note: if multiple guidance values are available, the lowest value is used for screening purposes]
HRL - Health Risk Limit
-- - HBG not established
< - Not Detected at the associated reporting limit
D - Duplicate
J - Estimated Result
ND - Not Detected (Reporting Limit Varies By Analyte)
UJ - Estimated Reporting Limit

# Attachments

# Attachment A
# Laboratory Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-99299-1
Client Project/Site: 002012, Highway 96 Landfill

For:
GHD Services Inc.
1801 Old Highway 8 NW
Suite 114
St Paul, Minnesota 55112

Attn: Mr. Grant Anderson

Melissa Deyo

*Authorized for release by:*
*5/10/2016 10:48:42 AM*

Melissa Deyo, Project Manager I
(716)504-9874
melissa.deyo@testamericainc.com

LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| * | LCS or LCSD is outside acceptance limits. |
| F1 | MS and/or MSD Recovery is outside acceptance limits. |
| F2 | MS/MSD RPD exceeds control limits |

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| F1 | MS and/or MSD Recovery is outside acceptance limits. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Job ID: 480-99299-1

### Laboratory: TestAmerica Buffalo

**Narrative**

**Job Narrative**
**480-99299-1**

**Receipt**
The samples were received on 4/29/2016 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.8º C and 3.1º C.

**GC/MS VOA**
Method(s) 524.2: The following samples contained residual chlorine upon receipt: W-160426-MB-01 (480-99299-1), W-160426-MB-02 (480-99299-2), W-160426-MB-03 (480-99299-3), W-160426-MB-05 (480-99299-5), W-160426-MB-06 (480-99299-6), W-160426-MB-07 (480-99299-7), W-160426-MB-08 (480-99299-8), W-160426-MB-10 (480-99299-10), W-160426-MB-11 (480-99299-11), W-160426-MB-12 (480-99299-12), W-160426-MB-13 (480-99299-13), W-160426-MB-14 (480-99299-14), W-160427-MB-15 (480-99299-15) and W-160427-MB-16 (480-99299-16).

Method(s) 524.2: Due to the specific client requirements for the MDL/RL, the recovery of Total Xylenes was below the RL, therefore could not be calculated out in the low level laboratory control spike (LLCS). The final recovery for Total Xylenes was 1.030ug/L in LLCS 480-299326. The following samples are impacted: W-160426-MB-01 (480-99299-1), W-160426-MB-02 (480-99299-2), W-160426-MB-03 (480-99299-3), W-160426-MB-04 (480-99299-4), W-160426-MB-05 (480-99299-5), W-160426-MB-06 (480-99299-6), W-160426-MB-07 (480-99299-7), W-160426-MB-08 (480-99299-8), W-160426-MB-09 (480-99299-9), W-160426-MB-10 (480-99299-10), W-160426-MB-11 (480-99299-11), W-160426-MB-12 (480-99299-12), W-160426-MB-13 (480-99299-13), W-160426-MB-14 (480-99299-14), W-160427-MB-15 (480-99299-15) and W-160427-MB-16 (480-99299-16).

Method(s) 524.2: The sample was collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, when verified by the laboratory, the pH was greater than 2 and the following samples were analyzed after 7 days from sampling: TRIP BLANK (480-99299-34)

Method(s) 524.2: The following samples contained residual chlorine upon receipt: W-160427-MB-19 (480-99299-19), W-160427-MB-23 (480-99299-23), W-160427-MB-24 (480-99299-24), W-160428-MB-25 (480-99299-25) and W-160428-MB-27 (480-99299-27).

Method(s) 524.2: The samples were collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, when verified by the laboratory, the pH was greater than 2 and the following samples were analyzed after 7 days from sampling: W-160428-MB-26 (480-99299-26), W-160428-MB-28 (480-99299-28), W-160428-MB-29 (480-99299-29), W-160428-MB-30 (480-99299-30), W-160428-MB-30 (480-99299-30[MS]), W-160428-MB-30 (480-99299-30[MSD]), W-160428-MB-39 (480-99299-31) and W-160428-MB-40 (480-99299-32).

Method(s) 524.2: Due to the specific client requirements for the MDL/RL, the recovery of Total Xylenes was below the RL, therefore could not be calculated out in the low level laboratory control spike (LLCS). The final recovery for Total Xylenes was 0.984ug/L in LLCS 480-300335. The following sample is impacted: W-160428-MB-41 (480-99299-33).

Method(s) 524.2: The following sample was collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH was outside the required criteria when verified by the laboratory, and corrective action was not possible: W-160428-MB-41 (480-99299-33).

Method(s) 524.2: Due to the specific client requirements for the MDL/RL, the recovery of Total Xylenes was below the RL, therefore could not be calculated out in the low level laboratory control spike (LLCS). The final recovery for Total Xylenes was 0.956ug/L in LLCS 480-299600. The following samples are impacted: W-160426-MB-06 (480-99299-6[MS]) and W-160426-MB-06 (480-99299-6[MSD]).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**HPLC/IC**
Method(s) 300.0: The following samples were reported with elevated reporting limits for all analytes: W-160426-MB-01 (480-99299-1), W-160426-MB-02 (480-99299-2), W-160426-MB-03 (480-99299-3), W-160426-MB-05 (480-99299-5), W-160426-MB-06 (480-99299-6), W-160426-MB-07 (480-99299-7), W-160426-MB-08 (480-99299-8), W-160426-MB-09 (480-99299-9), W-160426-MB-10 (480-99299-10), W-160426-MB-11 (480-99299-11), W-160426-MB-12 (480-99299-12) and W-160426-MB-13 (480-99299-13). The sample was analyzed at a dilution based on conductivity screening results.

## Job ID: 480-99299-1 (Continued)

### Laboratory: TestAmerica Buffalo (Continued)

Method(s) 300.0: The following samples were reported with elevated reporting limits for all analytes: W-160426-MB-14 (480-99299-14), W-160427-MB-15 (480-99299-15), W-160427-MB-16 (480-99299-16), W-160427-MB-17 (480-99299-17), W-160427-MB-19 (480-99299-19), W-160427-MB-20 (480-99299-20), W-160427-MB-21 (480-99299-21), W-160427-MB-22 (480-99299-22), W-160427-MB-23 (480-99299-23), W-160427-MB-24 (480-99299-24), W-160428-MB-25 (480-99299-25), W-160428-MB-26 (480-99299-26), W-160428-MB-27 (480-99299-27), W-160428-MB-28 (480-99299-28), W-160428-MB-30 (480-99299-30), W-160428-MB-39 (480-99299-31), W-160428-MB-40 (480-99299-32) and W-160428-MB-41 (480-99299-33). The sample was analyzed at a dilution based on conductivity screening results.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

## Job ID: 480-99299-2

### Laboratory: TestAmerica Buffalo

**Narrative**

**Job Narrative**
**480-99299-2**

**Receipt**
The samples were received on 4/29/2016 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.8º C and 3.1º C.

**GC/MS VOA**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-01 — Lab Sample ID: 480-99299-1

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 35.1 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160426-MB-02 — Lab Sample ID: 480-99299-2

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 34.2 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160426-MB-03 — Lab Sample ID: 480-99299-3

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 29.2 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160426-MB-04 — Lab Sample ID: 480-99299-4

No Detections.

## Client Sample ID: W-160426-MB-05 — Lab Sample ID: 480-99299-5

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 40.7 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160426-MB-06 — Lab Sample ID: 480-99299-6

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 32.9 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160426-MB-07 — Lab Sample ID: 480-99299-7

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 28.9 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160426-MB-08 — Lab Sample ID: 480-99299-8

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 33.7 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160426-MB-09 — Lab Sample ID: 480-99299-9

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 39.8 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160426-MB-10 — Lab Sample ID: 480-99299-10

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 16.4 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160426-MB-11 — Lab Sample ID: 480-99299-11

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 33.3 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-12 — Lab Sample ID: 480-99299-12

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 12.2 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160426-MB-13 — Lab Sample ID: 480-99299-13

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 27.2 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160426-MB-14 — Lab Sample ID: 480-99299-14

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 26.4 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160427-MB-15 — Lab Sample ID: 480-99299-15

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 28.9 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160427-MB-16 — Lab Sample ID: 480-99299-16

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 18.2 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160427-MB-17 — Lab Sample ID: 480-99299-17

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 27.3 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160427-MB-18 — Lab Sample ID: 480-99299-18

No Detections.

## Client Sample ID: W-160427-MB-19 — Lab Sample ID: 480-99299-19

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 29.2 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160427-MB-20 — Lab Sample ID: 480-99299-20

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 22.9 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160427-MB-21 — Lab Sample ID: 480-99299-21

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 27.9 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160427-MB-22 — Lab Sample ID: 480-99299-22

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 33.5 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160427-MB-23 — Lab Sample ID: 480-99299-23

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 24.1 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160427-MB-24 — Lab Sample ID: 480-99299-24

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 32.1 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160428-MB-25 — Lab Sample ID: 480-99299-25

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 49.9 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160428-MB-26 — Lab Sample ID: 480-99299-26

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 49.6 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160428-MB-27 — Lab Sample ID: 480-99299-27

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 18.4 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160428-MB-28 — Lab Sample ID: 480-99299-28

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 25.6 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160428-MB-29 — Lab Sample ID: 480-99299-29

No Detections.

## Client Sample ID: W-160428-MB-30 — Lab Sample ID: 480-99299-30

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 60.6 | F1 | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160428-MB-39 — Lab Sample ID: 480-99299-31

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 5.9 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160428-MB-40 — Lab Sample ID: 480-99299-32

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 31.4 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160428-MB-41 — Lab Sample ID: 480-99299-33

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 28.1 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: TRIP BLANK — Lab Sample ID: 480-99299-34

No Detections.

This Detection Summary does not include radiochemical test results.

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-01

**Date Collected: 04/26/16 09:21**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-1

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/02/16 13:45 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/02/16 13:45 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/02/16 13:45 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/02/16 13:45 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/02/16 13:45 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/02/16 13:45 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/02/16 13:45 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/02/16 13:45 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-01

**Date Collected: 04/26/16 09:21**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-1

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/02/16 13:45 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/02/16 13:45 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 13:45 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/02/16 13:45 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 13:45 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/02/16 13:45 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 13:45 | 1 |
| Xylenes, Total | ND | * | 1.0 | 1.0 | ug/L | | | 05/02/16 13:45 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/02/16 13:45* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *80 - 120* | | *05/02/16 13:45* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **35.1** | | 2.5 | 2.5 | mg/L | | | 05/04/16 17:00 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-02

**Date Collected: 04/26/16 09:22**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-2

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/02/16 14:13 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/02/16 14:13 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/02/16 14:13 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/02/16 14:13 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/02/16 14:13 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/02/16 14:13 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/02/16 14:13 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/02/16 14:13 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |

## Client Sample ID: W-160426-MB-02

**Date Collected: 04/26/16 09:22**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-2

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/02/16 14:13 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/02/16 14:13 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 14:13 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/02/16 14:13 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:13 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/02/16 14:13 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 14:13 | 1 |
| Xylenes, Total | ND | * | 1.0 | 1.0 | ug/L | | | 05/02/16 14:13 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/02/16 14:13* | *1* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* | | *05/02/16 14:13* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **34.2** | | 2.5 | 2.5 | mg/L | | | 05/04/16 17:15 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-03

**Date Collected: 04/26/16 09:55**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-3

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/02/16 14:40 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/02/16 14:40 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/02/16 14:40 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/02/16 14:40 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/02/16 14:40 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/02/16 14:40 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/02/16 14:40 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/02/16 14:40 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |

## Client Sample ID: W-160426-MB-03

**Lab Sample ID: 480-99299-3**

**Date Collected: 04/26/16 09:55**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/02/16 14:40 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/02/16 14:40 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 14:40 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/02/16 14:40 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 14:40 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/02/16 14:40 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 14:40 | 1 |
| Xylenes, Total | ND | * | 1.0 | 1.0 | ug/L | | | 05/02/16 14:40 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *104* | | *80 - 120* | | *05/02/16 14:40* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *80 - 120* | | *05/02/16 14:40* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **29.2** | | 2.5 | 2.5 | mg/L | | | 05/04/16 17:29 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-04

**Date Collected: 04/26/16 09:57**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-4

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/02/16 15:07 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/02/16 15:07 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/02/16 15:07 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/02/16 15:07 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/02/16 15:07 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/02/16 15:07 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/02/16 15:07 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/02/16 15:07 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |

## Client Sample ID: W-160426-MB-04

**Date Collected: 04/26/16 09:57**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-4

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/02/16 15:07 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/02/16 15:07 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 15:07 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/02/16 15:07 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:07 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/02/16 15:07 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 15:07 | 1 |
| Xylenes, Total | ND | * | 1.0 | 1.0 | ug/L | | | 05/02/16 15:07 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/02/16 15:07* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *80 - 120* | | *05/02/16 15:07* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | | 0.50 | 0.50 | mg/L | | | 05/04/16 17:44 | 1 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-05

**Date Collected: 04/26/16 10:15**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-5

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/02/16 15:34 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/02/16 15:34 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/02/16 15:34 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/02/16 15:34 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/02/16 15:34 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/02/16 15:34 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/02/16 15:34 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/02/16 15:34 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-05

**Date Collected: 04/26/16 10:15**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-5

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/02/16 15:34 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/02/16 15:34 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 15:34 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/02/16 15:34 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 15:34 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/02/16 15:34 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 15:34 | 1 |
| Xylenes, Total | ND | * | 1.0 | 1.0 | ug/L | | | 05/02/16 15:34 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* | | *05/02/16 15:34* | *1* |
| *4-Bromofluorobenzene (Surr)* | *95* | | *80 - 120* | | *05/02/16 15:34* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **40.7** | | 2.5 | 2.5 | mg/L | | | 05/04/16 17:58 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-06

**Date Collected: 04/26/16 10:50**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-6

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/02/16 16:00 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/02/16 16:00 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/02/16 16:00 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/02/16 16:00 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/02/16 16:00 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/02/16 16:00 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/02/16 16:00 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/02/16 16:00 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |

## Client Sample ID: W-160426-MB-06

**Lab Sample ID: 480-99299-6**

**Date Collected: 04/26/16 10:50**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | F1 | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/02/16 16:00 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/02/16 16:00 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 16:00 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/02/16 16:00 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:00 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/02/16 16:00 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 16:00 | 1 |
| Xylenes, Total | ND | * | 1.0 | 1.0 | ug/L | | | 05/02/16 16:00 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *102* | | *80 - 120* | | *05/02/16 16:00* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *80 - 120* | | *05/02/16 16:00* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **32.9** | | 2.5 | 2.5 | mg/L | | | 05/04/16 21:23 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-07

**Date Collected: 04/26/16 11:27**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-7

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/02/16 16:27 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/02/16 16:27 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/02/16 16:27 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/02/16 16:27 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/02/16 16:27 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/02/16 16:27 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/02/16 16:27 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/02/16 16:27 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-07

**Date Collected: 04/26/16 11:27**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-7

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/02/16 16:27 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/02/16 16:27 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 16:27 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/02/16 16:27 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:27 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/02/16 16:27 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 16:27 | 1 |
| Xylenes, Total | ND | * | 1.0 | 1.0 | ug/L | | | 05/02/16 16:27 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/02/16 16:27* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *80 - 120* | | *05/02/16 16:27* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **28.9** | | 2.5 | 2.5 | mg/L | | | 05/04/16 18:13 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-08

**Date Collected: 04/26/16 11:33**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-8

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/02/16 16:54 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/02/16 16:54 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/02/16 16:54 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/02/16 16:54 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/02/16 16:54 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/02/16 16:54 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/02/16 16:54 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/02/16 16:54 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |

## Client Sample ID: W-160426-MB-08

**Lab Sample ID: 480-99299-8**

**Date Collected: 04/26/16 11:33**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/02/16 16:54 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/02/16 16:54 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 16:54 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/02/16 16:54 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 16:54 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/02/16 16:54 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 16:54 | 1 |
| Xylenes, Total | ND | * | 1.0 | 1.0 | ug/L | | | 05/02/16 16:54 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/02/16 16:54* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *80 - 120* | | *05/02/16 16:54* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **33.7** | | 2.5 | 2.5 | mg/L | | | 05/04/16 18:27 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-09

**Lab Sample ID: 480-99299-9**

**Date Collected: 04/26/16 12:29**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/02/16 17:21 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/02/16 17:21 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/02/16 17:21 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/02/16 17:21 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/02/16 17:21 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/02/16 17:21 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/02/16 17:21 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/02/16 17:21 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |

## Client Sample ID: W-160426-MB-09

**Lab Sample ID: 480-99299-9**

**Date Collected: 04/26/16 12:29**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/02/16 17:21 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/02/16 17:21 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 17:21 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/02/16 17:21 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:21 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/02/16 17:21 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 17:21 | 1 |
| Xylenes, Total | ND | * | 1.0 | 1.0 | ug/L | | | 05/02/16 17:21 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/02/16 17:21* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *80 - 120* | | *05/02/16 17:21* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **39.8** | | 2.5 | 2.5 | mg/L | | | 05/04/16 20:10 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-10

**Date Collected: 04/26/16 12:39**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-10

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/02/16 17:48 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/02/16 17:48 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/02/16 17:48 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/02/16 17:48 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/02/16 17:48 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/02/16 17:48 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/02/16 17:48 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/02/16 17:48 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |

## Client Sample ID: W-160426-MB-10

**Lab Sample ID: 480-99299-10**

**Date Collected: 04/26/16 12:39**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/02/16 17:48 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/02/16 17:48 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 17:48 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/02/16 17:48 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 17:48 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/02/16 17:48 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 17:48 | 1 |
| Xylenes, Total | ND | * | 1.0 | 1.0 | ug/L | | | 05/02/16 17:48 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *102* | | *80 - 120* | | *05/02/16 17:48* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *80 - 120* | | *05/02/16 17:48* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **16.4** | | 2.5 | 2.5 | mg/L | | | 05/04/16 20:24 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-11

**Lab Sample ID: 480-99299-11**

**Date Collected: 04/26/16 12:46**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/02/16 18:15 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/02/16 18:15 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/02/16 18:15 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/02/16 18:15 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/02/16 18:15 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/02/16 18:15 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/02/16 18:15 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/02/16 18:15 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |

## Client Sample ID: W-160426-MB-11

**Lab Sample ID: 480-99299-11**

**Date Collected: 04/26/16 12:46**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/02/16 18:15 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/02/16 18:15 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 18:15 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/02/16 18:15 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:15 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/02/16 18:15 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 18:15 | 1 |
| Xylenes, Total | ND | * | 1.0 | 1.0 | ug/L | | | 05/02/16 18:15 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* | | *05/02/16 18:15* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *80 - 120* | | *05/02/16 18:15* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **33.3** | | 2.5 | 2.5 | mg/L | | | 05/04/16 20:39 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-12

**Lab Sample ID: 480-99299-12**

**Date Collected: 04/26/16 13:20**
**Matrix: Water**
**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/02/16 18:42 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/02/16 18:42 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/02/16 18:42 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/02/16 18:42 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/02/16 18:42 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/02/16 18:42 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/02/16 18:42 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/02/16 18:42 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |

## Client Sample ID: W-160426-MB-12

**Lab Sample ID: 480-99299-12**

**Date Collected: 04/26/16 13:20**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/02/16 18:42 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/02/16 18:42 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 18:42 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/02/16 18:42 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 18:42 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/02/16 18:42 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 18:42 | 1 |
| Xylenes, Total | ND | * | 1.0 | 1.0 | ug/L | | | 05/02/16 18:42 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/02/16 18:42* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *80 - 120* | | *05/02/16 18:42* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **12.2** | | 2.5 | 2.5 | mg/L | | | 05/04/16 20:53 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-13

**Date Collected: 04/26/16 13:30**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-13

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/02/16 19:09 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/02/16 19:09 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/02/16 19:09 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/02/16 19:09 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/02/16 19:09 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/02/16 19:09 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/02/16 19:09 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/02/16 19:09 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-13

**Date Collected: 04/26/16 13:30**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-13

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/02/16 19:09 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/02/16 19:09 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 19:09 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/02/16 19:09 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:09 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/02/16 19:09 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 19:09 | 1 |
| Xylenes, Total | ND | * | 1.0 | 1.0 | ug/L | | | 05/02/16 19:09 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* | | *05/02/16 19:09* | *1* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* | | *05/02/16 19:09* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **27.2** | | 2.5 | 2.5 | mg/L | | | 05/04/16 21:08 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-14

**Date Collected: 04/26/16 09:50**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-14

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/02/16 19:36 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/02/16 19:36 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/02/16 19:36 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/02/16 19:36 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/02/16 19:36 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/02/16 19:36 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/02/16 19:36 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/02/16 19:36 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |

## Client Sample ID: W-160426-MB-14

**Lab Sample ID: 480-99299-14**

**Date Collected: 04/26/16 09:50**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/02/16 19:36 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/02/16 19:36 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 19:36 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/02/16 19:36 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 19:36 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/02/16 19:36 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 19:36 | 1 |
| Xylenes, Total | ND | * | 1.0 | 1.0 | ug/L | | | 05/02/16 19:36 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *103* | | *80 - 120* | | *05/02/16 19:36* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *80 - 120* | | *05/02/16 19:36* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **26.4** | | 2.5 | 2.5 | mg/L | | | 05/04/16 15:50 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160427-MB-15

**Lab Sample ID: 480-99299-15**

**Date Collected: 04/27/16 11:40**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/02/16 20:03 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/02/16 20:03 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/02/16 20:03 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/02/16 20:03 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/02/16 20:03 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/02/16 20:03 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/02/16 20:03 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/02/16 20:03 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |

## Client Sample ID: W-160427-MB-15

**Lab Sample ID: 480-99299-15**

**Date Collected: 04/27/16 11:40**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/02/16 20:03 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/02/16 20:03 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 20:03 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/02/16 20:03 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:03 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/02/16 20:03 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 20:03 | 1 |
| Xylenes, Total | ND | * | 1.0 | 1.0 | ug/L | | | 05/02/16 20:03 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *102* | | *80 - 120* | | *05/02/16 20:03* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *80 - 120* | | *05/02/16 20:03* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **28.9** | | 2.5 | 2.5 | mg/L | | | 05/04/16 15:58 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160427-MB-16

**Date Collected: 04/27/16 09:57**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-16

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/02/16 20:29 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/02/16 20:29 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/02/16 20:29 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/02/16 20:29 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/02/16 20:29 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/02/16 20:29 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/02/16 20:29 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/02/16 20:29 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160427-MB-16

**Lab Sample ID: 480-99299-16**

**Date Collected: 04/27/16 09:57**
**Matrix: Water**
**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/02/16 20:29 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/02/16 20:29 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 20:29 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/02/16 20:29 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 20:29 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/02/16 20:29 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 20:29 | 1 |
| Xylenes, Total | ND | * | 1.0 | 1.0 | ug/L | | | 05/02/16 20:29 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *102* | | *80 - 120* | | *05/02/16 20:29* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *80 - 120* | | *05/02/16 20:29* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **18.2** | | 2.5 | 2.5 | mg/L | | | 05/04/16 16:06 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160427-MB-17

**Date Collected: 04/27/16 10:05**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-17

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/05/16 12:48 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/05/16 12:48 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/05/16 12:48 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/05/16 12:48 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/05/16 12:48 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/05/16 12:48 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/05/16 12:48 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/05/16 12:48 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160427-MB-17

**Lab Sample ID: 480-99299-17**

**Date Collected: 04/27/16 10:05**
**Matrix: Water**
**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 12:48 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/05/16 12:48 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 12:48 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/05/16 12:48 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 12:48 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/05/16 12:48 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 12:48 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 12:48 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *102* | | *80 - 120* | | *05/05/16 12:48* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *80 - 120* | | *05/05/16 12:48* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **27.3** | | 2.5 | 2.5 | mg/L | | | 05/04/16 16:14 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160427-MB-18

**Date Collected: 04/27/16 10:07**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-18

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/05/16 13:15 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/05/16 13:15 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/05/16 13:15 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/05/16 13:15 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/05/16 13:15 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/05/16 13:15 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/05/16 13:15 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/05/16 13:15 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |

## Client Sample ID: W-160427-MB-18

**Lab Sample ID: 480-99299-18**

**Date Collected: 04/27/16 10:07**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 13:15 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/05/16 13:15 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 13:15 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/05/16 13:15 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:15 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/05/16 13:15 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 13:15 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 13:15 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* | | *05/05/16 13:15* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *80 - 120* | | *05/05/16 13:15* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | | 0.50 | 0.50 | mg/L | | | 05/04/16 16:22 | 1 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160427-MB-19

**Date Collected: 04/27/16 10:41**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-19

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/05/16 13:41 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/05/16 13:41 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/05/16 13:41 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/05/16 13:41 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/05/16 13:41 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/05/16 13:41 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/05/16 13:41 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/05/16 13:41 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |

## Client Sample ID: W-160427-MB-19

**Lab Sample ID: 480-99299-19**

**Date Collected: 04/27/16 10:41**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 13:41 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/05/16 13:41 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 13:41 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/05/16 13:41 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 13:41 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/05/16 13:41 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 13:41 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 13:41 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *102* | | *80 - 120* | | *05/05/16 13:41* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *80 - 120* | | *05/05/16 13:41* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **29.2** | | 2.5 | 2.5 | mg/L | | | 05/04/16 16:30 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160427-MB-20

**Lab Sample ID: 480-99299-20**

**Date Collected: 04/27/16 10:46**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/05/16 14:08 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/05/16 14:08 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/05/16 14:08 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/05/16 14:08 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/05/16 14:08 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/05/16 14:08 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/05/16 14:08 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/05/16 14:08 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160427-MB-20

**Lab Sample ID: 480-99299-20**

**Date Collected: 04/27/16 10:46**
**Matrix: Water**
**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 14:08 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/05/16 14:08 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 14:08 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/05/16 14:08 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:08 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/05/16 14:08 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 14:08 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 14:08 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *102* | | *80 - 120* | | *05/05/16 14:08* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *80 - 120* | | *05/05/16 14:08* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **22.9** | | 2.5 | 2.5 | mg/L | | | 05/04/16 16:38 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160427-MB-21

**Date Collected: 04/27/16 10:54**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-21

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/05/16 14:35 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/05/16 14:35 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/05/16 14:35 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/05/16 14:35 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/05/16 14:35 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/05/16 14:35 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/05/16 14:35 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/05/16 14:35 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |

## Client Sample ID: W-160427-MB-21

**Lab Sample ID: 480-99299-21**

**Date Collected: 04/27/16 10:54**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 14:35 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/05/16 14:35 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 14:35 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/05/16 14:35 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 14:35 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/05/16 14:35 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 14:35 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 14:35 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/05/16 14:35* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *80 - 120* | | *05/05/16 14:35* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **27.9** | | 2.5 | 2.5 | mg/L | | | 05/04/16 16:46 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160427-MB-22

**Lab Sample ID: 480-99299-22**

**Date Collected: 04/27/16 11:40**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/05/16 15:02 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/05/16 15:02 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/05/16 15:02 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/05/16 15:02 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/05/16 15:02 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/05/16 15:02 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/05/16 15:02 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/05/16 15:02 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |

## Client Sample ID: W-160427-MB-22

**Lab Sample ID: 480-99299-22**

**Date Collected: 04/27/16 11:40**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 15:02 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/05/16 15:02 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 15:02 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/05/16 15:02 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:02 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/05/16 15:02 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 15:02 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 15:02 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/05/16 15:02* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *80 - 120* | | *05/05/16 15:02* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **33.5** | | 2.5 | 2.5 | mg/L | | | 05/04/16 16:55 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160427-MB-23

**Date Collected: 04/27/16 12:07**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-23

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/05/16 15:29 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/05/16 15:29 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/05/16 15:29 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/05/16 15:29 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/05/16 15:29 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/05/16 15:29 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/05/16 15:29 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/05/16 15:29 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |

## Client Sample ID: W-160427-MB-23

**Lab Sample ID: 480-99299-23**

**Date Collected: 04/27/16 12:07**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 15:29 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/05/16 15:29 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 15:29 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/05/16 15:29 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:29 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/05/16 15:29 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 15:29 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 15:29 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *102* | | *80 - 120* | | *05/05/16 15:29* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *80 - 120* | | *05/05/16 15:29* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **24.1** | | 2.5 | 2.5 | mg/L | | | 05/04/16 17:52 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160427-MB-24

**Lab Sample ID: 480-99299-24**

**Date Collected: 04/27/16 12:15**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/05/16 15:55 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/05/16 15:55 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/05/16 15:55 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/05/16 15:55 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/05/16 15:55 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/05/16 15:55 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/05/16 15:55 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/05/16 15:55 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |

## Client Sample ID: W-160427-MB-24

**Lab Sample ID: 480-99299-24**

**Date Collected: 04/27/16 12:15**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 15:55 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/05/16 15:55 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 15:55 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/05/16 15:55 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 15:55 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/05/16 15:55 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 15:55 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 15:55 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/05/16 15:55* | *1* |
| *4-Bromofluorobenzene (Surr)* | *95* | | *80 - 120* | | *05/05/16 15:55* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **32.1** | | 2.5 | 2.5 | mg/L | | | 05/04/16 18:00 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160428-MB-25

**Lab Sample ID: 480-99299-25**

**Date Collected: 04/28/16 10:04**
**Date Received: 04/29/16 09:00**

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/05/16 16:22 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/05/16 16:22 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/05/16 16:22 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/05/16 16:22 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/05/16 16:22 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/05/16 16:22 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/05/16 16:22 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/05/16 16:22 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160428-MB-25

**Lab Sample ID: 480-99299-25**

**Date Collected: 04/28/16 10:04**
**Matrix: Water**
**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 16:22 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/05/16 16:22 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 16:22 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/05/16 16:22 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:22 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/05/16 16:22 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 16:22 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 16:22 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *102* | | *80 - 120* | | *05/05/16 16:22* | *1* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* | | *05/05/16 16:22* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **49.9** | | 2.5 | 2.5 | mg/L | | | 05/04/16 18:08 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160428-MB-26

**Lab Sample ID: 480-99299-26**

**Date Collected: 04/28/16 10:06**
**Date Received: 04/29/16 09:00**

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/05/16 16:49 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/05/16 16:49 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/05/16 16:49 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/05/16 16:49 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/05/16 16:49 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/05/16 16:49 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/05/16 16:49 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/05/16 16:49 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |

## Client Sample ID: W-160428-MB-26

**Lab Sample ID: 480-99299-26**

**Date Collected: 04/28/16 10:06**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 16:49 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/05/16 16:49 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 16:49 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/05/16 16:49 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 16:49 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/05/16 16:49 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 16:49 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 16:49 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* | | *05/05/16 16:49* | *1* |
| *4-Bromofluorobenzene (Surr)* | *101* | | *80 - 120* | | *05/05/16 16:49* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **49.6** | | 2.5 | 2.5 | mg/L | | | 05/04/16 18:16 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160428-MB-27

**Lab Sample ID: 480-99299-27**

**Date Collected: 04/28/16 10:30**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/05/16 17:16 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/05/16 17:16 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/05/16 17:16 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/05/16 17:16 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/05/16 17:16 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/05/16 17:16 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/05/16 17:16 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/05/16 17:16 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |

## Client Sample ID: W-160428-MB-27

**Lab Sample ID: 480-99299-27**

**Date Collected: 04/28/16 10:30**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 17:16 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/05/16 17:16 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 17:16 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/05/16 17:16 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:16 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/05/16 17:16 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 17:16 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 17:16 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/05/16 17:16* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *80 - 120* | | *05/05/16 17:16* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **18.4** | | 2.5 | 2.5 | mg/L | | | 05/04/16 18:24 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160428-MB-28

**Lab Sample ID: 480-99299-28**

**Date Collected: 04/28/16 10:46**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/05/16 17:43 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/05/16 17:43 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/05/16 17:43 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/05/16 17:43 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/05/16 17:43 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/05/16 17:43 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/05/16 17:43 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/05/16 17:43 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |

## Client Sample ID: W-160428-MB-28

**Lab Sample ID: 480-99299-28**

**Date Collected: 04/28/16 10:46**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 17:43 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/05/16 17:43 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 17:43 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/05/16 17:43 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 17:43 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/05/16 17:43 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 17:43 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 17:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *102* | | *80 - 120* | | *05/05/16 17:43* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *80 - 120* | | *05/05/16 17:43* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **25.6** | | 2.5 | 2.5 | mg/L | | | 05/04/16 18:32 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160428-MB-29

**Lab Sample ID: 480-99299-29**

**Date Collected: 04/28/16 10:48**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/05/16 18:09 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/05/16 18:09 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/05/16 18:09 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/05/16 18:09 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/05/16 18:09 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/05/16 18:09 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/05/16 18:09 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/05/16 18:09 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |

## Client Sample ID: W-160428-MB-29

**Lab Sample ID: 480-99299-29**

**Date Collected: 04/28/16 10:48**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 18:09 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/05/16 18:09 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 18:09 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/05/16 18:09 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:09 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/05/16 18:09 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 18:09 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 18:09 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/05/16 18:09* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *80 - 120* | | *05/05/16 18:09* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | | 0.50 | 0.50 | mg/L | | | 05/04/16 19:21 | 1 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160428-MB-30

**Date Collected: 04/28/16 10:52**
**Date Received: 04/29/16 09:00**

## Lab Sample ID: 480-99299-30

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/05/16 18:36 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/05/16 18:36 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/05/16 18:36 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/05/16 18:36 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/05/16 18:36 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/05/16 18:36 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/05/16 18:36 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/05/16 18:36 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |

## Client Sample ID: W-160428-MB-30

**Lab Sample ID: 480-99299-30**

**Date Collected: 04/28/16 10:52**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 18:36 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/05/16 18:36 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 18:36 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/05/16 18:36 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 18:36 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/05/16 18:36 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 18:36 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 18:36 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* | | *05/05/16 18:36* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *80 - 120* | | *05/05/16 18:36* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **60.6** | **F1** | 2.5 | 2.5 | mg/L | | | 05/04/16 15:01 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160428-MB-39

**Lab Sample ID: 480-99299-31**

**Date Collected: 04/28/16 10:30**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/05/16 19:03 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/05/16 19:03 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/05/16 19:03 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/05/16 19:03 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/05/16 19:03 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/05/16 19:03 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/05/16 19:03 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/05/16 19:03 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |

## Client Sample ID: W-160428-MB-39

**Lab Sample ID: 480-99299-31**

**Date Collected: 04/28/16 10:30**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 19:03 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/05/16 19:03 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 19:03 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/05/16 19:03 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:03 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/05/16 19:03 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 19:03 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 19:03 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *103* | | *80 - 120* | | *05/05/16 19:03* | *1* |
| *4-Bromofluorobenzene (Surr)* | *95* | | *80 - 120* | | *05/05/16 19:03* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **5.9** | | 2.5 | 2.5 | mg/L | | | 05/04/16 19:29 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160428-MB-40

**Lab Sample ID: 480-99299-32**

**Date Collected: 04/28/16 10:40**
**Date Received: 04/29/16 09:00**

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/05/16 19:30 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/05/16 19:30 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/05/16 19:30 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/05/16 19:30 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/05/16 19:30 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/05/16 19:30 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/05/16 19:30 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/05/16 19:30 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |

## Client Sample ID: W-160428-MB-40

**Lab Sample ID: 480-99299-32**

**Date Collected: 04/28/16 10:40**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 19:30 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/05/16 19:30 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 19:30 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/05/16 19:30 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 19:30 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/05/16 19:30 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 19:30 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 19:30 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/05/16 19:30* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *80 - 120* | | *05/05/16 19:30* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **31.4** | | 2.5 | 2.5 | mg/L | | | 05/04/16 19:37 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160428-MB-41

**Lab Sample ID: 480-99299-33**

**Date Collected: 04/28/16 11:05**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/06/16 12:30 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/06/16 12:30 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/06/16 12:30 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/06/16 12:30 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/06/16 12:30 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/06/16 12:30 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/06/16 12:30 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/06/16 12:30 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |

## Client Sample ID: W-160428-MB-41

**Lab Sample ID: 480-99299-33**

**Date Collected: 04/28/16 11:05**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/06/16 12:30 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/06/16 12:30 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/06/16 12:30 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/06/16 12:30 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 12:30 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/06/16 12:30 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/06/16 12:30 | 1 |
| Xylenes, Total | ND | * | 1.0 | 1.0 | ug/L | | | 05/06/16 12:30 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *102* | | *80 - 120* | | *05/06/16 12:30* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *80 - 120* | | *05/06/16 12:30* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **28.1** | | 2.5 | 2.5 | mg/L | | | 05/04/16 19:45 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: TRIP BLANK

**Lab Sample ID: 480-99299-34**

**Date Collected: 04/26/16 00:00**
**Matrix: Water**
**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/04/16 20:25 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/04/16 20:25 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/04/16 20:25 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/04/16 20:25 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/04/16 20:25 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/04/16 20:25 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/04/16 20:25 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/04/16 20:25 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |

## Client Sample ID: TRIP BLANK

**Lab Sample ID: 480-99299-34**

**Date Collected: 04/26/16 00:00**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/04/16 20:25 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/04/16 20:25 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/04/16 20:25 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/04/16 20:25 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 20:25 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/04/16 20:25 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/04/16 20:25 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/04/16 20:25 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* | | *05/04/16 20:25* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *80 - 120* | | *05/04/16 20:25* | *1* |

# Surrogate Summary

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Method: 524.2 - Volatile Organic Compounds (GC/MS)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | 12DCB (80-120) | BFB (80-120) | | | | | | |
| 480-99299-1 | W-160426-MB-01 | 101 | 97 | | | | | | |
| 480-99299-2 | W-160426-MB-02 | 101 | 99 | | | | | | |
| 480-99299-3 | W-160426-MB-03 | 104 | 97 | | | | | | |
| 480-99299-4 | W-160426-MB-04 | 101 | 98 | | | | | | |
| 480-99299-5 | W-160426-MB-05 | 100 | 95 | | | | | | |
| 480-99299-6 | W-160426-MB-06 | 102 | 98 | | | | | | |
| 480-99299-6 MS | W-160426-MB-06 | 99 | 99 | | | | | | |
| 480-99299-6 MSD | W-160426-MB-06 | 99 | 99 | | | | | | |
| 480-99299-7 | W-160426-MB-07 | 101 | 97 | | | | | | |
| 480-99299-8 | W-160426-MB-08 | 101 | 96 | | | | | | |
| 480-99299-9 | W-160426-MB-09 | 101 | 97 | | | | | | |
| 480-99299-10 | W-160426-MB-10 | 102 | 98 | | | | | | |
| 480-99299-11 | W-160426-MB-11 | 100 | 98 | | | | | | |
| 480-99299-12 | W-160426-MB-12 | 101 | 97 | | | | | | |
| 480-99299-13 | W-160426-MB-13 | 100 | 99 | | | | | | |
| 480-99299-14 | W-160426-MB-14 | 103 | 97 | | | | | | |
| 480-99299-15 | W-160427-MB-15 | 102 | 96 | | | | | | |
| 480-99299-16 | W-160427-MB-16 | 102 | 98 | | | | | | |
| 480-99299-17 | W-160427-MB-17 | 102 | 96 | | | | | | |
| 480-99299-18 | W-160427-MB-18 | 100 | 96 | | | | | | |
| 480-99299-19 | W-160427-MB-19 | 102 | 97 | | | | | | |
| 480-99299-20 | W-160427-MB-20 | 102 | 98 | | | | | | |
| 480-99299-21 | W-160427-MB-21 | 101 | 96 | | | | | | |
| 480-99299-22 | W-160427-MB-22 | 101 | 97 | | | | | | |
| 480-99299-23 | W-160427-MB-23 | 102 | 96 | | | | | | |
| 480-99299-24 | W-160427-MB-24 | 101 | 95 | | | | | | |
| 480-99299-25 | W-160428-MB-25 | 102 | 99 | | | | | | |
| 480-99299-26 | W-160428-MB-26 | 100 | 101 | | | | | | |
| 480-99299-27 | W-160428-MB-27 | 101 | 97 | | | | | | |
| 480-99299-28 | W-160428-MB-28 | 102 | 97 | | | | | | |
| 480-99299-29 | W-160428-MB-29 | 101 | 97 | | | | | | |
| 480-99299-30 | W-160428-MB-30 | 100 | 97 | | | | | | |
| 480-99299-30 MS | W-160428-MB-30 | 100 | 99 | | | | | | |
| 480-99299-30 MSD | W-160428-MB-30 | 101 | 98 | | | | | | |
| 480-99299-31 | W-160428-MB-39 | 103 | 95 | | | | | | |
| 480-99299-32 | W-160428-MB-40 | 101 | 97 | | | | | | |
| 480-99299-33 | W-160428-MB-41 | 102 | 97 | | | | | | |
| 480-99299-34 | TRIP BLANK | 100 | 96 | | | | | | |
| LCS 480-299326/4 | Lab Control Sample | 101 | 100 | | | | | | |
| LCS 480-299600/4 | Lab Control Sample | 100 | 100 | | | | | | |
| LCS 480-299833/4 | Lab Control Sample | 100 | 101 | | | | | | |
| LCS 480-300068/4 | Lab Control Sample | 101 | 97 | | | | | | |
| LCS 480-300335/4 | Lab Control Sample | 98 | 100 | | | | | | |
| LCSD 480-299326/28 | Lab Control Sample Dup | 101 | 99 | | | | | | |
| LCSD 480-299600/5 | Lab Control Sample Dup | 99 | 103 | | | | | | |
| LCSD 480-299833/5 | Lab Control Sample Dup | 99 | 99 | | | | | | |
| LCSD 480-300068/5 | Lab Control Sample Dup | 100 | 101 | | | | | | |
| LCSD 480-300335/5 | Lab Control Sample Dup | 100 | 99 | | | | | | |
| LLCS 480-299326/6 | Lab Control Sample | 100 | 99 | | | | | | |

# Surrogate Summary

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | 12DCB (80-120) | BFB (80-120) | | | | | | |
| LLCS 480-299600/6 | Lab Control Sample | 100 | 100 | | | | | | |
| LLCS 480-299833/6 | Lab Control Sample | 101 | 98 | | | | | | |
| LLCS 480-300068/6 | Lab Control Sample | 100 | 98 | | | | | | |
| LLCS 480-300335/6 | Lab Control Sample | 101 | 98 | | | | | | |
| MB 480-299326/7 | Method Blank | 101 | 98 | | | | | | |
| MB 480-299600/7 | Method Blank | 102 | 95 | | | | | | |
| MB 480-299833/7 | Method Blank | 100 | 97 | | | | | | |
| MB 480-300068/7 | Method Blank | 101 | 98 | | | | | | |
| MB 480-300335/7 | Method Blank | 100 | 97 | | | | | | |

**Surrogate Legend**

12DCB = 1,2-Dichlorobenzene-d4
BFB = 4-Bromofluorobenzene (Surr)

## Method: 524.2 - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 480-299326/7**
**Matrix: Water**
**Analysis Batch: 299326**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/02/16 11:10 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/02/16 11:10 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/02/16 11:10 | 1 |

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/02/16 11:10 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/02/16 11:10 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/02/16 11:10 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/02/16 11:10 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/02/16 11:10 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-299326/7**
**Matrix: Water**
**Analysis Batch: 299326**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/02/16 11:10 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/02/16 11:10 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 11:10 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/02/16 11:10 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/02/16 11:10 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/02/16 11:10 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/02/16 11:10 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/02/16 11:10 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/02/16 11:10* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *80 - 120* | | *05/02/16 11:10* | *1* |

**Lab Sample ID: LCS 480-299326/4**
**Matrix: Water**
**Analysis Batch: 299326**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 |
| cis-1,2-Dichloroethene | 4.00 | 4.18 | | ug/L | | 105 | 70 - 130 |
| Vinyl chloride | 4.00 | 3.55 | | ug/L | | 89 | 70 - 130 |

