March 13, 2019 Reference No. 11152042

Mr. Peter Ramanauskas
U.S. Environmental Protection Agency, Region 5
Land and Chemicals Division
77 West Jackson Blvd., LU 9J
Chicago, Illinois 60604 3590

Original Sent Via Email

Dear Mr. Ramanauskas:

Re: Groundwater Sampling Summary and Results
Former Douglas Michigan Facility
200 Blue Star Highway
Douglas, Michigan 49406

1. Introduction

GHD Services Inc. (GHD) is providing this letter on behalf of Haworth Inc. (Haworth) for the facility located at 200 Blue Star Highway in Douglas, Michigan (Site) (Figure 1). The purpose of this letter is to provide the summary and results from the January 23 and 24, 2019 groundwater sampling event. The sampling activities were conducted as per the January 3, 2019 Groundwater Monitoring Plan (GWMP). The GWMP was prepared per the EPA's request to supplement the PCB Cleanup Plan submitted on August 3, 2018. The purpose of the groundwater sampling was to evaluate whether PCBs have leached to groundwater at the locations where elevated levels of trichlorethene (TCE) are