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 4.00 | 4.19 | | ug/L | | 105 | 70 - 130 |
| 1,1,1-Trichloroethane | 4.00 | 4.23 | | ug/L | | 106 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 4.00 | 3.80 | | ug/L | | 95 | 70 - 130 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-299326/4**
**Matrix: Water**
**Analysis Batch: 299326**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,2-Trichloroethane | 4.00 | 3.92 | | ug/L | | 98 | 70 - 130 |
| 1,1-Dichloroethene | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 |
| 1,1-Dichloropropene | 4.00 | 3.88 | | ug/L | | 97 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 4.00 | 3.74 | | ug/L | | 93 | 70 - 130 |
| 1,2,3-Trichloropropane | 4.00 | 3.64 | | ug/L | | 91 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 4.00 | 3.84 | | ug/L | | 96 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 4.00 | 3.75 | | ug/L | | 94 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 4.00 | 3.52 | | ug/L | | 88 | 70 - 130 |
| 1,2-Dibromoethane | 4.00 | 3.84 | | ug/L | | 96 | 70 - 130 |
| 1,2-Dichlorobenzene | 4.00 | 3.87 | | ug/L | | 97 | 70 - 130 |
| 1,2-Dichloroethane | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 |
| 1,2-Dichloropropane | 4.00 | 4.17 | | ug/L | | 104 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 4.00 | 3.83 | | ug/L | | 96 | 70 - 130 |
| 1,3-Dichlorobenzene | 4.00 | 3.94 | | ug/L | | 99 | 70 - 130 |
| 1,3-Dichloropropane | 4.00 | 3.74 | | ug/L | | 93 | 70 - 130 |
| 1,4-Dichlorobenzene | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 |
| 2,2-Dichloropropane | 4.00 | 4.52 | | ug/L | | 113 | 70 - 130 |
| 2-Butanone (MEK) | 20.0 | 16.6 | | ug/L | | 83 | 70 - 130 |
| 2-Chlorotoluene | 4.00 | 3.97 | | ug/L | | 99 | 70 - 130 |
| 2-Hexanone | 20.0 | 17.5 | | ug/L | | 88 | 70 - 130 |
| 4-Chlorotoluene | 4.00 | 3.93 | | ug/L | | 98 | 70 - 130 |
| 4-Isopropyltoluene | 4.00 | 3.79 | | ug/L | | 95 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 20.0 | 17.8 | | ug/L | | 89 | 70 - 130 |
| Acetone | 20.0 | 17.2 | | ug/L | | 86 | 70 - 130 |
| Benzene | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 |
| Bromobenzene | 4.00 | 3.82 | | ug/L | | 96 | 70 - 130 |
| Bromochloromethane | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 |
| Bromoform | 4.00 | 4.22 | | ug/L | | 105 | 70 - 130 |
| Bromomethane | 4.00 | 3.36 | | ug/L | | 84 | 70 - 130 |
| Carbon disulfide | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 |
| Carbon tetrachloride | 4.00 | 4.48 | | ug/L | | 112 | 70 - 130 |
| Chlorobenzene | 4.00 | 3.92 | | ug/L | | 98 | 70 - 130 |
| Chlorodibromomethane | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 |
| Chloroethane | 4.00 | 3.87 | | ug/L | | 97 | 70 - 130 |
| Chloroform | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 |
| Chloromethane | 4.00 | 3.50 | | ug/L | | 87 | 70 - 130 |
| cis-1,3-Dichloropropene | 4.00 | 4.02 | | ug/L | | 100 | 70 - 130 |
| Dibromomethane | 4.00 | 3.79 | | ug/L | | 95 | 70 - 130 |
| Dichlorobromomethane | 4.00 | 4.19 | | ug/L | | 105 | 70 - 130 |
| Dichlorodifluoromethane | 4.00 | 2.94 | | ug/L | | 73 | 70 - 130 |
| Ethylbenzene | 4.00 | 3.95 | | ug/L | | 99 | 70 - 130 |
| Hexachlorobutadiene | 4.00 | 3.63 | | ug/L | | 91 | 70 - 130 |
| Isopropylbenzene | 4.00 | 3.88 | | ug/L | | 97 | 70 - 130 |
| Methyl tert-butyl ether | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 |
| Methylene Chloride | 4.00 | 3.85 | | ug/L | | 96 | 70 - 130 |
| Naphthalene | 4.00 | 3.56 | | ug/L | | 89 | 70 - 130 |
| n-Butylbenzene | 4.00 | 3.69 | | ug/L | | 92 | 70 - 130 |
| n-Propylbenzene | 4.00 | 3.87 | | ug/L | | 97 | 70 - 130 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-299326/4**
**Matrix: Water**
**Analysis Batch: 299326**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| sec-Butylbenzene | 4.00 | 3.77 | | ug/L | | 94 | 70 - 130 |
| Styrene | 4.00 | 4.10 | | ug/L | | 103 | 70 - 130 |
| tert-Butylbenzene | 4.00 | 3.66 | | ug/L | | 92 | 70 - 130 |
| Tetrachloroethene | 4.00 | 3.86 | | ug/L | | 96 | 70 - 130 |
| Toluene | 4.00 | 4.02 | | ug/L | | 101 | 70 - 130 |
| trans-1,2-Dichloroethene | 4.00 | 4.18 | | ug/L | | 104 | 70 - 130 |
| trans-1,3-Dichloropropene | 4.00 | 3.91 | | ug/L | | 98 | 70 - 130 |
| Trichloroethene | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 |
| Trichlorofluoromethane | 4.00 | 3.82 | | ug/L | | 95 | 70 - 130 |
| Xylenes, Total | 8.00 | 7.61 | | ug/L | | 95 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *100* | | *80 - 120* |

**Lab Sample ID: LCSD 480-299326/28**
**Matrix: Water**
**Analysis Batch: 299326**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 4.00 | 4.02 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| cis-1,2-Dichloroethene | 4.00 | 4.23 | | ug/L | | 106 | 70 - 130 | 1 | 20 |
| Vinyl chloride | 4.00 | 3.49 | | ug/L | | 87 | 70 - 130 | 2 | 20 |
| **Analyte** | **Spike Added** | **LCSD Result** | **LCSD Qualifier** | **Unit** | **D** | **%Rec** | **%Rec. Limits** | **RPD** | **RPD Limit** |
| 1,1,1,2-Tetrachloroethane | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| 1,1,1-Trichloroethane | 4.00 | 4.16 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| 1,1,2,2-Tetrachloroethane | 4.00 | 3.97 | | ug/L | | 99 | 70 - 130 | 4 | 20 |
| 1,1,2-Trichloroethane | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| 1,1-Dichloroethene | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 | 3 | 20 |
| 1,1-Dichloropropene | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 | 4 | 20 |
| 1,2,3-Trichlorobenzene | 4.00 | 3.71 | | ug/L | | 93 | 70 - 130 | 1 | 20 |
| 1,2,3-Trichloropropane | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 | 8 | 20 |
| 1,2,4-Trichlorobenzene | 4.00 | 3.75 | | ug/L | | 94 | 70 - 130 | 2 | 20 |
| 1,2,4-Trimethylbenzene | 4.00 | 3.90 | | ug/L | | 98 | 70 - 130 | 4 | 20 |
| 1,2-Dibromo-3-Chloropropane | 4.00 | 3.76 | | ug/L | | 94 | 70 - 130 | 7 | 20 |
| 1,2-Dibromoethane | 4.00 | 3.98 | | ug/L | | 100 | 70 - 130 | 4 | 20 |
| 1,2-Dichlorobenzene | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| 1,2-Dichloroethane | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 | 3 | 20 |
| 1,2-Dichloropropane | 4.00 | 4.13 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| 1,3,5-Trimethylbenzene | 4.00 | 3.98 | | ug/L | | 99 | 70 - 130 | 4 | 20 |
| 1,3-Dichlorobenzene | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| 1,3-Dichloropropane | 4.00 | 3.92 | | ug/L | | 98 | 70 - 130 | 5 | 20 |
| 1,4-Dichlorobenzene | 4.00 | 4.06 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| 2,2-Dichloropropane | 4.00 | 4.21 | | ug/L | | 105 | 70 - 130 | 7 | 20 |
| 2-Butanone (MEK) | 20.0 | 18.2 | | ug/L | | 91 | 70 - 130 | 9 | 20 |
| 2-Chlorotoluene | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 | 4 | 20 |
| 2-Hexanone | 20.0 | 18.1 | | ug/L | | 91 | 70 - 130 | 3 | 20 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-299326/28**
**Matrix: Water**
**Analysis Batch: 299326**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4-Chlorotoluene | | | 4.00 | 3.78 | | ug/L | | 95 | 70 - 130 | 4 | 20 |
| 4-Isopropyltoluene | | | 4.00 | 3.87 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| 4-Methyl-2-pentanone (MIBK) | | | 20.0 | 18.7 | | ug/L | | 93 | 70 - 130 | 5 | 20 |
| Acetone | | | 20.0 | 18.1 | | ug/L | | 91 | 70 - 130 | 5 | 20 |
| Benzene | | | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 | 3 | 20 |
| Bromobenzene | | | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 | 5 | 20 |
| Bromochloromethane | | | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| Bromoform | | | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 5 | 20 |
| Bromomethane | | | 4.00 | 3.36 | | ug/L | | 84 | 70 - 130 | 0 | 20 |
| Carbon disulfide | | | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| Carbon tetrachloride | | | 4.00 | 4.38 | | ug/L | | 109 | 70 - 130 | 2 | 20 |
| Chlorobenzene | | | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| Chlorodibromomethane | | | 4.00 | 3.97 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| Chloroethane | | | 4.00 | 3.72 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| Chloroform | | | 4.00 | 4.10 | | ug/L | | 103 | 70 - 130 | 0 | 20 |
| Chloromethane | | | 4.00 | 3.42 | | ug/L | | 86 | 70 - 130 | 2 | 20 |
| cis-1,3-Dichloropropene | | | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| Dibromomethane | | | 4.00 | 3.93 | | ug/L | | 98 | 70 - 130 | 3 | 20 |
| Dichlorobromomethane | | | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 4 | 20 |
| Dichlorodifluoromethane | | | 4.00 | 2.89 | | ug/L | | 72 | 70 - 130 | 2 | 20 |
| Ethylbenzene | | | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 | 0 | 20 |
| Hexachlorobutadiene | | | 4.00 | 3.67 | | ug/L | | 92 | 70 - 130 | 1 | 20 |
| Isopropylbenzene | | | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| Methyl tert-butyl ether | | | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| Methylene Chloride | | | 4.00 | 3.97 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| Naphthalene | | | 4.00 | 3.75 | | ug/L | | 94 | 70 - 130 | 5 | 20 |
| n-Butylbenzene | | | 4.00 | 3.78 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| n-Propylbenzene | | | 4.00 | 3.95 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| sec-Butylbenzene | | | 4.00 | 3.84 | | ug/L | | 96 | 70 - 130 | 2 | 20 |
| Styrene | | | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| tert-Butylbenzene | | | 4.00 | 3.85 | | ug/L | | 96 | 70 - 130 | 5 | 20 |
| Tetrachloroethene | | | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 | 5 | 20 |
| Toluene | | | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| trans-1,2-Dichloroethene | | | 4.00 | 4.23 | | ug/L | | 106 | 70 - 130 | 1 | 20 |
| trans-1,3-Dichloropropene | | | 4.00 | 3.81 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| Trichloroethene | | | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 | 0 | 20 |
| Trichlorofluoromethane | | | 4.00 | 3.68 | | ug/L | | 92 | 70 - 130 | 4 | 20 |
| Xylenes, Total | | | 8.00 | 7.99 | | ug/L | | 100 | 70 - 130 | 5 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LLCS 480-299326/6**
**Matrix: Water**
**Analysis Batch: 299326**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 0.500 | 0.552 | | ug/L | | 110 | 50 - 150 |
| cis-1,2-Dichloroethene | 0.500 | 0.545 | | ug/L | | 109 | 50 - 150 |
| Vinyl chloride | 0.500 | 0.462 | | ug/L | | 92 | 50 - 150 |

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.500 | 0.517 | | ug/L | | 103 | 50 - 150 |
| 1,1,1-Trichloroethane | 0.500 | 0.520 | | ug/L | | 104 | 50 - 150 |
| 1,1,2,2-Tetrachloroethane | 0.500 | 0.501 | | ug/L | | 100 | 50 - 150 |
| 1,1,2-Trichloroethane | 0.500 | 0.529 | | ug/L | | 106 | 50 - 150 |
| 1,1-Dichloroethene | 0.500 | 0.503 | | ug/L | | 101 | 50 - 150 |
| 1,1-Dichloropropene | 0.500 | ND | | ug/L | | 98 | 50 - 150 |
| 1,2,3-Trichlorobenzene | 0.500 | 0.615 | | ug/L | | 123 | 50 - 150 |
| 1,2,3-Trichloropropane | 0.500 | 0.508 | | ug/L | | 102 | 50 - 150 |
| 1,2,4-Trichlorobenzene | 0.500 | 0.618 | | ug/L | | 124 | 50 - 150 |
| 1,2,4-Trimethylbenzene | 0.500 | 0.506 | | ug/L | | 101 | 50 - 150 |
| 1,2-Dibromo-3-Chloropropane | 0.500 | ND | | ug/L | | 77 | 50 - 150 |
| 1,2-Dibromoethane | 0.500 | 0.507 | | ug/L | | 101 | 50 - 150 |
| 1,2-Dichlorobenzene | 0.500 | 0.554 | | ug/L | | 111 | 50 - 150 |
| 1,2-Dichloroethane | 0.500 | 0.522 | | ug/L | | 104 | 50 - 150 |
| 1,2-Dichloropropane | 0.500 | 0.588 | | ug/L | | 118 | 50 - 150 |
| 1,3,5-Trimethylbenzene | 0.500 | 0.504 | | ug/L | | 101 | 50 - 150 |
| 1,3-Dichlorobenzene | 0.500 | 0.540 | | ug/L | | 108 | 50 - 150 |
| 1,3-Dichloropropane | 0.500 | 0.505 | | ug/L | | 101 | 50 - 150 |
| 1,4-Dichlorobenzene | 0.500 | 0.564 | | ug/L | | 113 | 50 - 150 |
| 2,2-Dichloropropane | 0.500 | 0.626 | | ug/L | | 125 | 50 - 150 |
| 2-Butanone (MEK) | 2.50 | ND | | ug/L | | 95 | 50 - 150 |
| 2-Chlorotoluene | 0.500 | 0.556 | | ug/L | | 111 | 50 - 150 |
| 2-Hexanone | 2.50 | ND | | ug/L | | 94 | 50 - 150 |
| 4-Chlorotoluene | 0.500 | 0.538 | | ug/L | | 108 | 50 - 150 |
| 4-Isopropyltoluene | 0.500 | 0.506 | | ug/L | | 101 | 50 - 150 |
| 4-Methyl-2-pentanone (MIBK) | 2.50 | ND | | ug/L | | 96 | 50 - 150 |
| Acetone | 2.50 | ND | | ug/L | | 102 | 50 - 150 |
| Benzene | 0.500 | 0.567 | | ug/L | | 113 | 50 - 150 |
| Bromobenzene | 0.500 | 0.527 | | ug/L | | 105 | 50 - 150 |
| Bromochloromethane | 0.500 | 0.514 | | ug/L | | 103 | 50 - 150 |
| Bromoform | 0.500 | ND | | ug/L | | 96 | 50 - 150 |
| Bromomethane | 0.500 | 0.561 | | ug/L | | 112 | 50 - 150 |
| Carbon disulfide | 0.500 | 0.506 | | ug/L | | 101 | 50 - 150 |
| Carbon tetrachloride | 0.500 | 0.518 | | ug/L | | 104 | 50 - 150 |
| Chlorobenzene | 0.500 | 0.532 | | ug/L | | 106 | 50 - 150 |
| Chlorodibromomethane | 0.500 | ND | | ug/L | | 97 | 50 - 150 |
| Chloroethane | 0.500 | ND | | ug/L | | 97 | 50 - 150 |
| Chloroform | 0.500 | 0.558 | | ug/L | | 112 | 50 - 150 |
| Chloromethane | 0.500 | 0.514 | | ug/L | | 103 | 50 - 150 |
| cis-1,3-Dichloropropene | 0.500 | 0.505 | | ug/L | | 101 | 50 - 150 |
| Dibromomethane | 0.500 | 0.506 | | ug/L | | 101 | 50 - 150 |
| Dichlorobromomethane | 0.500 | 0.564 | | ug/L | | 113 | 50 - 150 |
| Dichlorodifluoromethane | 0.500 | ND | | ug/L | | 67 | 50 - 150 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LLCS 480-299326/6**
**Matrix: Water**
**Analysis Batch: 299326**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Ethylbenzene | 0.500 | 0.520 | | ug/L | | 104 | 50 - 150 |
| Hexachlorobutadiene | 0.500 | 0.586 | | ug/L | | 117 | 50 - 150 |
| Isopropylbenzene | 0.500 | ND | | ug/L | | 99 | 50 - 150 |
| Methyl tert-butyl ether | 0.500 | 0.546 | | ug/L | | 109 | 50 - 150 |
| Methylene Chloride | 0.500 | 0.586 | | ug/L | | 117 | 50 - 150 |
| Naphthalene | 0.500 | 0.530 | | ug/L | | 106 | 50 - 150 |
| n-Butylbenzene | 0.500 | 0.518 | | ug/L | | 104 | 50 - 150 |
| n-Propylbenzene | 0.500 | 0.516 | | ug/L | | 103 | 50 - 150 |
| sec-Butylbenzene | 0.500 | 0.513 | | ug/L | | 103 | 50 - 150 |
| Styrene | 0.500 | 0.514 | | ug/L | | 103 | 50 - 150 |
| tert-Butylbenzene | 0.500 | 0.509 | | ug/L | | 102 | 50 - 150 |
| Tetrachloroethene | 0.500 | ND | | ug/L | | 95 | 50 - 150 |
| Toluene | 0.500 | 0.523 | | ug/L | | 105 | 50 - 150 |
| trans-1,2-Dichloroethene | 0.500 | 0.532 | | ug/L | | 106 | 50 - 150 |
| trans-1,3-Dichloropropene | 0.500 | ND | | ug/L | | 90 | 50 - 150 |
| Trichloroethene | 0.500 | 0.520 | | ug/L | | 104 | 50 - 150 |
| Trichlorofluoromethane | 0.500 | ND | | ug/L | | 88 | 50 - 150 |
| Xylenes, Total | 1.00 | ND | * | ug/L | | 0 | 50 - 150 |

| *Surrogate* | *LLCS %Recovery* | *LLCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* |

**Lab Sample ID: MB 480-299600/7**
**Matrix: Water**
**Analysis Batch: 299600**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/03/16 11:41 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/03/16 11:41 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/03/16 11:41 | 1 |

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-299600/7**
**Matrix: Water**
**Analysis Batch: 299600**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/03/16 11:41 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/03/16 11:41 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/03/16 11:41 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/03/16 11:41 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/03/16 11:41 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/03/16 11:41 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/03/16 11:41 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-299600/7**
**Matrix: Water**
**Analysis Batch: 299600**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/03/16 11:41 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/03/16 11:41 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/03/16 11:41 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/03/16 11:41 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/03/16 11:41 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/03/16 11:41 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *102* | | *80 - 120* | | *05/03/16 11:41* | *1* |
| *4-Bromofluorobenzene (Surr)* | *95* | | *80 - 120* | | *05/03/16 11:41* | *1* |

**Lab Sample ID: LCS 480-299600/4**
**Matrix: Water**
**Analysis Batch: 299600**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 4.00 | 4.24 | | ug/L | | 106 | 70 - 130 |
| cis-1,2-Dichloroethene | 4.00 | 4.31 | | ug/L | | 108 | 70 - 130 |
| Vinyl chloride | 4.00 | 4.22 | | ug/L | | 106 | 70 - 130 |

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 4.00 | 4.27 | | ug/L | | 107 | 70 - 130 |
| 1,1,1-Trichloroethane | 4.00 | 4.32 | | ug/L | | 108 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 4.00 | 3.93 | | ug/L | | 98 | 70 - 130 |
| 1,1,2-Trichloroethane | 4.00 | 4.10 | | ug/L | | 102 | 70 - 130 |
| 1,1-Dichloroethene | 4.00 | 4.20 | | ug/L | | 105 | 70 - 130 |
| 1,1-Dichloropropene | 4.00 | 4.20 | | ug/L | | 105 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 |
| 1,2,3-Trichloropropane | 4.00 | 3.80 | | ug/L | | 95 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 4.00 | 4.20 | | ug/L | | 105 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 4.00 | 4.10 | | ug/L | | 103 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 4.00 | 3.55 | | ug/L | | 89 | 70 - 130 |
| 1,2-Dibromoethane | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 |
| 1,2-Dichlorobenzene | 4.00 | 4.12 | | ug/L | | 103 | 70 - 130 |
| 1,2-Dichloroethane | 4.00 | 4.19 | | ug/L | | 105 | 70 - 130 |
| 1,2-Dichloropropane | 4.00 | 4.26 | | ug/L | | 107 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 4.00 | 4.16 | | ug/L | | 104 | 70 - 130 |
| 1,3-Dichlorobenzene | 4.00 | 4.23 | | ug/L | | 106 | 70 - 130 |
| 1,3-Dichloropropane | 4.00 | 4.02 | | ug/L | | 101 | 70 - 130 |
| 1,4-Dichlorobenzene | 4.00 | 4.26 | | ug/L | | 106 | 70 - 130 |
| 2,2-Dichloropropane | 4.00 | 4.26 | | ug/L | | 107 | 70 - 130 |
| 2-Butanone (MEK) | 20.0 | 17.7 | | ug/L | | 88 | 70 - 130 |
| 2-Chlorotoluene | 4.00 | 4.25 | | ug/L | | 106 | 70 - 130 |
| 2-Hexanone | 20.0 | 17.9 | | ug/L | | 89 | 70 - 130 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-299600/4**
**Matrix: Water**
**Analysis Batch: 299600**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 4-Chlorotoluene | 4.00 | 4.20 | | ug/L | | 105 | 70 - 130 |
| 4-Isopropyltoluene | 4.00 | 4.19 | | ug/L | | 105 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 20.0 | 17.9 | | ug/L | | 90 | 70 - 130 |
| Acetone | 20.0 | 18.2 | | ug/L | | 91 | 70 - 130 |
| Benzene | 4.00 | 4.18 | | ug/L | | 105 | 70 - 130 |
| Bromobenzene | 4.00 | 4.14 | | ug/L | | 103 | 70 - 130 |
| Bromochloromethane | 4.00 | 4.16 | | ug/L | | 104 | 70 - 130 |
| Bromoform | 4.00 | 4.14 | | ug/L | | 104 | 70 - 130 |
| Bromomethane | 4.00 | 3.98 | | ug/L | | 100 | 70 - 130 |
| Carbon disulfide | 4.00 | 4.13 | | ug/L | | 103 | 70 - 130 |
| Carbon tetrachloride | 4.00 | 4.50 | | ug/L | | 113 | 70 - 130 |
| Chlorobenzene | 4.00 | 4.20 | | ug/L | | 105 | 70 - 130 |
| Chlorodibromomethane | 4.00 | 4.16 | | ug/L | | 104 | 70 - 130 |
| Chloroethane | 4.00 | 4.28 | | ug/L | | 107 | 70 - 130 |
| Chloroform | 4.00 | 4.23 | | ug/L | | 106 | 70 - 130 |
| Chloromethane | 4.00 | 4.15 | | ug/L | | 104 | 70 - 130 |
| cis-1,3-Dichloropropene | 4.00 | 4.10 | | ug/L | | 102 | 70 - 130 |
| Dibromomethane | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 |
| Dichlorobromomethane | 4.00 | 4.24 | | ug/L | | 106 | 70 - 130 |
| Dichlorodifluoromethane | 4.00 | 4.19 | | ug/L | | 105 | 70 - 130 |
| Ethylbenzene | 4.00 | 4.20 | | ug/L | | 105 | 70 - 130 |
| Hexachlorobutadiene | 4.00 | 4.27 | | ug/L | | 107 | 70 - 130 |
| Isopropylbenzene | 4.00 | 4.23 | | ug/L | | 106 | 70 - 130 |
| Methyl tert-butyl ether | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 |
| Methylene Chloride | 4.00 | 4.02 | | ug/L | | 101 | 70 - 130 |
| Naphthalene | 4.00 | 3.82 | | ug/L | | 95 | 70 - 130 |
| n-Butylbenzene | 4.00 | 4.25 | | ug/L | | 106 | 70 - 130 |
| n-Propylbenzene | 4.00 | 4.24 | | ug/L | | 106 | 70 - 130 |
| sec-Butylbenzene | 4.00 | 4.20 | | ug/L | | 105 | 70 - 130 |
| Styrene | 4.00 | 4.25 | | ug/L | | 106 | 70 - 130 |
| tert-Butylbenzene | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 |
| Tetrachloroethene | 4.00 | 4.29 | | ug/L | | 107 | 70 - 130 |
| Toluene | 4.00 | 4.18 | | ug/L | | 104 | 70 - 130 |
| trans-1,2-Dichloroethene | 4.00 | 4.32 | | ug/L | | 108 | 70 - 130 |
| trans-1,3-Dichloropropene | 4.00 | 3.87 | | ug/L | | 97 | 70 - 130 |
| Trichloroethene | 4.00 | 4.22 | | ug/L | | 105 | 70 - 130 |
| Trichlorofluoromethane | 4.00 | 4.22 | | ug/L | | 106 | 70 - 130 |
| Xylenes, Total | 8.00 | 8.23 | | ug/L | | 103 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *100* | | *80 - 120* |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-299600/5**
**Matrix: Water**
**Analysis Batch: 299600**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 | 4 | 20 |
| cis-1,2-Dichloroethene | 4.00 | 4.19 | | ug/L | | 105 | 70 - 130 | 3 | 20 |
| Vinyl chloride | 4.00 | 3.97 | | ug/L | | 99 | 70 - 130 | 6 | 20 |

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 4.00 | 4.39 | | ug/L | | 110 | 70 - 130 | 3 | 20 |
| 1,1,1-Trichloroethane | 4.00 | 4.21 | | ug/L | | 105 | 70 - 130 | 3 | 20 |
| 1,1,2,2-Tetrachloroethane | 4.00 | 3.80 | | ug/L | | 95 | 70 - 130 | 3 | 20 |
| 1,1,2-Trichloroethane | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| 1,1-Dichloroethene | 4.00 | 4.13 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| 1,1-Dichloropropene | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 | 3 | 20 |
| 1,2,3-Trichlorobenzene | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| 1,2,3-Trichloropropane | 4.00 | 3.70 | | ug/L | | 92 | 70 - 130 | 3 | 20 |
| 1,2,4-Trichlorobenzene | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| 1,2,4-Trimethylbenzene | 4.00 | 3.98 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| 1,2-Dibromo-3-Chloropropane | 4.00 | 3.48 | | ug/L | | 87 | 70 - 130 | 2 | 20 |
| 1,2-Dibromoethane | 4.00 | 4.14 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| 1,2-Dichlorobenzene | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| 1,2-Dichloroethane | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| 1,2-Dichloropropane | 4.00 | 4.22 | | ug/L | | 105 | 70 - 130 | 1 | 20 |
| 1,3,5-Trimethylbenzene | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| 1,3-Dichlorobenzene | 4.00 | 4.06 | | ug/L | | 102 | 70 - 130 | 4 | 20 |
| 1,3-Dichloropropane | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 0 | 20 |
| 1,4-Dichlorobenzene | 4.00 | 4.16 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| 2,2-Dichloropropane | 4.00 | 4.56 | | ug/L | | 114 | 70 - 130 | 7 | 20 |
| 2-Butanone (MEK) | 20.0 | 16.8 | | ug/L | | 84 | 70 - 130 | 5 | 20 |
| 2-Chlorotoluene | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 | 4 | 20 |
| 2-Hexanone | 20.0 | 18.0 | | ug/L | | 90 | 70 - 130 | 1 | 20 |
| 4-Chlorotoluene | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 | 4 | 20 |
| 4-Isopropyltoluene | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 | 3 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 20.0 | 17.9 | | ug/L | | 90 | 70 - 130 | 0 | 20 |
| Acetone | 20.0 | 18.2 | | ug/L | | 91 | 70 - 130 | 0 | 20 |
| Benzene | 4.00 | 4.15 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| Bromobenzene | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| Bromochloromethane | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| Bromoform | 4.00 | 4.15 | | ug/L | | 104 | 70 - 130 | 0 | 20 |
| Bromomethane | 4.00 | 3.56 | | ug/L | | 89 | 70 - 130 | 11 | 20 |
| Carbon disulfide | 4.00 | 4.02 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| Carbon tetrachloride | 4.00 | 4.26 | | ug/L | | 106 | 70 - 130 | 6 | 20 |
| Chlorobenzene | 4.00 | 4.19 | | ug/L | | 105 | 70 - 130 | 0 | 20 |
| Chlorodibromomethane | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| Chloroethane | 4.00 | 3.98 | | ug/L | | 99 | 70 - 130 | 7 | 20 |
| Chloroform | 4.00 | 4.15 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| Chloromethane | 4.00 | 3.83 | | ug/L | | 96 | 70 - 130 | 8 | 20 |
| cis-1,3-Dichloropropene | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| Dibromomethane | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| Dichlorobromomethane | 4.00 | 4.26 | | ug/L | | 106 | 70 - 130 | 0 | 20 |
| Dichlorodifluoromethane | 4.00 | 4.10 | | ug/L | | 103 | 70 - 130 | 2 | 20 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-299600/5**
**Matrix: Water**
**Analysis Batch: 299600**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | 4.00 | 4.14 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| Hexachlorobutadiene | 4.00 | 4.14 | | ug/L | | 104 | 70 - 130 | 3 | 20 |
| Isopropylbenzene | 4.00 | 4.24 | | ug/L | | 106 | 70 - 130 | 0 | 20 |
| Methyl tert-butyl ether | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| Methylene Chloride | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| Naphthalene | 4.00 | 3.73 | | ug/L | | 93 | 70 - 130 | 2 | 20 |
| n-Butylbenzene | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 | 4 | 20 |
| n-Propylbenzene | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 | 4 | 20 |
| sec-Butylbenzene | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| Styrene | 4.00 | 4.25 | | ug/L | | 106 | 70 - 130 | 0 | 20 |
| tert-Butylbenzene | 4.00 | 4.06 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| Tetrachloroethene | 4.00 | 4.29 | | ug/L | | 107 | 70 - 130 | 0 | 20 |
| Toluene | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| trans-1,2-Dichloroethene | 4.00 | 4.24 | | ug/L | | 106 | 70 - 130 | 2 | 20 |
| trans-1,3-Dichloropropene | 4.00 | 3.92 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| Trichloroethene | 4.00 | 4.17 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| Trichlorofluoromethane | 4.00 | 4.19 | | ug/L | | 105 | 70 - 130 | 1 | 20 |
| Xylenes, Total | 8.00 | 8.36 | | ug/L | | 105 | 70 - 130 | 2 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *99* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *103* | | *80 - 120* |

**Lab Sample ID: LLCS 480-299600/6**
**Matrix: Water**
**Analysis Batch: 299600**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 0.500 | 0.505 | | ug/L | | 101 | 50 - 150 |
| cis-1,2-Dichloroethene | 0.500 | 0.520 | | ug/L | | 104 | 50 - 150 |
| Vinyl chloride | 0.500 | 0.513 | | ug/L | | 103 | 50 - 150 |

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.500 | ND | | ug/L | | 95 | 50 - 150 |
| 1,1,1-Trichloroethane | 0.500 | ND | | ug/L | | 98 | 50 - 150 |
| 1,1,2,2-Tetrachloroethane | 0.500 | ND | | ug/L | | 95 | 50 - 150 |
| 1,1,2-Trichloroethane | 0.500 | ND | | ug/L | | 95 | 50 - 150 |
| 1,1-Dichloroethene | 0.500 | ND | | ug/L | | 92 | 50 - 150 |
| 1,1-Dichloropropene | 0.500 | ND | | ug/L | | 93 | 50 - 150 |
| 1,2,3-Trichlorobenzene | 0.500 | ND | | ug/L | | 98 | 50 - 150 |
| 1,2,3-Trichloropropane | 0.500 | ND | | ug/L | | 87 | 50 - 150 |
| 1,2,4-Trichlorobenzene | 0.500 | ND | | ug/L | | 98 | 50 - 150 |
| 1,2,4-Trimethylbenzene | 0.500 | ND | | ug/L | | 93 | 50 - 150 |
| 1,2-Dibromo-3-Chloropropane | 0.500 | ND | | ug/L | | 69 | 50 - 150 |
| 1,2-Dibromoethane | 0.500 | ND | | ug/L | | 93 | 50 - 150 |
| 1,2-Dichlorobenzene | 0.500 | 0.501 | | ug/L | | 100 | 50 - 150 |
| 1,2-Dichloroethane | 0.500 | 0.517 | | ug/L | | 103 | 50 - 150 |
| 1,2-Dichloropropane | 0.500 | ND | | ug/L | | 95 | 50 - 150 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LLCS 480-299600/6**
**Matrix: Water**
**Analysis Batch: 299600**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,3,5-Trimethylbenzene | 0.500 | ND | | ug/L | | 96 | 50 - 150 |
| 1,3-Dichlorobenzene | 0.500 | ND | | ug/L | | 100 | 50 - 150 |
| 1,3-Dichloropropane | 0.500 | ND | | ug/L | | 92 | 50 - 150 |
| 1,4-Dichlorobenzene | 0.500 | 0.526 | | ug/L | | 105 | 50 - 150 |
| 2,2-Dichloropropane | 0.500 | 0.587 | | ug/L | | 117 | 50 - 150 |
| 2-Butanone (MEK) | 2.50 | ND | | ug/L | | 91 | 50 - 150 |
| 2-Chlorotoluene | 0.500 | ND | | ug/L | | 99 | 50 - 150 |
| 2-Hexanone | 2.50 | ND | | ug/L | | 88 | 50 - 150 |
| 4-Chlorotoluene | 0.500 | ND | | ug/L | | 99 | 50 - 150 |
| 4-Isopropyltoluene | 0.500 | ND | | ug/L | | 93 | 50 - 150 |
| 4-Methyl-2-pentanone (MIBK) | 2.50 | ND | | ug/L | | 90 | 50 - 150 |
| Acetone | 2.50 | ND | | ug/L | | 102 | 50 - 150 |
| Benzene | 0.500 | 0.503 | | ug/L | | 101 | 50 - 150 |
| Bromobenzene | 0.500 | ND | | ug/L | | 92 | 50 - 150 |
| Bromochloromethane | 0.500 | ND | | ug/L | | 94 | 50 - 150 |
| Bromoform | 0.500 | ND | | ug/L | | 80 | 50 - 150 |
| Bromomethane | 0.500 | ND | | ug/L | | 77 | 50 - 150 |
| Carbon disulfide | 0.500 | ND | | ug/L | | 95 | 50 - 150 |
| Carbon tetrachloride | 0.500 | ND | | ug/L | | 96 | 50 - 150 |
| Chlorobenzene | 0.500 | ND | | ug/L | | 96 | 50 - 150 |
| Chlorodibromomethane | 0.500 | ND | | ug/L | | 87 | 50 - 150 |
| Chloroethane | 0.500 | ND | | ug/L | | 95 | 50 - 150 |
| Chloroform | 0.500 | 0.532 | | ug/L | | 106 | 50 - 150 |
| Chloromethane | 0.500 | 0.553 | | ug/L | | 111 | 50 - 150 |
| cis-1,3-Dichloropropene | 0.500 | ND | | ug/L | | 87 | 50 - 150 |
| Dibromomethane | 0.500 | ND | | ug/L | | 97 | 50 - 150 |
| Dichlorobromomethane | 0.500 | ND | | ug/L | | 97 | 50 - 150 |
| Dichlorodifluoromethane | 0.500 | ND | | ug/L | | 90 | 50 - 150 |
| Ethylbenzene | 0.500 | ND | | ug/L | | 95 | 50 - 150 |
| Hexachlorobutadiene | 0.500 | ND | | ug/L | | 91 | 50 - 150 |
| Isopropylbenzene | 0.500 | ND | | ug/L | | 95 | 50 - 150 |
| Methyl tert-butyl ether | 0.500 | ND | | ug/L | | 99 | 50 - 150 |
| Methylene Chloride | 0.500 | 0.590 | | ug/L | | 118 | 50 - 150 |
| Naphthalene | 0.500 | ND | | ug/L | | 92 | 50 - 150 |
| n-Butylbenzene | 0.500 | ND | | ug/L | | 93 | 50 - 150 |
| n-Propylbenzene | 0.500 | ND | | ug/L | | 96 | 50 - 150 |
| sec-Butylbenzene | 0.500 | ND | | ug/L | | 95 | 50 - 150 |
| Styrene | 0.500 | ND | | ug/L | | 94 | 50 - 150 |
| tert-Butylbenzene | 0.500 | ND | | ug/L | | 93 | 50 - 150 |
| Tetrachloroethene | 0.500 | ND | | ug/L | | 94 | 50 - 150 |
| Toluene | 0.500 | ND | | ug/L | | 95 | 50 - 150 |
| trans-1,2-Dichloroethene | 0.500 | 0.511 | | ug/L | | 102 | 50 - 150 |
| trans-1,3-Dichloropropene | 0.500 | ND | | ug/L | | 84 | 50 - 150 |
| Trichloroethene | 0.500 | 0.475 | | ug/L | | 95 | 50 - 150 |
| Trichlorofluoromethane | 0.500 | ND | | ug/L | | 97 | 50 - 150 |
| Xylenes, Total | 1.00 | ND | * | ug/L | | 0 | 50 - 150 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LLCS 480-299600/6**
**Matrix: Water**
**Analysis Batch: 299600**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| *Surrogate* | *LLCS %Recovery* | *LLCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *100* | | *80 - 120* |

**Lab Sample ID: 480-99299-6 MS**
**Matrix: Water**
**Analysis Batch: 299600**

**Client Sample ID: W-160426-MB-06**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 4.00 | 3.66 | | ug/L | | 92 | 70 - 130 |
| cis-1,2-Dichloroethene | ND | | 4.00 | 3.79 | | ug/L | | 95 | 70 - 130 |
| Vinyl chloride | ND | | 4.00 | 3.65 | | ug/L | | 91 | 70 - 130 |

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 4.00 | 3.48 | | ug/L | | 87 | 70 - 130 |
| 1,1,1-Trichloroethane | ND | | 4.00 | 3.73 | | ug/L | | 93 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | ND | | 4.00 | 3.36 | | ug/L | | 84 | 70 - 130 |
| 1,1,2-Trichloroethane | ND | | 4.00 | 3.37 | | ug/L | | 84 | 70 - 130 |
| 1,1-Dichloroethene | ND | | 4.00 | 3.62 | | ug/L | | 90 | 70 - 130 |
| 1,1-Dichloropropene | ND | | 4.00 | 3.62 | | ug/L | | 91 | 70 - 130 |
| 1,2,3-Trichlorobenzene | ND | | 4.00 | 3.37 | | ug/L | | 84 | 70 - 130 |
| 1,2,3-Trichloropropane | ND | | 4.00 | 3.34 | | ug/L | | 84 | 70 - 130 |
| 1,2,4-Trichlorobenzene | ND | | 4.00 | 3.43 | | ug/L | | 86 | 70 - 130 |
| 1,2,4-Trimethylbenzene | ND | | 4.00 | 3.35 | | ug/L | | 84 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | ND | | 4.00 | 2.98 | | ug/L | | 75 | 70 - 130 |
| 1,2-Dibromoethane | ND | | 4.00 | 3.40 | | ug/L | | 85 | 70 - 130 |
| 1,2-Dichlorobenzene | ND | | 4.00 | 3.44 | | ug/L | | 86 | 70 - 130 |
| 1,2-Dichloroethane | ND | | 4.00 | 3.55 | | ug/L | | 89 | 70 - 130 |
| 1,2-Dichloropropane | ND | | 4.00 | 3.51 | | ug/L | | 88 | 70 - 130 |
| 1,3,5-Trimethylbenzene | ND | | 4.00 | 3.39 | | ug/L | | 85 | 70 - 130 |
| 1,3-Dichlorobenzene | ND | | 4.00 | 3.48 | | ug/L | | 87 | 70 - 130 |
| 1,3-Dichloropropane | ND | | 4.00 | 3.45 | | ug/L | | 86 | 70 - 130 |
| 1,4-Dichlorobenzene | ND | | 4.00 | 3.54 | | ug/L | | 88 | 70 - 130 |
| 2,2-Dichloropropane | ND | | 4.00 | 4.12 | | ug/L | | 103 | 70 - 130 |
| 2-Butanone (MEK) | ND | | 20.0 | 16.7 | | ug/L | | 84 | 70 - 130 |
| 2-Chlorotoluene | ND | | 4.00 | 3.42 | | ug/L | | 86 | 70 - 130 |
| 2-Hexanone | ND | | 20.0 | 16.4 | | ug/L | | 82 | 70 - 130 |
| 4-Chlorotoluene | ND | | 4.00 | 3.43 | | ug/L | | 86 | 70 - 130 |
| 4-Isopropyltoluene | ND | | 4.00 | 3.53 | | ug/L | | 88 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 20.0 | 16.4 | | ug/L | | 82 | 70 - 130 |
| Acetone | ND | | 20.0 | 18.5 | | ug/L | | 92 | 70 - 130 |
| Benzene | ND | | 4.00 | 3.60 | | ug/L | | 90 | 70 - 130 |
| Bromobenzene | ND | | 4.00 | 3.42 | | ug/L | | 85 | 70 - 130 |
| Bromochloromethane | ND | | 4.00 | 3.62 | | ug/L | | 91 | 70 - 130 |
| Bromoform | ND | | 4.00 | 3.36 | | ug/L | | 84 | 70 - 130 |
| Bromomethane | ND | | 4.00 | 3.35 | | ug/L | | 84 | 70 - 130 |
| Carbon disulfide | ND | | 4.00 | 3.51 | | ug/L | | 88 | 70 - 130 |
| Carbon tetrachloride | ND | | 4.00 | 3.75 | | ug/L | | 94 | 70 - 130 |
| Chlorobenzene | ND | | 4.00 | 3.49 | | ug/L | | 87 | 70 - 130 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 480-99299-6 MS**
**Matrix: Water**
**Analysis Batch: 299600**

**Client Sample ID: W-160426-MB-06**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chlorodibromomethane | ND | | 4.00 | 3.34 | | ug/L | | 84 | 70 - 130 |
| Chloroethane | ND | | 4.00 | 3.66 | | ug/L | | 92 | 70 - 130 |
| Chloroform | ND | | 4.00 | 3.53 | | ug/L | | 88 | 70 - 130 |
| Chloromethane | ND | | 4.00 | 3.51 | | ug/L | | 88 | 70 - 130 |
| cis-1,3-Dichloropropene | ND | | 4.00 | 3.37 | | ug/L | | 84 | 70 - 130 |
| Dibromomethane | ND | | 4.00 | 3.45 | | ug/L | | 86 | 70 - 130 |
| Dichlorobromomethane | ND | | 4.00 | 3.48 | | ug/L | | 87 | 70 - 130 |
| Dichlorodifluoromethane | ND | F1 | 4.00 | 3.59 | | ug/L | | 90 | 70 - 130 |
| Ethylbenzene | ND | | 4.00 | 3.50 | | ug/L | | 87 | 70 - 130 |
| Hexachlorobutadiene | ND | | 4.00 | 3.73 | | ug/L | | 93 | 70 - 130 |
| Isopropylbenzene | ND | | 4.00 | 3.56 | | ug/L | | 89 | 70 - 130 |
| Methyl tert-butyl ether | ND | | 4.00 | 3.56 | | ug/L | | 89 | 70 - 130 |
| Methylene Chloride | ND | | 4.00 | 3.49 | | ug/L | | 87 | 70 - 130 |
| Naphthalene | ND | | 4.00 | 3.14 | | ug/L | | 78 | 70 - 130 |
| n-Butylbenzene | ND | | 4.00 | 3.51 | | ug/L | | 88 | 70 - 130 |
| n-Propylbenzene | ND | | 4.00 | 3.44 | | ug/L | | 86 | 70 - 130 |
| sec-Butylbenzene | ND | | 4.00 | 3.50 | | ug/L | | 88 | 70 - 130 |
| Styrene | ND | | 4.00 | 3.60 | | ug/L | | 90 | 70 - 130 |
| tert-Butylbenzene | ND | | 4.00 | 3.38 | | ug/L | | 84 | 70 - 130 |
| Tetrachloroethene | ND | | 4.00 | 3.56 | | ug/L | | 89 | 70 - 130 |
| Toluene | ND | | 4.00 | 3.41 | | ug/L | | 85 | 70 - 130 |
| trans-1,2-Dichloroethene | ND | | 4.00 | 3.71 | | ug/L | | 93 | 70 - 130 |
| trans-1,3-Dichloropropene | ND | | 4.00 | 3.21 | | ug/L | | 80 | 70 - 130 |
| Trichloroethene | ND | | 4.00 | 3.56 | | ug/L | | 89 | 70 - 130 |
| Trichlorofluoromethane | ND | | 4.00 | 3.61 | | ug/L | | 90 | 70 - 130 |
| Xylenes, Total | ND | * | 8.00 | 6.94 | | ug/L | | 87 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *99* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* |

**Lab Sample ID: 480-99299-6 MSD**
**Matrix: Water**
**Analysis Batch: 299600**

**Client Sample ID: W-160426-MB-06**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 4.00 | 3.61 | | ug/L | | 90 | 70 - 130 | 2 | 20 |
| cis-1,2-Dichloroethene | ND | | 4.00 | 3.76 | | ug/L | | 94 | 70 - 130 | 1 | 20 |
| Vinyl chloride | ND | | 4.00 | 4.68 | F2 | ug/L | | 117 | 70 - 130 | 25 | 20 |
| **Analyte** | **Sample Result** | **Sample Qualifier** | **Spike Added** | **MSD Result** | **MSD Qualifier** | **Unit** | **D** | **%Rec** | **%Rec. Limits** | **RPD** | **RPD Limit** |
| 1,1,1,2-Tetrachloroethane | ND | | 4.00 | 3.58 | | ug/L | | 90 | 70 - 130 | 3 | 20 |
| 1,1,1-Trichloroethane | ND | | 4.00 | 3.65 | | ug/L | | 91 | 70 - 130 | 2 | 20 |
| 1,1,2,2-Tetrachloroethane | ND | | 4.00 | 3.39 | | ug/L | | 85 | 70 - 130 | 1 | 20 |
| 1,1,2-Trichloroethane | ND | | 4.00 | 3.48 | | ug/L | | 87 | 70 - 130 | 3 | 20 |
| 1,1-Dichloroethene | ND | | 4.00 | 3.59 | | ug/L | | 90 | 70 - 130 | 1 | 20 |
| 1,1-Dichloropropene | ND | | 4.00 | 3.60 | | ug/L | | 90 | 70 - 130 | 1 | 20 |
| 1,2,3-Trichlorobenzene | ND | | 4.00 | 3.38 | | ug/L | | 85 | 70 - 130 | 0 | 20 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 480-99299-6 MSD**
**Matrix: Water**
**Analysis Batch: 299600**

**Client Sample ID: W-160426-MB-06**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichloropropane | ND | | 4.00 | 3.22 | | ug/L | | 81 | 70 - 130 | 4 | 20 |
| 1,2,4-Trichlorobenzene | ND | | 4.00 | 3.51 | | ug/L | | 88 | 70 - 130 | 2 | 20 |
| 1,2,4-Trimethylbenzene | ND | | 4.00 | 3.44 | | ug/L | | 86 | 70 - 130 | 3 | 20 |
| 1,2-Dibromo-3-Chloropropane | ND | | 4.00 | 3.05 | | ug/L | | 76 | 70 - 130 | 2 | 20 |
| 1,2-Dibromoethane | ND | | 4.00 | 3.49 | | ug/L | | 87 | 70 - 130 | 2 | 20 |
| 1,2-Dichlorobenzene | ND | | 4.00 | 3.53 | | ug/L | | 88 | 70 - 130 | 3 | 20 |
| 1,2-Dichloroethane | ND | | 4.00 | 3.61 | | ug/L | | 90 | 70 - 130 | 2 | 20 |
| 1,2-Dichloropropane | ND | | 4.00 | 3.59 | | ug/L | | 90 | 70 - 130 | 2 | 20 |
| 1,3,5-Trimethylbenzene | ND | | 4.00 | 3.48 | | ug/L | | 87 | 70 - 130 | 3 | 20 |
| 1,3-Dichlorobenzene | ND | | 4.00 | 3.52 | | ug/L | | 88 | 70 - 130 | 1 | 20 |
| 1,3-Dichloropropane | ND | | 4.00 | 3.43 | | ug/L | | 86 | 70 - 130 | 1 | 20 |
| 1,4-Dichlorobenzene | ND | | 4.00 | 3.55 | | ug/L | | 89 | 70 - 130 | 0 | 20 |
| 2,2-Dichloropropane | ND | | 4.00 | 3.95 | | ug/L | | 99 | 70 - 130 | 4 | 20 |
| 2-Butanone (MEK) | ND | | 20.0 | 16.0 | | ug/L | | 80 | 70 - 130 | 5 | 20 |
| 2-Chlorotoluene | ND | | 4.00 | 3.53 | | ug/L | | 88 | 70 - 130 | 3 | 20 |
| 2-Hexanone | ND | | 20.0 | 16.6 | | ug/L | | 83 | 70 - 130 | 2 | 20 |
| 4-Chlorotoluene | ND | | 4.00 | 3.51 | | ug/L | | 88 | 70 - 130 | 2 | 20 |
| 4-Isopropyltoluene | ND | | 4.00 | 3.57 | | ug/L | | 89 | 70 - 130 | 1 | 20 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 20.0 | 16.4 | | ug/L | | 82 | 70 - 130 | 0 | 20 |
| Acetone | ND | | 20.0 | 19.4 | | ug/L | | 97 | 70 - 130 | 5 | 20 |
| Benzene | ND | | 4.00 | 3.56 | | ug/L | | 89 | 70 - 130 | 1 | 20 |
| Bromobenzene | ND | | 4.00 | 3.45 | | ug/L | | 86 | 70 - 130 | 1 | 20 |
| Bromochloromethane | ND | | 4.00 | 3.61 | | ug/L | | 90 | 70 - 130 | 0 | 20 |
| Bromoform | ND | | 4.00 | 3.54 | | ug/L | | 89 | 70 - 130 | 5 | 20 |
| Bromomethane | ND | | 4.00 | 4.15 | F2 | ug/L | | 104 | 70 - 130 | 21 | 20 |
| Carbon disulfide | ND | | 4.00 | 3.50 | | ug/L | | 88 | 70 - 130 | 0 | 20 |
| Carbon tetrachloride | ND | | 4.00 | 3.73 | | ug/L | | 93 | 70 - 130 | 0 | 20 |
| Chlorobenzene | ND | | 4.00 | 3.60 | | ug/L | | 90 | 70 - 130 | 3 | 20 |
| Chlorodibromomethane | ND | | 4.00 | 3.44 | | ug/L | | 86 | 70 - 130 | 3 | 20 |
| Chloroethane | ND | | 4.00 | 4.47 | | ug/L | | 112 | 70 - 130 | 20 | 20 |
| Chloroform | ND | | 4.00 | 3.59 | | ug/L | | 90 | 70 - 130 | 2 | 20 |
| Chloromethane | ND | | 4.00 | 4.32 | F2 | ug/L | | 108 | 70 - 130 | 21 | 20 |
| cis-1,3-Dichloropropene | ND | | 4.00 | 3.42 | | ug/L | | 86 | 70 - 130 | 2 | 20 |
| Dibromomethane | ND | | 4.00 | 3.42 | | ug/L | | 85 | 70 - 130 | 1 | 20 |
| Dichlorobromomethane | ND | | 4.00 | 3.61 | | ug/L | | 90 | 70 - 130 | 3 | 20 |
| Dichlorodifluoromethane | ND | F1 | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 | 12 | 20 |
| Ethylbenzene | ND | | 4.00 | 3.57 | | ug/L | | 89 | 70 - 130 | 2 | 20 |
| Hexachlorobutadiene | ND | | 4.00 | 3.78 | | ug/L | | 94 | 70 - 130 | 1 | 20 |
| Isopropylbenzene | ND | | 4.00 | 3.64 | | ug/L | | 91 | 70 - 130 | 2 | 20 |
| Methyl tert-butyl ether | ND | | 4.00 | 3.48 | | ug/L | | 87 | 70 - 130 | 2 | 20 |
| Methylene Chloride | ND | | 4.00 | 3.40 | | ug/L | | 85 | 70 - 130 | 3 | 20 |
| Naphthalene | ND | | 4.00 | 3.15 | | ug/L | | 79 | 70 - 130 | 0 | 20 |
| n-Butylbenzene | ND | | 4.00 | 3.58 | | ug/L | | 89 | 70 - 130 | 2 | 20 |
| n-Propylbenzene | ND | | 4.00 | 3.53 | | ug/L | | 88 | 70 - 130 | 3 | 20 |
| sec-Butylbenzene | ND | | 4.00 | 3.63 | | ug/L | | 91 | 70 - 130 | 4 | 20 |
| Styrene | ND | | 4.00 | 3.62 | | ug/L | | 91 | 70 - 130 | 1 | 20 |
| tert-Butylbenzene | ND | | 4.00 | 3.52 | | ug/L | | 88 | 70 - 130 | 4 | 20 |
| Tetrachloroethene | ND | | 4.00 | 3.59 | | ug/L | | 90 | 70 - 130 | 1 | 20 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 480-99299-6 MSD**
**Matrix: Water**
**Analysis Batch: 299600**

**Client Sample ID: W-160426-MB-06**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ND | | 4.00 | 3.40 | | ug/L | | 85 | 70 - 130 | 0 | 20 |
| trans-1,2-Dichloroethene | ND | | 4.00 | 3.63 | | ug/L | | 91 | 70 - 130 | 2 | 20 |
| trans-1,3-Dichloropropene | ND | | 4.00 | 3.26 | | ug/L | | 82 | 70 - 130 | 1 | 20 |
| Trichloroethene | ND | | 4.00 | 3.57 | | ug/L | | 89 | 70 - 130 | 0 | 20 |
| Trichlorofluoromethane | ND | | 4.00 | 4.43 | | ug/L | | 111 | 70 - 130 | 20 | 20 |
| Xylenes, Total | ND | * | 8.00 | 7.09 | | ug/L | | 89 | 70 - 130 | 2 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *99* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* |

**Lab Sample ID: MB 480-299833/7**
**Matrix: Water**
**Analysis Batch: 299833**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/04/16 11:20 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/04/16 11:20 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/04/16 11:20 | 1 |

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/04/16 11:20 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/04/16 11:20 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/04/16 11:20 | 1 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-299833/7**
**Matrix: Water**
**Analysis Batch: 299833**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | | 10 | 10 | ug/L | | | 05/04/16 11:20 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/04/16 11:20 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/04/16 11:20 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/04/16 11:20 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/04/16 11:20 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/04/16 11:20 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/04/16 11:20 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/04/16 11:20 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/04/16 11:20 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/04/16 11:20 | 1 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-299833/7**
**Matrix: Water**
**Analysis Batch: 299833**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene-d4 | 100 | | 80 - 120 | | 05/04/16 11:20 | 1 |
| 4-Bromofluorobenzene (Surr) | 97 | | 80 - 120 | | 05/04/16 11:20 | 1 |

**Lab Sample ID: LCS 480-299833/4**
**Matrix: Water**
**Analysis Batch: 299833**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 4.00 | 4.13 | | ug/L | | 103 | 70 - 130 |
| cis-1,2-Dichloroethene | 4.00 | 4.32 | | ug/L | | 108 | 70 - 130 |
| Vinyl chloride | 4.00 | 4.24 | | ug/L | | 106 | 70 - 130 |

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 4.00 | 4.39 | | ug/L | | 110 | 70 - 130 |
| 1,1,1-Trichloroethane | 4.00 | 4.41 | | ug/L | | 110 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 4.00 | 4.13 | | ug/L | | 103 | 70 - 130 |
| 1,1,2-Trichloroethane | 4.00 | 4.16 | | ug/L | | 104 | 70 - 130 |
| 1,1-Dichloroethene | 4.00 | 4.21 | | ug/L | | 105 | 70 - 130 |
| 1,1-Dichloropropene | 4.00 | 4.21 | | ug/L | | 105 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 4.00 | 3.98 | | ug/L | | 100 | 70 - 130 |
| 1,2,3-Trichloropropane | 4.00 | 4.13 | | ug/L | | 103 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 4.00 | 4.15 | | ug/L | | 104 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 4.00 | 4.23 | | ug/L | | 106 | 70 - 130 |
| 1,2-Dibromoethane | 4.00 | 4.15 | | ug/L | | 104 | 70 - 130 |
| 1,2-Dichlorobenzene | 4.00 | 4.15 | | ug/L | | 104 | 70 - 130 |
| 1,2-Dichloroethane | 4.00 | 4.16 | | ug/L | | 104 | 70 - 130 |
| 1,2-Dichloropropane | 4.00 | 4.21 | | ug/L | | 105 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 4.00 | 4.16 | | ug/L | | 104 | 70 - 130 |
| 1,3-Dichlorobenzene | 4.00 | 4.18 | | ug/L | | 104 | 70 - 130 |
| 1,3-Dichloropropane | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 |
| 1,4-Dichlorobenzene | 4.00 | 4.27 | | ug/L | | 107 | 70 - 130 |
| 2,2-Dichloropropane | 4.00 | 4.73 | | ug/L | | 118 | 70 - 130 |
| 2-Butanone (MEK) | 20.0 | 19.7 | | ug/L | | 99 | 70 - 130 |
| 2-Chlorotoluene | 4.00 | 4.28 | | ug/L | | 107 | 70 - 130 |
| 2-Hexanone | 20.0 | 20.4 | | ug/L | | 102 | 70 - 130 |
| 4-Chlorotoluene | 4.00 | 4.22 | | ug/L | | 105 | 70 - 130 |
| 4-Isopropyltoluene | 4.00 | 4.25 | | ug/L | | 106 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 20.0 | 20.2 | | ug/L | | 101 | 70 - 130 |
| Acetone | 20.0 | 19.2 | | ug/L | | 96 | 70 - 130 |
| Benzene | 4.00 | 4.15 | | ug/L | | 104 | 70 - 130 |
| Bromobenzene | 4.00 | 4.12 | | ug/L | | 103 | 70 - 130 |
| Bromochloromethane | 4.00 | 4.23 | | ug/L | | 106 | 70 - 130 |
| Bromoform | 4.00 | 4.82 | | ug/L | | 120 | 70 - 130 |
| Bromomethane | 4.00 | 3.68 | | ug/L | | 92 | 70 - 130 |
| Carbon disulfide | 4.00 | 4.37 | | ug/L | | 109 | 70 - 130 |
| Carbon tetrachloride | 4.00 | 4.73 | | ug/L | | 118 | 70 - 130 |
| Chlorobenzene | 4.00 | 4.18 | | ug/L | | 105 | 70 - 130 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-299833/4**
**Matrix: Water**
**Analysis Batch: 299833**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chlorodibromomethane | 4.00 | 4.34 | | ug/L | | 109 | 70 - 130 |
| Chloroethane | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 |
| Chloroform | 4.00 | 4.29 | | ug/L | | 107 | 70 - 130 |
| Chloromethane | 4.00 | 4.26 | | ug/L | | 107 | 70 - 130 |
| cis-1,3-Dichloropropene | 4.00 | 4.20 | | ug/L | | 105 | 70 - 130 |
| Dibromomethane | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 |
| Dichlorobromomethane | 4.00 | 4.34 | | ug/L | | 109 | 70 - 130 |
| Dichlorodifluoromethane | 4.00 | 4.31 | | ug/L | | 108 | 70 - 130 |
| Ethylbenzene | 4.00 | 4.20 | | ug/L | | 105 | 70 - 130 |
| Hexachlorobutadiene | 4.00 | 4.16 | | ug/L | | 104 | 70 - 130 |
| Isopropylbenzene | 4.00 | 4.31 | | ug/L | | 108 | 70 - 130 |
| Methyl tert-butyl ether | 4.00 | 4.16 | | ug/L | | 104 | 70 - 130 |
| Methylene Chloride | 4.00 | 4.10 | | ug/L | | 103 | 70 - 130 |
| Naphthalene | 4.00 | 3.90 | | ug/L | | 98 | 70 - 130 |
| n-Butylbenzene | 4.00 | 4.27 | | ug/L | | 107 | 70 - 130 |
| n-Propylbenzene | 4.00 | 4.31 | | ug/L | | 108 | 70 - 130 |
| sec-Butylbenzene | 4.00 | 4.32 | | ug/L | | 108 | 70 - 130 |
| Styrene | 4.00 | 4.32 | | ug/L | | 108 | 70 - 130 |
| tert-Butylbenzene | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 |
| Tetrachloroethene | 4.00 | 4.31 | | ug/L | | 108 | 70 - 130 |
| Toluene | 4.00 | 4.13 | | ug/L | | 103 | 70 - 130 |
| trans-1,2-Dichloroethene | 4.00 | 4.44 | | ug/L | | 111 | 70 - 130 |
| trans-1,3-Dichloropropene | 4.00 | 4.06 | | ug/L | | 102 | 70 - 130 |
| Trichloroethene | 4.00 | 4.18 | | ug/L | | 104 | 70 - 130 |
| Trichlorofluoromethane | 4.00 | 4.35 | | ug/L | | 109 | 70 - 130 |
| Xylenes, Total | 8.00 | 8.41 | | ug/L | | 105 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *101* | | *80 - 120* |

**Lab Sample ID: LCSD 480-299833/5**
**Matrix: Water**
**Analysis Batch: 299833**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| cis-1,2-Dichloroethene | 4.00 | 4.20 | | ug/L | | 105 | 70 - 130 | 3 | 20 |
| Vinyl chloride | 4.00 | 3.98 | | ug/L | | 100 | 70 - 130 | 6 | 20 |

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 4.00 | 4.28 | | ug/L | | 107 | 70 - 130 | 2 | 20 |
| 1,1,1-Trichloroethane | 4.00 | 4.28 | | ug/L | | 107 | 70 - 130 | 3 | 20 |
| 1,1,2,2-Tetrachloroethane | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 | 4 | 20 |
| 1,1,2-Trichloroethane | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| 1,1-Dichloroethene | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 | 5 | 20 |
| 1,1-Dichloropropene | 4.00 | 3.97 | | ug/L | | 99 | 70 - 130 | 6 | 20 |
| 1,2,3-Trichlorobenzene | 4.00 | 3.87 | | ug/L | | 97 | 70 - 130 | 3 | 20 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-299833/5**
**Matrix: Water**
**Analysis Batch: 299833**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichloropropane | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| 1,2,4-Trichlorobenzene | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| 1,2,4-Trimethylbenzene | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| 1,2-Dibromo-3-Chloropropane | 4.00 | 3.88 | | ug/L | | 97 | 70 - 130 | 9 | 20 |
| 1,2-Dibromoethane | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| 1,2-Dichlorobenzene | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| 1,2-Dichloroethane | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| 1,2-Dichloropropane | 4.00 | 4.13 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| 1,3,5-Trimethylbenzene | 4.00 | 4.02 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| 1,3-Dichlorobenzene | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 4 | 20 |
| 1,3-Dichloropropane | 4.00 | 3.89 | | ug/L | | 97 | 70 - 130 | 3 | 20 |
| 1,4-Dichlorobenzene | 4.00 | 4.14 | | ug/L | | 103 | 70 - 130 | 3 | 20 |
| 2,2-Dichloropropane | 4.00 | 4.71 | | ug/L | | 118 | 70 - 130 | 1 | 20 |
| 2-Butanone (MEK) | 20.0 | 18.8 | | ug/L | | 94 | 70 - 130 | 5 | 20 |
| 2-Chlorotoluene | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 | 5 | 20 |
| 2-Hexanone | 20.0 | 19.2 | | ug/L | | 96 | 70 - 130 | 6 | 20 |
| 4-Chlorotoluene | 4.00 | 4.10 | | ug/L | | 103 | 70 - 130 | 3 | 20 |
| 4-Isopropyltoluene | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 | 5 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 20.0 | 19.7 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| Acetone | 20.0 | 18.6 | | ug/L | | 93 | 70 - 130 | 3 | 20 |
| Benzene | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| Bromobenzene | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| Bromochloromethane | 4.00 | 4.12 | | ug/L | | 103 | 70 - 130 | 3 | 20 |
| Bromoform | 4.00 | 4.59 | | ug/L | | 115 | 70 - 130 | 5 | 20 |
| Bromomethane | 4.00 | 3.59 | | ug/L | | 90 | 70 - 130 | 3 | 20 |
| Carbon disulfide | 4.00 | 4.18 | | ug/L | | 105 | 70 - 130 | 4 | 20 |
| Carbon tetrachloride | 4.00 | 4.49 | | ug/L | | 112 | 70 - 130 | 5 | 20 |
| Chlorobenzene | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 | 3 | 20 |
| Chlorodibromomethane | 4.00 | 4.23 | | ug/L | | 106 | 70 - 130 | 3 | 20 |
| Chloroethane | 4.00 | 3.82 | | ug/L | | 96 | 70 - 130 | 5 | 20 |
| Chloroform | 4.00 | 4.06 | | ug/L | | 102 | 70 - 130 | 5 | 20 |
| Chloromethane | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 | 7 | 20 |
| cis-1,3-Dichloropropene | 4.00 | 4.19 | | ug/L | | 105 | 70 - 130 | 0 | 20 |
| Dibromomethane | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| Dichlorobromomethane | 4.00 | 4.27 | | ug/L | | 107 | 70 - 130 | 2 | 20 |
| Dichlorodifluoromethane | 4.00 | 3.98 | | ug/L | | 99 | 70 - 130 | 8 | 20 |
| Ethylbenzene | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 4 | 20 |
| Hexachlorobutadiene | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| Isopropylbenzene | 4.00 | 4.13 | | ug/L | | 103 | 70 - 130 | 4 | 20 |
| Methyl tert-butyl ether | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| Methylene Chloride | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| Naphthalene | 4.00 | 3.76 | | ug/L | | 94 | 70 - 130 | 4 | 20 |
| n-Butylbenzene | 4.00 | 4.02 | | ug/L | | 100 | 70 - 130 | 6 | 20 |
| n-Propylbenzene | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 | 6 | 20 |
| sec-Butylbenzene | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 | 5 | 20 |
| Styrene | 4.00 | 4.16 | | ug/L | | 104 | 70 - 130 | 4 | 20 |
| tert-Butylbenzene | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| Tetrachloroethene | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 | 7 | 20 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-299833/5**
**Matrix: Water**
**Analysis Batch: 299833**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Toluene | 4.00 | 4.15 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| trans-1,2-Dichloroethene | 4.00 | 4.20 | | ug/L | | 105 | 70 - 130 | 5 | 20 |
| trans-1,3-Dichloropropene | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| Trichloroethene | 4.00 | 4.14 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| Trichlorofluoromethane | 4.00 | 4.12 | | ug/L | | 103 | 70 - 130 | 5 | 20 |
| Xylenes, Total | 8.00 | 8.01 | | ug/L | | 100 | 70 - 130 | 5 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *99* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* |

**Lab Sample ID: LLCS 480-299833/6**
**Matrix: Water**
**Analysis Batch: 299833**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 0.500 | 0.524 | | ug/L | | 105 | 50 - 150 |
| cis-1,2-Dichloroethene | 0.500 | 0.524 | | ug/L | | 105 | 50 - 150 |
| Vinyl chloride | 0.500 | 0.492 | | ug/L | | 98 | 50 - 150 |

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.500 | 0.501 | | ug/L | | 100 | 50 - 150 |
| 1,1,1-Trichloroethane | 0.500 | ND | | ug/L | | 100 | 50 - 150 |
| 1,1,2,2-Tetrachloroethane | 0.500 | 0.532 | | ug/L | | 106 | 50 - 150 |
| 1,1,2-Trichloroethane | 0.500 | 0.500 | | ug/L | | 100 | 50 - 150 |
| 1,1-Dichloroethene | 0.500 | 0.506 | | ug/L | | 101 | 50 - 150 |
| 1,1-Dichloropropene | 0.500 | 0.520 | | ug/L | | 104 | 50 - 150 |
| 1,2,3-Trichlorobenzene | 0.500 | 0.531 | | ug/L | | 106 | 50 - 150 |
| 1,2,3-Trichloropropane | 0.500 | 0.527 | | ug/L | | 105 | 50 - 150 |
| 1,2,4-Trichlorobenzene | 0.500 | 0.550 | | ug/L | | 110 | 50 - 150 |
| 1,2,4-Trimethylbenzene | 0.500 | 0.500 | | ug/L | | 100 | 50 - 150 |
| 1,2-Dibromo-3-Chloropropane | 0.500 | ND | | ug/L | | 82 | 50 - 150 |
| 1,2-Dibromoethane | 0.500 | ND | | ug/L | | 98 | 50 - 150 |
| 1,2-Dichlorobenzene | 0.500 | 0.560 | | ug/L | | 112 | 50 - 150 |
| 1,2-Dichloroethane | 0.500 | 0.540 | | ug/L | | 108 | 50 - 150 |
| 1,2-Dichloropropane | 0.500 | 0.517 | | ug/L | | 103 | 50 - 150 |
| 1,3,5-Trimethylbenzene | 0.500 | ND | | ug/L | | 99 | 50 - 150 |
| 1,3-Dichlorobenzene | 0.500 | 0.554 | | ug/L | | 111 | 50 - 150 |
| 1,3-Dichloropropane | 0.500 | 0.517 | | ug/L | | 103 | 50 - 150 |
| 1,4-Dichlorobenzene | 0.500 | 0.569 | | ug/L | | 114 | 50 - 150 |
| 2,2-Dichloropropane | 0.500 | 0.565 | | ug/L | | 113 | 50 - 150 |
| 2-Butanone (MEK) | 2.50 | ND | | ug/L | | 126 | 50 - 150 |
| 2-Chlorotoluene | 0.500 | 0.552 | | ug/L | | 110 | 50 - 150 |
| 2-Hexanone | 2.50 | ND | | ug/L | | 99 | 50 - 150 |
| 4-Chlorotoluene | 0.500 | 0.533 | | ug/L | | 107 | 50 - 150 |
| 4-Isopropyltoluene | 0.500 | 0.504 | | ug/L | | 101 | 50 - 150 |
| 4-Methyl-2-pentanone (MIBK) | 2.50 | ND | | ug/L | | 98 | 50 - 150 |
| Acetone | 2.50 | ND | | ug/L | | 109 | 50 - 150 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LLCS 480-299833/6**
**Matrix: Water**
**Analysis Batch: 299833**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Benzene | 0.500 | 0.557 | | ug/L | | 111 | 50 - 150 |
| Bromobenzene | 0.500 | 0.528 | | ug/L | | 106 | 50 - 150 |
| Bromochloromethane | 0.500 | 0.525 | | ug/L | | 105 | 50 - 150 |
| Bromoform | 0.500 | 0.504 | | ug/L | | 101 | 50 - 150 |
| Bromomethane | 0.500 | ND | | ug/L | | 89 | 50 - 150 |
| Carbon disulfide | 0.500 | 0.530 | | ug/L | | 106 | 50 - 150 |
| Carbon tetrachloride | 0.500 | 0.526 | | ug/L | | 105 | 50 - 150 |
| Chlorobenzene | 0.500 | 0.536 | | ug/L | | 107 | 50 - 150 |
| Chlorodibromomethane | 0.500 | ND | | ug/L | | 98 | 50 - 150 |
| Chloroethane | 0.500 | ND | | ug/L | | 91 | 50 - 150 |
| Chloroform | 0.500 | 0.568 | | ug/L | | 114 | 50 - 150 |
| Chloromethane | 0.500 | 0.559 | | ug/L | | 112 | 50 - 150 |
| cis-1,3-Dichloropropene | 0.500 | ND | | ug/L | | 97 | 50 - 150 |
| Dibromomethane | 0.500 | 0.500 | | ug/L | | 100 | 50 - 150 |
| Dichlorobromomethane | 0.500 | 0.516 | | ug/L | | 103 | 50 - 150 |
| Dichlorodifluoromethane | 0.500 | ND | | ug/L | | 83 | 50 - 150 |
| Ethylbenzene | 0.500 | 0.509 | | ug/L | | 102 | 50 - 150 |
| Hexachlorobutadiene | 0.500 | 0.547 | | ug/L | | 109 | 50 - 150 |
| Isopropylbenzene | 0.500 | 0.505 | | ug/L | | 101 | 50 - 150 |
| Methyl tert-butyl ether | 0.500 | 0.519 | | ug/L | | 104 | 50 - 150 |
| Methylene Chloride | 0.500 | 0.675 | | ug/L | | 135 | 50 - 150 |
| Naphthalene | 0.500 | 0.534 | | ug/L | | 107 | 50 - 150 |
| n-Butylbenzene | 0.500 | 0.506 | | ug/L | | 101 | 50 - 150 |
| n-Propylbenzene | 0.500 | 0.523 | | ug/L | | 105 | 50 - 150 |
| sec-Butylbenzene | 0.500 | 0.513 | | ug/L | | 103 | 50 - 150 |
| Styrene | 0.500 | 0.532 | | ug/L | | 106 | 50 - 150 |
| tert-Butylbenzene | 0.500 | 0.520 | | ug/L | | 104 | 50 - 150 |
| Tetrachloroethene | 0.500 | 0.508 | | ug/L | | 102 | 50 - 150 |
| Toluene | 0.500 | 0.555 | | ug/L | | 111 | 50 - 150 |
| trans-1,2-Dichloroethene | 0.500 | 0.543 | | ug/L | | 109 | 50 - 150 |
| trans-1,3-Dichloropropene | 0.500 | ND | | ug/L | | 88 | 50 - 150 |
| Trichloroethene | 0.500 | 0.525 | | ug/L | | 105 | 50 - 150 |
| Trichlorofluoromethane | 0.500 | ND | | ug/L | | 81 | 50 - 150 |
| Xylenes, Total | 1.00 | ND | | ug/L | | 50 | 50 - 150 |

| *Surrogate* | *LLCS %Recovery* | *LLCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *80 - 120* |

**Lab Sample ID: MB 480-300068/7**
**Matrix: Water**
**Analysis Batch: 300068**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/05/16 11:19 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/05/16 11:19 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/05/16 11:19 | 1 |

# QC Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/05/16 11:19 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/05/16 11:19 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/05/16 11:19 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/05/16 11:19 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/05/16 11:19 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-300068/7**
**Matrix: Water**
**Analysis Batch: 300068**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 11:19 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/05/16 11:19 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 11:19 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/05/16 11:19 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/05/16 11:19 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/05/16 11:19 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/05/16 11:19 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/05/16 11:19 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/05/16 11:19* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *80 - 120* | | *05/05/16 11:19* | *1* |

**Lab Sample ID: LCS 480-300068/4**
**Matrix: Water**
**Analysis Batch: 300068**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 4.00 | 4.16 | | ug/L | | 104 | 70 - 130 |
| cis-1,2-Dichloroethene | 4.00 | 4.17 | | ug/L | | 104 | 70 - 130 |
| Vinyl chloride | 4.00 | 4.31 | | ug/L | | 108 | 70 - 130 |

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 4.00 | 4.20 | | ug/L | | 105 | 70 - 130 |
| 1,1,1-Trichloroethane | 4.00 | 4.26 | | ug/L | | 107 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 |
| 1,1,2-Trichloroethane | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 |
| 1,1-Dichloroethene | 4.00 | 4.17 | | ug/L | | 104 | 70 - 130 |
| 1,1-Dichloropropene | 4.00 | 4.17 | | ug/L | | 104 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 |
| 1,2,3-Trichloropropane | 4.00 | 3.81 | | ug/L | | 95 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 4.00 | 4.20 | | ug/L | | 105 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 4.00 | 3.75 | | ug/L | | 94 | 70 - 130 |
| 1,2-Dibromoethane | 4.00 | 3.98 | | ug/L | | 100 | 70 - 130 |
| 1,2-Dichlorobenzene | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 |
| 1,2-Dichloroethane | 4.00 | 4.13 | | ug/L | | 103 | 70 - 130 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-300068/4**
**Matrix: Water**
**Analysis Batch: 300068**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 4.00 | 4.15 | | ug/L | | 104 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 4.00 | 4.10 | | ug/L | | 102 | 70 - 130 |
| 1,3-Dichlorobenzene | 4.00 | 4.18 | | ug/L | | 105 | 70 - 130 |
| 1,3-Dichloropropane | 4.00 | 3.92 | | ug/L | | 98 | 70 - 130 |
| 1,4-Dichlorobenzene | 4.00 | 4.17 | | ug/L | | 104 | 70 - 130 |
| 2,2-Dichloropropane | 4.00 | 4.18 | | ug/L | | 105 | 70 - 130 |
| 2-Butanone (MEK) | 20.0 | 18.3 | | ug/L | | 91 | 70 - 130 |
| 2-Chlorotoluene | 4.00 | 4.13 | | ug/L | | 103 | 70 - 130 |
| 2-Hexanone | 20.0 | 18.2 | | ug/L | | 91 | 70 - 130 |
| 4-Chlorotoluene | 4.00 | 4.10 | | ug/L | | 103 | 70 - 130 |
| 4-Isopropyltoluene | 4.00 | 4.16 | | ug/L | | 104 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 20.0 | 18.3 | | ug/L | | 92 | 70 - 130 |
| Acetone | 20.0 | 19.8 | | ug/L | | 99 | 70 - 130 |
| Benzene | 4.00 | 4.23 | | ug/L | | 106 | 70 - 130 |
| Bromobenzene | 4.00 | 4.06 | | ug/L | | 102 | 70 - 130 |
| Bromochloromethane | 4.00 | 4.15 | | ug/L | | 104 | 70 - 130 |
| Bromoform | 4.00 | 4.22 | | ug/L | | 106 | 70 - 130 |
| Bromomethane | 4.00 | 4.20 | | ug/L | | 105 | 70 - 130 |
| Carbon disulfide | 4.00 | 4.16 | | ug/L | | 104 | 70 - 130 |
| Carbon tetrachloride | 4.00 | 4.48 | | ug/L | | 112 | 70 - 130 |
| Chlorobenzene | 4.00 | 4.06 | | ug/L | | 101 | 70 - 130 |
| Chlorodibromomethane | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 |
| Chloroethane | 4.00 | 4.41 | | ug/L | | 110 | 70 - 130 |
| Chloroform | 4.00 | 4.14 | | ug/L | | 103 | 70 - 130 |
| Chloromethane | 4.00 | 4.21 | | ug/L | | 105 | 70 - 130 |
| cis-1,3-Dichloropropene | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 |
| Dibromomethane | 4.00 | 3.93 | | ug/L | | 98 | 70 - 130 |
| Dichlorobromomethane | 4.00 | 4.26 | | ug/L | | 106 | 70 - 130 |
| Dichlorodifluoromethane | 4.00 | 4.34 | | ug/L | | 108 | 70 - 130 |
| Ethylbenzene | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 |
| Hexachlorobutadiene | 4.00 | 4.43 | | ug/L | | 111 | 70 - 130 |
| Isopropylbenzene | 4.00 | 4.10 | | ug/L | | 103 | 70 - 130 |
| Methyl tert-butyl ether | 4.00 | 4.02 | | ug/L | | 100 | 70 - 130 |
| Methylene Chloride | 4.00 | 4.10 | | ug/L | | 102 | 70 - 130 |
| Naphthalene | 4.00 | 3.80 | | ug/L | | 95 | 70 - 130 |
| n-Butylbenzene | 4.00 | 4.17 | | ug/L | | 104 | 70 - 130 |
| n-Propylbenzene | 4.00 | 4.12 | | ug/L | | 103 | 70 - 130 |
| sec-Butylbenzene | 4.00 | 4.16 | | ug/L | | 104 | 70 - 130 |
| Styrene | 4.00 | 4.02 | | ug/L | | 101 | 70 - 130 |
| tert-Butylbenzene | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 |
| Tetrachloroethene | 4.00 | 4.21 | | ug/L | | 105 | 70 - 130 |
| Toluene | 4.00 | 4.06 | | ug/L | | 102 | 70 - 130 |
| trans-1,2-Dichloroethene | 4.00 | 4.40 | | ug/L | | 110 | 70 - 130 |
| trans-1,3-Dichloropropene | 4.00 | 3.79 | | ug/L | | 95 | 70 - 130 |
| Trichloroethene | 4.00 | 4.18 | | ug/L | | 104 | 70 - 130 |
| Trichlorofluoromethane | 4.00 | 4.29 | | ug/L | | 107 | 70 - 130 |
| Xylenes, Total | 8.00 | 7.98 | | ug/L | | 100 | 70 - 130 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-300068/4**
**Matrix: Water**
**Analysis Batch: 300068**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *80 - 120* |

**Lab Sample ID: LCSD 480-300068/5**
**Matrix: Water**
**Analysis Batch: 300068**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 4.00 | 3.92 | | ug/L | | 98 | 70 - 130 | 6 | 20 |
| cis-1,2-Dichloroethene | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| Vinyl chloride | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 | 7 | 20 |

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| 1,1,1-Trichloroethane | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 | 5 | 20 |
| 1,1,2,2-Tetrachloroethane | 4.00 | 3.92 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| 1,1,2-Trichloroethane | 4.00 | 3.93 | | ug/L | | 98 | 70 - 130 | 4 | 20 |
| 1,1-Dichloroethene | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 | 5 | 20 |
| 1,1-Dichloropropene | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 | 5 | 20 |
| 1,2,3-Trichlorobenzene | 4.00 | 3.91 | | ug/L | | 98 | 70 - 130 | 4 | 20 |
| 1,2,3-Trichloropropane | 4.00 | 3.80 | | ug/L | | 95 | 70 - 130 | 0 | 20 |
| 1,2,4-Trichlorobenzene | 4.00 | 3.98 | | ug/L | | 100 | 70 - 130 | 5 | 20 |
| 1,2,4-Trimethylbenzene | 4.00 | 3.82 | | ug/L | | 95 | 70 - 130 | 4 | 20 |
| 1,2-Dibromo-3-Chloropropane | 4.00 | 3.63 | | ug/L | | 91 | 70 - 130 | 3 | 20 |
| 1,2-Dibromoethane | 4.00 | 3.99 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| 1,2-Dichlorobenzene | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| 1,2-Dichloroethane | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| 1,2-Dichloropropane | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| 1,3,5-Trimethylbenzene | 4.00 | 3.94 | | ug/L | | 98 | 70 - 130 | 4 | 20 |
| 1,3-Dichlorobenzene | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| 1,3-Dichloropropane | 4.00 | 3.94 | | ug/L | | 98 | 70 - 130 | 0 | 20 |
| 1,4-Dichlorobenzene | 4.00 | 4.06 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| 2,2-Dichloropropane | 4.00 | 4.18 | | ug/L | | 105 | 70 - 130 | 0 | 20 |
| 2-Butanone (MEK) | 20.0 | 17.8 | | ug/L | | 89 | 70 - 130 | 3 | 20 |
| 2-Chlorotoluene | 4.00 | 4.06 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| 2-Hexanone | 20.0 | 18.3 | | ug/L | | 91 | 70 - 130 | 1 | 20 |
| 4-Chlorotoluene | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| 4-Isopropyltoluene | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 20.0 | 18.0 | | ug/L | | 90 | 70 - 130 | 2 | 20 |
| Acetone | 20.0 | 18.9 | | ug/L | | 95 | 70 - 130 | 5 | 20 |
| Benzene | 4.00 | 4.06 | | ug/L | | 102 | 70 - 130 | 4 | 20 |
| Bromobenzene | 4.00 | 3.90 | | ug/L | | 97 | 70 - 130 | 4 | 20 |
| Bromochloromethane | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| Bromoform | 4.00 | 4.22 | | ug/L | | 106 | 70 - 130 | 0 | 20 |
| Bromomethane | 4.00 | 3.90 | | ug/L | | 97 | 70 - 130 | 8 | 20 |
| Carbon disulfide | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| Carbon tetrachloride | 4.00 | 4.25 | | ug/L | | 106 | 70 - 130 | 5 | 20 |
| Chlorobenzene | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 1 | 20 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-300068/5**
**Matrix: Water**
**Analysis Batch: 300068**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chlorodibromomethane | | | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| Chloroethane | | | 4.00 | 3.91 | | ug/L | | 98 | 70 - 130 | 12 | 20 |
| Chloroform | | | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| Chloromethane | | | 4.00 | 3.85 | | ug/L | | 96 | 70 - 130 | 9 | 20 |
| cis-1,3-Dichloropropene | | | 4.00 | 3.98 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| Dibromomethane | | | 4.00 | 3.88 | | ug/L | | 97 | 70 - 130 | 1 | 20 |
| Dichlorobromomethane | | | 4.00 | 4.06 | | ug/L | | 102 | 70 - 130 | 5 | 20 |
| Dichlorodifluoromethane | | | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 | 7 | 20 |
| Ethylbenzene | | | 4.00 | 3.97 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| Hexachlorobutadiene | | | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 | 7 | 20 |
| Isopropylbenzene | | | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| Methyl tert-butyl ether | | | 4.00 | 3.92 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| Methylene Chloride | | | 4.00 | 3.98 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| Naphthalene | | | 4.00 | 3.72 | | ug/L | | 93 | 70 - 130 | 2 | 20 |
| n-Butylbenzene | | | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 | 4 | 20 |
| n-Propylbenzene | | | 4.00 | 3.99 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| sec-Butylbenzene | | | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 | 4 | 20 |
| Styrene | | | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 | 0 | 20 |
| tert-Butylbenzene | | | 4.00 | 3.93 | | ug/L | | 98 | 70 - 130 | 4 | 20 |
| Tetrachloroethene | | | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 | 3 | 20 |
| Toluene | | | 4.00 | 3.95 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| trans-1,2-Dichloroethene | | | 4.00 | 4.14 | | ug/L | | 103 | 70 - 130 | 6 | 20 |
| trans-1,3-Dichloropropene | | | 4.00 | 3.75 | | ug/L | | 94 | 70 - 130 | 1 | 20 |
| Trichloroethene | | | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 | 4 | 20 |
| Trichlorofluoromethane | | | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 | 4 | 20 |
| Xylenes, Total | | | 8.00 | 7.98 | | ug/L | | 100 | 70 - 130 | 0 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *101* | | *80 - 120* |

**Lab Sample ID: LLCS 480-300068/6**
**Matrix: Water**
**Analysis Batch: 300068**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | | | 0.500 | 0.541 | | ug/L | | 108 | 50 - 150 | | |
| cis-1,2-Dichloroethene | | | 0.500 | 0.550 | | ug/L | | 110 | 50 - 150 | | |
| Vinyl chloride | | | 0.500 | 0.508 | | ug/L | | 102 | 50 - 150 | | |
| **Analyte** | | | **Spike Added** | **LLCS Result** | **LLCS Qualifier** | **Unit** | **D** | **%Rec** | **%Rec. Limits** | | |
| 1,1,1,2-Tetrachloroethane | | | 0.500 | 0.514 | | ug/L | | 103 | 50 - 150 | | |
| 1,1,1-Trichloroethane | | | 0.500 | 0.553 | | ug/L | | 111 | 50 - 150 | | |
| 1,1,2,2-Tetrachloroethane | | | 0.500 | 0.515 | | ug/L | | 103 | 50 - 150 | | |
| 1,1,2-Trichloroethane | | | 0.500 | 0.501 | | ug/L | | 100 | 50 - 150 | | |
| 1,1-Dichloroethene | | | 0.500 | 0.523 | | ug/L | | 105 | 50 - 150 | | |
| 1,1-Dichloropropene | | | 0.500 | 0.551 | | ug/L | | 110 | 50 - 150 | | |
| 1,2,3-Trichlorobenzene | | | 0.500 | 0.535 | | ug/L | | 107 | 50 - 150 | | |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LLCS 480-300068/6**
**Matrix: Water**
**Analysis Batch: 300068**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,2,3-Trichloropropane | 0.500 | ND | | ug/L | | 98 | 50 - 150 |
| 1,2,4-Trichlorobenzene | 0.500 | 0.545 | | ug/L | | 109 | 50 - 150 |
| 1,2,4-Trimethylbenzene | 0.500 | 0.501 | | ug/L | | 100 | 50 - 150 |
| 1,2-Dibromo-3-Chloropropane | 0.500 | ND | | ug/L | | 76 | 50 - 150 |
| 1,2-Dibromoethane | 0.500 | ND | | ug/L | | 100 | 50 - 150 |
| 1,2-Dichlorobenzene | 0.500 | 0.544 | | ug/L | | 109 | 50 - 150 |
| 1,2-Dichloroethane | 0.500 | 0.544 | | ug/L | | 109 | 50 - 150 |
| 1,2-Dichloropropane | 0.500 | 0.560 | | ug/L | | 112 | 50 - 150 |
| 1,3,5-Trimethylbenzene | 0.500 | 0.524 | | ug/L | | 105 | 50 - 150 |
| 1,3-Dichlorobenzene | 0.500 | 0.539 | | ug/L | | 108 | 50 - 150 |
| 1,3-Dichloropropane | 0.500 | ND | | ug/L | | 99 | 50 - 150 |
| 1,4-Dichlorobenzene | 0.500 | 0.553 | | ug/L | | 111 | 50 - 150 |
| 2,2-Dichloropropane | 0.500 | 0.658 | | ug/L | | 132 | 50 - 150 |
| 2-Butanone (MEK) | 2.50 | ND | | ug/L | | 102 | 50 - 150 |
| 2-Chlorotoluene | 0.500 | 0.557 | | ug/L | | 111 | 50 - 150 |
| 2-Hexanone | 2.50 | ND | | ug/L | | 99 | 50 - 150 |
| 4-Chlorotoluene | 0.500 | 0.539 | | ug/L | | 108 | 50 - 150 |
| 4-Isopropyltoluene | 0.500 | 0.529 | | ug/L | | 106 | 50 - 150 |
| 4-Methyl-2-pentanone (MIBK) | 2.50 | ND | | ug/L | | 99 | 50 - 150 |
| Acetone | 2.50 | ND | | ug/L | | 118 | 50 - 150 |
| Benzene | 0.500 | 0.576 | | ug/L | | 115 | 50 - 150 |
| Bromobenzene | 0.500 | 0.526 | | ug/L | | 105 | 50 - 150 |
| Bromochloromethane | 0.500 | 0.555 | | ug/L | | 111 | 50 - 150 |
| Bromoform | 0.500 | 0.501 | | ug/L | | 100 | 50 - 150 |
| Bromomethane | 0.500 | ND | | ug/L | | 87 | 50 - 150 |
| Carbon disulfide | 0.500 | 0.556 | | ug/L | | 111 | 50 - 150 |
| Carbon tetrachloride | 0.500 | 0.572 | | ug/L | | 114 | 50 - 150 |
| Chlorobenzene | 0.500 | 0.539 | | ug/L | | 108 | 50 - 150 |
| Chlorodibromomethane | 0.500 | ND | | ug/L | | 95 | 50 - 150 |
| Chloroethane | 0.500 | ND | | ug/L | | 89 | 50 - 150 |
| Chloroform | 0.500 | 0.585 | | ug/L | | 117 | 50 - 150 |
| Chloromethane | 0.500 | 0.582 | | ug/L | | 116 | 50 - 150 |
| cis-1,3-Dichloropropene | 0.500 | ND | | ug/L | | 97 | 50 - 150 |
| Dibromomethane | 0.500 | 0.509 | | ug/L | | 102 | 50 - 150 |
| Dichlorobromomethane | 0.500 | 0.528 | | ug/L | | 106 | 50 - 150 |
| Dichlorodifluoromethane | 0.500 | ND | | ug/L | | 89 | 50 - 150 |
| Ethylbenzene | 0.500 | 0.539 | | ug/L | | 108 | 50 - 150 |
| Hexachlorobutadiene | 0.500 | 0.556 | | ug/L | | 111 | 50 - 150 |
| Isopropylbenzene | 0.500 | 0.526 | | ug/L | | 105 | 50 - 150 |
| Methyl tert-butyl ether | 0.500 | 0.525 | | ug/L | | 105 | 50 - 150 |
| Methylene Chloride | 0.500 | 0.696 | | ug/L | | 139 | 50 - 150 |
| Naphthalene | 0.500 | ND | | ug/L | | 97 | 50 - 150 |
| n-Butylbenzene | 0.500 | 0.530 | | ug/L | | 106 | 50 - 150 |
| n-Propylbenzene | 0.500 | 0.530 | | ug/L | | 106 | 50 - 150 |
| sec-Butylbenzene | 0.500 | 0.531 | | ug/L | | 106 | 50 - 150 |
| Styrene | 0.500 | 0.525 | | ug/L | | 105 | 50 - 150 |
| tert-Butylbenzene | 0.500 | 0.523 | | ug/L | | 105 | 50 - 150 |
| Tetrachloroethene | 0.500 | 0.516 | | ug/L | | 103 | 50 - 150 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LLCS 480-300068/6**
**Matrix: Water**
**Analysis Batch: 300068**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Toluene | 0.500 | 0.555 | | ug/L | | 111 | 50 - 150 |
| trans-1,2-Dichloroethene | 0.500 | 0.564 | | ug/L | | 113 | 50 - 150 |
| trans-1,3-Dichloropropene | 0.500 | ND | | ug/L | | 89 | 50 - 150 |
| Trichloroethene | 0.500 | 0.532 | | ug/L | | 106 | 50 - 150 |
| Trichlorofluoromethane | 0.500 | ND | | ug/L | | 98 | 50 - 150 |
| Xylenes, Total | 1.00 | ND | | ug/L | | 52 | 50 - 150 |

| *Surrogate* | *LLCS %Recovery* | *LLCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *80 - 120* |

**Lab Sample ID: 480-99299-30 MS**
**Matrix: Water**
**Analysis Batch: 300068**

**Client Sample ID: W-160428-MB-30**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 4.00 | 4.02 | | ug/L | | 100 | 70 - 130 |
| cis-1,2-Dichloroethene | ND | | 4.00 | 4.17 | | ug/L | | 104 | 70 - 130 |
| Vinyl chloride | ND | | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 |

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 4.00 | 3.86 | | ug/L | | 97 | 70 - 130 |
| 1,1,1-Trichloroethane | ND | | 4.00 | 4.25 | | ug/L | | 106 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | ND | | 4.00 | 3.73 | | ug/L | | 93 | 70 - 130 |
| 1,1,2-Trichloroethane | ND | | 4.00 | 3.97 | | ug/L | | 99 | 70 - 130 |
| 1,1-Dichloroethene | ND | | 4.00 | 4.15 | | ug/L | | 104 | 70 - 130 |
| 1,1-Dichloropropene | ND | | 4.00 | 4.22 | | ug/L | | 106 | 70 - 130 |
| 1,2,3-Trichlorobenzene | ND | | 4.00 | 3.74 | | ug/L | | 93 | 70 - 130 |
| 1,2,3-Trichloropropane | ND | | 4.00 | 3.69 | | ug/L | | 92 | 70 - 130 |
| 1,2,4-Trichlorobenzene | ND | | 4.00 | 3.88 | | ug/L | | 97 | 70 - 130 |
| 1,2,4-Trimethylbenzene | ND | | 4.00 | 3.86 | | ug/L | | 96 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | ND | | 4.00 | 3.20 | | ug/L | | 80 | 70 - 130 |
| 1,2-Dibromoethane | ND | | 4.00 | 3.86 | | ug/L | | 97 | 70 - 130 |
| 1,2-Dichlorobenzene | ND | | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 |
| 1,2-Dichloroethane | ND | | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 |
| 1,2-Dichloropropane | ND | | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 |
| 1,3,5-Trimethylbenzene | ND | | 4.00 | 3.95 | | ug/L | | 99 | 70 - 130 |
| 1,3-Dichlorobenzene | ND | | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 |
| 1,3-Dichloropropane | ND | | 4.00 | 3.84 | | ug/L | | 96 | 70 - 130 |
| 1,4-Dichlorobenzene | ND | | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 |
| 2,2-Dichloropropane | ND | | 4.00 | 4.20 | | ug/L | | 105 | 70 - 130 |
| 2-Butanone (MEK) | ND | | 20.0 | 17.2 | | ug/L | | 86 | 70 - 130 |
| 2-Chlorotoluene | ND | | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 |
| 2-Hexanone | ND | | 20.0 | 17.4 | | ug/L | | 87 | 70 - 130 |
| 4-Chlorotoluene | ND | | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 |
| 4-Isopropyltoluene | ND | | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 20.0 | 18.0 | | ug/L | | 90 | 70 - 130 |
| Acetone | ND | | 20.0 | 18.2 | | ug/L | | 91 | 70 - 130 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 480-99299-30 MS**
**Matrix: Water**
**Analysis Batch: 300068**

**Client Sample ID: W-160428-MB-30**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 4.00 | 4.14 | | ug/L | | 103 | 70 - 130 |
| Bromobenzene | ND | | 4.00 | 3.92 | | ug/L | | 98 | 70 - 130 |
| Bromochloromethane | ND | | 4.00 | 4.15 | | ug/L | | 104 | 70 - 130 |
| Bromoform | ND | | 4.00 | 3.63 | | ug/L | | 91 | 70 - 130 |
| Bromomethane | ND | | 4.00 | 3.51 | | ug/L | | 88 | 70 - 130 |
| Carbon disulfide | ND | | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 |
| Carbon tetrachloride | ND | | 4.00 | 4.18 | | ug/L | | 104 | 70 - 130 |
| Chlorobenzene | ND | | 4.00 | 4.02 | | ug/L | | 100 | 70 - 130 |
| Chlorodibromomethane | ND | | 4.00 | 3.66 | | ug/L | | 92 | 70 - 130 |
| Chloroethane | ND | | 4.00 | 4.10 | | ug/L | | 102 | 70 - 130 |
| Chloroform | ND | | 4.00 | 4.14 | | ug/L | | 103 | 70 - 130 |
| Chloromethane | ND | | 4.00 | 3.80 | | ug/L | | 95 | 70 - 130 |
| cis-1,3-Dichloropropene | ND | | 4.00 | 3.76 | | ug/L | | 94 | 70 - 130 |
| Dibromomethane | ND | | 4.00 | 3.89 | | ug/L | | 97 | 70 - 130 |
| Dichlorobromomethane | ND | | 4.00 | 3.91 | | ug/L | | 98 | 70 - 130 |
| Dichlorodifluoromethane | ND | | 4.00 | 3.83 | | ug/L | | 96 | 70 - 130 |
| Ethylbenzene | ND | | 4.00 | 3.99 | | ug/L | | 100 | 70 - 130 |
| Hexachlorobutadiene | ND | | 4.00 | 4.18 | | ug/L | | 104 | 70 - 130 |
| Isopropylbenzene | ND | | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 |
| Methyl tert-butyl ether | ND | | 4.00 | 3.84 | | ug/L | | 96 | 70 - 130 |
| Methylene Chloride | ND | | 4.00 | 3.89 | | ug/L | | 97 | 70 - 130 |
| Naphthalene | ND | | 4.00 | 3.45 | | ug/L | | 86 | 70 - 130 |
| n-Butylbenzene | ND | | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 |
| n-Propylbenzene | ND | | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 |
| sec-Butylbenzene | ND | | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 |
| Styrene | ND | | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 |
| tert-Butylbenzene | ND | | 4.00 | 4.02 | | ug/L | | 100 | 70 - 130 |
| Tetrachloroethene | ND | | 4.00 | 4.21 | | ug/L | | 105 | 70 - 130 |
| Toluene | ND | | 4.00 | 4.15 | | ug/L | | 104 | 70 - 130 |
| trans-1,2-Dichloroethene | ND | | 4.00 | 4.28 | | ug/L | | 107 | 70 - 130 |
| trans-1,3-Dichloropropene | ND | | 4.00 | 3.40 | | ug/L | | 85 | 70 - 130 |
| Trichloroethene | ND | | 4.00 | 4.12 | | ug/L | | 103 | 70 - 130 |
| Trichlorofluoromethane | ND | | 4.00 | 4.06 | | ug/L | | 102 | 70 - 130 |
| Xylenes, Total | ND | | 8.00 | 7.98 | | ug/L | | 100 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* |

**Lab Sample ID: 480-99299-30 MSD**
**Matrix: Water**
**Analysis Batch: 300068**

**Client Sample ID: W-160428-MB-30**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 4.00 | 3.93 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| cis-1,2-Dichloroethene | ND | | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| Vinyl chloride | ND | | 4.00 | 3.97 | | ug/L | | 99 | 70 - 130 | 2 | 20 |

# QC Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 4.00 | 3.98 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| 1,1,1-Trichloroethane | ND | | 4.00 | 4.16 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| 1,1,2,2-Tetrachloroethane | ND | | 4.00 | 3.81 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| 1,1,2-Trichloroethane | ND | | 4.00 | 3.93 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| 1,1-Dichloroethene | ND | | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 | 4 | 20 |
| 1,1-Dichloropropene | ND | | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 | 4 | 20 |
| 1,2,3-Trichlorobenzene | ND | | 4.00 | 3.87 | | ug/L | | 97 | 70 - 130 | 3 | 20 |
| 1,2,3-Trichloropropane | ND | | 4.00 | 3.77 | | ug/L | | 94 | 70 - 130 | 2 | 20 |
| 1,2,4-Trichlorobenzene | ND | | 4.00 | 3.93 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| 1,2,4-Trimethylbenzene | ND | | 4.00 | 3.88 | | ug/L | | 97 | 70 - 130 | 1 | 20 |
| 1,2-Dibromo-3-Chloropropane | ND | | 4.00 | 3.29 | | ug/L | | 82 | 70 - 130 | 3 | 20 |
| 1,2-Dibromoethane | ND | | 4.00 | 3.91 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| 1,2-Dichlorobenzene | ND | | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| 1,2-Dichloroethane | ND | | 4.00 | 3.98 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| 1,2-Dichloropropane | ND | | 4.00 | 3.98 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| 1,3,5-Trimethylbenzene | ND | | 4.00 | 4.02 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| 1,3-Dichlorobenzene | ND | | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| 1,3-Dichloropropane | ND | | 4.00 | 3.86 | | ug/L | | 97 | 70 - 130 | 1 | 20 |
| 1,4-Dichlorobenzene | ND | | 4.00 | 4.10 | | ug/L | | 103 | 70 - 130 | 0 | 20 |
| 2,2-Dichloropropane | ND | | 4.00 | 3.97 | | ug/L | | 99 | 70 - 130 | 6 | 20 |
| 2-Butanone (MEK) | ND | | 20.0 | 17.5 | | ug/L | | 87 | 70 - 130 | 1 | 20 |
| 2-Chlorotoluene | ND | | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| 2-Hexanone | ND | | 20.0 | 18.0 | | ug/L | | 90 | 70 - 130 | 3 | 20 |
| 4-Chlorotoluene | ND | | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| 4-Isopropyltoluene | ND | | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 | 0 | 20 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 20.0 | 18.0 | | ug/L | | 90 | 70 - 130 | 0 | 20 |
| Acetone | ND | | 20.0 | 18.4 | | ug/L | | 92 | 70 - 130 | 1 | 20 |
| Benzene | ND | | 4.00 | 3.99 | | ug/L | | 100 | 70 - 130 | 4 | 20 |
| Bromobenzene | ND | | 4.00 | 3.94 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| Bromochloromethane | ND | | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| Bromoform | ND | | 4.00 | 3.75 | | ug/L | | 94 | 70 - 130 | 3 | 20 |
| Bromomethane | ND | | 4.00 | 3.34 | | ug/L | | 84 | 70 - 130 | 5 | 20 |
| Carbon disulfide | ND | | 4.00 | 3.91 | | ug/L | | 98 | 70 - 130 | 4 | 20 |
| Carbon tetrachloride | ND | | 4.00 | 4.12 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| Chlorobenzene | ND | | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| Chlorodibromomethane | ND | | 4.00 | 3.77 | | ug/L | | 94 | 70 - 130 | 3 | 20 |
| Chloroethane | ND | | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| Chloroform | ND | | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| Chloromethane | ND | | 4.00 | 3.70 | | ug/L | | 93 | 70 - 130 | 3 | 20 |
| cis-1,3-Dichloropropene | ND | | 4.00 | 3.69 | | ug/L | | 92 | 70 - 130 | 2 | 20 |
| Dibromomethane | ND | | 4.00 | 3.83 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| Dichlorobromomethane | ND | | 4.00 | 3.93 | | ug/L | | 98 | 70 - 130 | 0 | 20 |
| Dichlorodifluoromethane | ND | | 4.00 | 3.65 | | ug/L | | 91 | 70 - 130 | 5 | 20 |
| Ethylbenzene | ND | | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| Hexachlorobutadiene | ND | | 4.00 | 4.16 | | ug/L | | 104 | 70 - 130 | 0 | 20 |
| Isopropylbenzene | ND | | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 | 0 | 20 |
| Methyl tert-butyl ether | ND | | 4.00 | 3.87 | | ug/L | | 97 | 70 - 130 | 1 | 20 |
| Methylene Chloride | ND | | 4.00 | 3.78 | | ug/L | | 95 | 70 - 130 | 3 | 20 |
| Naphthalene | ND | | 4.00 | 3.59 | | ug/L | | 90 | 70 - 130 | 4 | 20 |
| n-Butylbenzene | ND | | 4.00 | 3.99 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| n-Propylbenzene | ND | | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| sec-Butylbenzene | ND | | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| Styrene | ND | | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| tert-Butylbenzene | ND | | 4.00 | 3.99 | | ug/L | | 100 | 70 - 130 | 1 | 20 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 480-99299-30 MSD**
**Matrix: Water**
**Analysis Batch: 300068**

**Client Sample ID: W-160428-MB-30**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | ND | | 4.00 | 4.06 | | ug/L | | 102 | 70 - 130 | 4 | 20 |
| Toluene | ND | | 4.00 | 3.95 | | ug/L | | 99 | 70 - 130 | 5 | 20 |
| trans-1,2-Dichloroethene | ND | | 4.00 | 4.16 | | ug/L | | 104 | 70 - 130 | 3 | 20 |
| trans-1,3-Dichloropropene | ND | | 4.00 | 3.44 | | ug/L | | 86 | 70 - 130 | 1 | 20 |
| Trichloroethene | ND | | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| Trichlorofluoromethane | ND | | 4.00 | 3.98 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| Xylenes, Total | ND | | 8.00 | 7.82 | | ug/L | | 98 | 70 - 130 | 2 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *80 - 120* |

**Lab Sample ID: MB 480-300335/7**
**Matrix: Water**
**Analysis Batch: 300335**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/06/16 11:53 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/06/16 11:53 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/06/16 11:53 | 1 |

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/06/16 11:53 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/06/16 11:53 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-300335/7**
**Matrix: Water**
**Analysis Batch: 300335**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/06/16 11:53 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/06/16 11:53 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/06/16 11:53 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/06/16 11:53 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/06/16 11:53 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/06/16 11:53 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/06/16 11:53 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/06/16 11:53 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/06/16 11:53 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/06/16 11:53 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/06/16 11:53 | 1 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-300335/7**
**Matrix: Water**
**Analysis Batch: 300335**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene-d4 | 100 | | 80 - 120 | | 05/06/16 11:53 | 1 |
| 4-Bromofluorobenzene (Surr) | 97 | | 80 - 120 | | 05/06/16 11:53 | 1 |

**Lab Sample ID: LCS 480-300335/4**
**Matrix: Water**
**Analysis Batch: 300335**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 |
| cis-1,2-Dichloroethene | 4.00 | 4.17 | | ug/L | | 104 | 70 - 130 |
| Vinyl chloride | 4.00 | 4.23 | | ug/L | | 106 | 70 - 130 |

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 |
| 1,1,1-Trichloroethane | 4.00 | 4.28 | | ug/L | | 107 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 4.00 | 3.77 | | ug/L | | 94 | 70 - 130 |
| 1,1,2-Trichloroethane | 4.00 | 3.90 | | ug/L | | 97 | 70 - 130 |
| 1,1-Dichloroethene | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 |
| 1,1-Dichloropropene | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 4.00 | 3.76 | | ug/L | | 94 | 70 - 130 |
| 1,2,3-Trichloropropane | 4.00 | 3.76 | | ug/L | | 94 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 4.00 | 3.83 | | ug/L | | 96 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 4.00 | 3.83 | | ug/L | | 96 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 4.00 | 3.57 | | ug/L | | 89 | 70 - 130 |
| 1,2-Dibromoethane | 4.00 | 3.91 | | ug/L | | 98 | 70 - 130 |
| 1,2-Dichlorobenzene | 4.00 | 3.91 | | ug/L | | 98 | 70 - 130 |
| 1,2-Dichloroethane | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 |
| 1,2-Dichloropropane | 4.00 | 3.99 | | ug/L | | 100 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 4.00 | 3.85 | | ug/L | | 96 | 70 - 130 |
| 1,3-Dichlorobenzene | 4.00 | 3.93 | | ug/L | | 98 | 70 - 130 |
| 1,3-Dichloropropane | 4.00 | 3.81 | | ug/L | | 95 | 70 - 130 |
| 1,4-Dichlorobenzene | 4.00 | 3.95 | | ug/L | | 99 | 70 - 130 |
| 2,2-Dichloropropane | 4.00 | 4.78 | | ug/L | | 120 | 70 - 130 |
| 2-Butanone (MEK) | 20.0 | 18.0 | | ug/L | | 90 | 70 - 130 |
| 2-Chlorotoluene | 4.00 | 3.98 | | ug/L | | 99 | 70 - 130 |
| 2-Hexanone | 20.0 | 18.0 | | ug/L | | 90 | 70 - 130 |
| 4-Chlorotoluene | 4.00 | 3.89 | | ug/L | | 97 | 70 - 130 |
| 4-Isopropyltoluene | 4.00 | 3.80 | | ug/L | | 95 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 20.0 | 18.4 | | ug/L | | 92 | 70 - 130 |
| Acetone | 20.0 | 18.5 | | ug/L | | 93 | 70 - 130 |
| Benzene | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 |
| Bromobenzene | 4.00 | 3.81 | | ug/L | | 95 | 70 - 130 |
| Bromochloromethane | 4.00 | 4.17 | | ug/L | | 104 | 70 - 130 |
| Bromoform | 4.00 | 4.26 | | ug/L | | 107 | 70 - 130 |
| Bromomethane | 4.00 | 4.23 | | ug/L | | 106 | 70 - 130 |
| Carbon disulfide | 4.00 | 4.18 | | ug/L | | 104 | 70 - 130 |
| Carbon tetrachloride | 4.00 | 4.35 | | ug/L | | 109 | 70 - 130 |
| Chlorobenzene | 4.00 | 3.94 | | ug/L | | 99 | 70 - 130 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-300335/4**
**Matrix: Water**
**Analysis Batch: 300335**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chlorodibromomethane | 4.00 | 3.99 | | ug/L | | 100 | 70 - 130 |
| Chloroethane | 4.00 | 4.14 | | ug/L | | 103 | 70 - 130 |
| Chloroform | 4.00 | 4.13 | | ug/L | | 103 | 70 - 130 |
| Chloromethane | 4.00 | 4.17 | | ug/L | | 104 | 70 - 130 |
| cis-1,3-Dichloropropene | 4.00 | 3.90 | | ug/L | | 97 | 70 - 130 |
| Dibromomethane | 4.00 | 3.86 | | ug/L | | 96 | 70 - 130 |
| Dichlorobromomethane | 4.00 | 4.06 | | ug/L | | 101 | 70 - 130 |
| Dichlorodifluoromethane | 4.00 | 4.17 | | ug/L | | 104 | 70 - 130 |
| Ethylbenzene | 4.00 | 3.94 | | ug/L | | 99 | 70 - 130 |
| Hexachlorobutadiene | 4.00 | 3.72 | | ug/L | | 93 | 70 - 130 |
| Isopropylbenzene | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 |
| Methyl tert-butyl ether | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 |
| Methylene Chloride | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 |
| Naphthalene | 4.00 | 3.57 | | ug/L | | 89 | 70 - 130 |
| n-Butylbenzene | 4.00 | 3.76 | | ug/L | | 94 | 70 - 130 |
| n-Propylbenzene | 4.00 | 3.90 | | ug/L | | 98 | 70 - 130 |
| sec-Butylbenzene | 4.00 | 3.87 | | ug/L | | 97 | 70 - 130 |
| Styrene | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 |
| tert-Butylbenzene | 4.00 | 3.81 | | ug/L | | 95 | 70 - 130 |
| Tetrachloroethene | 4.00 | 3.99 | | ug/L | | 100 | 70 - 130 |
| Toluene | 4.00 | 3.95 | | ug/L | | 99 | 70 - 130 |
| trans-1,2-Dichloroethene | 4.00 | 4.24 | | ug/L | | 106 | 70 - 130 |
| trans-1,3-Dichloropropene | 4.00 | 3.73 | | ug/L | | 93 | 70 - 130 |
| Trichloroethene | 4.00 | 3.93 | | ug/L | | 98 | 70 - 130 |
| Trichlorofluoromethane | 4.00 | 4.42 | | ug/L | | 110 | 70 - 130 |
| Xylenes, Total | 8.00 | 7.91 | | ug/L | | 99 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *98* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *100* | | *80 - 120* |

**Lab Sample ID: LCSD 480-300335/5**
**Matrix: Water**
**Analysis Batch: 300335**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 4.00 | 3.82 | | ug/L | | 96 | 70 - 130 | 6 | 20 |
| cis-1,2-Dichloroethene | 4.00 | 3.95 | | ug/L | | 99 | 70 - 130 | 6 | 20 |
| Vinyl chloride | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 | 5 | 20 |

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 4.00 | 3.95 | | ug/L | | 99 | 70 - 130 | 4 | 20 |
| 1,1,1-Trichloroethane | 4.00 | 3.91 | | ug/L | | 98 | 70 - 130 | 9 | 20 |
| 1,1,2,2-Tetrachloroethane | 4.00 | 3.76 | | ug/L | | 94 | 70 - 130 | 0 | 20 |
| 1,1,2-Trichloroethane | 4.00 | 3.85 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| 1,1-Dichloroethene | 4.00 | 3.82 | | ug/L | | 96 | 70 - 130 | 5 | 20 |
| 1,1-Dichloropropene | 4.00 | 3.86 | | ug/L | | 97 | 70 - 130 | 4 | 20 |
| 1,2,3-Trichlorobenzene | 4.00 | 3.74 | | ug/L | | 94 | 70 - 130 | 0 | 20 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-300335/5**
**Matrix: Water**
**Analysis Batch: 300335**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichloropropane | 4.00 | 3.79 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| 1,2,4-Trichlorobenzene | 4.00 | 3.89 | | ug/L | | 97 | 70 - 130 | 1 | 20 |
| 1,2,4-Trimethylbenzene | 4.00 | 3.78 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| 1,2-Dibromo-3-Chloropropane | 4.00 | 3.54 | | ug/L | | 89 | 70 - 130 | 1 | 20 |
| 1,2-Dibromoethane | 4.00 | 3.87 | | ug/L | | 97 | 70 - 130 | 1 | 20 |
| 1,2-Dichlorobenzene | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| 1,2-Dichloroethane | 4.00 | 3.98 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| 1,2-Dichloropropane | 4.00 | 3.95 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| 1,3,5-Trimethylbenzene | 4.00 | 3.85 | | ug/L | | 96 | 70 - 130 | 0 | 20 |
| 1,3-Dichlorobenzene | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| 1,3-Dichloropropane | 4.00 | 3.83 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| 1,4-Dichlorobenzene | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| 2,2-Dichloropropane | 4.00 | 3.99 | | ug/L | | 100 | 70 - 130 | 18 | 20 |
| 2-Butanone (MEK) | 20.0 | 17.3 | | ug/L | | 87 | 70 - 130 | 4 | 20 |
| 2-Chlorotoluene | 4.00 | 3.91 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| 2-Hexanone | 20.0 | 17.3 | | ug/L | | 87 | 70 - 130 | 4 | 20 |
| 4-Chlorotoluene | 4.00 | 3.90 | | ug/L | | 97 | 70 - 130 | 0 | 20 |
| 4-Isopropyltoluene | 4.00 | 3.81 | | ug/L | | 95 | 70 - 130 | 0 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 20.0 | 17.5 | | ug/L | | 87 | 70 - 130 | 5 | 20 |
| Acetone | 20.0 | 17.6 | | ug/L | | 88 | 70 - 130 | 5 | 20 |
| Benzene | 4.00 | 3.94 | | ug/L | | 98 | 70 - 130 | 4 | 20 |
| Bromobenzene | 4.00 | 3.89 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| Bromochloromethane | 4.00 | 3.95 | | ug/L | | 99 | 70 - 130 | 5 | 20 |
| Bromoform | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 | 5 | 20 |
| Bromomethane | 4.00 | 3.69 | | ug/L | | 92 | 70 - 130 | 14 | 20 |
| Carbon disulfide | 4.00 | 3.79 | | ug/L | | 95 | 70 - 130 | 10 | 20 |
| Carbon tetrachloride | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 | 6 | 20 |
| Chlorobenzene | 4.00 | 3.92 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| Chlorodibromomethane | 4.00 | 3.94 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| Chloroethane | 4.00 | 4.12 | | ug/L | | 103 | 70 - 130 | 0 | 20 |
| Chloroform | 4.00 | 3.93 | | ug/L | | 98 | 70 - 130 | 5 | 20 |
| Chloromethane | 4.00 | 3.88 | | ug/L | | 97 | 70 - 130 | 7 | 20 |
| cis-1,3-Dichloropropene | 4.00 | 3.82 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| Dibromomethane | 4.00 | 3.86 | | ug/L | | 96 | 70 - 130 | 0 | 20 |
| Dichlorobromomethane | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| Dichlorodifluoromethane | 4.00 | 3.91 | | ug/L | | 98 | 70 - 130 | 7 | 20 |
| Ethylbenzene | 4.00 | 3.79 | | ug/L | | 95 | 70 - 130 | 4 | 20 |
| Hexachlorobutadiene | 4.00 | 3.65 | | ug/L | | 91 | 70 - 130 | 2 | 20 |
| Isopropylbenzene | 4.00 | 3.84 | | ug/L | | 96 | 70 - 130 | 4 | 20 |
| Methyl tert-butyl ether | 4.00 | 3.84 | | ug/L | | 96 | 70 - 130 | 5 | 20 |
| Methylene Chloride | 4.00 | 3.90 | | ug/L | | 98 | 70 - 130 | 5 | 20 |
| Naphthalene | 4.00 | 3.62 | | ug/L | | 90 | 70 - 130 | 1 | 20 |
| n-Butylbenzene | 4.00 | 3.78 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| n-Propylbenzene | 4.00 | 3.83 | | ug/L | | 96 | 70 - 130 | 2 | 20 |
| sec-Butylbenzene | 4.00 | 3.86 | | ug/L | | 97 | 70 - 130 | 0 | 20 |
| Styrene | 4.00 | 3.92 | | ug/L | | 98 | 70 - 130 | 3 | 20 |
| tert-Butylbenzene | 4.00 | 3.71 | | ug/L | | 93 | 70 - 130 | 3 | 20 |
| Tetrachloroethene | 4.00 | 3.84 | | ug/L | | 96 | 70 - 130 | 4 | 20 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-300335/5**
**Matrix: Water**
**Analysis Batch: 300335**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Toluene | 4.00 | 3.87 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| trans-1,2-Dichloroethene | 4.00 | 3.99 | | ug/L | | 100 | 70 - 130 | 6 | 20 |
| trans-1,3-Dichloropropene | 4.00 | 3.68 | | ug/L | | 92 | 70 - 130 | 1 | 20 |
| Trichloroethene | 4.00 | 3.87 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| Trichlorofluoromethane | 4.00 | 3.97 | | ug/L | | 99 | 70 - 130 | 11 | 20 |
| Xylenes, Total | 8.00 | 7.65 | | ug/L | | 96 | 70 - 130 | 3 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* |

**Lab Sample ID: LLCS 480-300335/6**
**Matrix: Water**
**Analysis Batch: 300335**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 0.500 | 0.555 | | ug/L | | 111 | 50 - 150 |
| cis-1,2-Dichloroethene | 0.500 | 0.543 | | ug/L | | 109 | 50 - 150 |
| Vinyl chloride | 0.500 | 0.432 | | ug/L | | 86 | 50 - 150 |

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.500 | ND | | ug/L | | 94 | 50 - 150 |
| 1,1,1-Trichloroethane | 0.500 | ND | | ug/L | | 97 | 50 - 150 |
| 1,1,2,2-Tetrachloroethane | 0.500 | 0.514 | | ug/L | | 103 | 50 - 150 |
| 1,1,2-Trichloroethane | 0.500 | 0.504 | | ug/L | | 101 | 50 - 150 |
| 1,1-Dichloroethene | 0.500 | ND | | ug/L | | 94 | 50 - 150 |
| 1,1-Dichloropropene | 0.500 | ND | | ug/L | | 97 | 50 - 150 |
| 1,2,3-Trichlorobenzene | 0.500 | 0.529 | | ug/L | | 106 | 50 - 150 |
| 1,2,3-Trichloropropane | 0.500 | ND | | ug/L | | 97 | 50 - 150 |
| 1,2,4-Trichlorobenzene | 0.500 | 0.521 | | ug/L | | 104 | 50 - 150 |
| 1,2,4-Trimethylbenzene | 0.500 | ND | | ug/L | | 98 | 50 - 150 |
| 1,2-Dibromo-3-Chloropropane | 0.500 | ND | | ug/L | | 76 | 50 - 150 |
| 1,2-Dibromoethane | 0.500 | ND | | ug/L | | 93 | 50 - 150 |
| 1,2-Dichlorobenzene | 0.500 | 0.550 | | ug/L | | 110 | 50 - 150 |
| 1,2-Dichloroethane | 0.500 | 0.546 | | ug/L | | 109 | 50 - 150 |
| 1,2-Dichloropropane | 0.500 | 0.525 | | ug/L | | 105 | 50 - 150 |
| 1,3,5-Trimethylbenzene | 0.500 | ND | | ug/L | | 95 | 50 - 150 |
| 1,3-Dichlorobenzene | 0.500 | 0.525 | | ug/L | | 105 | 50 - 150 |
| 1,3-Dichloropropane | 0.500 | ND | | ug/L | | 99 | 50 - 150 |
| 1,4-Dichlorobenzene | 0.500 | 0.549 | | ug/L | | 110 | 50 - 150 |
| 2,2-Dichloropropane | 0.500 | 0.558 | | ug/L | | 112 | 50 - 150 |
| 2-Butanone (MEK) | 2.50 | ND | | ug/L | | 100 | 50 - 150 |
| 2-Chlorotoluene | 0.500 | 0.544 | | ug/L | | 109 | 50 - 150 |
| 2-Hexanone | 2.50 | ND | | ug/L | | 95 | 50 - 150 |
| 4-Chlorotoluene | 0.500 | 0.524 | | ug/L | | 105 | 50 - 150 |
| 4-Isopropyltoluene | 0.500 | 0.504 | | ug/L | | 101 | 50 - 150 |
| 4-Methyl-2-pentanone (MIBK) | 2.50 | ND | | ug/L | | 98 | 50 - 150 |
| Acetone | 2.50 | ND | | ug/L | | 116 | 50 - 150 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LLCS 480-300335/6**
**Matrix: Water**
**Analysis Batch: 300335**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Benzene | 0.500 | 0.542 | | ug/L | | 108 | 50 - 150 |
| Bromobenzene | 0.500 | 0.512 | | ug/L | | 102 | 50 - 150 |
| Bromochloromethane | 0.500 | 0.552 | | ug/L | | 110 | 50 - 150 |
| Bromoform | 0.500 | ND | | ug/L | | 93 | 50 - 150 |
| Bromomethane | 0.500 | ND | | ug/L | | 66 | 50 - 150 |
| Carbon disulfide | 0.500 | 0.521 | | ug/L | | 104 | 50 - 150 |
| Carbon tetrachloride | 0.500 | ND | | ug/L | | 99 | 50 - 150 |
| Chlorobenzene | 0.500 | 0.518 | | ug/L | | 104 | 50 - 150 |
| Chlorodibromomethane | 0.500 | ND | | ug/L | | 91 | 50 - 150 |
| Chloroethane | 0.500 | ND | | ug/L | | 75 | 50 - 150 |
| Chloroform | 0.500 | 0.580 | | ug/L | | 116 | 50 - 150 |
| Chloromethane | 0.500 | ND | | ug/L | | 95 | 50 - 150 |
| cis-1,3-Dichloropropene | 0.500 | ND | | ug/L | | 93 | 50 - 150 |
| Dibromomethane | 0.500 | 0.514 | | ug/L | | 103 | 50 - 150 |
| Dichlorobromomethane | 0.500 | 0.511 | | ug/L | | 102 | 50 - 150 |
| Dichlorodifluoromethane | 0.500 | ND | | ug/L | | 72 | 50 - 150 |
| Ethylbenzene | 0.500 | ND | | ug/L | | 99 | 50 - 150 |
| Hexachlorobutadiene | 0.500 | 0.545 | | ug/L | | 109 | 50 - 150 |
| Isopropylbenzene | 0.500 | ND | | ug/L | | 98 | 50 - 150 |
| Methyl tert-butyl ether | 0.500 | 0.521 | | ug/L | | 104 | 50 - 150 |
| Methylene Chloride | 0.500 | 0.737 | | ug/L | | 147 | 50 - 150 |
| Naphthalene | 0.500 | ND | | ug/L | | 99 | 50 - 150 |
| n-Butylbenzene | 0.500 | 0.501 | | ug/L | | 100 | 50 - 150 |
| n-Propylbenzene | 0.500 | 0.515 | | ug/L | | 103 | 50 - 150 |
| sec-Butylbenzene | 0.500 | ND | | ug/L | | 98 | 50 - 150 |
| Styrene | 0.500 | 0.500 | | ug/L | | 100 | 50 - 150 |
| tert-Butylbenzene | 0.500 | ND | | ug/L | | 97 | 50 - 150 |
| Tetrachloroethene | 0.500 | ND | | ug/L | | 92 | 50 - 150 |
| Toluene | 0.500 | 0.547 | | ug/L | | 109 | 50 - 150 |
| trans-1,2-Dichloroethene | 0.500 | 0.525 | | ug/L | | 105 | 50 - 150 |
| trans-1,3-Dichloropropene | 0.500 | ND | | ug/L | | 81 | 50 - 150 |
| Trichloroethene | 0.500 | 0.507 | | ug/L | | 101 | 50 - 150 |
| Trichlorofluoromethane | 0.500 | ND | | ug/L | | 80 | 50 - 150 |
| Xylenes, Total | 1.00 | ND | * | ug/L | | 0 | 50 - 150 |

| *Surrogate* | *LLCS %Recovery* | *LLCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *80 - 120* |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 480-299835/30**
**Matrix: Water**
**Analysis Batch: 299835**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | | 0.50 | 0.50 | mg/L | | | 05/04/16 19:55 | 1 |

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: MB 480-299835/4** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 299835**

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | | 0.50 | 0.50 | mg/L | | | 05/04/16 13:36 | 1 |

**Lab Sample ID: LCS 480-299835/29** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 299835**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 51.46 | | mg/L | | 103 | 90 - 110 |

**Lab Sample ID: LCS 480-299835/3** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 299835**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 51.60 | | mg/L | | 103 | 90 - 110 |

**Lab Sample ID: 480-99299-6 MS** — **Client Sample ID: W-160426-MB-06**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 299835**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 32.9 | | 125 | 165.9 | | mg/L | | 106 | 81 - 120 |

**Lab Sample ID: 480-99299-6 MSD** — **Client Sample ID: W-160426-MB-06**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 299835**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 32.9 | | 125 | 164.9 | | mg/L | | 106 | 81 - 120 | 1 | 20 |

**Lab Sample ID: 480-99299-8 MS** — **Client Sample ID: W-160426-MB-08**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 299835**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 33.7 | | 125 | 165.1 | | mg/L | | 105 | 81 - 120 |

**Lab Sample ID: MB 480-299838/30** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 299838**

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | | 0.50 | 0.50 | mg/L | | | 05/04/16 17:43 | 1 |

**Lab Sample ID: MB 480-299838/4** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 299838**

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | | 0.50 | 0.50 | mg/L | | | 05/04/16 13:23 | 1 |

# QC Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

**Lab Sample ID: LCS 480-299838/29** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 299838**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 51.28 | | mg/L | | 103 | 90 - 110 |

**Lab Sample ID: LCS 480-299838/3** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 299838**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 50.73 | | mg/L | | 101 | 90 - 110 |

**Lab Sample ID: 480-99299-22 MS** — **Client Sample ID: W-160427-MB-22**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 299838**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 33.5 | | 125 | 162.0 | | mg/L | | 103 | 81 - 120 |

**Lab Sample ID: 480-99299-28 MS** — **Client Sample ID: W-160428-MB-28**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 299838**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 25.6 | | 125 | 154.4 | | mg/L | | 103 | 81 - 120 |

**Lab Sample ID: 480-99299-28 MSD** — **Client Sample ID: W-160428-MB-28**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 299838**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 25.6 | | 125 | 151.7 | | mg/L | | 101 | 81 - 120 | 2 | 20 |

**Lab Sample ID: 480-99299-30 MS** — **Client Sample ID: W-160428-MB-30**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 299838**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 60.6 | F1 | 125 | 158.7 | F1 | mg/L | | 78 | 81 - 120 |

**Lab Sample ID: 480-99299-30 MSD** — **Client Sample ID: W-160428-MB-30**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 299838**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 60.6 | F1 | 125 | 176.2 | | mg/L | | 92 | 81 - 120 | 10 | 20 |

**Lab Sample ID: 480-99299-33 MS** — **Client Sample ID: W-160428-MB-41**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 299838**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 28.1 | | 125 | 154.7 | | mg/L | | 101 | 81 - 120 |

# QC Association Summary

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## GC/MS VOA

### Analysis Batch: 299326

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-99299-1 | W-160426-MB-01 | Total/NA | Water | 524.2 | |
| 480-99299-2 | W-160426-MB-02 | Total/NA | Water | 524.2 | |
| 480-99299-3 | W-160426-MB-03 | Total/NA | Water | 524.2 | |
| 480-99299-4 | W-160426-MB-04 | Total/NA | Water | 524.2 | |
| 480-99299-5 | W-160426-MB-05 | Total/NA | Water | 524.2 | |
| 480-99299-6 | W-160426-MB-06 | Total/NA | Water | 524.2 | |
| 480-99299-7 | W-160426-MB-07 | Total/NA | Water | 524.2 | |
| 480-99299-8 | W-160426-MB-08 | Total/NA | Water | 524.2 | |
| 480-99299-9 | W-160426-MB-09 | Total/NA | Water | 524.2 | |
| 480-99299-10 | W-160426-MB-10 | Total/NA | Water | 524.2 | |
| 480-99299-11 | W-160426-MB-11 | Total/NA | Water | 524.2 | |
| 480-99299-12 | W-160426-MB-12 | Total/NA | Water | 524.2 | |
| 480-99299-13 | W-160426-MB-13 | Total/NA | Water | 524.2 | |
| 480-99299-14 | W-160426-MB-14 | Total/NA | Water | 524.2 | |
| 480-99299-15 | W-160427-MB-15 | Total/NA | Water | 524.2 | |
| 480-99299-16 | W-160427-MB-16 | Total/NA | Water | 524.2 | |
| LCS 480-299326/4 | Lab Control Sample | Total/NA | Water | 524.2 | |
| LCSD 480-299326/28 | Lab Control Sample Dup | Total/NA | Water | 524.2 | |
| LLCS 480-299326/6 | Lab Control Sample | Total/NA | Water | 524.2 | |
| MB 480-299326/7 | Method Blank | Total/NA | Water | 524.2 | |

### Analysis Batch: 299600

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-99299-6 MS | W-160426-MB-06 | Total/NA | Water | 524.2 | |
| 480-99299-6 MSD | W-160426-MB-06 | Total/NA | Water | 524.2 | |
| LCS 480-299600/4 | Lab Control Sample | Total/NA | Water | 524.2 | |
| LCSD 480-299600/5 | Lab Control Sample Dup | Total/NA | Water | 524.2 | |
| LLCS 480-299600/6 | Lab Control Sample | Total/NA | Water | 524.2 | |
| MB 480-299600/7 | Method Blank | Total/NA | Water | 524.2 | |

### Analysis Batch: 299833

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-99299-34 | TRIP BLANK | Total/NA | Water | 524.2 | |
| LCS 480-299833/4 | Lab Control Sample | Total/NA | Water | 524.2 | |
| LCSD 480-299833/5 | Lab Control Sample Dup | Total/NA | Water | 524.2 | |
| LLCS 480-299833/6 | Lab Control Sample | Total/NA | Water | 524.2 | |
| MB 480-299833/7 | Method Blank | Total/NA | Water | 524.2 | |

### Analysis Batch: 300068

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-99299-17 | W-160427-MB-17 | Total/NA | Water | 524.2 | |
| 480-99299-18 | W-160427-MB-18 | Total/NA | Water | 524.2 | |
| 480-99299-19 | W-160427-MB-19 | Total/NA | Water | 524.2 | |
| 480-99299-20 | W-160427-MB-20 | Total/NA | Water | 524.2 | |
| 480-99299-21 | W-160427-MB-21 | Total/NA | Water | 524.2 | |
| 480-99299-22 | W-160427-MB-22 | Total/NA | Water | 524.2 | |
| 480-99299-23 | W-160427-MB-23 | Total/NA | Water | 524.2 | |
| 480-99299-24 | W-160427-MB-24 | Total/NA | Water | 524.2 | |
| 480-99299-25 | W-160428-MB-25 | Total/NA | Water | 524.2 | |
| 480-99299-26 | W-160428-MB-26 | Total/NA | Water | 524.2 | |
| 480-99299-27 | W-160428-MB-27 | Total/NA | Water | 524.2 | |

## GC/MS VOA (Continued)

### Analysis Batch: 300068 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-99299-28 | W-160428-MB-28 | Total/NA | Water | 524.2 | |
| 480-99299-29 | W-160428-MB-29 | Total/NA | Water | 524.2 | |
| 480-99299-30 | W-160428-MB-30 | Total/NA | Water | 524.2 | |
| 480-99299-30 MS | W-160428-MB-30 | Total/NA | Water | 524.2 | |
| 480-99299-30 MSD | W-160428-MB-30 | Total/NA | Water | 524.2 | |
| 480-99299-31 | W-160428-MB-39 | Total/NA | Water | 524.2 | |
| 480-99299-32 | W-160428-MB-40 | Total/NA | Water | 524.2 | |
| LCS 480-300068/4 | Lab Control Sample | Total/NA | Water | 524.2 | |
| LCSD 480-300068/5 | Lab Control Sample Dup | Total/NA | Water | 524.2 | |
| LLCS 480-300068/6 | Lab Control Sample | Total/NA | Water | 524.2 | |
| MB 480-300068/7 | Method Blank | Total/NA | Water | 524.2 | |

### Analysis Batch: 300335

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-99299-33 | W-160428-MB-41 | Total/NA | Water | 524.2 | |
| LCS 480-300335/4 | Lab Control Sample | Total/NA | Water | 524.2 | |
| LCSD 480-300335/5 | Lab Control Sample Dup | Total/NA | Water | 524.2 | |
| LLCS 480-300335/6 | Lab Control Sample | Total/NA | Water | 524.2 | |
| MB 480-300335/7 | Method Blank | Total/NA | Water | 524.2 | |

## General Chemistry

### Analysis Batch: 299835

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-99299-1 | W-160426-MB-01 | Total/NA | Water | 300.0 | |
| 480-99299-2 | W-160426-MB-02 | Total/NA | Water | 300.0 | |
| 480-99299-3 | W-160426-MB-03 | Total/NA | Water | 300.0 | |
| 480-99299-4 | W-160426-MB-04 | Total/NA | Water | 300.0 | |
| 480-99299-5 | W-160426-MB-05 | Total/NA | Water | 300.0 | |
| 480-99299-6 | W-160426-MB-06 | Total/NA | Water | 300.0 | |
| 480-99299-6 MS | W-160426-MB-06 | Total/NA | Water | 300.0 | |
| 480-99299-6 MSD | W-160426-MB-06 | Total/NA | Water | 300.0 | |
| 480-99299-7 | W-160426-MB-07 | Total/NA | Water | 300.0 | |
| 480-99299-8 | W-160426-MB-08 | Total/NA | Water | 300.0 | |
| 480-99299-8 MS | W-160426-MB-08 | Total/NA | Water | 300.0 | |
| 480-99299-9 | W-160426-MB-09 | Total/NA | Water | 300.0 | |
| 480-99299-10 | W-160426-MB-10 | Total/NA | Water | 300.0 | |
| 480-99299-11 | W-160426-MB-11 | Total/NA | Water | 300.0 | |
| 480-99299-12 | W-160426-MB-12 | Total/NA | Water | 300.0 | |
| 480-99299-13 | W-160426-MB-13 | Total/NA | Water | 300.0 | |
| LCS 480-299835/29 | Lab Control Sample | Total/NA | Water | 300.0 | |
| LCS 480-299835/3 | Lab Control Sample | Total/NA | Water | 300.0 | |
| MB 480-299835/30 | Method Blank | Total/NA | Water | 300.0 | |
| MB 480-299835/4 | Method Blank | Total/NA | Water | 300.0 | |

### Analysis Batch: 299838

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-99299-14 | W-160426-MB-14 | Total/NA | Water | 300.0 | |
| 480-99299-15 | W-160427-MB-15 | Total/NA | Water | 300.0 | |
| 480-99299-16 | W-160427-MB-16 | Total/NA | Water | 300.0 | |

## General Chemistry (Continued)

### Analysis Batch: 299838 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-99299-17 | W-160427-MB-17 | Total/NA | Water | 300.0 | |
| 480-99299-18 | W-160427-MB-18 | Total/NA | Water | 300.0 | |
| 480-99299-19 | W-160427-MB-19 | Total/NA | Water | 300.0 | |
| 480-99299-20 | W-160427-MB-20 | Total/NA | Water | 300.0 | |
| 480-99299-21 | W-160427-MB-21 | Total/NA | Water | 300.0 | |
| 480-99299-22 | W-160427-MB-22 | Total/NA | Water | 300.0 | |
| 480-99299-22 MS | W-160427-MB-22 | Total/NA | Water | 300.0 | |
| 480-99299-23 | W-160427-MB-23 | Total/NA | Water | 300.0 | |
| 480-99299-24 | W-160427-MB-24 | Total/NA | Water | 300.0 | |
| 480-99299-25 | W-160428-MB-25 | Total/NA | Water | 300.0 | |
| 480-99299-26 | W-160428-MB-26 | Total/NA | Water | 300.0 | |
| 480-99299-27 | W-160428-MB-27 | Total/NA | Water | 300.0 | |
| 480-99299-28 | W-160428-MB-28 | Total/NA | Water | 300.0 | |
| 480-99299-28 MS | W-160428-MB-28 | Total/NA | Water | 300.0 | |
| 480-99299-28 MSD | W-160428-MB-28 | Total/NA | Water | 300.0 | |
| 480-99299-29 | W-160428-MB-29 | Total/NA | Water | 300.0 | |
| 480-99299-30 | W-160428-MB-30 | Total/NA | Water | 300.0 | |
| 480-99299-30 MS | W-160428-MB-30 | Total/NA | Water | 300.0 | |
| 480-99299-30 MSD | W-160428-MB-30 | Total/NA | Water | 300.0 | |
| 480-99299-31 | W-160428-MB-39 | Total/NA | Water | 300.0 | |
| 480-99299-32 | W-160428-MB-40 | Total/NA | Water | 300.0 | |
| 480-99299-33 | W-160428-MB-41 | Total/NA | Water | 300.0 | |
| 480-99299-33 MS | W-160428-MB-41 | Total/NA | Water | 300.0 | |
| LCS 480-299838/29 | Lab Control Sample | Total/NA | Water | 300.0 | |
| LCS 480-299838/3 | Lab Control Sample | Total/NA | Water | 300.0 | |
| MB 480-299838/30 | Method Blank | Total/NA | Water | 300.0 | |
| MB 480-299838/4 | Method Blank | Total/NA | Water | 300.0 | |

# Lab Chronicle

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-01 — Lab Sample ID: 480-99299-1

**Date Collected: 04/26/16 09:21** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 299326 | 05/02/16 13:45 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299835 | 05/04/16 17:00 | CAV | TAL BUF |

## Client Sample ID: W-160426-MB-02 — Lab Sample ID: 480-99299-2

**Date Collected: 04/26/16 09:22** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 299326 | 05/02/16 14:13 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299835 | 05/04/16 17:15 | CAV | TAL BUF |

## Client Sample ID: W-160426-MB-03 — Lab Sample ID: 480-99299-3

**Date Collected: 04/26/16 09:55** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 299326 | 05/02/16 14:40 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299835 | 05/04/16 17:29 | CAV | TAL BUF |

## Client Sample ID: W-160426-MB-04 — Lab Sample ID: 480-99299-4

**Date Collected: 04/26/16 09:57** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 299326 | 05/02/16 15:07 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 1 | 299835 | 05/04/16 17:44 | CAV | TAL BUF |

## Client Sample ID: W-160426-MB-05 — Lab Sample ID: 480-99299-5

**Date Collected: 04/26/16 10:15** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 299326 | 05/02/16 15:34 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299835 | 05/04/16 17:58 | CAV | TAL BUF |

## Client Sample ID: W-160426-MB-06 — Lab Sample ID: 480-99299-6

**Date Collected: 04/26/16 10:50** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 299326 | 05/02/16 16:00 | RAS | TAL BUF |

# Lab Chronicle

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-06 — Lab Sample ID: 480-99299-6

**Date Collected: 04/26/16 10:50** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 5 | 299835 | 05/04/16 21:23 | CAV | TAL BUF |

## Client Sample ID: W-160426-MB-07 — Lab Sample ID: 480-99299-7

**Date Collected: 04/26/16 11:27** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 299326 | 05/02/16 16:27 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299835 | 05/04/16 18:13 | CAV | TAL BUF |

## Client Sample ID: W-160426-MB-08 — Lab Sample ID: 480-99299-8

**Date Collected: 04/26/16 11:33** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 299326 | 05/02/16 16:54 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299835 | 05/04/16 18:27 | CAV | TAL BUF |

## Client Sample ID: W-160426-MB-09 — Lab Sample ID: 480-99299-9

**Date Collected: 04/26/16 12:29** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 299326 | 05/02/16 17:21 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299835 | 05/04/16 20:10 | CAV | TAL BUF |

## Client Sample ID: W-160426-MB-10 — Lab Sample ID: 480-99299-10

**Date Collected: 04/26/16 12:39** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 299326 | 05/02/16 17:48 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299835 | 05/04/16 20:24 | CAV | TAL BUF |

## Client Sample ID: W-160426-MB-11 — Lab Sample ID: 480-99299-11

**Date Collected: 04/26/16 12:46** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 299326 | 05/02/16 18:15 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299835 | 05/04/16 20:39 | CAV | TAL BUF |

# Lab Chronicle

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160426-MB-12 — Lab Sample ID: 480-99299-12

**Date Collected: 04/26/16 13:20** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 299326 | 05/02/16 18:42 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299835 | 05/04/16 20:53 | CAV | TAL BUF |

## Client Sample ID: W-160426-MB-13 — Lab Sample ID: 480-99299-13

**Date Collected: 04/26/16 13:30** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 299326 | 05/02/16 19:09 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299835 | 05/04/16 21:08 | CAV | TAL BUF |

## Client Sample ID: W-160426-MB-14 — Lab Sample ID: 480-99299-14

**Date Collected: 04/26/16 09:50** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 299326 | 05/02/16 19:36 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299838 | 05/04/16 15:50 | CAV | TAL BUF |

## Client Sample ID: W-160427-MB-15 — Lab Sample ID: 480-99299-15

**Date Collected: 04/27/16 11:40** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 299326 | 05/02/16 20:03 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299838 | 05/04/16 15:58 | CAV | TAL BUF |

## Client Sample ID: W-160427-MB-16 — Lab Sample ID: 480-99299-16

**Date Collected: 04/27/16 09:57** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 299326 | 05/02/16 20:29 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299838 | 05/04/16 16:06 | CAV | TAL BUF |

## Client Sample ID: W-160427-MB-17 — Lab Sample ID: 480-99299-17

**Date Collected: 04/27/16 10:05** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 300068 | 05/05/16 12:48 | RAS | TAL BUF |

# Lab Chronicle

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160427-MB-17 — Lab Sample ID: 480-99299-17

**Date Collected: 04/27/16 10:05** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 5 | 299838 | 05/04/16 16:14 | CAV | TAL BUF |

## Client Sample ID: W-160427-MB-18 — Lab Sample ID: 480-99299-18

**Date Collected: 04/27/16 10:07** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 300068 | 05/05/16 13:15 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 1 | 299838 | 05/04/16 16:22 | CAV | TAL BUF |

## Client Sample ID: W-160427-MB-19 — Lab Sample ID: 480-99299-19

**Date Collected: 04/27/16 10:41** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 300068 | 05/05/16 13:41 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299838 | 05/04/16 16:30 | CAV | TAL BUF |

## Client Sample ID: W-160427-MB-20 — Lab Sample ID: 480-99299-20

**Date Collected: 04/27/16 10:46** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 300068 | 05/05/16 14:08 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299838 | 05/04/16 16:38 | CAV | TAL BUF |

## Client Sample ID: W-160427-MB-21 — Lab Sample ID: 480-99299-21

**Date Collected: 04/27/16 10:54** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 300068 | 05/05/16 14:35 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299838 | 05/04/16 16:46 | CAV | TAL BUF |

## Client Sample ID: W-160427-MB-22 — Lab Sample ID: 480-99299-22

**Date Collected: 04/27/16 11:40** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 300068 | 05/05/16 15:02 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299838 | 05/04/16 16:55 | CAV | TAL BUF |

# Lab Chronicle

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: W-160427-MB-23 — Lab Sample ID: 480-99299-23

**Date Collected: 04/27/16 12:07** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 300068 | 05/05/16 15:29 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299838 | 05/04/16 17:52 | CAV | TAL BUF |

## Client Sample ID: W-160427-MB-24 — Lab Sample ID: 480-99299-24

**Date Collected: 04/27/16 12:15** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 300068 | 05/05/16 15:55 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299838 | 05/04/16 18:00 | CAV | TAL BUF |

## Client Sample ID: W-160428-MB-25 — Lab Sample ID: 480-99299-25

**Date Collected: 04/28/16 10:04** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 300068 | 05/05/16 16:22 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299838 | 05/04/16 18:08 | CAV | TAL BUF |

## Client Sample ID: W-160428-MB-26 — Lab Sample ID: 480-99299-26

**Date Collected: 04/28/16 10:06** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 300068 | 05/05/16 16:49 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299838 | 05/04/16 18:16 | CAV | TAL BUF |

## Client Sample ID: W-160428-MB-27 — Lab Sample ID: 480-99299-27

**Date Collected: 04/28/16 10:30** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 300068 | 05/05/16 17:16 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299838 | 05/04/16 18:24 | CAV | TAL BUF |

## Client Sample ID: W-160428-MB-28 — Lab Sample ID: 480-99299-28

**Date Collected: 04/28/16 10:46** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 300068 | 05/05/16 17:43 | RAS | TAL BUF |

## Client Sample ID: W-160428-MB-28 — Lab Sample ID: 480-99299-28

**Date Collected: 04/28/16 10:46** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 5 | 299838 | 05/04/16 18:32 | CAV | TAL BUF |

## Client Sample ID: W-160428-MB-29 — Lab Sample ID: 480-99299-29

**Date Collected: 04/28/16 10:48** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 300068 | 05/05/16 18:09 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 1 | 299838 | 05/04/16 19:21 | CAV | TAL BUF |

## Client Sample ID: W-160428-MB-30 — Lab Sample ID: 480-99299-30

**Date Collected: 04/28/16 10:52** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 300068 | 05/05/16 18:36 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299838 | 05/04/16 15:01 | CAV | TAL BUF |

## Client Sample ID: W-160428-MB-39 — Lab Sample ID: 480-99299-31

**Date Collected: 04/28/16 10:30** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 300068 | 05/05/16 19:03 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299838 | 05/04/16 19:29 | CAV | TAL BUF |

## Client Sample ID: W-160428-MB-40 — Lab Sample ID: 480-99299-32

**Date Collected: 04/28/16 10:40** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 300068 | 05/05/16 19:30 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299838 | 05/04/16 19:37 | CAV | TAL BUF |

## Client Sample ID: W-160428-MB-41 — Lab Sample ID: 480-99299-33

**Date Collected: 04/28/16 11:05** — **Matrix: Water**
**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 300335 | 05/06/16 12:30 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 299838 | 05/04/16 19:45 | CAV | TAL BUF |

# Lab Chronicle

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Client Sample ID: TRIP BLANK

**Lab Sample ID: 480-99299-34**

**Date Collected: 04/26/16 00:00**

**Matrix: Water**

**Date Received: 04/29/16 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 299833 | 05/04/16 20:25 | RAS | TAL BUF |

**Laboratory References:**

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# Certification Summary

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

## Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Minnesota | NELAP | 5 | 036-999-337 | 12-31-16 |

The following analytes are included in this report, but are not certified under this certification:

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 524.2 | | Water | Dibromomethane |
| 524.2 | | Water | Naphthalene |

The following analytes are included in this report, but certification is not offered by the governing authority:

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 524.2 | | Water | 1,1,2-Trichloro-1,2,2-trifluoroethane |
| 524.2 | | Water | 1,2-Dibromo-3-Chloropropane |
| 524.2 | | Water | 1,2-Dibromoethane |
| 524.2 | | Water | 1,3-Dichloropropane |
| 524.2 | | Water | 2-Butanone (MEK) |
| 524.2 | | Water | 2-Hexanone |
| 524.2 | | Water | 4-Isopropyltoluene |
| 524.2 | | Water | 4-Methyl-2-pentanone (MIBK) |
| 524.2 | | Water | Acetone |
| 524.2 | | Water | Acrylonitrile |
| 524.2 | | Water | Allyl chloride |
| 524.2 | | Water | Carbon disulfide |
| 524.2 | | Water | Dichlorofluoromethane |
| 524.2 | | Water | Ethyl ether |
| 524.2 | | Water | Iodomethane |
| 524.2 | | Water | m-Xylene & p-Xylene |
| 524.2 | | Water | o-Xylene |
| 524.2 | | Water | t-Butanol |
| 524.2 | | Water | trans-1,4-Dichloro-2-butene |
| 524.2 | | Water | Vinyl acetate |

# Method Summary

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 524.2 | Volatile Organic Compounds (GC/MS) | EPA-DW | TAL BUF |
| 300.0 | Anions, Ion Chromatography | MCAWW | TAL BUF |

**Protocol References:**

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

**Laboratory References:**

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# Sample Summary

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 480-99299-1 | W-160426-MB-01 | Water | 04/26/16 09:21 | 04/29/16 09:00 |
| 480-99299-2 | W-160426-MB-02 | Water | 04/26/16 09:22 | 04/29/16 09:00 |
| 480-99299-3 | W-160426-MB-03 | Water | 04/26/16 09:55 | 04/29/16 09:00 |
| 480-99299-4 | W-160426-MB-04 | Water | 04/26/16 09:57 | 04/29/16 09:00 |
| 480-99299-5 | W-160426-MB-05 | Water | 04/26/16 10:15 | 04/29/16 09:00 |
| 480-99299-6 | W-160426-MB-06 | Water | 04/26/16 10:50 | 04/29/16 09:00 |
| 480-99299-7 | W-160426-MB-07 | Water | 04/26/16 11:27 | 04/29/16 09:00 |
| 480-99299-8 | W-160426-MB-08 | Water | 04/26/16 11:33 | 04/29/16 09:00 |
| 480-99299-9 | W-160426-MB-09 | Water | 04/26/16 12:29 | 04/29/16 09:00 |
| 480-99299-10 | W-160426-MB-10 | Water | 04/26/16 12:39 | 04/29/16 09:00 |
| 480-99299-11 | W-160426-MB-11 | Water | 04/26/16 12:46 | 04/29/16 09:00 |
| 480-99299-12 | W-160426-MB-12 | Water | 04/26/16 13:20 | 04/29/16 09:00 |
| 480-99299-13 | W-160426-MB-13 | Water | 04/26/16 13:30 | 04/29/16 09:00 |
| 480-99299-14 | W-160426-MB-14 | Water | 04/26/16 09:50 | 04/29/16 09:00 |
| 480-99299-15 | W-160427-MB-15 | Water | 04/27/16 11:40 | 04/29/16 09:00 |
| 480-99299-16 | W-160427-MB-16 | Water | 04/27/16 09:57 | 04/29/16 09:00 |
| 480-99299-17 | W-160427-MB-17 | Water | 04/27/16 10:05 | 04/29/16 09:00 |
| 480-99299-18 | W-160427-MB-18 | Water | 04/27/16 10:07 | 04/29/16 09:00 |
| 480-99299-19 | W-160427-MB-19 | Water | 04/27/16 10:41 | 04/29/16 09:00 |
| 480-99299-20 | W-160427-MB-20 | Water | 04/27/16 10:46 | 04/29/16 09:00 |
| 480-99299-21 | W-160427-MB-21 | Water | 04/27/16 10:54 | 04/29/16 09:00 |
| 480-99299-22 | W-160427-MB-22 | Water | 04/27/16 11:40 | 04/29/16 09:00 |
| 480-99299-23 | W-160427-MB-23 | Water | 04/27/16 12:07 | 04/29/16 09:00 |
| 480-99299-24 | W-160427-MB-24 | Water | 04/27/16 12:15 | 04/29/16 09:00 |
| 480-99299-25 | W-160428-MB-25 | Water | 04/28/16 10:04 | 04/29/16 09:00 |
| 480-99299-26 | W-160428-MB-26 | Water | 04/28/16 10:06 | 04/29/16 09:00 |
| 480-99299-27 | W-160428-MB-27 | Water | 04/28/16 10:30 | 04/29/16 09:00 |
| 480-99299-28 | W-160428-MB-28 | Water | 04/28/16 10:46 | 04/29/16 09:00 |
| 480-99299-29 | W-160428-MB-29 | Water | 04/28/16 10:48 | 04/29/16 09:00 |
| 480-99299-30 | W-160428-MB-30 | Water | 04/28/16 10:52 | 04/29/16 09:00 |
| 480-99299-31 | W-160428-MB-39 | Water | 04/28/16 10:30 | 04/29/16 09:00 |
| 480-99299-32 | W-160428-MB-40 | Water | 04/28/16 10:40 | 04/29/16 09:00 |
| 480-99299-33 | W-160428-MB-41 | Water | 04/28/16 11:05 | 04/29/16 09:00 |
| 480-99299-34 | TRIP BLANK | Water | 04/26/16 00:00 | 04/29/16 09:00 |

# Detection Limit Exceptions Summary

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99299-1

The requested project specific reporting limits listed below were less than laboratory standard quantitation limits (PQL) but great than or equal to the laboratory method detection limits (MDL). It must be noted that results reported below lab standard quantitation limits may result in false positive/false negative values and less accurate quantitation. Routine laboratory procedure do not indicate corrective action for detections below the laboratory's PQL.

| Method | Matrix | Analyte | Units | Client RL | Lab PQL |
|---|---|---|---|---|---|
| 524.2 | Water | Trichloroethene | ug/L | 0.20 | 0.5 |
| 524.2 | Water | Vinyl chloride | ug/L | 0.20 | 0.5 |

GHD inc.

CONESTOGA-ROVERS & ASSOCIATES

# CHAIN OF CUSTODY RECORD

1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States
Phone: (651) 639-0913 Fax: (651) 639-0923

480-99299 Chain of Custody



(structions)

| | | | |
|---|---|---|---|
| Project No/ Phase/Task Code: 002012 | Laboratory Name: Test America | Lab Location: Buffalo, NY | |
| Project Name: Hwy 96 | Lab Contact: | Lab Quote No: | Cooler No: |
| Project Location: North Oaks, MN | | | Carrier: FedEx |
| Chemistry Contact: Grant Anderson | | | Airbill No: |
| Sampler(s): M. Barnes / M. Webb | | | Date Shipped: 4/28/16 |

| Item | Sample Identification (Containers for each sample may be combined on one line) | Date (mm/dd/yy) | Time (hh:mm) | Matrix Code (see back of COC) | Grab (G) or Comp (C) | Unpreserved | Hydrochloric Acid (HCl) | Nitric Acid ($HNO_3$) | Sulfuric Acid ($H_2SO_4$) | Sodium Hydroxide (NaOH) | Methanol/Water (Soil VOC) | EnCores 3x5-g, 1x25-g | Other: | Total Containers/Sample | VOCs 524.2 Standard List | Chloride (300.0A) | 524.2 MDL | | | | | | | MS/MSD Request | Comments/ Special Instructions: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | W-160426-MB-01 | 4/26/16 | 09:21 | WG | G | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |
| 2 | -02 | | 09:22 | | | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |
| 3 | -03 | | 09:55 | | | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |
| 4 | -04 | | 09:57 | | | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |
| 5 | -05 | | 10:15 | | | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |
| 6 | -06 MS/MSD | | 10:50 | | | 3 | 9 | | | | | | | 12 | X | X | X | | | | | | | X | |
| 7 | -07 | | 11:27 | | | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |
| 8 | -08 | | 11:33 | | | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |
| 9 | -09 | | 12:29 | | | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |
| 10 | -10 | | 12:39 | | | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |
| 11 | -11 | | 12:46 | | | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |
| 12 | -12 | | 13:20 | | | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |
| 13 | -13 | | 13:30 | | | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |
| 14 | -14 | | 09:~~13:31~~ 09:58 MB | | | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |
| 15 | W-160427-MB-15 | 4/27/16 | 11:40 | | | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |

TAT Required in business days (use separate COCs for different TATs):
☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☒ 2 Week ☐ Other: Standard

Total Number of Containers: 151

All Samples in Cooler must be on COC

Notes/ Special Requirements: 1,1-Dichloroethane, cis-1,2-Dichloroethane, Vinyl chloride only. TCE RL = 0.2 ug/L

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| 1. [signature] | GHD | 4/28/16 | 16:00 | 1. [signature] | | 4/29/16 | 09:00 |
| 2. | | | | 2. | | | |
| 3. | | | | 3. | | | |

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

2.8, 3.1 #1

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10A (20110804)

GHD Inc.

CONESTOGA-ROVERS & ASSOCIATES

# CHAIN OF CUSTODY RECORD

1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States
Phone: (651) 639-0913 Fax: (651) 639-0923

COC NO.: SP-01892



(See Reverse Side for Instructions)

Cooler 1 of 2

| | | | |
|---|---|---|---|
| Project No/ Phase/Task Code: 002012 | Laboratory Name: Test America | Lab Location: Buffalo NY | SSOW ID: |
| Project Name: Hwy 96 | Lab Contact: | Lab Quote No: | Cooler No: |
| Project Location: North Oaks, MN | | | Carrier: FedEx |
| Chemistry Contact: Grant Anderson | | | Airbill No: |
| Sampler(s): M. Barnes / M. Webb | | | Date Shipped: ~~MB 4/28~~ 4/28/16 |

| Item | Sample Identification (Containers for each sample may be combined on one line) | Date (mm/dd/yy) | Time (hh:mm) | Matrix Code (see back of COC) | Grab (G) or Comp (C) | Unpreserved | Hydrochloric Acid (HCl) | Nitric Acid ($HNO_3$) | Sulfuric Acid ($H_2SO_4$) | Sodium Hydroxide (NaOH) | Methanol/Water (Soil VOC) | EnCores 3x5-g, 1x25-g | Other: | Total Containers/Sample | VOCs 524.2 Standard List RL | Chloride (300.0A) | 524.2 MDL | MS/MSD Request | Comments/ Special Instructions: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | W-160427-MB-16 | 4/27/16 | 09:57 | WG | G | 1 | 3 | | | | | | | 4 | X | X | X | | |
| 2 | -17 | | 10:05 | | | 1 | 3 | | | | | | | 4 | X | X | X | | |
| 3 | -18 | | 10:07 | | | 1 | 3 | | | | | | | 4 | X | X | X | | |
| 4 | -19 | | 10:41 | | | 1 | 3 | | | | | | | 4 | X | X | X | | |
| 5 | -20 | | 10:46 | | | 1 | 3 | | | | | | | 4 | X | X | X | | |
| 6 | -21 | | 10:54 | | | 1 | 3 | | | | | | | 4 | X | X | X | | |
| 7 | -22 | | 11:40 | | | 1 | 3 | | | | | | | 4 | X | X | X | | |
| 8 | -23 | | 12:07 | | | 1 | 3 | | | | | | | 4 | X | X | X | | |
| 9 | -24 | | 12:15 | | | 1 | 3 | | | | | | | 4 | X | X | X | | |
| 10 | W-160428-MB-25 | 4/28/16 | 10:04 | | | 1 | 3 | | | | | | | 4 | X | X | X | | |
| 11 | -26 | | 10:06 | | | 1 | 3 | | | | | | | 4 | X | X | X | | |
| 12 | -27 | | 10:30 | | | 1 | 3 | | | | | | | 4 | X | X | X | | |
| 13 | -28 | | 10:46 | | | 1 | 3 | | | | | | | 4 | X | X | X | | |
| 14 | -29 | | 10:48 | | | 1 | 3 | | | | | | | 4 | X | X | X | | |
| 15 | -30 MS/MSD | | 10:52 | | | 3 | ~~4~~ 3 | | | | | | | 12 | X | X | X | X | |

TAT Required in business days (use separate COCs for different TATs):
☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☒ 2 Week ☐ Other:

Total Number of Containers: 151

All Samples in Cooler must be on COC

Notes/ Special Requirements: 1,1-Dichloroethane, cis-1,2-Dichloroethane, vinyl chloride only. TCE RL = 0.2 ug/L

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| 1. [signature] | GHD | 4/28/16 | 16:00 | 1. [signature] | | 4/29/16 | 0900 |
| 2. | | | | 2. | | | |
| 3. | | | | 3. | | | |

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT — ALL FIELDS MUST BE COMPLETED ACCURATELY

20513.1 #1

Distribution: WHITE — Fully Executed Copy (CRA) YELLOW — Receiving Laboratory Copy PINK — Shipper GOLDENROD — Sampling Crew

CRA Form: COC-10A (20110804)

GHD Inc

CONESTOGA-ROVERS & ASSOCIATES

# CHAIN OF CUSTODY RECORD

1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States
Phone: (651) 639-0913 Fax: (651) 639-0923

Cooler 1 of 2

COC NO.: SP- 01893



(See Reverse Side for Instructions)

| | | | |
|---|---|---|---|
| Project No/ Phase/Task Code: 002012 | Laboratory Name: Test America | Lab Location: Buffalo NY | SSOW ID: |
| Project Name: Hwy 96 | Lab Contact: | Lab Quote No: | Cooler No: |
| Project Location: North Oaks, MN | | | Carrier: FedEx |
| Chemistry Contact: Grant Anderson | | | Airbill No: |
| Sampler(s): M. Barnes / M. Webb | | | Date Shipped: 4/28/16 |

| Item | Sample Identification (Containers for each sample may be combined on one line) | Date (mm/dd/yy) | Time (hh:mm) | Matrix Code (see back of COC) | Grab (G) or Comp (C) | Unpreserved | Hydrochloric Acid (HCl) | Nitric Acid ($HNO_3$) | Sulfuric Acid ($H_2SO_4$) | Sodium Hydroxide (NaOH) | Methanol/Water (Soil VOC) | EnCores 3x5-g, 1x25-g | Other: | Total Containers/Sample | VOCs 524.2 Standard List + RL | Chloride (300.0) | 524.2 MDL | MS/MSD Request | Comments/ Special Instructions: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | W - 160428-MB-39 | 4/28/16 | 10:30 | WG | G | 1 | 3 | | | | | | | 4 | | | | | |
| 2 | W - 160428-MB-40 | 4/28/16 | 10:40 | ↓ | ↓ | 1 | 3 | | | | | | | 4 | | | | | |
| 3 | W - 160428-MB-41 | 4/28/16 | 11:05 | ↓ | ↓ | 1 | 3 | | | | | | | 4 | | | | | |
| 4 | Trip Blank | 4/26/16 | — | — | — | | X | | | | | | | 3 | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | |

MB

TAT Required in business days (use separate COCs for different TATs):
☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☒ 2 Week ☐ Other: Standard

Total Number of Containers: 15

All Samples in Cooler must be on COC

Notes/ Special Requirements: 1,1-Dichloroethane, cis-1,2-Dichloroethane, vinyl chloride only. TCE RL = 0.2 ug/L

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| 1. Matthew [illegible] | GHD | 4/28/16 | 16:00 | 1. [illegible] | | 4/29/16 | 0900 |
| 2. | | | | 2. | | | |
| 3. | | | | 3. | | | |

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

2,8,3,1 #1

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10A (20110804)



5/10/2016

# Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 480-99299-1

**Login Number: 99299**

**List Source: TestAmerica Buffalo**

**List Number: 1**

**Creator: Conway, Curtis R**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity either was not measured or, if measured, is at or below background | True | |
| The cooler's custody seal, if present, is intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the sample IDs on the containers and the COC. | True | |
| Samples are received within Holding Time (Excluding tests with immediate HTs).. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter. | True | |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Sampling Company provided. | True | |
| Samples received within 48 hours of sampling. | False | |
| Samples requiring field filtration have been filtered in the field. | N/A | |
| Chlorine Residual checked. | True | |

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-99735-1
Client Project/Site: 002012, Highway 96 Landfill

For:
GHD Services Inc.
1801 Old Highway 8 NW
Suite 114
St Paul, Minnesota 55112

Attn: Mr. Grant Anderson

Melissa Deyo

*Authorized for release by:*
*5/17/2016 10:22:08 AM*

Melissa Deyo, Project Manager I
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LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| * | LCS or LCSD is outside acceptance limits. |
| B | Compound was found in the blank and sample. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Job ID: 480-99735-1

### Laboratory: TestAmerica Buffalo

**Narrative**

**Job Narrative**
**480-99735-1**

**Receipt**
The samples were received on 5/6/2016 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.7º C.

**GC/MS VOA**
Method(s) 524.2: Due to the specific client requirements for the MDL/RL, the recovery of Total Xylenes was below the MDL, therefore could not be calculated out in the low level laboratory control spike (LLCS). The final recovery for Total Xylenes was 0.925ug/L the LLCS 480-600342/6. The following samples are impacted: W-160505-MLR-01 (480-99735-1) and W-160505-MLR-02 (480-99735-2).

Method(s) 524.2: The analyte Methylene Chloride was detected in the Method Blank at a level above the project established reporting limit. The associated samples had levels of Methylene Chloride less than ten times that of the Method Blank value. All sample results for Methylene Chloride may potentially be due to laboratory contamination and should be evaluated accordingly. All associated positive sample results were qualified with a "B". The following samples are impacted: W-160505-MLR-05 (480-99735-5) and W-160505-MLR-06 (480-99735-6).

Method(s) 524.2: The low level laboratory control sample (LLCS) for analytical batch 480-301615 recovered outside control limits for the following analyte: Methylene Chloride. This analyte was biased high in the LLCS and was not detected in the associated samples; therefore, the data have been reported. The following samples are impacted: W-160505-MLR-03 (480-99735-3), W-160505-MLR-04 (480-99735-4) and TRIP BLANK (480-99735-7).

Method(s) 524.2: The analyte Methylene Chloride was outside recovery limits, biased high, in the Low Level Laboratory Control Sample (LLCS) for batch analytical batch 480-301615. Methylene Chloride was detected in the following samples: W-160505-MLR-05 (480-99735-5) and W-160505-MLR-06 (480-99735-6). Methylene Chloride is a common laboratory contaminate, therefore any detection may potentially be due to laboratory contamination and should be evaluated accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**HPLC/IC**
Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: W-160505-MLR-03 (480-99735-3). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following samples were diluted due to the nature of the sample matrix: W-160505-MLR-01 (480-99735-1), W-160505-MLR-04 (480-99735-4), W-160505-MLR-05 (480-99735-5) and W-160505-MLR-06 (480-99735-6). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

## Job ID: 480-99735-2

### Laboratory: TestAmerica Buffalo

**Narrative**

**Job Narrative**
**480-99735-2**

**Receipt**
The samples were received on 5/6/2016 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.7º C.

**GC/MS VOA**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

## Client Sample ID: W-160505-MLR-01 — Lab Sample ID: 480-99735-1

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 25.7 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160505-MLR-02 — Lab Sample ID: 480-99735-2

No Detections.

## Client Sample ID: W-160505-MLR-03 — Lab Sample ID: 480-99735-3

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 104 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160505-MLR-04 — Lab Sample ID: 480-99735-4

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 31.9 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160505-MLR-05 — Lab Sample ID: 480-99735-5

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 0.53 | B * | 0.50 | 0.50 | ug/L | 1 | | 524.2 | Total/NA |
| Chloride | 31.4 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: W-160505-MLR-06 — Lab Sample ID: 480-99735-6

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 0.61 | B * | 0.50 | 0.50 | ug/L | 1 | | 524.2 | Total/NA |
| Chloride | 33.1 | | 2.5 | 2.5 | mg/L | 5 | | 300.0 | Total/NA |

## Client Sample ID: TRIP BLANK — Lab Sample ID: 480-99735-7

No Detections.

This Detection Summary does not include radiochemical test results.

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

## Client Sample ID: W-160505-MLR-01

**Date Collected: 05/05/16 11:20**
**Date Received: 05/06/16 10:00**

## Lab Sample ID: 480-99735-1

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/09/16 18:29 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/09/16 18:29 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/09/16 18:29 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/09/16 18:29 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/09/16 18:29 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/09/16 18:29 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/09/16 18:29 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/09/16 18:29 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

## Client Sample ID: W-160505-MLR-01

**Date Collected: 05/05/16 11:20**
**Date Received: 05/06/16 10:00**

## Lab Sample ID: 480-99735-1

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/09/16 18:29 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/09/16 18:29 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/09/16 18:29 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/09/16 18:29 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:29 | 1 |
| Trihalomethanes, Total | ND | * | 2.0 | 2.0 | ug/L | | | 05/09/16 18:29 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/09/16 18:29 | 1 |
| Xylenes, Total | ND | * | 1.0 | 1.0 | ug/L | | | 05/09/16 18:29 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/09/16 18:29* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *80 - 120* | | *05/09/16 18:29* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **25.7** | | 2.5 | 2.5 | mg/L | | | 05/11/16 16:33 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

## Client Sample ID: W-160505-MLR-02

**Lab Sample ID: 480-99735-2**

**Date Collected: 05/05/16 11:22**

**Matrix: Water**

**Date Received: 05/06/16 10:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/09/16 18:56 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/09/16 18:56 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/09/16 18:56 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/09/16 18:56 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/09/16 18:56 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/09/16 18:56 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/09/16 18:56 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/09/16 18:56 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |

## Client Sample ID: W-160505-MLR-02

**Lab Sample ID: 480-99735-2**

**Date Collected: 05/05/16 11:22**

**Matrix: Water**

**Date Received: 05/06/16 10:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/09/16 18:56 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/09/16 18:56 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/09/16 18:56 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/09/16 18:56 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 18:56 | 1 |
| Trihalomethanes, Total | ND | * | 2.0 | 2.0 | ug/L | | | 05/09/16 18:56 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/09/16 18:56 | 1 |
| Xylenes, Total | ND | * | 1.0 | 1.0 | ug/L | | | 05/09/16 18:56 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* | | *05/09/16 18:56* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *80 - 120* | | *05/09/16 18:56* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | | 0.50 | 0.50 | mg/L | | | 05/11/16 16:41 | 1 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

## Client Sample ID: W-160505-MLR-03

**Lab Sample ID: 480-99735-3**

**Date Collected: 05/05/16 12:00**

**Matrix: Water**

**Date Received: 05/06/16 10:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/13/16 15:03 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/13/16 15:03 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/13/16 15:03 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/13/16 15:03 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/13/16 15:03 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/13/16 15:03 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/13/16 15:03 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/13/16 15:03 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

## Client Sample ID: W-160505-MLR-03

**Lab Sample ID: 480-99735-3**

**Date Collected: 05/05/16 12:00**
**Matrix: Water**
**Date Received: 05/06/16 10:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Methylene Chloride | ND | * | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/13/16 15:03 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/13/16 15:03 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/13/16 15:03 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/13/16 15:03 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:03 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/13/16 15:03 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/13/16 15:03 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/13/16 15:03 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/13/16 15:03* | *1* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* | | *05/13/16 15:03* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **104** | | 2.5 | 2.5 | mg/L | | | 05/11/16 17:30 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

## Client Sample ID: W-160505-MLR-04

**Date Collected: 05/05/16 13:19**
**Date Received: 05/06/16 10:00**

## Lab Sample ID: 480-99735-4

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/13/16 15:30 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/13/16 15:30 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/13/16 15:30 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/13/16 15:30 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/13/16 15:30 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/13/16 15:30 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/13/16 15:30 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/13/16 15:30 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |

## Client Sample ID: W-160505-MLR-04

**Lab Sample ID: 480-99735-4**

**Date Collected: 05/05/16 13:19**

**Matrix: Water**

**Date Received: 05/06/16 10:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Methylene Chloride | ND | * | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/13/16 15:30 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/13/16 15:30 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/13/16 15:30 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/13/16 15:30 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:30 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/13/16 15:30 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/13/16 15:30 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/13/16 15:30 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* | | *05/13/16 15:30* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *80 - 120* | | *05/13/16 15:30* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **31.9** | | 2.5 | 2.5 | mg/L | | | 05/11/16 17:38 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

## Client Sample ID: W-160505-MLR-05

**Lab Sample ID: 480-99735-5**

**Date Collected: 05/05/16 13:20**

**Matrix: Water**

**Date Received: 05/06/16 10:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/13/16 15:56 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/13/16 15:56 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/13/16 15:56 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/13/16 15:56 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/13/16 15:56 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/13/16 15:56 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/13/16 15:56 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/13/16 15:56 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

## Client Sample ID: W-160505-MLR-05

**Date Collected: 05/05/16 13:20**
**Date Received: 05/06/16 10:00**

## Lab Sample ID: 480-99735-5

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| **Methylene Chloride** | **0.53** | **B *** | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/13/16 15:56 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/13/16 15:56 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/13/16 15:56 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/13/16 15:56 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 15:56 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/13/16 15:56 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/13/16 15:56 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/13/16 15:56 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* | | *05/13/16 15:56* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *80 - 120* | | *05/13/16 15:56* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **31.4** | | 2.5 | 2.5 | mg/L | | | 05/11/16 17:46 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

## Client Sample ID: W-160505-MLR-06

**Lab Sample ID: 480-99735-6**

**Date Collected: 05/05/16 13:29**

**Matrix: Water**

**Date Received: 05/06/16 10:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/13/16 16:23 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/13/16 16:23 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/13/16 16:23 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/13/16 16:23 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/13/16 16:23 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/13/16 16:23 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/13/16 16:23 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/13/16 16:23 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

## Client Sample ID: W-160505-MLR-06

**Date Collected: 05/05/16 13:29**
**Date Received: 05/06/16 10:00**

## Lab Sample ID: 480-99735-6

**Matrix: Water**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| **Methylene Chloride** | **0.61** | **B *** | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/13/16 16:23 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/13/16 16:23 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/13/16 16:23 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/13/16 16:23 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:23 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/13/16 16:23 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/13/16 16:23 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/13/16 16:23 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/13/16 16:23* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *80 - 120* | | *05/13/16 16:23* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **33.1** | | 2.5 | 2.5 | mg/L | | | 05/11/16 17:54 | 5 |

# Client Sample Results

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

## Client Sample ID: TRIP BLANK

**Lab Sample ID: 480-99735-7**

**Date Collected: 05/05/16 00:00**
**Matrix: Water**
**Date Received: 05/06/16 10:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/13/16 16:50 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/13/16 16:50 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/13/16 16:50 | 1 |

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/13/16 16:50 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/13/16 16:50 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/13/16 16:50 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/13/16 16:50 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/13/16 16:50 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |

## Client Sample ID: TRIP BLANK

**Lab Sample ID: 480-99735-7**

**Date Collected: 05/05/16 00:00**

**Matrix: Water**

**Date Received: 05/06/16 10:00**

### Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Methylene Chloride | ND | * | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/13/16 16:50 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/13/16 16:50 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/13/16 16:50 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/13/16 16:50 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 16:50 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/13/16 16:50 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/13/16 16:50 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/13/16 16:50 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/13/16 16:50* | *1* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* | | *05/13/16 16:50* | *1* |

# Surrogate Summary

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

## Method: 524.2 - Volatile Organic Compounds (GC/MS)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | 12DCB (80-120) | BFB (80-120) | | | | | | | | |
| 480-99735-1 | W-160505-MLR-01 | 101 | 96 | | | | | | | | |
| 480-99735-2 | W-160505-MLR-02 | 100 | 97 | | | | | | | | |
| 480-99735-3 | W-160505-MLR-03 | 101 | 99 | | | | | | | | |
| 480-99735-4 | W-160505-MLR-04 | 100 | 98 | | | | | | | | |
| 480-99735-5 | W-160505-MLR-05 | 100 | 98 | | | | | | | | |
| 480-99735-6 | W-160505-MLR-06 | 101 | 98 | | | | | | | | |
| 480-99735-7 | TRIP BLANK | 101 | 99 | | | | | | | | |
| LCS 480-300642/4 | Lab Control Sample | 99 | 99 | | | | | | | | |
| LCS 480-301615/28 | Lab Control Sample | 99 | 100 | | | | | | | | |
| LCSD 480-300642/5 | Lab Control Sample Dup | 101 | 98 | | | | | | | | |
| LCSD 480-301615/29 | Lab Control Sample Dup | 100 | 102 | | | | | | | | |
| LLCS 480-300642/6 | Lab Control Sample | 101 | 98 | | | | | | | | |
| LLCS 480-301615/6 | Lab Control Sample | 100 | 100 | | | | | | | | |
| MB 480-300642/7 | Method Blank | 101 | 96 | | | | | | | | |
| MB 480-301615/30 | Method Blank | 100 | 99 | | | | | | | | |

**Surrogate Legend**

12DCB = 1,2-Dichlorobenzene-d4

BFB = 4-Bromofluorobenzene (Surr)

## Method: 524.2 - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 480-300642/7**
**Matrix: Water**
**Analysis Batch: 300642**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/09/16 11:12 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/09/16 11:12 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/09/16 11:12 | 1 |

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/09/16 11:12 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/09/16 11:12 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/09/16 11:12 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/09/16 11:12 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/09/16 11:12 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-300642/7**
**Matrix: Water**
**Analysis Batch: 300642**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Methylene Chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/09/16 11:12 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/09/16 11:12 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/09/16 11:12 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/09/16 11:12 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/09/16 11:12 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/09/16 11:12 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/09/16 11:12 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/09/16 11:12 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* | | *05/09/16 11:12* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *80 - 120* | | *05/09/16 11:12* | *1* |

**Lab Sample ID: LCS 480-300642/4**
**Matrix: Water**
**Analysis Batch: 300642**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 |
| cis-1,2-Dichloroethene | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 |
| Vinyl chloride | 4.00 | 4.16 | | ug/L | | 104 | 70 - 130 |

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 4.00 | 4.25 | | ug/L | | 106 | 70 - 130 |
| 1,1,1-Trichloroethane | 4.00 | 4.19 | | ug/L | | 105 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-300642/4**
**Matrix: Water**
**Analysis Batch: 300642**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,2-Trichloroethane | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 |
| 1,1-Dichloroethene | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 |
| 1,1-Dichloropropene | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 4.00 | 3.95 | | ug/L | | 99 | 70 - 130 |
| 1,2,3-Trichloropropane | 4.00 | 3.89 | | ug/L | | 97 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 4.00 | 4.02 | | ug/L | | 100 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 4.00 | 3.92 | | ug/L | | 98 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 |
| 1,2-Dibromoethane | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 |
| 1,2-Dichlorobenzene | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 |
| 1,2-Dichloroethane | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 |
| 1,2-Dichloropropane | 4.00 | 4.20 | | ug/L | | 105 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 |
| 1,3-Dichlorobenzene | 4.00 | 4.06 | | ug/L | | 101 | 70 - 130 |
| 1,3-Dichloropropane | 4.00 | 3.85 | | ug/L | | 96 | 70 - 130 |
| 1,4-Dichlorobenzene | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 |
| 2,2-Dichloropropane | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 |
| 2-Butanone (MEK) | 20.0 | 18.9 | | ug/L | | 94 | 70 - 130 |
| 2-Chlorotoluene | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 |
| 2-Hexanone | 20.0 | 18.8 | | ug/L | | 94 | 70 - 130 |
| 4-Chlorotoluene | 4.00 | 4.10 | | ug/L | | 102 | 70 - 130 |
| 4-Isopropyltoluene | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 20.0 | 19.3 | | ug/L | | 97 | 70 - 130 |
| Acetone | 20.0 | 19.1 | | ug/L | | 96 | 70 - 130 |
| Benzene | 4.00 | 4.04 | | ug/L | | 101 | 70 - 130 |
| Bromobenzene | 4.00 | 3.98 | | ug/L | | 99 | 70 - 130 |
| Bromochloromethane | 4.00 | 4.10 | | ug/L | | 103 | 70 - 130 |
| Bromoform | 4.00 | 4.61 | | ug/L | | 115 | 70 - 130 |
| Bromomethane | 4.00 | 3.76 | | ug/L | | 94 | 70 - 130 |
| Carbon disulfide | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 |
| Carbon tetrachloride | 4.00 | 4.49 | | ug/L | | 112 | 70 - 130 |
| Chlorobenzene | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 |
| Chlorodibromomethane | 4.00 | 4.20 | | ug/L | | 105 | 70 - 130 |
| Chloroethane | 4.00 | 4.22 | | ug/L | | 106 | 70 - 130 |
| Chloroform | 4.00 | 4.02 | | ug/L | | 101 | 70 - 130 |
| Chloromethane | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 |
| cis-1,3-Dichloropropene | 4.00 | 4.17 | | ug/L | | 104 | 70 - 130 |
| Dibromomethane | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 |
| Dichlorobromomethane | 4.00 | 4.24 | | ug/L | | 106 | 70 - 130 |
| Dichlorodifluoromethane | 4.00 | 4.50 | | ug/L | | 113 | 70 - 130 |
| Ethylbenzene | 4.00 | 3.99 | | ug/L | | 100 | 70 - 130 |
| Hexachlorobutadiene | 4.00 | 4.17 | | ug/L | | 104 | 70 - 130 |
| Isopropylbenzene | 4.00 | 4.06 | | ug/L | | 102 | 70 - 130 |
| Methyl tert-butyl ether | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 |
| Methylene Chloride | 4.00 | 3.89 | | ug/L | | 97 | 70 - 130 |
| Naphthalene | 4.00 | 3.82 | | ug/L | | 95 | 70 - 130 |
| n-Butylbenzene | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 |
| n-Propylbenzene | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-300642/4**
**Matrix: Water**
**Analysis Batch: 300642**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| sec-Butylbenzene | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 |
| Styrene | 4.00 | 4.14 | | ug/L | | 103 | 70 - 130 |
| tert-Butylbenzene | 4.00 | 3.95 | | ug/L | | 99 | 70 - 130 |
| Tetrachloroethene | 4.00 | 4.10 | | ug/L | | 102 | 70 - 130 |
| Toluene | 4.00 | 4.09 | | ug/L | | 102 | 70 - 130 |
| trans-1,2-Dichloroethene | 4.00 | 4.24 | | ug/L | | 106 | 70 - 130 |
| trans-1,3-Dichloropropene | 4.00 | 3.98 | | ug/L | | 100 | 70 - 130 |
| Trichloroethene | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 |
| Trichlorofluoromethane | 4.00 | 4.14 | | ug/L | | 104 | 70 - 130 |
| Xylenes, Total | 8.00 | 7.90 | | ug/L | | 99 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *99* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* |

**Lab Sample ID: LCSD 480-300642/5**
**Matrix: Water**
**Analysis Batch: 300642**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| cis-1,2-Dichloroethene | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| Vinyl chloride | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 | 1 | 20 |

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 4.00 | 4.17 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| 1,1,1-Trichloroethane | 4.00 | 4.15 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| 1,1,2,2-Tetrachloroethane | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| 1,1,2-Trichloroethane | 4.00 | 4.06 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| 1,1-Dichloroethene | 4.00 | 3.95 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| 1,1-Dichloropropene | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 0 | 20 |
| 1,2,3-Trichlorobenzene | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| 1,2,3-Trichloropropane | 4.00 | 3.81 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| 1,2,4-Trichlorobenzene | 4.00 | 4.13 | | ug/L | | 103 | 70 - 130 | 3 | 20 |
| 1,2,4-Trimethylbenzene | 4.00 | 3.86 | | ug/L | | 96 | 70 - 130 | 2 | 20 |
| 1,2-Dibromo-3-Chloropropane | 4.00 | 3.88 | | ug/L | | 97 | 70 - 130 | 5 | 20 |
| 1,2-Dibromoethane | 4.00 | 3.98 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| 1,2-Dichlorobenzene | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 0 | 20 |
| 1,2-Dichloroethane | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 | 0 | 20 |
| 1,2-Dichloropropane | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| 1,3,5-Trimethylbenzene | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| 1,3-Dichlorobenzene | 4.00 | 4.12 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| 1,3-Dichloropropane | 4.00 | 3.87 | | ug/L | | 97 | 70 - 130 | 1 | 20 |
| 1,4-Dichlorobenzene | 4.00 | 4.06 | | ug/L | | 101 | 70 - 130 | 0 | 20 |
| 2,2-Dichloropropane | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| 2-Butanone (MEK) | 20.0 | 17.6 | | ug/L | | 88 | 70 - 130 | 7 | 20 |
| 2-Chlorotoluene | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| 2-Hexanone | 20.0 | 18.1 | | ug/L | | 90 | 70 - 130 | 4 | 20 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-300642/5**
**Matrix: Water**
**Analysis Batch: 300642**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4-Chlorotoluene | | | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| 4-Isopropyltoluene | | | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| 4-Methyl-2-pentanone (MIBK) | | | 20.0 | 18.7 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| Acetone | | | 20.0 | 18.0 | | ug/L | | 90 | 70 - 130 | 6 | 20 |
| Benzene | | | 4.00 | 3.99 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| Bromobenzene | | | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| Bromochloromethane | | | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| Bromoform | | | 4.00 | 4.33 | | ug/L | | 108 | 70 - 130 | 6 | 20 |
| Bromomethane | | | 4.00 | 3.86 | | ug/L | | 97 | 70 - 130 | 3 | 20 |
| Carbon disulfide | | | 4.00 | 3.93 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| Carbon tetrachloride | | | 4.00 | 4.35 | | ug/L | | 109 | 70 - 130 | 3 | 20 |
| Chlorobenzene | | | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| Chlorodibromomethane | | | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 | 3 | 20 |
| Chloroethane | | | 4.00 | 3.99 | | ug/L | | 100 | 70 - 130 | 6 | 20 |
| Chloroform | | | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| Chloromethane | | | 4.00 | 4.00 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| cis-1,3-Dichloropropene | | | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| Dibromomethane | | | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| Dichlorobromomethane | | | 4.00 | 4.21 | | ug/L | | 105 | 70 - 130 | 1 | 20 |
| Dichlorodifluoromethane | | | 4.00 | 4.22 | | ug/L | | 105 | 70 - 130 | 7 | 20 |
| Ethylbenzene | | | 4.00 | 3.91 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| Hexachlorobutadiene | | | 4.00 | 4.24 | | ug/L | | 106 | 70 - 130 | 2 | 20 |
| Isopropylbenzene | | | 4.00 | 3.97 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| Methyl tert-butyl ether | | | 4.00 | 3.98 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| Methylene Chloride | | | 4.00 | 3.85 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| Naphthalene | | | 4.00 | 3.79 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| n-Butylbenzene | | | 4.00 | 4.03 | | ug/L | | 101 | 70 - 130 | 0 | 20 |
| n-Propylbenzene | | | 4.00 | 4.05 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| sec-Butylbenzene | | | 4.00 | 4.07 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| Styrene | | | 4.00 | 4.02 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| tert-Butylbenzene | | | 4.00 | 3.96 | | ug/L | | 99 | 70 - 130 | 0 | 20 |
| Tetrachloroethene | | | 4.00 | 4.01 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| Toluene | | | 4.00 | 4.08 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| trans-1,2-Dichloroethene | | | 4.00 | 4.11 | | ug/L | | 103 | 70 - 130 | 3 | 20 |
| trans-1,3-Dichloropropene | | | 4.00 | 3.90 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| Trichloroethene | | | 4.00 | 3.99 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| Trichlorofluoromethane | | | 4.00 | 3.97 | | ug/L | | 99 | 70 - 130 | 4 | 20 |
| Xylenes, Total | | | 8.00 | 7.79 | | ug/L | | 97 | 70 - 130 | 1 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *80 - 120* |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LLCS 480-300642/6**
**Matrix: Water**
**Analysis Batch: 300642**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 0.500 | 0.491 | J | ug/L | | 98 | 50 - 150 |
| cis-1,2-Dichloroethene | 0.500 | 0.490 | J | ug/L | | 98 | 50 - 150 |
| Vinyl chloride | 0.500 | 0.442 | | ug/L | | 88 | 50 - 150 |

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.500 | ND | | ug/L | | 96 | 50 - 150 |
| 1,1,1-Trichloroethane | 0.500 | ND | | ug/L | | 91 | 50 - 150 |
| 1,1,2,2-Tetrachloroethane | 0.500 | 0.539 | | ug/L | | 108 | 50 - 150 |
| 1,1,2-Trichloroethane | 0.500 | ND | | ug/L | | 99 | 50 - 150 |
| 1,1-Dichloroethene | 0.500 | ND | | ug/L | | 92 | 50 - 150 |
| 1,1-Dichloropropene | 0.500 | ND | | ug/L | | 89 | 50 - 150 |
| 1,2,3-Trichlorobenzene | 0.500 | 0.521 | | ug/L | | 104 | 50 - 150 |
| 1,2,3-Trichloropropane | 0.500 | ND | | ug/L | | 92 | 50 - 150 |
| 1,2,4-Trichlorobenzene | 0.500 | 0.538 | | ug/L | | 108 | 50 - 150 |
| 1,2,4-Trimethylbenzene | 0.500 | ND | | ug/L | | 92 | 50 - 150 |
| 1,2-Dibromo-3-Chloropropane | 0.500 | ND | | ug/L | | 88 | 50 - 150 |
| 1,2-Dibromoethane | 0.500 | ND | | ug/L | | 97 | 50 - 150 |
| 1,2-Dichlorobenzene | 0.500 | 0.530 | | ug/L | | 106 | 50 - 150 |
| 1,2-Dichloroethane | 0.500 | ND | | ug/L | | 99 | 50 - 150 |
| 1,2-Dichloropropane | 0.500 | ND | | ug/L | | 98 | 50 - 150 |
| 1,3,5-Trimethylbenzene | 0.500 | ND | | ug/L | | 94 | 50 - 150 |
| 1,3-Dichlorobenzene | 0.500 | 0.501 | | ug/L | | 100 | 50 - 150 |
| 1,3-Dichloropropane | 0.500 | ND | | ug/L | | 99 | 50 - 150 |
| 1,4-Dichlorobenzene | 0.500 | 0.524 | | ug/L | | 105 | 50 - 150 |
| 2,2-Dichloropropane | 0.500 | 0.503 | | ug/L | | 101 | 50 - 150 |
| 2-Butanone (MEK) | 2.50 | ND | | ug/L | | 99 | 50 - 150 |
| 2-Chlorotoluene | 0.500 | ND | | ug/L | | 97 | 50 - 150 |
| 2-Hexanone | 2.50 | ND | | ug/L | | 94 | 50 - 150 |
| 4-Chlorotoluene | 0.500 | ND | | ug/L | | 99 | 50 - 150 |
| 4-Isopropyltoluene | 0.500 | ND | | ug/L | | 93 | 50 - 150 |
| 4-Methyl-2-pentanone (MIBK) | 2.50 | ND | | ug/L | | 99 | 50 - 150 |
| Acetone | 2.50 | ND | | ug/L | | 105 | 50 - 150 |
| Benzene | 0.500 | ND | | ug/L | | 100 | 50 - 150 |
| Bromobenzene | 0.500 | 0.500 | | ug/L | | 100 | 50 - 150 |
| Bromochloromethane | 0.500 | ND | | ug/L | | 91 | 50 - 150 |
| Bromoform | 0.500 | ND | | ug/L | | 95 | 50 - 150 |
| Bromomethane | 0.500 | ND | | ug/L | | 84 | 50 - 150 |
| Carbon disulfide | 0.500 | ND | | ug/L | | 88 | 50 - 150 |
| Carbon tetrachloride | 0.500 | ND | | ug/L | | 92 | 50 - 150 |
| Chlorobenzene | 0.500 | ND | | ug/L | | 99 | 50 - 150 |
| Chlorodibromomethane | 0.500 | ND | | ug/L | | 94 | 50 - 150 |
| Chloroethane | 0.500 | ND | | ug/L | | 97 | 50 - 150 |
| Chloroform | 0.500 | 0.519 | | ug/L | | 104 | 50 - 150 |
| Chloromethane | 0.500 | 0.503 | | ug/L | | 101 | 50 - 150 |
| cis-1,3-Dichloropropene | 0.500 | ND | | ug/L | | 86 | 50 - 150 |
| Dibromomethane | 0.500 | ND | | ug/L | | 94 | 50 - 150 |
| Dichlorobromomethane | 0.500 | ND | | ug/L | | 100 | 50 - 150 |
| Dichlorodifluoromethane | 0.500 | ND | | ug/L | | 90 | 50 - 150 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LLCS 480-300642/6**
**Matrix: Water**
**Analysis Batch: 300642**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Ethylbenzene | 0.500 | ND | | ug/L | | 93 | 50 - 150 |
| Hexachlorobutadiene | 0.500 | 0.509 | | ug/L | | 102 | 50 - 150 |
| Isopropylbenzene | 0.500 | ND | | ug/L | | 94 | 50 - 150 |
| Methyl tert-butyl ether | 0.500 | ND | | ug/L | | 97 | 50 - 150 |
| Methylene Chloride | 0.500 | 0.558 | | ug/L | | 112 | 50 - 150 |
| Naphthalene | 0.500 | ND | | ug/L | | 98 | 50 - 150 |
| n-Butylbenzene | 0.500 | ND | | ug/L | | 97 | 50 - 150 |
| n-Propylbenzene | 0.500 | ND | | ug/L | | 95 | 50 - 150 |
| sec-Butylbenzene | 0.500 | ND | | ug/L | | 93 | 50 - 150 |
| Styrene | 0.500 | ND | | ug/L | | 91 | 50 - 150 |
| tert-Butylbenzene | 0.500 | ND | | ug/L | | 93 | 50 - 150 |
| Tetrachloroethene | 0.500 | ND | | ug/L | | 95 | 50 - 150 |
| Toluene | 0.500 | ND | | ug/L | | 99 | 50 - 150 |
| trans-1,2-Dichloroethene | 0.500 | ND | | ug/L | | 90 | 50 - 150 |
| trans-1,3-Dichloropropene | 0.500 | ND | | ug/L | | 81 | 50 - 150 |
| Trichloroethene | 0.500 | 0.437 | | ug/L | | 87 | 50 - 150 |
| Trichlorofluoromethane | 0.500 | ND | | ug/L | | 69 | 50 - 150 |
| Xylenes, Total | 1.00 | ND | * | ug/L | | 0 | 50 - 150 |

| *Surrogate* | *LLCS %Recovery* | *LLCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *101* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *80 - 120* |

**Lab Sample ID: MB 480-301615/30**
**Matrix: Water**
**Analysis Batch: 301615**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 0.50 | 0.18 | ug/L | | | 05/13/16 13:58 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.12 | ug/L | | | 05/13/16 13:58 | 1 |
| Vinyl chloride | ND | | 0.20 | 0.18 | ug/L | | | 05/13/16 13:58 | 1 |

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-301615/30**
**Matrix: Water**
**Analysis Batch: 301615**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 10 | ug/L | | | 05/13/16 13:58 | 1 |
| 2-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 2-Hexanone | ND | | 10 | 10 | ug/L | | | 05/13/16 13:58 | 1 |
| 4-Chlorotoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 4-Isopropyltoluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | 10 | ug/L | | | 05/13/16 13:58 | 1 |
| Acetone | ND | | 10 | 10 | ug/L | | | 05/13/16 13:58 | 1 |
| Acrylonitrile | ND | | 10 | 10 | ug/L | | | 05/13/16 13:58 | 1 |
| Allyl chloride | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Benzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Bromobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Bromochloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Bromoform | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Bromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Carbon disulfide | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Carbon tetrachloride | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Chlorobenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Chlorodibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Chloroethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Chloroform | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Chloromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Dibromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Dichlorobromomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Dichlorodifluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Dichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Ethyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Ethylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Iodomethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Isopropylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Methyl tert-butyl ether | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Methylene Chloride | 0.551 | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| m-Xylene & p-Xylene | ND | | 1.0 | 1.0 | ug/L | | | 05/13/16 13:58 | 1 |
| Naphthalene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| n-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| n-Propylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| o-Xylene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| sec-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Styrene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| t-Butanol | ND | | 10 | 10 | ug/L | | | 05/13/16 13:58 | 1 |
| tert-Butylbenzene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-301615/30**
**Matrix: Water**
**Analysis Batch: 301615**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Toluene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | 2.5 | 2.5 | ug/L | | | 05/13/16 13:58 | 1 |
| Trichloroethene | ND | | 0.20 | 0.20 | ug/L | | | 05/13/16 13:58 | 1 |
| Trichlorofluoromethane | ND | | 0.50 | 0.50 | ug/L | | | 05/13/16 13:58 | 1 |
| Trihalomethanes, Total | ND | | 2.0 | 2.0 | ug/L | | | 05/13/16 13:58 | 1 |
| Vinyl acetate | ND | | 2.5 | 2.5 | ug/L | | | 05/13/16 13:58 | 1 |
| Xylenes, Total | ND | | 1.0 | 1.0 | ug/L | | | 05/13/16 13:58 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* | | *05/13/16 13:58* | *1* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* | | *05/13/16 13:58* | *1* |

**Lab Sample ID: LCS 480-301615/28**
**Matrix: Water**
**Analysis Batch: 301615**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 4.00 | 3.61 | | ug/L | | 90 | 70 - 130 |
| cis-1,2-Dichloroethene | 4.00 | 3.81 | | ug/L | | 95 | 70 - 130 |
| Vinyl chloride | 4.00 | 4.53 | | ug/L | | 113 | 70 - 130 |

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 4.00 | 3.72 | | ug/L | | 93 | 70 - 130 |
| 1,1,1-Trichloroethane | 4.00 | 3.67 | | ug/L | | 92 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 4.00 | 3.72 | | ug/L | | 93 | 70 - 130 |
| 1,1,2-Trichloroethane | 4.00 | 3.76 | | ug/L | | 94 | 70 - 130 |
| 1,1-Dichloroethene | 4.00 | 3.64 | | ug/L | | 91 | 70 - 130 |
| 1,1-Dichloropropene | 4.00 | 3.59 | | ug/L | | 90 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 4.00 | 3.62 | | ug/L | | 91 | 70 - 130 |
| 1,2,3-Trichloropropane | 4.00 | 3.81 | | ug/L | | 95 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 4.00 | 3.76 | | ug/L | | 94 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 4.00 | 3.74 | | ug/L | | 93 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 4.00 | 3.66 | | ug/L | | 92 | 70 - 130 |
| 1,2-Dibromoethane | 4.00 | 3.84 | | ug/L | | 96 | 70 - 130 |
| 1,2-Dichlorobenzene | 4.00 | 3.72 | | ug/L | | 93 | 70 - 130 |
| 1,2-Dichloroethane | 4.00 | 3.77 | | ug/L | | 94 | 70 - 130 |
| 1,2-Dichloropropane | 4.00 | 3.78 | | ug/L | | 95 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 4.00 | 3.70 | | ug/L | | 93 | 70 - 130 |
| 1,3-Dichlorobenzene | 4.00 | 3.70 | | ug/L | | 93 | 70 - 130 |
| 1,3-Dichloropropane | 4.00 | 3.72 | | ug/L | | 93 | 70 - 130 |
| 1,4-Dichlorobenzene | 4.00 | 3.74 | | ug/L | | 94 | 70 - 130 |
| 2,2-Dichloropropane | 4.00 | 3.97 | | ug/L | | 99 | 70 - 130 |
| 2-Butanone (MEK) | 20.0 | 18.1 | | ug/L | | 91 | 70 - 130 |
| 2-Chlorotoluene | 4.00 | 3.67 | | ug/L | | 92 | 70 - 130 |
| 2-Hexanone | 20.0 | 19.1 | | ug/L | | 96 | 70 - 130 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-301615/28**
**Matrix: Water**
**Analysis Batch: 301615**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 4-Chlorotoluene | 4.00 | 3.52 | | ug/L | | 88 | 70 - 130 |
| 4-Isopropyltoluene | 4.00 | 3.70 | | ug/L | | 93 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 20.0 | 18.6 | | ug/L | | 93 | 70 - 130 |
| Acetone | 20.0 | 17.5 | | ug/L | | 87 | 70 - 130 |
| Benzene | 4.00 | 3.77 | | ug/L | | 94 | 70 - 130 |
| Bromobenzene | 4.00 | 3.74 | | ug/L | | 94 | 70 - 130 |
| Bromochloromethane | 4.00 | 3.75 | | ug/L | | 94 | 70 - 130 |
| Bromoform | 4.00 | 3.83 | | ug/L | | 96 | 70 - 130 |
| Bromomethane | 4.00 | 4.44 | | ug/L | | 111 | 70 - 130 |
| Carbon disulfide | 4.00 | 3.55 | | ug/L | | 89 | 70 - 130 |
| Carbon tetrachloride | 4.00 | 3.76 | | ug/L | | 94 | 70 - 130 |
| Chlorobenzene | 4.00 | 3.71 | | ug/L | | 93 | 70 - 130 |
| Chlorodibromomethane | 4.00 | 3.66 | | ug/L | | 91 | 70 - 130 |
| Chloroethane | 4.00 | 4.43 | | ug/L | | 111 | 70 - 130 |
| Chloroform | 4.00 | 3.65 | | ug/L | | 91 | 70 - 130 |
| Chloromethane | 4.00 | 4.29 | | ug/L | | 107 | 70 - 130 |
| cis-1,3-Dichloropropene | 4.00 | 3.76 | | ug/L | | 94 | 70 - 130 |
| Dibromomethane | 4.00 | 3.67 | | ug/L | | 92 | 70 - 130 |
| Dichlorobromomethane | 4.00 | 3.71 | | ug/L | | 93 | 70 - 130 |
| Dichlorodifluoromethane | 4.00 | 4.85 | | ug/L | | 121 | 70 - 130 |
| Ethylbenzene | 4.00 | 3.73 | | ug/L | | 93 | 70 - 130 |
| Hexachlorobutadiene | 4.00 | 3.59 | | ug/L | | 90 | 70 - 130 |
| Isopropylbenzene | 4.00 | 3.78 | | ug/L | | 95 | 70 - 130 |
| Methyl tert-butyl ether | 4.00 | 3.80 | | ug/L | | 95 | 70 - 130 |
| Methylene Chloride | 4.00 | 4.75 | | ug/L | | 119 | 70 - 130 |
| Naphthalene | 4.00 | 3.63 | | ug/L | | 91 | 70 - 130 |
| n-Butylbenzene | 4.00 | 3.59 | | ug/L | | 90 | 70 - 130 |
| n-Propylbenzene | 4.00 | 3.64 | | ug/L | | 91 | 70 - 130 |
| sec-Butylbenzene | 4.00 | 3.63 | | ug/L | | 91 | 70 - 130 |
| Styrene | 4.00 | 3.76 | | ug/L | | 94 | 70 - 130 |
| tert-Butylbenzene | 4.00 | 3.68 | | ug/L | | 92 | 70 - 130 |
| Tetrachloroethene | 4.00 | 3.74 | | ug/L | | 93 | 70 - 130 |
| Toluene | 4.00 | 3.65 | | ug/L | | 91 | 70 - 130 |
| trans-1,2-Dichloroethene | 4.00 | 3.81 | | ug/L | | 95 | 70 - 130 |
| trans-1,3-Dichloropropene | 4.00 | 3.61 | | ug/L | | 90 | 70 - 130 |
| Trichloroethene | 4.00 | 3.84 | | ug/L | | 96 | 70 - 130 |
| Trichlorofluoromethane | 4.00 | 4.65 | | ug/L | | 116 | 70 - 130 |
| Xylenes, Total | 8.00 | 7.44 | | ug/L | | 93 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *99* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *100* | | *80 - 120* |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-301615/29**
**Matrix: Water**
**Analysis Batch: 301615**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 4.00 | 3.50 | | ug/L | | 88 | 70 - 130 | 3 | 20 |
| cis-1,2-Dichloroethene | 4.00 | 3.66 | | ug/L | | 92 | 70 - 130 | 4 | 20 |
| Vinyl chloride | 4.00 | 4.35 | | ug/L | | 109 | 70 - 130 | 4 | 20 |

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 4.00 | 3.68 | | ug/L | | 92 | 70 - 130 | 1 | 20 |
| 1,1,1-Trichloroethane | 4.00 | 3.49 | | ug/L | | 87 | 70 - 130 | 5 | 20 |
| 1,1,2,2-Tetrachloroethane | 4.00 | 3.71 | | ug/L | | 93 | 70 - 130 | 0 | 20 |
| 1,1,2-Trichloroethane | 4.00 | 3.68 | | ug/L | | 92 | 70 - 130 | 2 | 20 |
| 1,1-Dichloroethene | 4.00 | 3.50 | | ug/L | | 88 | 70 - 130 | 4 | 20 |
| 1,1-Dichloropropene | 4.00 | 3.47 | | ug/L | | 87 | 70 - 130 | 4 | 20 |
| 1,2,3-Trichlorobenzene | 4.00 | 3.67 | | ug/L | | 92 | 70 - 130 | 1 | 20 |
| 1,2,3-Trichloropropane | 4.00 | 3.78 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| 1,2,4-Trichlorobenzene | 4.00 | 3.76 | | ug/L | | 94 | 70 - 130 | 0 | 20 |
| 1,2,4-Trimethylbenzene | 4.00 | 3.66 | | ug/L | | 92 | 70 - 130 | 2 | 20 |
| 1,2-Dibromo-3-Chloropropane | 4.00 | 3.60 | | ug/L | | 90 | 70 - 130 | 2 | 20 |
| 1,2-Dibromoethane | 4.00 | 3.85 | | ug/L | | 96 | 70 - 130 | 0 | 20 |
| 1,2-Dichlorobenzene | 4.00 | 3.73 | | ug/L | | 93 | 70 - 130 | 0 | 20 |
| 1,2-Dichloroethane | 4.00 | 3.71 | | ug/L | | 93 | 70 - 130 | 2 | 20 |
| 1,2-Dichloropropane | 4.00 | 3.75 | | ug/L | | 94 | 70 - 130 | 1 | 20 |
| 1,3,5-Trimethylbenzene | 4.00 | 3.63 | | ug/L | | 91 | 70 - 130 | 2 | 20 |
| 1,3-Dichlorobenzene | 4.00 | 3.65 | | ug/L | | 91 | 70 - 130 | 1 | 20 |
| 1,3-Dichloropropane | 4.00 | 3.70 | | ug/L | | 92 | 70 - 130 | 1 | 20 |
| 1,4-Dichlorobenzene | 4.00 | 3.73 | | ug/L | | 93 | 70 - 130 | 0 | 20 |
| 2,2-Dichloropropane | 4.00 | 3.67 | | ug/L | | 92 | 70 - 130 | 8 | 20 |
| 2-Butanone (MEK) | 20.0 | 18.4 | | ug/L | | 92 | 70 - 130 | 1 | 20 |
| 2-Chlorotoluene | 4.00 | 3.65 | | ug/L | | 91 | 70 - 130 | 1 | 20 |
| 2-Hexanone | 20.0 | 19.0 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| 4-Chlorotoluene | 4.00 | 3.79 | | ug/L | | 95 | 70 - 130 | 7 | 20 |
| 4-Isopropyltoluene | 4.00 | 3.62 | | ug/L | | 90 | 70 - 130 | 2 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 20.0 | 18.5 | | ug/L | | 92 | 70 - 130 | 0 | 20 |
| Acetone | 20.0 | 16.9 | | ug/L | | 85 | 70 - 130 | 3 | 20 |
| Benzene | 4.00 | 3.67 | | ug/L | | 92 | 70 - 130 | 3 | 20 |
| Bromobenzene | 4.00 | 3.64 | | ug/L | | 91 | 70 - 130 | 3 | 20 |
| Bromochloromethane | 4.00 | 3.71 | | ug/L | | 93 | 70 - 130 | 1 | 20 |
| Bromoform | 4.00 | 3.73 | | ug/L | | 93 | 70 - 130 | 3 | 20 |
| Bromomethane | 4.00 | 4.39 | | ug/L | | 110 | 70 - 130 | 1 | 20 |
| Carbon disulfide | 4.00 | 3.39 | | ug/L | | 85 | 70 - 130 | 5 | 20 |
| Carbon tetrachloride | 4.00 | 3.52 | | ug/L | | 88 | 70 - 130 | 7 | 20 |
| Chlorobenzene | 4.00 | 3.67 | | ug/L | | 92 | 70 - 130 | 1 | 20 |
| Chlorodibromomethane | 4.00 | 3.61 | | ug/L | | 90 | 70 - 130 | 1 | 20 |
| Chloroethane | 4.00 | 4.27 | | ug/L | | 107 | 70 - 130 | 4 | 20 |
| Chloroform | 4.00 | 3.55 | | ug/L | | 89 | 70 - 130 | 3 | 20 |
| Chloromethane | 4.00 | 4.37 | | ug/L | | 109 | 70 - 130 | 2 | 20 |
| cis-1,3-Dichloropropene | 4.00 | 3.67 | | ug/L | | 92 | 70 - 130 | 2 | 20 |
| Dibromomethane | 4.00 | 3.68 | | ug/L | | 92 | 70 - 130 | 0 | 20 |
| Dichlorobromomethane | 4.00 | 3.67 | | ug/L | | 92 | 70 - 130 | 1 | 20 |
| Dichlorodifluoromethane | 4.00 | 4.58 | | ug/L | | 115 | 70 - 130 | 6 | 20 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-301615/29**
**Matrix: Water**
**Analysis Batch: 301615**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | 4.00 | 3.62 | | ug/L | | 91 | 70 - 130 | 3 | 20 |
| Hexachlorobutadiene | 4.00 | 3.61 | | ug/L | | 90 | 70 - 130 | 0 | 20 |
| Isopropylbenzene | 4.00 | 3.69 | | ug/L | | 92 | 70 - 130 | 2 | 20 |
| Methyl tert-butyl ether | 4.00 | 3.75 | | ug/L | | 94 | 70 - 130 | 1 | 20 |
| Methylene Chloride | 4.00 | 4.76 | | ug/L | | 119 | 70 - 130 | 0 | 20 |
| Naphthalene | 4.00 | 3.71 | | ug/L | | 93 | 70 - 130 | 2 | 20 |
| n-Butylbenzene | 4.00 | 3.56 | | ug/L | | 89 | 70 - 130 | 1 | 20 |
| n-Propylbenzene | 4.00 | 3.61 | | ug/L | | 90 | 70 - 130 | 1 | 20 |
| sec-Butylbenzene | 4.00 | 3.55 | | ug/L | | 89 | 70 - 130 | 2 | 20 |
| Styrene | 4.00 | 3.78 | | ug/L | | 94 | 70 - 130 | 1 | 20 |
| tert-Butylbenzene | 4.00 | 3.59 | | ug/L | | 90 | 70 - 130 | 2 | 20 |
| Tetrachloroethene | 4.00 | 3.58 | | ug/L | | 89 | 70 - 130 | 4 | 20 |
| Toluene | 4.00 | 3.62 | | ug/L | | 90 | 70 - 130 | 1 | 20 |
| trans-1,2-Dichloroethene | 4.00 | 3.69 | | ug/L | | 92 | 70 - 130 | 3 | 20 |
| trans-1,3-Dichloropropene | 4.00 | 3.61 | | ug/L | | 90 | 70 - 130 | 0 | 20 |
| Trichloroethene | 4.00 | 3.72 | | ug/L | | 93 | 70 - 130 | 3 | 20 |
| Trichlorofluoromethane | 4.00 | 4.35 | | ug/L | | 109 | 70 - 130 | 7 | 20 |
| Xylenes, Total | 8.00 | 7.22 | | ug/L | | 90 | 70 - 130 | 3 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *102* | | *80 - 120* |

**Lab Sample ID: LLCS 480-301615/6**
**Matrix: Water**
**Analysis Batch: 301615**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 0.500 | 0.545 | | ug/L | | 109 | 50 - 150 |
| cis-1,2-Dichloroethene | 0.500 | 0.549 | | ug/L | | 110 | 50 - 150 |
| Vinyl chloride | 0.500 | 0.560 | | ug/L | | 112 | 50 - 150 |

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.500 | 0.523 | | ug/L | | 105 | 50 - 150 |
| 1,1,1-Trichloroethane | 0.500 | 0.526 | | ug/L | | 105 | 50 - 150 |
| 1,1,2,2-Tetrachloroethane | 0.500 | 0.551 | | ug/L | | 110 | 50 - 150 |
| 1,1,2-Trichloroethane | 0.500 | 0.554 | | ug/L | | 111 | 50 - 150 |
| 1,1-Dichloroethene | 0.500 | 0.526 | | ug/L | | 105 | 50 - 150 |
| 1,1-Dichloropropene | 0.500 | 0.544 | | ug/L | | 109 | 50 - 150 |
| 1,2,3-Trichlorobenzene | 0.500 | 0.578 | | ug/L | | 116 | 50 - 150 |
| 1,2,3-Trichloropropane | 0.500 | 0.583 | | ug/L | | 117 | 50 - 150 |
| 1,2,4-Trichlorobenzene | 0.500 | 0.592 | | ug/L | | 118 | 50 - 150 |
| 1,2,4-Trimethylbenzene | 0.500 | 0.548 | | ug/L | | 110 | 50 - 150 |
| 1,2-Dibromo-3-Chloropropane | 0.500 | ND | | ug/L | | 100 | 50 - 150 |
| 1,2-Dibromoethane | 0.500 | 0.572 | | ug/L | | 114 | 50 - 150 |
| 1,2-Dichlorobenzene | 0.500 | 0.590 | | ug/L | | 118 | 50 - 150 |
| 1,2-Dichloroethane | 0.500 | 0.528 | | ug/L | | 106 | 50 - 150 |
| 1,2-Dichloropropane | 0.500 | 0.571 | | ug/L | | 114 | 50 - 150 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LLCS 480-301615/6**
**Matrix: Water**
**Analysis Batch: 301615**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,3,5-Trimethylbenzene | 0.500 | 0.543 | | ug/L | | 109 | 50 - 150 |
| 1,3-Dichlorobenzene | 0.500 | 0.565 | | ug/L | | 113 | 50 - 150 |
| 1,3-Dichloropropane | 0.500 | 0.554 | | ug/L | | 111 | 50 - 150 |
| 1,4-Dichlorobenzene | 0.500 | 0.591 | | ug/L | | 118 | 50 - 150 |
| 2,2-Dichloropropane | 0.500 | 0.595 | | ug/L | | 119 | 50 - 150 |
| 2-Butanone (MEK) | 2.50 | ND | | ug/L | | 120 | 50 - 150 |
| 2-Chlorotoluene | 0.500 | 0.565 | | ug/L | | 113 | 50 - 150 |
| 2-Hexanone | 2.50 | ND | | ug/L | | 116 | 50 - 150 |
| 4-Chlorotoluene | 0.500 | 0.578 | | ug/L | | 116 | 50 - 150 |
| 4-Isopropyltoluene | 0.500 | 0.544 | | ug/L | | 109 | 50 - 150 |
| 4-Methyl-2-pentanone (MIBK) | 2.50 | ND | | ug/L | | 117 | 50 - 150 |
| Acetone | 2.50 | ND | | ug/L | | 121 | 50 - 150 |
| Benzene | 0.500 | 0.564 | | ug/L | | 113 | 50 - 150 |
| Bromobenzene | 0.500 | 0.561 | | ug/L | | 112 | 50 - 150 |
| Bromochloromethane | 0.500 | 0.549 | | ug/L | | 110 | 50 - 150 |
| Bromoform | 0.500 | 0.549 | | ug/L | | 110 | 50 - 150 |
| Bromomethane | 0.500 | 0.645 | | ug/L | | 129 | 50 - 150 |
| Carbon disulfide | 0.500 | 0.521 | | ug/L | | 104 | 50 - 150 |
| Carbon tetrachloride | 0.500 | 0.549 | | ug/L | | 110 | 50 - 150 |
| Chlorobenzene | 0.500 | 0.548 | | ug/L | | 110 | 50 - 150 |
| Chlorodibromomethane | 0.500 | 0.521 | | ug/L | | 104 | 50 - 150 |
| Chloroethane | 0.500 | 0.524 | | ug/L | | 105 | 50 - 150 |
| Chloroform | 0.500 | 0.582 | | ug/L | | 116 | 50 - 150 |
| Chloromethane | 0.500 | 0.582 | | ug/L | | 116 | 50 - 150 |
| cis-1,3-Dichloropropene | 0.500 | 0.508 | | ug/L | | 102 | 50 - 150 |
| Dibromomethane | 0.500 | 0.591 | | ug/L | | 118 | 50 - 150 |
| Dichlorobromomethane | 0.500 | 0.551 | | ug/L | | 110 | 50 - 150 |
| Dichlorodifluoromethane | 0.500 | 0.571 | | ug/L | | 114 | 50 - 150 |
| Ethylbenzene | 0.500 | 0.555 | | ug/L | | 111 | 50 - 150 |
| Hexachlorobutadiene | 0.500 | 0.582 | | ug/L | | 116 | 50 - 150 |
| Isopropylbenzene | 0.500 | 0.561 | | ug/L | | 112 | 50 - 150 |
| Methyl tert-butyl ether | 0.500 | 0.540 | | ug/L | | 108 | 50 - 150 |
| Methylene Chloride | 0.500 | 1.48 | * | ug/L | | 296 | 50 - 150 |
| Naphthalene | 0.500 | 0.583 | | ug/L | | 117 | 50 - 150 |
| n-Butylbenzene | 0.500 | 0.538 | | ug/L | | 108 | 50 - 150 |
| n-Propylbenzene | 0.500 | 0.536 | | ug/L | | 107 | 50 - 150 |
| sec-Butylbenzene | 0.500 | 0.548 | | ug/L | | 110 | 50 - 150 |
| Styrene | 0.500 | 0.549 | | ug/L | | 110 | 50 - 150 |
| tert-Butylbenzene | 0.500 | 0.536 | | ug/L | | 107 | 50 - 150 |
| Tetrachloroethene | 0.500 | 0.534 | | ug/L | | 107 | 50 - 150 |
| Toluene | 0.500 | 0.578 | | ug/L | | 116 | 50 - 150 |
| trans-1,2-Dichloroethene | 0.500 | 0.539 | | ug/L | | 108 | 50 - 150 |
| trans-1,3-Dichloropropene | 0.500 | ND | | ug/L | | 94 | 50 - 150 |
| Trichloroethene | 0.500 | 0.553 | | ug/L | | 111 | 50 - 150 |
| Trichlorofluoromethane | 0.500 | 0.538 | | ug/L | | 108 | 50 - 150 |
| Xylenes, Total | 1.00 | ND | | ug/L | | 54 | 50 - 150 |

## Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LLCS 480-301615/6**
**Matrix: Water**
**Analysis Batch: 301615**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| *Surrogate* | *LLCS %Recovery* | *LLCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichlorobenzene-d4* | *100* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *100* | | *80 - 120* |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 480-301145/30**
**Matrix: Water**
**Analysis Batch: 301145**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | | 0.50 | 0.50 | mg/L | | | 05/11/16 15:52 | 1 |

**Lab Sample ID: LCS 480-301145/29**
**Matrix: Water**
**Analysis Batch: 301145**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 51.62 | | mg/L | | 103 | 90 - 110 | | |

**Lab Sample ID: 480-99735-2 MS**
**Matrix: Water**
**Analysis Batch: 301145**

**Client Sample ID: W-160505-MLR-02**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | | 25.0 | 25.15 | | mg/L | | 101 | 81 - 120 | | |

**Lab Sample ID: 480-99735-2 MSD**
**Matrix: Water**
**Analysis Batch: 301145**

**Client Sample ID: W-160505-MLR-02**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | | 25.0 | 25.30 | | mg/L | | 101 | 81 - 120 | 1 | 20 |

# QC Association Summary

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

## GC/MS VOA

### Analysis Batch: 300642

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-99735-1 | W-160505-MLR-01 | Total/NA | Water | 524.2 | |
| 480-99735-2 | W-160505-MLR-02 | Total/NA | Water | 524.2 | |
| LCS 480-300642/4 | Lab Control Sample | Total/NA | Water | 524.2 | |
| LCSD 480-300642/5 | Lab Control Sample Dup | Total/NA | Water | 524.2 | |
| LLCS 480-300642/6 | Lab Control Sample | Total/NA | Water | 524.2 | |
| MB 480-300642/7 | Method Blank | Total/NA | Water | 524.2 | |

### Analysis Batch: 301615

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-99735-3 | W-160505-MLR-03 | Total/NA | Water | 524.2 | |
| 480-99735-4 | W-160505-MLR-04 | Total/NA | Water | 524.2 | |
| 480-99735-5 | W-160505-MLR-05 | Total/NA | Water | 524.2 | |
| 480-99735-6 | W-160505-MLR-06 | Total/NA | Water | 524.2 | |
| 480-99735-7 | TRIP BLANK | Total/NA | Water | 524.2 | |
| LCS 480-301615/28 | Lab Control Sample | Total/NA | Water | 524.2 | |
| LCSD 480-301615/29 | Lab Control Sample Dup | Total/NA | Water | 524.2 | |
| LLCS 480-301615/6 | Lab Control Sample | Total/NA | Water | 524.2 | |
| MB 480-301615/30 | Method Blank | Total/NA | Water | 524.2 | |

## General Chemistry

### Analysis Batch: 301145

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-99735-1 | W-160505-MLR-01 | Total/NA | Water | 300.0 | |
| 480-99735-2 | W-160505-MLR-02 | Total/NA | Water | 300.0 | |
| 480-99735-2 MS | W-160505-MLR-02 | Total/NA | Water | 300.0 | |
| 480-99735-2 MSD | W-160505-MLR-02 | Total/NA | Water | 300.0 | |
| 480-99735-3 | W-160505-MLR-03 | Total/NA | Water | 300.0 | |
| 480-99735-4 | W-160505-MLR-04 | Total/NA | Water | 300.0 | |
| 480-99735-5 | W-160505-MLR-05 | Total/NA | Water | 300.0 | |
| 480-99735-6 | W-160505-MLR-06 | Total/NA | Water | 300.0 | |
| LCS 480-301145/29 | Lab Control Sample | Total/NA | Water | 300.0 | |
| MB 480-301145/30 | Method Blank | Total/NA | Water | 300.0 | |

# Lab Chronicle

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

## Client Sample ID: W-160505-MLR-01 — Lab Sample ID: 480-99735-1

**Date Collected: 05/05/16 11:20** — **Matrix: Water**
**Date Received: 05/06/16 10:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 300642 | 05/09/16 18:29 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 301145 | 05/11/16 16:33 | CAV | TAL BUF |

## Client Sample ID: W-160505-MLR-02 — Lab Sample ID: 480-99735-2

**Date Collected: 05/05/16 11:22** — **Matrix: Water**
**Date Received: 05/06/16 10:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 300642 | 05/09/16 18:56 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 1 | 301145 | 05/11/16 16:41 | CAV | TAL BUF |

## Client Sample ID: W-160505-MLR-03 — Lab Sample ID: 480-99735-3

**Date Collected: 05/05/16 12:00** — **Matrix: Water**
**Date Received: 05/06/16 10:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 301615 | 05/13/16 15:03 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 301145 | 05/11/16 17:30 | CAV | TAL BUF |

## Client Sample ID: W-160505-MLR-04 — Lab Sample ID: 480-99735-4

**Date Collected: 05/05/16 13:19** — **Matrix: Water**
**Date Received: 05/06/16 10:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 301615 | 05/13/16 15:30 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 301145 | 05/11/16 17:38 | CAV | TAL BUF |

## Client Sample ID: W-160505-MLR-05 — Lab Sample ID: 480-99735-5

**Date Collected: 05/05/16 13:20** — **Matrix: Water**
**Date Received: 05/06/16 10:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 301615 | 05/13/16 15:56 | RAS | TAL BUF |
| Total/NA | Analysis | 300.0 | | 5 | 301145 | 05/11/16 17:46 | CAV | TAL BUF |

## Client Sample ID: W-160505-MLR-06 — Lab Sample ID: 480-99735-6

**Date Collected: 05/05/16 13:29** — **Matrix: Water**
**Date Received: 05/06/16 10:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 301615 | 05/13/16 16:23 | RAS | TAL BUF |

# Lab Chronicle

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

## Client Sample ID: W-160505-MLR-06

**Lab Sample ID: 480-99735-6**
**Date Collected: 05/05/16 13:29**
**Matrix: Water**
**Date Received: 05/06/16 10:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 5 | 301145 | 05/11/16 17:54 | CAV | TAL BUF |

## Client Sample ID: TRIP BLANK

**Lab Sample ID: 480-99735-7**
**Date Collected: 05/05/16 00:00**
**Matrix: Water**
**Date Received: 05/06/16 10:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 524.2 | | 1 | 301615 | 05/13/16 16:50 | RAS | TAL BUF |

**Laboratory References:**

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# Certification Summary

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

## Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Minnesota | NELAP | 5 | 036-999-337 | 12-31-16 |

The following analytes are included in this report, but are not certified under this certification:

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 524.2 | | Water | Dibromomethane |
| 524.2 | | Water | Naphthalene |

The following analytes are included in this report, but certification is not offered by the governing authority:

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 524.2 | | Water | 1,1,2-Trichloro-1,2,2-trifluoroethane |
| 524.2 | | Water | 1,2-Dibromo-3-Chloropropane |
| 524.2 | | Water | 1,2-Dibromoethane |
| 524.2 | | Water | 1,3-Dichloropropane |
| 524.2 | | Water | 2-Butanone (MEK) |
| 524.2 | | Water | 2-Hexanone |
| 524.2 | | Water | 4-Isopropyltoluene |
| 524.2 | | Water | 4-Methyl-2-pentanone (MIBK) |
| 524.2 | | Water | Acetone |
| 524.2 | | Water | Acrylonitrile |
| 524.2 | | Water | Allyl chloride |
| 524.2 | | Water | Carbon disulfide |
| 524.2 | | Water | Dichlorofluoromethane |
| 524.2 | | Water | Ethyl ether |
| 524.2 | | Water | Iodomethane |
| 524.2 | | Water | m-Xylene & p-Xylene |
| 524.2 | | Water | o-Xylene |
| 524.2 | | Water | t-Butanol |
| 524.2 | | Water | trans-1,4-Dichloro-2-butene |
| 524.2 | | Water | Vinyl acetate |

# Method Summary

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 524.2 | Volatile Organic Compounds (GC/MS) | EPA-DW | TAL BUF |
| 300.0 | Anions, Ion Chromatography | MCAWW | TAL BUF |

**Protocol References:**

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

**Laboratory References:**

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# Sample Summary

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 480-99735-1 | W-160505-MLR-01 | Water | 05/05/16 11:20 | 05/06/16 10:00 |
| 480-99735-2 | W-160505-MLR-02 | Water | 05/05/16 11:22 | 05/06/16 10:00 |
| 480-99735-3 | W-160505-MLR-03 | Water | 05/05/16 12:00 | 05/06/16 10:00 |
| 480-99735-4 | W-160505-MLR-04 | Water | 05/05/16 13:19 | 05/06/16 10:00 |
| 480-99735-5 | W-160505-MLR-05 | Water | 05/05/16 13:20 | 05/06/16 10:00 |
| 480-99735-6 | W-160505-MLR-06 | Water | 05/05/16 13:29 | 05/06/16 10:00 |
| 480-99735-7 | TRIP BLANK | Water | 05/05/16 00:00 | 05/06/16 10:00 |

# Detection Limit Exceptions Summary

Client: GHD Services Inc.
Project/Site: 002012, Highway 96 Landfill

TestAmerica Job ID: 480-99735-1

The requested project specific reporting limits listed below were less than laboratory standard quantitation limits (PQL) but great than or equal to the laboratory method detection limits (MDL). It must be noted that results reported below lab standard quantitation limits may result in false positive/false negative values and less accurate quantitation. Routine laboratory procedure do not indicate corrective action for detections below the laboratory's PQL.

| Method | Matrix | Analyte | Units | Client RL | Lab PQL |
|---|---|---|---|---|---|
| 524.2 | Water | Trichloroethene | ug/L | 0.20 | 0.5 |
| 524.2 | Water | Vinyl chloride | ug/L | 0.20 | 0.5 |

CHD SERVICES INC

CONESTOGA-ROVERS & ASSOCIATES

# CHAIN OF CUSTODY RECORD

1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States
Phone: (651) 639-0913 Fax: (651) 639-0923

COC NO.: SP- 01913
PAGE 1 OF 1
(See Reverse Side for Instructions)

| | | | |
|---|---|---|---|
| Project No/ Phase/Task Code: 002012 | Laboratory Name: TEST AMERICA | Lab Location: BUFFALO, NY | SSOW ID: |
| Project Name: HWY 96 | Lab Contact: MELISSA DEYO | Lab Quote No: | Cooler No: 1 OF 1 |
| Project Location: NORTH OAKS, MN | | | Carrier: FED EX |
| Chemistry Contact: GRANT ANDERSON | | | Airbill No: |
| Sampler(s): MICHAEL RICHIE | | | Date Shipped: 5/5/16 |

| Item | Sample Identification (Containers for each sample may be combined on one line) | Date (mm/dd/yy) | Time (hh:mm) | Matrix Code (see back of COC) | Grab (G) or Comp (C) | Unpreserved | Hydrochloric Acid (HCl) | Nitric Acid ($HNO_3$) | Sulfuric Acid ($H_2SO_4$) | Sodium Hydroxide (NaOH) | Methanol/Water (Soil VOC) | EnCores 3x5-g, 1x25-g | Other: | Total Containers/Sample | VOCs 524.2 STANDARD | 524.2 MDL* | CHLORIDE (300.0) | | | | | | | MS/MSD Request | Comments/ Special Instructions: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | W-160505-MLR-01 | 05/05/16 | 11:20 | WG | G | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |
| 2 | W-160505-MLR-02 | 05/05/16 | 11:22 | WG | G | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |
| 3 | W-160505-MLR-03 | 05/05/16 | 12:00 | WG | G | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |
| 4 | W-160505-MLR-04 | 05/05/16 | 13:19 | WG | G | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |
| 5 | W-160505-MLR-05 | 05/05/16 | 13:20 | WG | G | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |
| 6 | W-160505-MLR-06 | 05/05/16 | 13:29 | WG | G | 1 | 3 | | | | | | | 4 | X | X | X | | | | | | | | |
| 7 | TRIP BLANK | 05/05/16 | — | WG | TB | | 2 | | | | | | | 2 | X | X | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | | | | | | |

TAT Required in business days (use separate COCs for different TATs):
☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☒ 2 Week ☐ Other: STANDARD

Total Number of Containers: 26
All Samples in Cooler must be on COC

Notes/ Special Requirements: ~~1,1-DICHLOROETHANE~~, ~~1,2-DICHLOROETHANE~~, VINYL CHLORIDE ONLY. TCE RL = 0.2 ug/L

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| 1. Michael Richie | CHD | 05/05/16 | 16:00 | 1. | | 5/6/16 | 1000 |
| | | | | 2. | | | |
| | | | | 3. | 3.741 | | |

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10A (20110804)

480-99735 Chain of Custody

# Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 480-99735-1

**Login Number: 99735**
**List Number: 1**
**Creator: Janish, Carl M**

**List Source: TestAmerica Buffalo**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity either was not measured or, if measured, is at or below background | True | |
| The cooler's custody seal, if present, is intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the sample IDs on the containers and the COC. | True | |
| Samples are received within Holding Time (Excluding tests with immediate HTs).. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter. | True | |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Sampling Company provided. | True | GHD |
| Samples received within 48 hours of sampling. | True | |
| Samples requiring field filtration have been filtered in the field. | N/A | |
| Chlorine Residual checked. | True | |

# Attachment B
# Data Quality Assessment and Validation Memorandum

# Memorandum

| | | | |
|---|---|---|---|
| To: | Michael Richie, GHD | Ref. No.: | 002012 |
| From: | Grant Anderson/sb/19 | Date: | June 29, 2016 |
| cc: | Sarah Illi, GHD | | |

**Re: Analytical Results and Reduced Validation**
**Highway 96 Site**
**Residential Well Sampling**
**North Oaks, Minnesota**
**April and May 2016**

## 1. Introduction

The following document details a reduced validation of analytical results for residential well samples collected in support of the residential well sampling event for the Highway 96 Site in April and May 2016. Samples were submitted to TestAmerica Laboratories, Inc. (TestAmerica), located in Buffalo, New York. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD Services Inc. (GHD) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control samples (LCS), matrix spikes (MS), and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

i) "Response Action Plan Quality Assurance Project Plan (QAPP)"; May 1994, Conestoga-Rovers & Associates, Report 30.

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-99-008, October 1999

iii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", USEPA 540/R-94-013, February 1994

Items ii) and iii) will subsequently be referred to as the "Guidelines" in this Memorandum.

## 2. Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were analyzed within the required holding times.

With the exception of seven volatile organic compound (VOC) samples, the samples were properly preserved. Table 4 lists samples with improper preservation for VOC analysis. The samples were analyzed just beyond the required hold time of 7 days for unpreserved VOC analysis. Associated sample data are qualified as noted in the table.

The samples were delivered on ice, and stored by the laboratory at the required temperature (0-6°C).

## 3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

Laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

With the exception of methylene chloride, all method blank results were non-detect. Table 5 lists the compound detected in the method blank. Associated sample data are qualified as noted in the table.

## 4. Surrogate Spike Recoveries - Organic Analyses

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for VOC determinations were spiked with the appropriate number of surrogate compounds prior to sample analysis.

Surrogate recoveries were assessed per the "Guidelines" and were within laboratory control limits, indicating individual sample performance was adequate.

## 5. Laboratory Control Sample Analyses

LCS and/or laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

***Organic Analyses***

The LCS/LCSD contained all compounds of interest. All LCS recoveries and RPDs were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

***Inorganic Analyses***

The LCS contained all analytes of interest. LCS recoveries were assessed per the "Guidelines" and were within the laboratory control limits, demonstrating acceptable analytical accuracy.

## 6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The relative percent difference (RPD) between the MS and MSD is used to assess analytical precision. If the original investigative sample result for any analyte is significantly greater than the associated spike concentration, the recovery and RPD for that analyte are not assessed.

MS/MSD analyses were performed as specified in Table 1. The laboratory performed additional site-specific MS/MSD analyses internally.

***Organic Analyses***

The MS/MSD samples were spiked with all compounds of interest. The percent recoveries and RPD values were evaluated using the "Guidelines".

All percent recoveries were within acceptable criteria. With the exception of bromomethane, chloromethane and vinyl chloride, the associated RPD values were within acceptable criteria. The RPD for bromomethane, chloromethane and vinyl chloride were above the control limits. However, the associated sample results were non-detect; therefore, no qualification of data was necessary based on outlying MS/MSD results.

***Inorganic Analyses***

The MS/MSD samples were spiked with the analytes of interest. The percent recoveries and RPD values were evaluated using the "Guidelines". Table 6 lists outlying MS/MSD results. Associated sample data are qualified as noted in the table.

## 7. Field QA/QC Samples

The field QA/QC consisted of two trip blank samples (VOCs), four field blank samples (per parameter), and four field duplicate sample sets (per parameter).

***Trip Blank Sample Analysis***

To evaluate contamination from sample collection, transportation, storage, and analytical activities, two trip blank samples were submitted to the laboratories for VOC analysis, as identified in Table 1. The trip blanks were reported to be non-detect for the compounds of interest.

### *Field Blank Sample Analysis*

To assess ambient conditions at the Site, four field blanks per parameter were submitted for analysis, as identified in Table 1. All results were non-detect for the analytes of interest.

### *Field Duplicate Sample Analysis*

To assess the analytical and sampling protocol precision, four field duplicate sample sets per parameter were collected and submitted "blind" to the laboratories, as specified in Table 1.

If both sample results associated with the field duplicate sample set are detects greater than five times the reporting limit (RL), the RPD must be less than 50 percent. If one of the sample results associated with the field duplicate sample set is non-detect, the RPD must be less than 50 percent (using the RL in place of the non-detect result to calculate the RPD). If any reported concentration in the field duplicate sample set is between one times the RL and five times the RL, the difference between the results must be less than one times the RL value (using the RL in place of the non-detect result to calculate the difference). If any reported concentration in the field duplicate sample set is less than the RL, the difference between the results must be less than one times the method detection limit (MDL) value (using the MDL in place of the non-detect result to calculate the difference).

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

## 8. Analyte Reporting

### *VOCs (524.2)*

TestAmerica - Buffalo reported detected results down to the laboratory's MDL for a select list of VOC analytes, as approved by the Minnesota Pollution Control Agency (MPCA). This list includes: 1,1-dichloroethane, cis-1,2-dichloroethene and vinyl chloride. Positive analyte detections less than the quantitation limit (i.e., RL) but greater than the MDL were qualified as estimated (J) unless qualified otherwise in this memorandum. The remaining VOC analytes were reported down to the laboratory RL. Non-detect results were presented as non-detect at the laboratory RL.

### *Chloride (300.0)*

TestAmerica - Buffalo reported detected results down to the laboratory RL. Non-detect results were presented as non-detect at the laboratory RL.

## 9. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific qualifications noted herein.

**Table 1**

**Sample Collection and Analysis Summary**
**Highway 96 Site**
**Residential Well Sampling Event**
**North Oaks, Minnesota**
**April and May 2016**

| Sample Identification | Location | Matrix | Collection Date (mm/dd/yyyy) | Collection Time (hr:min) | Analysis/Parameters | Comments |
|---|---|---|---|---|---|---|
| W-160426-MB-01 | 1THOMPSNLN | water | 04/26/2016 | 09:21 | VOC (524.2), chloride | |
| W-160426-MB-02 | 1THOMPSNLN | water | 04/26/2016 | 09:22 | VOC (524.2), chloride | Duplicate (MB-01) |
| W-160426-MB-03 | 3THOMPSNLN | water | 04/26/2016 | 09:55 | VOC (524.2), chloride | |
| W-160426-MB-04 | 3THOMPSNLN | water | 04/26/2016 | 09:57 | VOC (524.2), chloride | Field Blank |
| W-160426-MB-05 | 3HERONLN | water | 04/26/2016 | 10:15 | VOC (524.2), chloride | |
| W-160426-MB-06 | 11WSHORE | water | 04/26/2016 | 10:50 | VOC (524.2), chloride | MS/MSD |
| W-160426-MB-07 | 10WSHORE | water | 04/26/2016 | 11:27 | VOC (524.2), chloride | |
| W-160426-MB-08 | 9WSHORE | water | 04/26/2016 | 11:33 | VOC (524.2), chloride | |
| W-160426-MB-09 | 15WSHORE | water | 04/26/2016 | 12:29 | VOC (524.2), chloride | |
| W-160426-MB-10 | 10POPLLN | water | 04/26/2016 | 12:39 | VOC (524.2), chloride | |
| W-160426-MB-11 | 8POPLLN | water | 04/26/2016 | 12:46 | VOC (524.2), chloride | |
| W-160426-MB-12 | 44EOAK | water | 04/26/2016 | 13:20 | VOC (524.2), chloride | |
| W-160426-MB-13 | 1HERONLN | water | 04/26/2016 | 13:30 | VOC (524.2), chloride | |
| W-160426-MB-14 | 1HERONLN | water | 04/26/2016 | 09:50 | VOC (524.2), chloride | Duplicate (MB-13) |
| W-160427-MB-15 | 6SKILN | water | 04/27/2016 | 11:40 | VOC (524.2), chloride | |
| W-160427-MB-16 | 8SKILN | water | 04/27/2016 | 09:57 | VOC (524.2), chloride | |
| W-160427-MB-17 | 10SKILN | water | 04/27/2016 | 10:05 | VOC (524.2), chloride | |
| W-160427-MB-18 | 10SKILN | water | 04/27/2016 | 10:07 | VOC (524.2), chloride | Field Blank |
| W-160427-MB-19 | 12SKILN | water | 04/27/2016 | 10:41 | VOC (524.2), chloride | |
| W-160427-MB-20 | 14SKILN | water | 04/27/2016 | 10:46 | VOC (524.2), chloride | |
| W-160427-MB-21 | 16SKILN | water | 04/27/2016 | 10:54 | VOC (524.2), chloride | |
| W-160427-MB-22 | 4SKILN | water | 04/27/2016 | 11:40 | VOC (524.2), chloride | |
| W-160427-MB-23 | 3BUFFALO | water | 04/27/2016 | 12:07 | VOC (524.2), chloride | |
| W-160427-MB-24 | 1BUFFALO | water | 04/27/2016 | 12:15 | VOC (524.2), chloride | |
| W-160428-MB-25 | 4WSHORE | water | 04/28/2016 | 10:04 | VOC (524.2), chloride | |
| W-160428-MB-26 | 4WSHORE | water | 04/28/2016 | 10:06 | VOC (524.2), chloride | Duplicate (MB-25) |
| W-160428-MB-27 | 1EAGLERDG | water | 04/28/2016 | 10:30 | VOC (524.2), chloride | |
| W-160428-MB-28 | 4EAGLERDG | water | 04/28/2016 | 10:46 | VOC (524.2), chloride | |
| W-160428-MB-29 | 4EAGLERDG | water | 04/28/2016 | 10:48 | VOC (524.2), chloride | Field Blank |
| W-160428-MB-30 | 6EAGLERDG | water | 04/28/2016 | 10:52 | VOC (524.2), chloride | MS/MSD |
| W-160428-MB-39 | 8WSHORE | water | 04/28/2016 | 10:30 | VOC (524.2), chloride | |
| W-160428-MB-40 | 50EOAK | water | 04/28/2016 | 10:40 | VOC (524.2), chloride | |
| W-160428-MB-41 | 1HUMMBIRD | water | 04/28/2016 | 11:05 | VOC (524.2), chloride | |
| TRIP BLANK | Trip Blank | water | 04/28/2016 | 0:00 | VOC (524.2) | Trip Blank |

**Table 1**

**Sample Collection and Analysis Summary**
**Highway 96 Site**
**Residential Well Sampling Event**
**North Oaks, Minnesota**
**April and May 2016**

| Sample Identification | Location | Matrix | Collection Date (mm/dd/yyyy) | Collection Time (hr:min) | Analysis/Parameters | Comments |
|---|---|---|---|---|---|---|
| W-160505-MLR-01 | 3QUAILLN | water | 05/05/2016 | 11:20 | VOC (524.2), chloride | |
| W-160505-MLR-02 | 3QUAILLN | water | 05/05/2016 | 11:22 | VOC (524.2), chloride | Field Blank |
| W-160505-MLR-03 | 4THOMPSNLN | water | 05/05/2016 | 12:00 | VOC (524.2), chloride | |
| W-160505-MLR-04 | 3EAGLERDG | water | 05/05/2016 | 13:19 | VOC (524.2), chloride | |
| W-160505-MLR-05 | 3EAGLERDG | water | 05/05/2016 | 13:20 | VOC (524.2), chloride | Duplicate (MLR-04) |
| W-160505-MLR-06 | 2EAGLERDG | water | 05/05/2016 | 13:29 | VOC (524.2), chloride | |
| TRIP BLANK | Trip Blank | water | 05/05/2016 | 0:00 | VOC (524.2) | Trip Blank |

**Table 2**

**Validated Analytical Results Summary**
**Highway 96 Site**
**Residential Well Sampling Event**
**North Oaks, Minnesota**
**April and May 2016**

| | Location ID: | 1THOMPSNLN | 1THOMPSNLN | 3THOMPSNLN | 3THOMPSNLN | 3HERONLN | 11WSHORE | 10WSHORE | 9WSHORE | 15WSHORE | 10POPLLN | 8POPLLN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sample Name: | W-160426-MB-01 | W-160426-MB-02 | W-160426-MB-03 | W-160426-MB-04 | W-160426-MB-05 | W-160426-MB-06 | W-160426-MB-07 | W-160426-MB-08 | W-160426-MB-09 | W-160426-MB-10 | W-160426-MB-11 |
| | Sample Date: | 04/26/2016 | 04/26/2016 | 04/26/2016 | 04/26/16 | 04/26/2016 | 04/26/2016 | 04/26/2016 | 04/26/2016 | 04/26/2016 | 04/26/2016 | 04/26/2016 |
| | Depth: | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | QA/QC: | -- | Duplicate | -- | Field Blank | -- | -- | -- | -- | -- | -- | -- |
| **Parameters** | **Unit** | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,1,1-Trichloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,1,2,2-Tetrachloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,1,2-Trichloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,1-Dichloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,1-Dichloroethene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,1-Dichloropropene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2,3-Trichlorobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2,3-Trichloropropane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2,4-Trichlorobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2,4-Trimethylbenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2-Dibromoethane (Ethylene dibromide) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2-Dichlorobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2-Dichloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2-Dichloropropane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,3,5-Trimethylbenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,3-Dichlorobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,3-Dichloropropane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,4-Dichlorobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 2,2-Dichloropropane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 2-Butanone (Methyl ethyl ketone) (MEK) | µg/L | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Chlorotoluene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 2-Hexanone | µg/L | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Phenylbutane (sec-Butylbenzene) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 4-Chlorotoluene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK) | µg/L | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acetone | µg/L | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acrylonitrile | µg/L | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Allyl chloride | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Benzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Bromobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Bromodichloromethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Bromoform | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Bromomethane (Methyl bromide) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Carbon disulfide | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Carbon tetrachloride | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Chlorobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Chlorobromomethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Chloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Chloroform (Trichloromethane) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Chloromethane (Methyl chloride) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| cis-1,2-Dichloroethene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |

**Table 2**

**Validated Analytical Results Summary**
**Highway 96 Site**
**Residential Well Sampling Event**
**North Oaks, Minnesota**
**April and May 2016**

| | Location ID: | 1THOMPSNLN | 1THOMPSNLN | 3THOMPSNLN | 3THOMPSNLN | 3HERONLN | 11WSHORE | 10WSHORE | 9WSHORE | 15WSHORE | 10POPLLN | 8POPLLN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sample Name: | W-160426-MB-01 | W-160426-MB-02 | W-160426-MB-03 | W-160426-MB-04 | W-160426-MB-05 | W-160426-MB-06 | W-160426-MB-07 | W-160426-MB-08 | W-160426-MB-09 | W-160426-MB-10 | W-160426-MB-11 |
| | Sample Date: | 04/26/2016 | 04/26/2016 | 04/26/2016 | 04/26/16 | 04/26/2016 | 04/26/2016 | 04/26/2016 | 04/26/2016 | 04/26/2016 | 04/26/2016 | 04/26/2016 |
| | Depth: | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | QA/QC: | -- | Duplicate | -- | Field Blank | -- | -- | -- | -- | -- | -- | -- |
| **Parameters** | **Unit** | | | | | | | | | | | |
| cis-1,3-Dichloropropene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Cymene (p-Isopropyltoluene) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Dibromochloromethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Dibromomethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Dichlorodifluoromethane (CFC-12) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Dichlorofluoromethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Ethyl ether | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Ethylbenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Hexachlorobutadiene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Iodomethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Isopropyl benzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| m&p-Xylenes | µg/L | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Methyl tert butyl ether (MTBE) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Methylene chloride | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| N-Butylbenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| N-Propylbenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Naphthalene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| o-Xylene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Styrene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| tert-Butyl alcohol | µg/L | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| tert-Butylbenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Tetrachloroethene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Toluene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| trans-1,2-Dichloroethene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| trans-1,3-Dichloropropene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| trans-1,4-Dichloro-2-butene | µg/L | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U |
| Trichloroethene | µg/L | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U |
| Trichlorofluoromethane (CFC-11) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Trifluorotrichloroethane (CFC-113) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Trihalomethanes | µg/L | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U |
| Vinyl acetate | µg/L | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U |
| Vinyl chloride | µg/L | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U |
| Xylenes (total) | µg/L | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| **Wet Chemistry** | | | | | | | | | | | | |
| Chloride | mg/L | 35.1 | 34.2 | 29.2 | 0.50U | 40.7 | 32.9 | 28.9 | 33.7 | 39.8 | 16.4 | 33.3 |

**Table 2**

**Validated Analytical Results Summary**
**Highway 96 Site**
**Residential Well Sampling Event**
**North Oaks, Minnesota**
**April and May 2016**

| | Location ID: | 44EOAK | 1HERONLN | 1HERONLN | Lab | 6SKILN | 8SKILN | 10SKILN | 10SKILN | 12SKILN | 14SKILN | 16SKILN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sample Name: | W-160426-MB-12 | W-160426-MB-13 | W-160426-MB-14 | TRIP BLANK | W-160427-MB-15 | W-160427-MB-16 | W-160427-MB-17 | W-160427-MB-18 | W-160427-MB-19 | W-160427-MB-20 | W-160427-MB-21 |
| | Sample Date: | 04/26/2016 | 04/26/2016 | 04/26/2016 | 04/26/16 | 04/27/2016 | 04/27/2016 | 04/27/2016 | 04/27/16 | 04/27/2016 | 04/27/2016 | 04/27/2016 |
| | Depth: | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | QA/QC: | -- | -- | Duplicate | Trip Blank | -- | -- | -- | Field Blank | -- | -- | -- |
| **Parameters** | **Unit** | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,1,1-Trichloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,1,2,2-Tetrachloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,1,2-Trichloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,1-Dichloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,1-Dichloroethene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,1-Dichloropropene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2,3-Trichlorobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2,3-Trichloropropane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2,4-Trichlorobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2,4-Trimethylbenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2-Dibromoethane (Ethylene dibromide) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2-Dichlorobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2-Dichloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2-Dichloropropane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,3,5-Trimethylbenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,3-Dichlorobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,3-Dichloropropane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,4-Dichlorobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 2,2-Dichloropropane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 2-Butanone (Methyl ethyl ketone) (MEK) | µg/L | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Chlorotoluene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 2-Hexanone | µg/L | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Phenylbutane (sec-Butylbenzene) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 4-Chlorotoluene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK) | µg/L | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acetone | µg/L | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acrylonitrile | µg/L | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Allyl chloride | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Benzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Bromobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Bromodichloromethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Bromoform | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Bromomethane (Methyl bromide) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Carbon disulfide | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Carbon tetrachloride | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Chlorobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Chlorobromomethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Chloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Chloroform (Trichloromethane) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Chloromethane (Methyl chloride) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| cis-1,2-Dichloroethene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |

**Table 2**

**Validated Analytical Results Summary**
**Highway 96 Site**
**Residential Well Sampling Event**
**North Oaks, Minnesota**
**April and May 2016**

| | **Location ID:** | **44EOAK** | **1HERONLN** | **1HERONLN** | **Lab** | **6SKILN** | **8SKILN** | **10SKILN** | **10SKILN** | **12SKILN** | **14SKILN** | **16SKILN** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Sample Name:** | **W-160426-MB-12** | **W-160426-MB-13** | **W-160426-MB-14** | **TRIP BLANK** | **W-160427-MB-15** | **W-160427-MB-16** | **W-160427-MB-17** | **W-160427-MB-18** | **W-160427-MB-19** | **W-160427-MB-20** | **W-160427-MB-21** |
| | **Sample Date:** | **04/26/2016** | **04/26/2016** | **04/26/2016** | **04/26/16** | **04/27/2016** | **04/27/2016** | **04/27/2016** | **04/27/16** | **04/27/2016** | **04/27/2016** | **04/27/2016** |
| | **Depth:** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** |
| | **QA/QC:** | **--** | **--** | **Duplicate** | **Trip Blank** | **--** | **--** | **--** | **Field Blank** | **--** | **--** | **--** |
| **Parameters** | **Unit** | | | | | | | | | | | |
| cis-1,3-Dichloropropene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Cymene (p-Isopropyltoluene) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Dibromochloromethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Dibromomethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Dichlorodifluoromethane (CFC-12) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Dichlorofluoromethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Ethyl ether | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Ethylbenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Hexachlorobutadiene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Iodomethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Isopropyl benzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| m&p-Xylenes | µg/L | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Methyl tert butyl ether (MTBE) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Methylene chloride | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| N-Butylbenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| N-Propylbenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Naphthalene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| o-Xylene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Styrene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| tert-Butyl alcohol | µg/L | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| tert-Butylbenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Tetrachloroethene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Toluene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| trans-1,2-Dichloroethene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| trans-1,3-Dichloropropene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| trans-1,4-Dichloro-2-butene | µg/L | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U |
| Trichloroethene | µg/L | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U |
| Trichlorofluoromethane (CFC-11) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Trifluorotrichloroethane (CFC-113) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Trihalomethanes | µg/L | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U |
| Vinyl acetate | µg/L | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U |
| Vinyl chloride | µg/L | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U |
| Xylenes (total) | µg/L | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| **Wet Chemistry** | | | | | | | | | | | | |
| Chloride | mg/L | 12.2 | 27.2 | 26.4 | - | 28.9 | 18.2 | 27.3 | 0.50U | 29.2 | 22.9 | 27.9 |

**Table 2**

**Validated Analytical Results Summary**
**Highway 96 Site**
**Residential Well Sampling Event**
**North Oaks, Minnesota**
**April and May 2016**

| | Location ID: | 4SKILN | 3BUFFALO | 1BUFFALO | 4WSHORE | 4WSHORE | 1EAGLERDG | 4EAGLERDG | 4EAGLERDG | 6EAGLERDG | 8WSHORE | 50EOAK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sample Name: | W-160427-MB-22 | W-160427-MB-23 | W-160427-MB-24 | W-160428-MB-25 | W-160428-MB-26 | W-160428-MB-27 | W-160428-MB-28 | W-160428-MB-29 | W-160428-MB-30 | W-160428-MB-39 | W-160428-MB-40 |
| | Sample Date: | 04/27/2016 | 04/27/2016 | 04/27/2016 | 04/28/2016 | 04/28/2016 | 04/28/2016 | 04/28/2016 | 04/28/16 | 04/28/2016 | 04/28/2016 | 04/28/2016 |
| | Depth: | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | QA/QC: | -- | -- | -- | -- | Duplicate | -- | -- | Field Blank | -- | -- | -- |
| **Parameters** | **Unit** | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 1,1,1-Trichloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 1,1,2,2-Tetrachloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 1,1,2-Trichloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 1,1-Dichloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 1,1-Dichloroethene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 1,1-Dichloropropene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 1,2,3-Trichlorobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 1,2,3-Trichloropropane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 1,2,4-Trichlorobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 1,2,4-Trimethylbenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 1,2-Dibromoethane (Ethylene dibromide) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 1,2-Dichlorobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 1,2-Dichloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 1,2-Dichloropropane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 1,3,5-Trimethylbenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 1,3-Dichlorobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 1,3-Dichloropropane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 1,4-Dichlorobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 2,2-Dichloropropane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 2-Butanone (Methyl ethyl ketone) (MEK) | µg/L | 10 U | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 UJ | 10 U | 10 UJ | 10 UJ | 10 UJ |
| 2-Chlorotoluene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 2-Hexanone | µg/L | 10 U | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 UJ | 10 U | 10 UJ | 10 UJ | 10 UJ |
| 2-Phenylbutane (sec-Butylbenzene) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 4-Chlorotoluene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK) | µg/L | 10 U | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 UJ | 10 U | 10 UJ | 10 UJ | 10 UJ |
| Acetone | µg/L | 10 U | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 UJ | 10 U | 10 UJ | 10 UJ | 10 UJ |
| Acrylonitrile | µg/L | 10 U | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 UJ | 10 U | 10 UJ | 10 UJ | 10 UJ |
| Allyl chloride | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Benzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Bromobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Bromodichloromethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Bromoform | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Bromomethane (Methyl bromide) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Carbon disulfide | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Carbon tetrachloride | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Chlorobenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Chlorobromomethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Chloroethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Chloroform (Trichloromethane) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Chloromethane (Methyl chloride) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| cis-1,2-Dichloroethene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |

**Table 2**

**Validated Analytical Results Summary**
**Highway 96 Site**
**Residential Well Sampling Event**
**North Oaks, Minnesota**
**April and May 2016**

| | Location ID: | 4SKILN | 3BUFFALO | 1BUFFALO | 4WSHORE | 4WSHORE | 1EAGLERDG | 4EAGLERDG | 4EAGLERDG | 6EAGLERDG | 8WSHORE | 50EOAK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sample Name: | W-160427-MB-22 | W-160427-MB-23 | W-160427-MB-24 | W-160428-MB-25 | W-160428-MB-26 | W-160428-MB-27 | W-160428-MB-28 | W-160428-MB-29 | W-160428-MB-30 | W-160428-MB-39 | W-160428-MB-40 |
| | Sample Date: | 04/27/2016 | 04/27/2016 | 04/27/2016 | 04/28/2016 | 04/28/2016 | 04/28/2016 | 04/28/2016 | 04/28/16 | 04/28/2016 | 04/28/2016 | 04/28/2016 |
| | Depth: | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | QA/QC: | -- | -- | -- | -- | Duplicate | -- | -- | Field Blank | -- | -- | -- |
| **Parameters** | **Unit** | | | | | | | | | | | |
| cis-1,3-Dichloropropene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Cymene (p-Isopropyltoluene) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Dibromochloromethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Dibromomethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Dichlorodifluoromethane (CFC-12) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Dichlorofluoromethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Ethyl ether | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Ethylbenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Hexachlorobutadiene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Iodomethane | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Isopropyl benzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| m&p-Xylenes | µg/L | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 UJ | 1.0 U | 1.0 UJ | 1.0 U | 1.0 UJ | 1.0 UJ | 1.0 UJ |
| Methyl tert butyl ether (MTBE) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Methylene chloride | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| N-Butylbenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| N-Propylbenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Naphthalene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| o-Xylene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Styrene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| tert-Butyl alcohol | µg/L | 10 U | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 UJ | 10 U | 10 UJ | 10 UJ | 10 UJ |
| tert-Butylbenzene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Tetrachloroethene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Toluene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| trans-1,2-Dichloroethene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| trans-1,3-Dichloropropene | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| trans-1,4-Dichloro-2-butene | µg/L | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 UJ | 2.5 U | 2.5 UJ | 2.5 U | 2.5 UJ | 2.5 UJ | 2.5 UJ |
| Trichloroethene | µg/L | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 UJ | 0.20 U | 0.20 UJ | 0.20 U | 0.20 UJ | 0.20 UJ | 0.20 UJ |
| Trichlorofluoromethane (CFC-11) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Trifluorotrichloroethane (CFC-113) | µg/L | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 U | 0.50 UJ | 0.50 UJ | 0.50 UJ |
| Trihalomethanes | µg/L | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 UJ | 2.0 U | 2.0 UJ | 2.0 U | 2.0 UJ | 2.0 UJ | 2.0 UJ |
| Vinyl acetate | µg/L | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 UJ | 2.5 U | 2.5 UJ | 2.5 U | 2.5 UJ | 2.5 UJ | 2.5 UJ |
| Vinyl chloride | µg/L | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 UJ | 0.20 U | 0.20 UJ | 0.20 U | 0.20 UJ | 0.20 UJ | 0.20 UJ |
| Xylenes (total) | µg/L | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 UJ | 1.0 U | 1.0 UJ | 1.0 U | 1.0 UJ | 1.0 UJ | 1.0 UJ |
| **Wet Chemistry** | | | | | | | | | | | | |
| Chloride | mg/L | 33.5 | 24.1 | 32.1 | 49.9 | 49.6 | 18.4 | 25.6 | 0.50U | 60.6 J | 5.9 | 31.4 |

**Table 2**

**Validated Analytical Results Summary**
**Highway 96 Site**
**Residential Well Sampling Event**
**North Oaks, Minnesota**
**April and May 2016**

| | Location ID: | 1HUMMBIRD | 3QUAILLN | 3QUAILLN | 4THOMPSNLN | 3EAGLERDG | 3EAGLERDG | 2EAGLERDG | Lab |
|---|---|---|---|---|---|---|---|---|---|
| | Sample Name: | W-160428-MB-41 | W-160505-MLR-01 | W-160505-MLR-02 | W-160505-MLR-03 | W-160505-MLR-04 | W-160505-MLR-05 | /-160505-MLR-0 | TRIP BLANK |
| | Sample Date: | 04/28/2016 | 05/05/2016 | 05/05/2016 | 05/05/2016 | 05/05/2016 | 05/05/2016 | 05/05/2016 | 05/05/16 |
| | Depth: | -- | -- | -- | -- | -- | -- | -- | -- |
| | QA/QC: | -- | -- | Field Blank | -- | -- | Duplicate | -- | Trip Blank |
| **Parameters** | **Unit** | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,1,1-Trichloroethane | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,1,2,2-Tetrachloroethane | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,1,2-Trichloroethane | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,1-Dichloroethane | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,1-Dichloroethene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,1-Dichloropropene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2,3-Trichlorobenzene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2,3-Trichloropropane | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2,4-Trichlorobenzene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2,4-Trimethylbenzene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2-Dibromoethane (Ethylene dibromide) | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2-Dichlorobenzene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2-Dichloroethane | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,2-Dichloropropane | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,3,5-Trimethylbenzene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,3-Dichlorobenzene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,3-Dichloropropane | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 1,4-Dichlorobenzene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 2,2-Dichloropropane | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 2-Butanone (Methyl ethyl ketone) (MEK) | µg/L | 10 UJ | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Chlorotoluene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 2-Hexanone | µg/L | 10 UJ | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Phenylbutane (sec-Butylbenzene) | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 4-Chlorotoluene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK) | µg/L | 10 UJ | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acetone | µg/L | 10 UJ | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acrylonitrile | µg/L | 10 UJ | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Allyl chloride | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Benzene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Bromobenzene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Bromodichloromethane | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Bromoform | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Bromomethane (Methyl bromide) | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Carbon disulfide | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Carbon tetrachloride | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Chlorobenzene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Chlorobromomethane | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Chloroethane | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Chloroform (Trichloromethane) | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Chloromethane (Methyl chloride) | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| cis-1,2-Dichloroethene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |

**Table 2**

**Validated Analytical Results Summary**
**Highway 96 Site**
**Residential Well Sampling Event**
**North Oaks, Minnesota**
**April and May 2016**

| | Location ID: | 1HUMMBIRD | 3QUAILLN | 3QUAILLN | 4THOMPSNLN | 3EAGLERDG | 3EAGLERDG | 2EAGLERDG | Lab |
|---|---|---|---|---|---|---|---|---|---|
| | Sample Name: | W-160428-MB-41 | W-160505-MLR-01 | W-160505-MLR-02 | W-160505-MLR-03 | W-160505-MLR-04 | W-160505-MLR-05 | /-160505-MLR-0 | TRIP BLANK |
| | Sample Date: | 04/28/2016 | 05/05/2016 | 05/05/2016 | 05/05/2016 | 05/05/2016 | 05/05/2016 | 05/05/2016 | 05/05/16 |
| | Depth: | -- | -- | -- | -- | -- | -- | -- | -- |
| | QA/QC: | -- | -- | Field Blank | -- | -- | Duplicate | -- | Trip Blank |
| **Parameters** | **Unit** | | | | | | | | |
| cis-1,3-Dichloropropene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Cymene (p-Isopropyltoluene) | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Dibromochloromethane | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Dibromomethane | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Dichlorodifluoromethane (CFC-12) | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Dichlorofluoromethane | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Ethyl ether | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Ethylbenzene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Hexachlorobutadiene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Iodomethane | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Isopropyl benzene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| m&p-Xylenes | µg/L | 1.0 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Methyl tert butyl ether (MTBE) | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Methylene chloride | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.53 U | 0.61 U | 0.50 U |
| N-Butylbenzene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| N-Propylbenzene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Naphthalene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| o-Xylene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Styrene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| tert-Butyl alcohol | µg/L | 10 UJ | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| tert-Butylbenzene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Tetrachloroethene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Toluene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| trans-1,2-Dichloroethene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| trans-1,3-Dichloropropene | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| trans-1,4-Dichloro-2-butene | µg/L | 2.5 UJ | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U |
| Trichloroethene | µg/L | 0.20 UJ | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U |
| Trichlorofluoromethane (CFC-11) | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Trifluorotrichloroethane (CFC-113) | µg/L | 0.50 UJ | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Trihalomethanes | µg/L | 2.0 UJ | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U |
| Vinyl acetate | µg/L | 2.5 UJ | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U |
| Vinyl chloride | µg/L | 0.20 UJ | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U |
| Xylenes (total) | µg/L | 1.0 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| **Wet Chemistry** | | | | | | | | | |
| Chloride | mg/L | 28.1 | 25.7 | 0.50U | 104 | 31.9 | 31.4 | 33.1 | - |

Notes:

U - Not detected at the associated reporting limit
J - Estimated concentration
UJ - Estimated reporting limit

**Table 3**

**Analytical Methods and Holding Time Criteria**
**Highway 96 Site**
**Residential Well Sampling Event**
**North Oaks, Minnesota**
**April and May 2016**

| Parameter | Method | Matrix | Preservation | Holding Time | |
|---|---|---|---|---|---|
| | | | | Collection to Extraction (Days) | Collection or Extraction to Analysis (Days) |
| VOC | EPA 524.2 | Water | pH < 2 and Iced, 4 ± 2°C | - | 14 |
| Chloride | EPA 300.0 | Water | Iced, 4 ± 2°C | - | 28 |

Notes:

EPA 524.2 - "Methods for the Determination of Organic Compounds in Drinking Water", EPA/600/4-88/039, December 1988 and its supplements.

EPA 300.0 - "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

**Table 4**

**Qualified Sample Data Due To Insufficient Sample Preservation**
**Highway 96 Site**
**Residential Well Sampling Event**
**North Oaks, Minnesota**
**April and May 2016**

| Parameter | Sample ID | pH Upon Receipt at Laboratory | Required pH | Analyte | Qualified Result | Units |
|---|---|---|---|---|---|---|
| VOC | W-160428-MB-26 | >2 | <2 | 1,1,1,2-Tetrachloroethane | 0.50 UJ | ug/L |
| | W-160428-MB-28 | >2 | <2 | 1,1,1-Trichloroethane | 0.50 UJ | ug/L |
| | W-160428-MB-29 | >2 | <2 | 1,1,2,2-Tetrachloroethane | 0.50 UJ | ug/L |
| | W-160428-MB-30 | >2 | <2 | 1,1,2-Trichloroethane | 0.50 UJ | ug/L |
| | W-160428-MB-39 | >2 | <2 | 1,1-Dichloroethane | 0.50 UJ | ug/L |
| | W-160428-MB-40 | >2 | <2 | 1,1-Dichloroethene | 0.50 UJ | ug/L |
| | W-160428-MB-41 | >2 | <2 | 1,1-Dichloropropene | 0.50 UJ | ug/L |
| | | | | 1,2,3-Trichlorobenzene | 0.50 UJ | ug/L |
| | | | | 1,2,3-Trichloropropane | 0.50 UJ | ug/L |
| | | | | 1,2,4-Trichlorobenzene | 0.50 UJ | ug/L |
| | | | | 1,2,4-Trimethylbenzene | 0.50 UJ | ug/L |
| | | | | 1,2-Dibromo-3-chloropropane (DBCP) | 0.50 UJ | ug/L |
| | | | | 1,2-Dibromoethane (Ethylene dibromide) | 0.50 UJ | ug/L |
| | | | | 1,2-Dichlorobenzene | 0.50 UJ | ug/L |
| | | | | 1,2-Dichloroethane | 0.50 UJ | ug/L |
| | | | | 1,2-Dichloropropane | 0.50 UJ | ug/L |
| | | | | 1,3,5-Trimethylbenzene | 0.50 UJ | ug/L |
| | | | | 1,3-Dichlorobenzene | 0.50 UJ | ug/L |
| | | | | 1,3-Dichloropropane | 0.50 UJ | ug/L |
| | | | | 1,4-Dichlorobenzene | 0.50 UJ | ug/L |
| | | | | 2,2-Dichloropropane | 0.50 UJ | ug/L |
| | | | | 2-Butanone (MEK) | 10 UJ | ug/L |
| | | | | 2-Chlorotoluene | 0.50 UJ | ug/L |
| | | | | 2-Hexanone | 10 UJ | ug/L |
| | | | | 2-Phenylbutane (sec-Butylbenzene) | 0.50 UJ | ug/L |
| | | | | 4-Chlorotoluene | 0.50 UJ | ug/L |
| | | | | 4-Methyl-2-pentanone (MIBK) | 10 UJ | ug/L |
| | | | | Acetone | 10 UJ | ug/L |
| | | | | Acrylonitrile | 10 UJ | ug/L |
| | | | | Allyl chloride | 0.50 UJ | ug/L |
| | | | | Benzene | 0.50 UJ | ug/L |
| | | | | Bromobenzene | 0.50 UJ | ug/L |
| | | | | Bromodichloromethane | 0.50 UJ | ug/L |

**Table 4**

**Qualified Sample Data Due To Insufficient Sample Preservation**
**Highway 96 Site**
**Residential Well Sampling Event**
**North Oaks, Minnesota**
**April and May 2016**

| Parameter | Sample ID | pH Upon Receipt at Laboratory | Required pH | Analyte | Qualified Result | Units |
|---|---|---|---|---|---|---|
| | | | | Bromoform | 0.50 UJ | ug/L |
| | | | | Bromomethane (Methyl bromide) | 0.50 UJ | ug/L |
| | | | | Carbon disulfide | 0.50 UJ | ug/L |
| | | | | Carbon tetrachloride | 0.50 UJ | ug/L |
| | | | | Chlorobenzene | 0.50 UJ | ug/L |
| | | | | Chlorobromomethane | 0.50 UJ | ug/L |
| | | | | Chloroethane | 0.50 UJ | ug/L |
| | | | | Chloroform (Trichloromethane) | 0.50 UJ | ug/L |
| | | | | Chloromethane (Methyl chloride) | 0.50 UJ | ug/L |
| | | | | cis-1,2-Dichloroethene | 0.50 UJ | ug/L |
| | | | | cis-1,3-Dichloropropene | 0.50 UJ | ug/L |
| | | | | Cymene (p-Isopropyltoluene) | 0.50 UJ | ug/L |
| | | | | Dibromochloromethane | 0.50 UJ | ug/L |
| | | | | Dibromomethane | 0.50 UJ | ug/L |
| | | | | Dichlorodifluoromethane (CFC-12) | 0.50 UJ | ug/L |
| | | | | Dichlorofluoromethane | 0.50 UJ | ug/L |
| | | | | Ethyl ether | 0.50 UJ | ug/L |
| | | | | Ethylbenzene | 0.50 UJ | ug/L |
| | | | | Hexachlorobutadiene | 0.50 UJ | ug/L |
| | | | | Iodomethane | 0.50 UJ | ug/L |
| | | | | Isopropyl benzene | 0.50 UJ | ug/L |
| | | | | m&p-Xylenes | 1.0 UJ | ug/L |
| | | | | Methyl tert butyl ether (MTBE) | 0.50 UJ | ug/L |
| | | | | Methylene chloride | 0.50 UJ | ug/L |
| | | | | N-Butylbenzene | 0.50 UJ | ug/L |
| | | | | N-Propylbenzene | 0.50 UJ | ug/L |
| | | | | Naphthalene | 0.50 UJ | ug/L |
| | | | | o-Xylene | 0.50 UJ | ug/L |
| | | | | Styrene | 0.50 UJ | ug/L |
| | | | | tert-Butyl alcohol | 10 UJ | ug/L |
| | | | | tert-Butylbenzene | 0.50 UJ | ug/L |
| | | | | Tetrachloroethene | 0.50 UJ | ug/L |
| | | | | Toluene | 0.50 UJ | ug/L |

**Table 4**

**Qualified Sample Data Due To Insufficient Sample Preservation**
**Highway 96 Site**
**Residential Well Sampling Event**
**North Oaks, Minnesota**
**April and May 2016**

| Parameter | Sample ID | pH Upon Receipt at Laboratory | Required pH | Analyte | Qualified Result | Units |
|---|---|---|---|---|---|---|
| | | | | trans-1,2-Dichloroethene | 0.50 UJ | ug/L |
| | | | | trans-1,3-Dichloropropene | 0.50 UJ | ug/L |
| | | | | trans-1,4-Dichloro-2-butene | 2.5 UJ | ug/L |
| | | | | Trichloroethene | 0.20 UJ | ug/L |
| | | | | Trichlorofluoromethane (CFC-11) | 0.50 UJ | ug/L |
| | | | | Trifluorotrichloroethane (CFC-113) | 0.50 UJ | ug/L |
| | | | | Trihalomethanes | 2.0 UJ | ug/L |
| | | | | Vinyl acetate | 2.5 UJ | ug/L |
| | | | | Vinyl chloride | 0.20 UJ | ug/L |
| | | | | Xylenes (total) | 1.0 UJ | ug/L |

Notes:

UJ - Not detected; associated reporting limit is estimated

**Table 5**

**Qualified Sample Results Due To Analyte Concentrations In The Method Blanks**
**Highway 96 Site**
**Residential Well Sampling Event**
**North Oaks, Minnesota**
**April and May 2016**

| Parameter | Analyte | Analysis Batch | Blank Result * | Sample ID | Original Result | Qualified Result | Units |
|---|---|---|---|---|---|---|---|
| VOC | Methylene chloride | 301615 | 0.551 | W-160505-MLR-05 | 0.53 | 0.53 U | ug/L |
| | | | | W-160505-MLR-06 | 0.61 | 0.61 U | ug/L |

Notes:

* - Blank result adjusted for sample factors where applicable
U - Not detected at the associated reporting limit

**Table 6**

**Qualified Sample Results Due To Outlying Matrix Spike/Matrix Spike Duplicate Results**
**Highway 96 Site**
**Residential Well Sampling Event**
**North Oaks, Minnesota**
**April and May 2016**

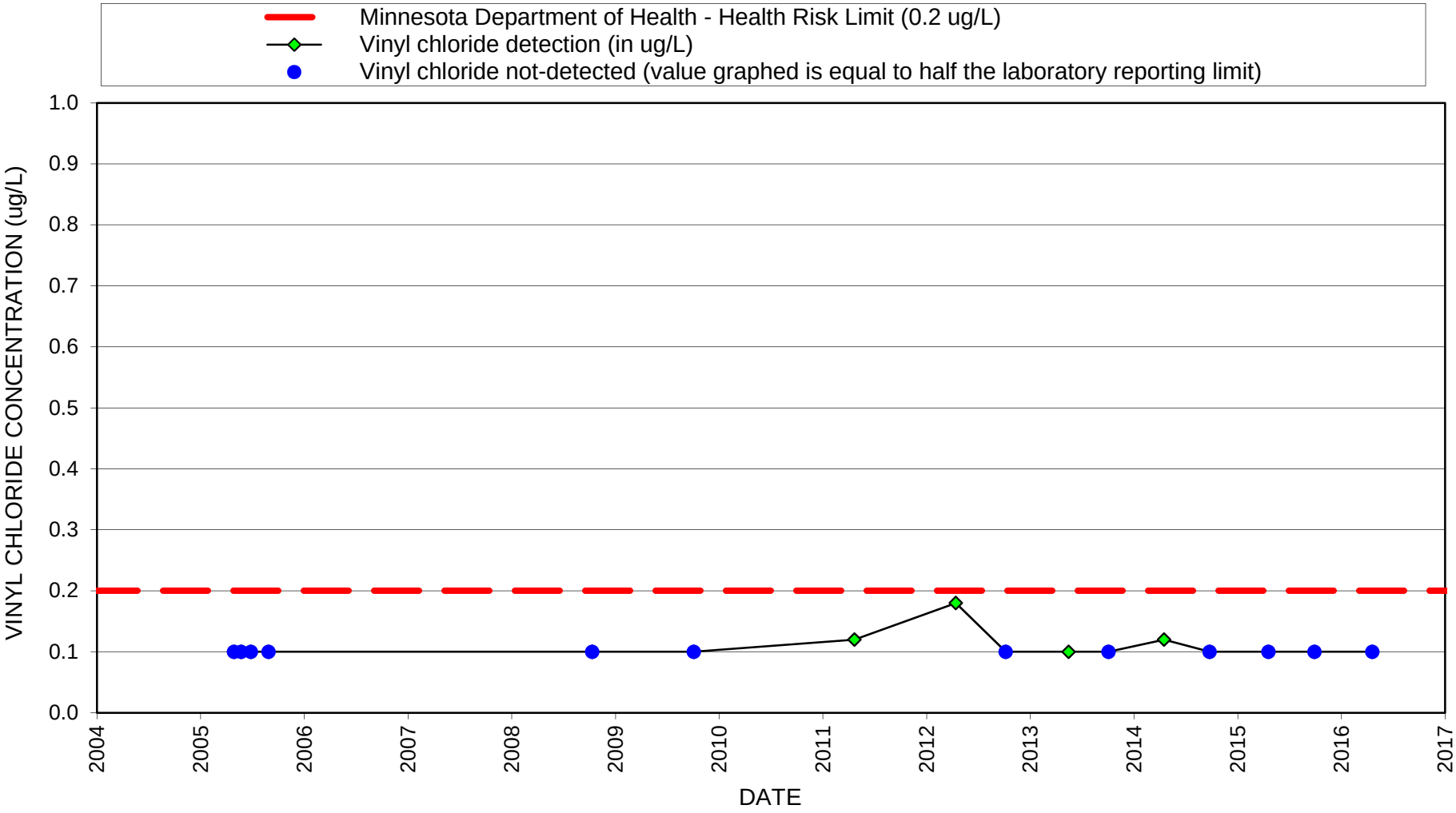
| Parameter | Sample ID | Analyte | MS % Recovery | MSD % Recovery | RPD (percent) | Control Limits % Recovery | Control Limits RPD | Qualified Result | Units |
|---|---|---|---|---|---|---|---|---|---|
| Gen. Chem | W-160428-MB-30 | Chloride | 78 | 92 | 10 | 81-120 | 20 | 60.6 J | mg/L |

Notes:

MS - Matrix Spike
MSD - Matrix Spike Duplicate
RPD - Relative Percent Difference
J - Estimated concentration

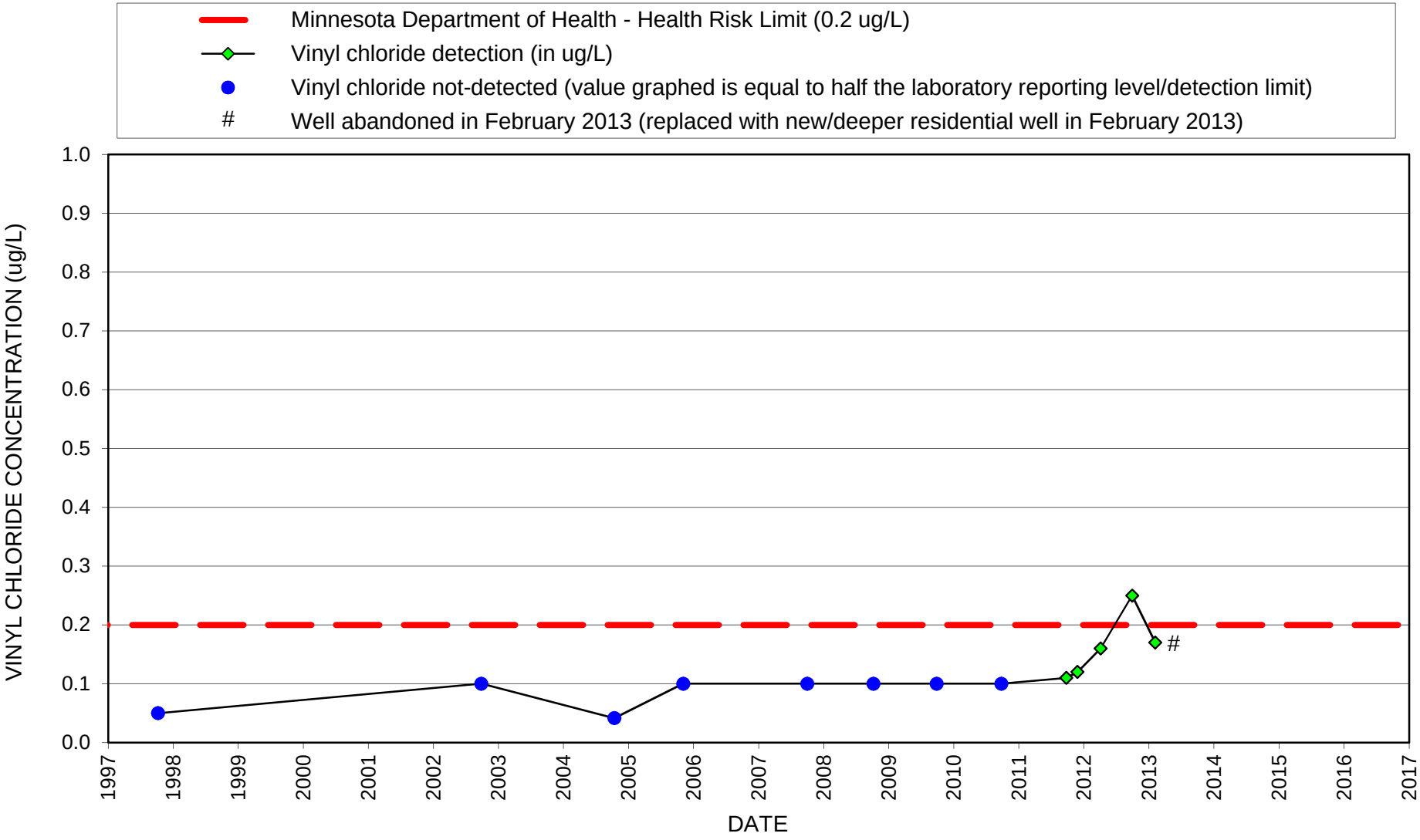
# Attachment C
# Updated Vinyl Chloride Graphs

VINYL CHLORIDE CONCENTRATIONS
50 EAST OAKS ROAD
NORTH OAKS, MINNESOTA



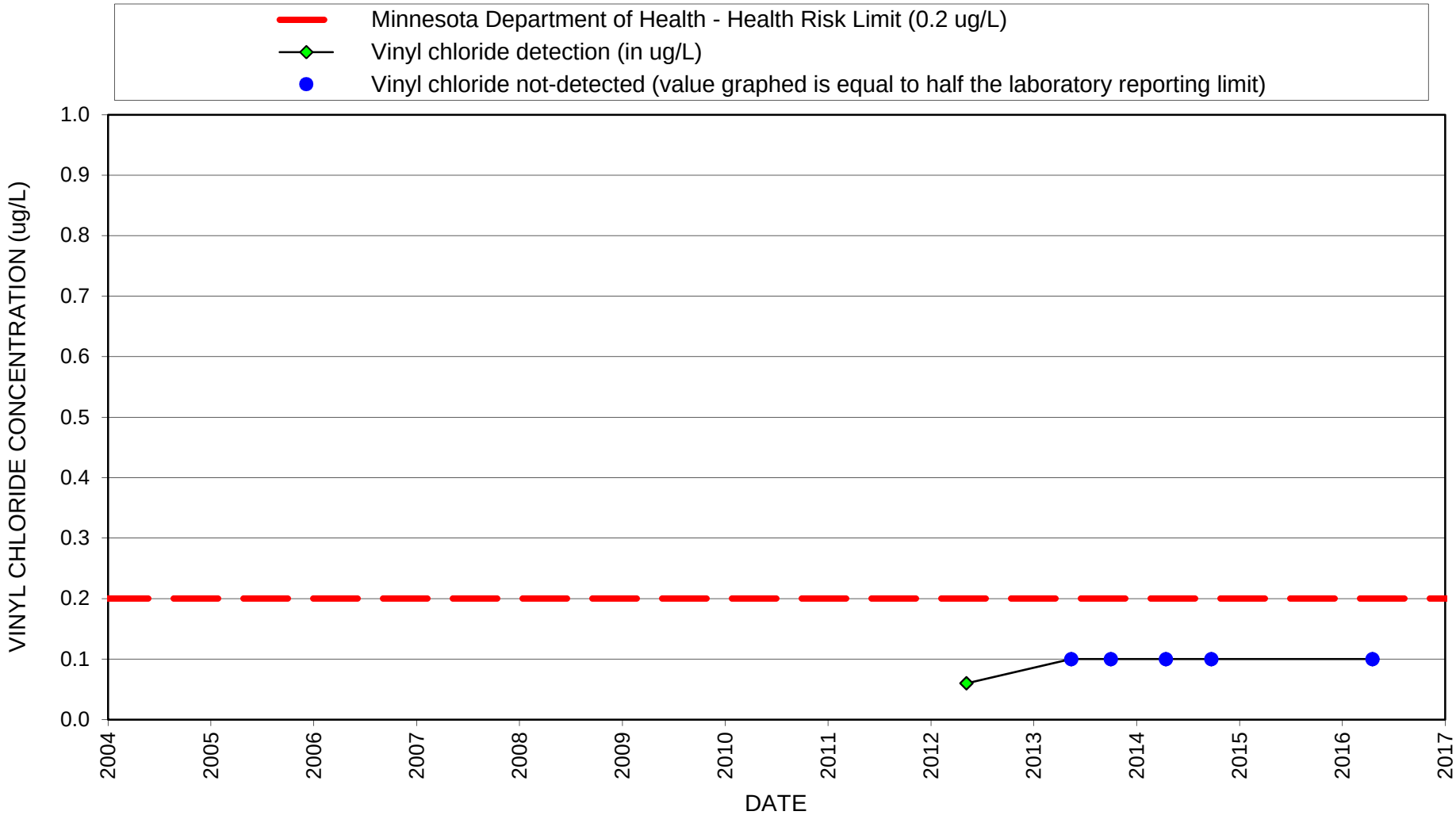

GHD 002012Campbell78-ATTC VC Graphs

# VINYL CHLORIDE CONCENTRATIONS
# 2 HERON LANE (OLD WELL)
# NORTH OAKS, MINNESOTA



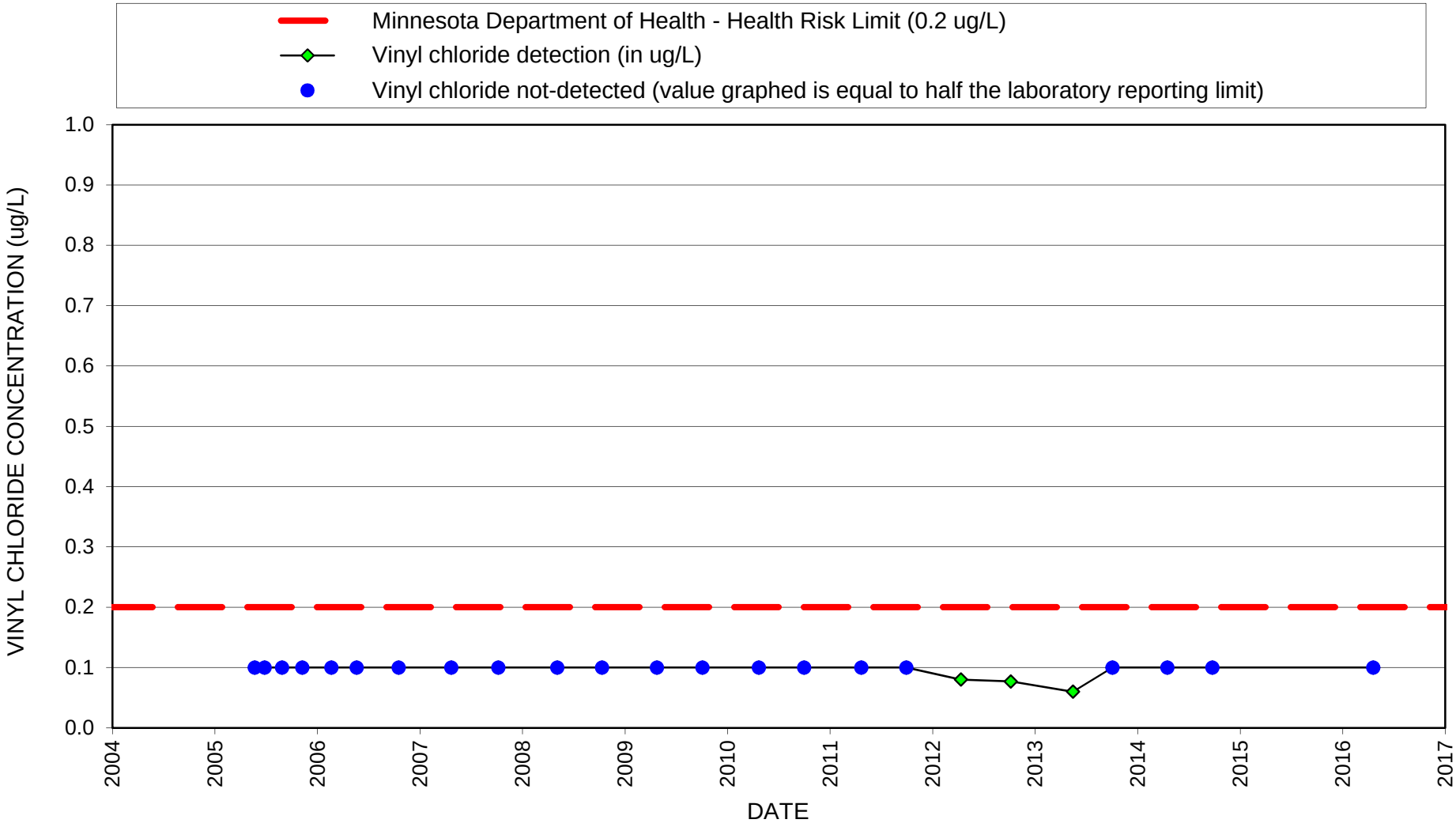

GHD 002012Campbell78-ATTC VC Graphs

# VINYL CHLORIDE CONCENTRATIONS
# 3 HERON LANE
# NORTH OAKS, MINNESOTA



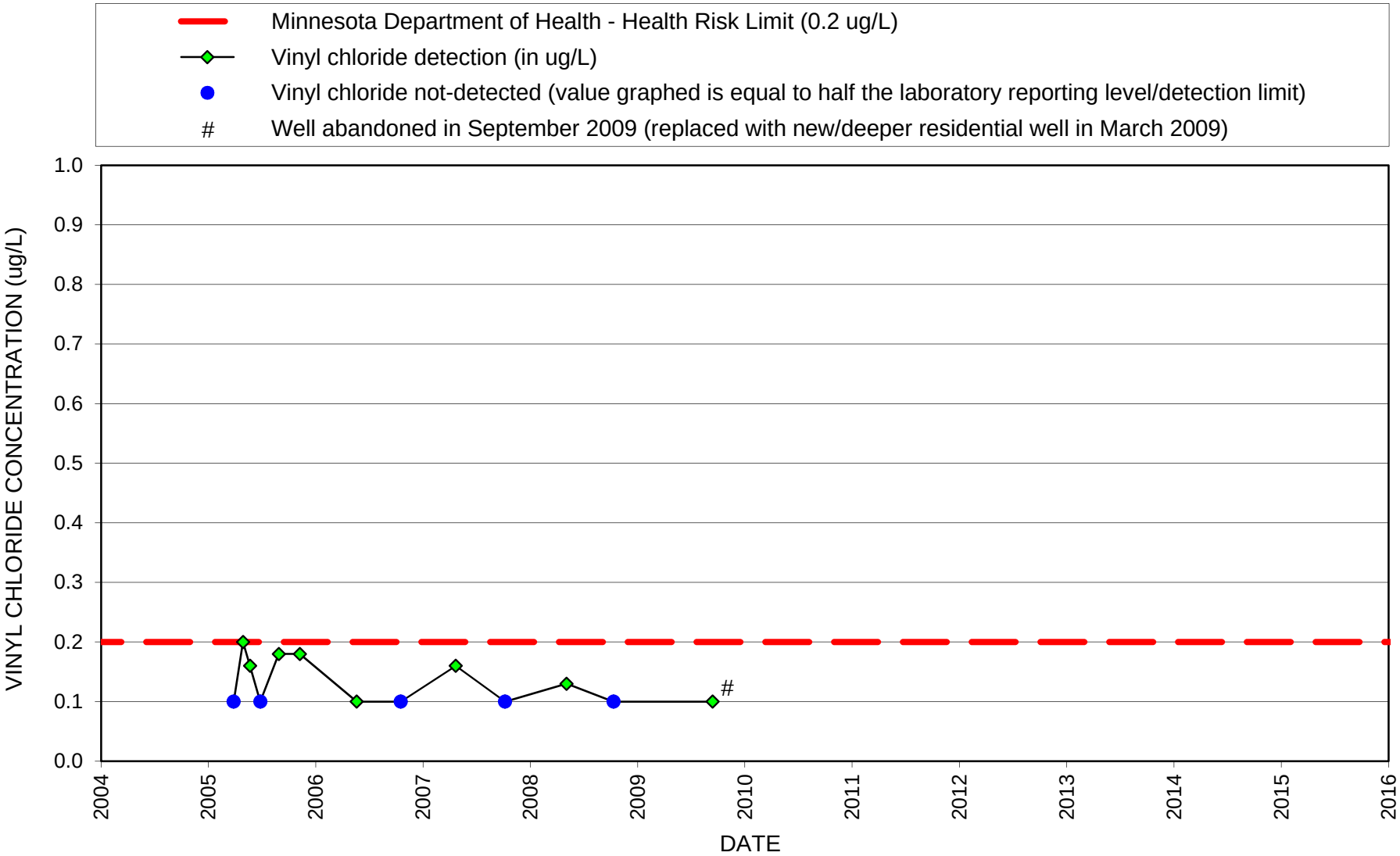

GHD 002012Campbell78-ATTC VC Graphs

# VINYL CHLORIDE CONCENTRATIONS
# 1 HUMMINGBIRD HILL
# NORTH OAKS, MINNESOTA



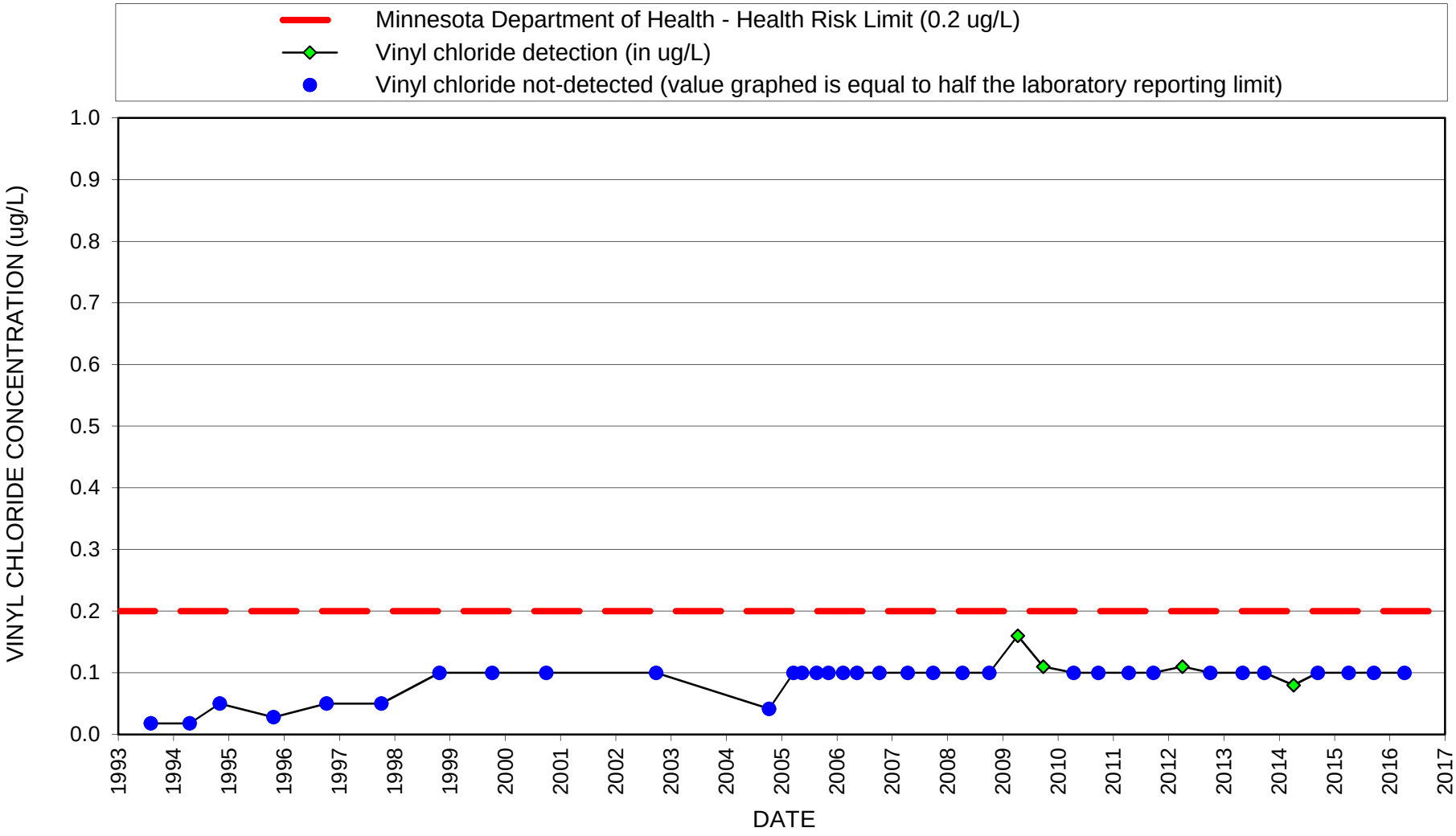

GHD 002012Campbell78-ATTC VC Graphs

# VINYL CHLORIDE CONCENTRATIONS
# 2 HUMMINGBIRD HILL (OLD WELL)
# NORTH OAKS, MINNESOTA



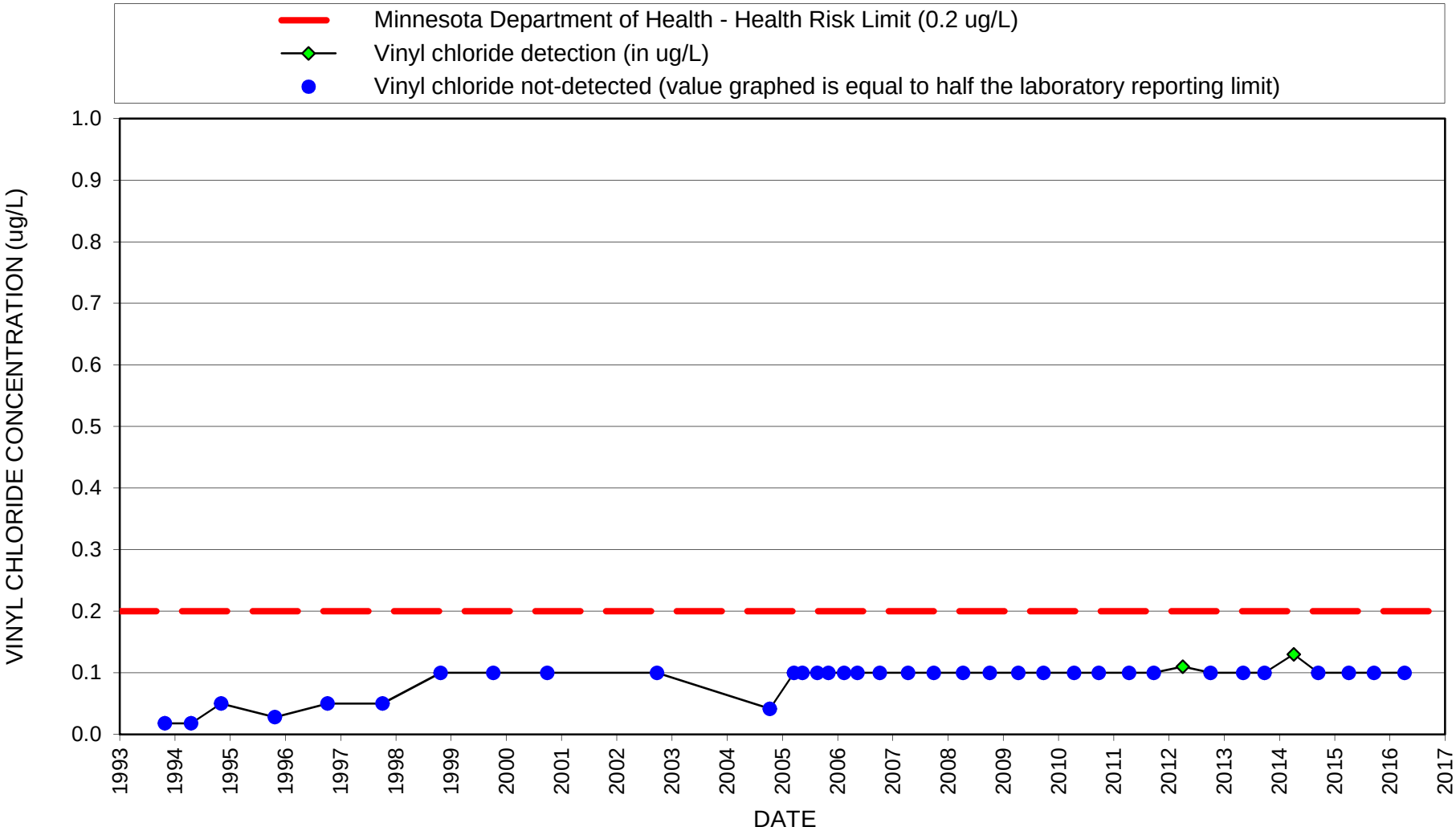

GHD 002012Campbell78-ATTC VC Graphs

# VINYL CHLORIDE CONCENTRATIONS
# 10 WEST SHORE ROAD
# NORTH OAKS, MINNESOTA



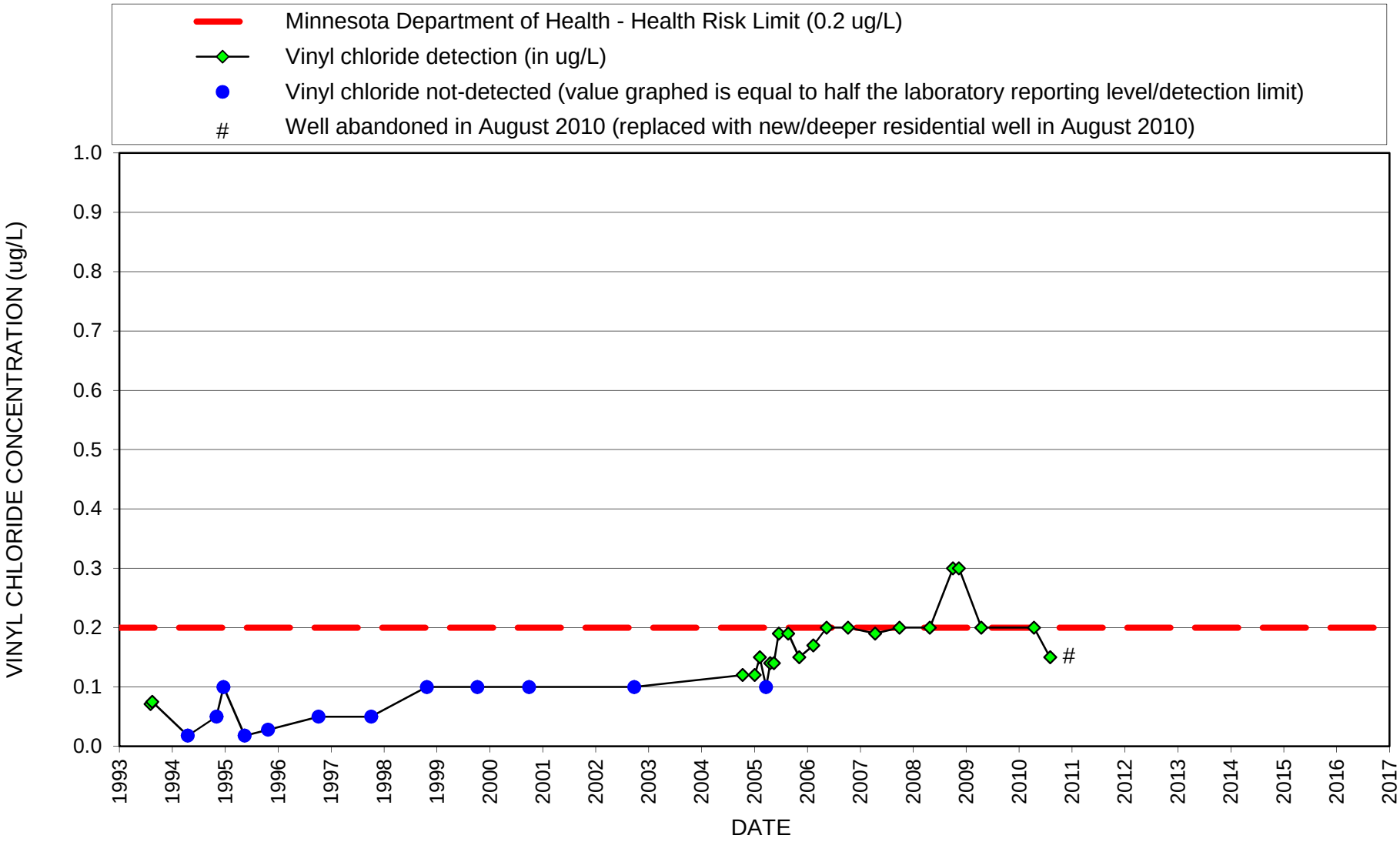

GHD 002012Campbell78-ATTC VC Graphs

# VINYL CHLORIDE CONCENTRATIONS
# 11 WEST SHORE ROAD
# NORTH OAKS, MINNESOTA

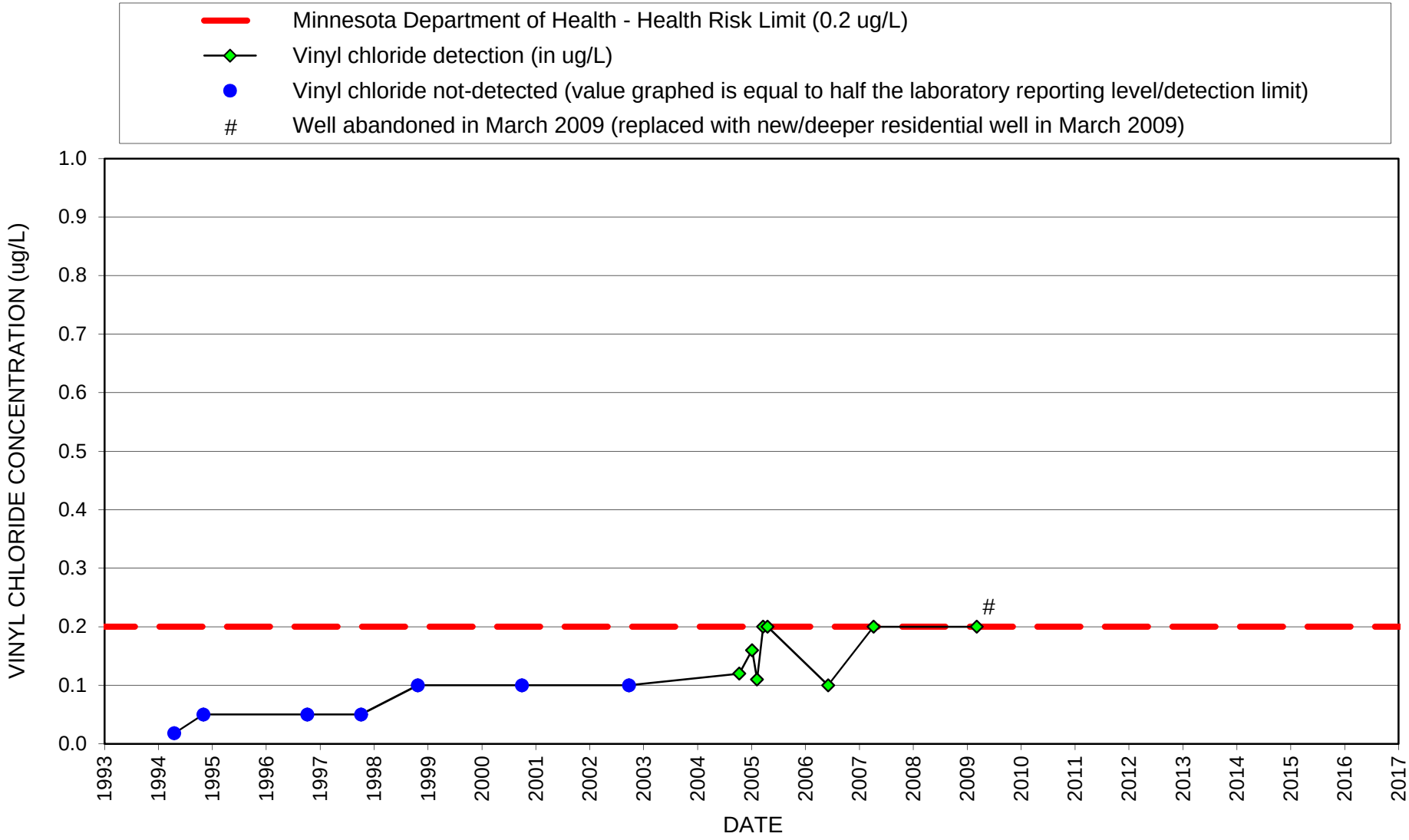



GHD 002012Campbell78-ATTC VC Graphs

# VINYL CHLORIDE CONCENTRATIONS
# 12 WEST SHORE ROAD (OLD WELL)
# NORTH OAKS, MINNESOTA

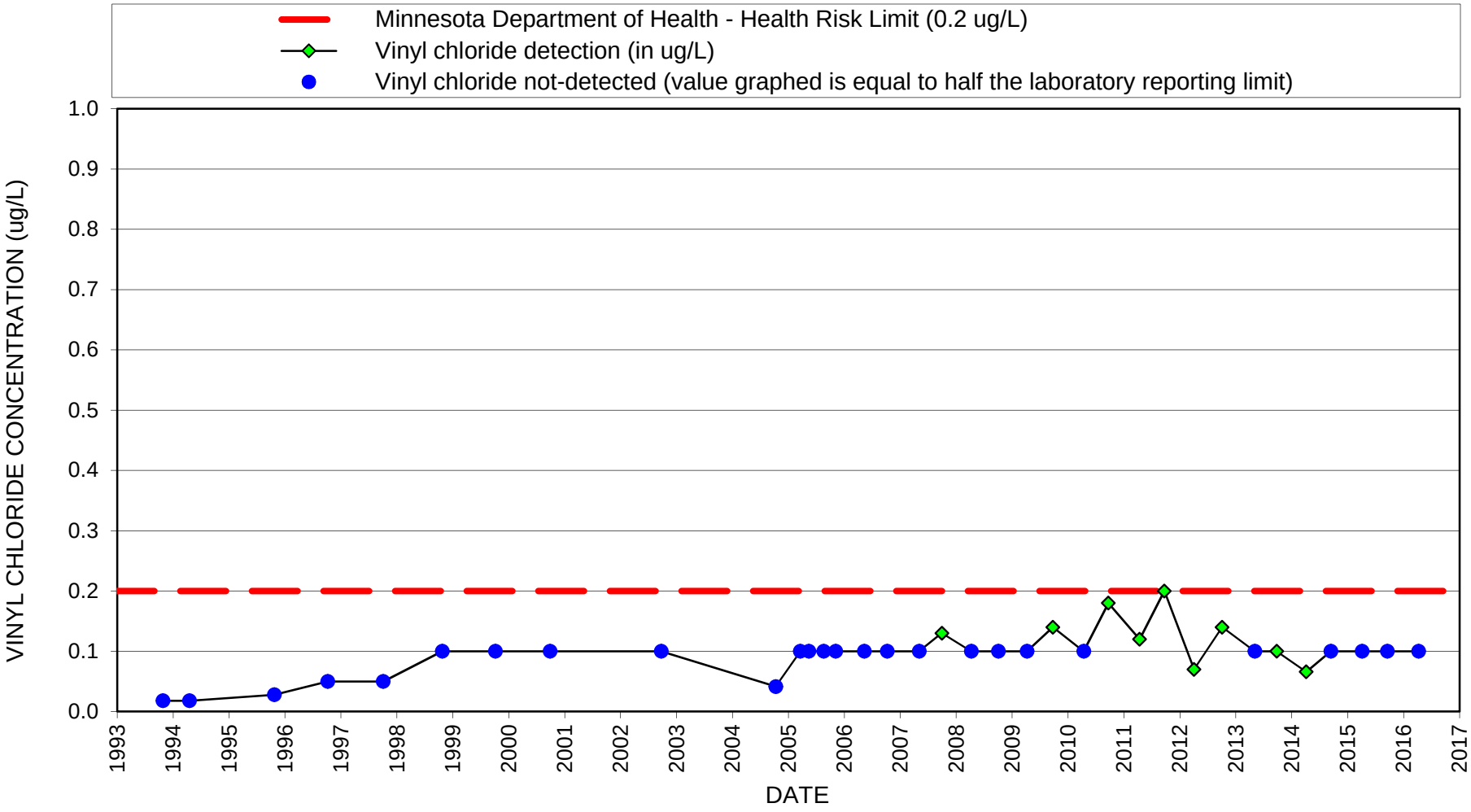


# VINYL CHLORIDE CONCENTRATIONS
# 13 WEST SHORE ROAD (OLD WELL)
# NORTH OAKS, MINNESOTA




GHD 002012Campbell78-ATTC VC Graphs

VINYL CHLORIDE CONCENTRATIONS
15 WEST SHORE ROAD
NORTH OAKS, MINNESOTA




GHD 002012Campbell78-ATTC VC Graphs

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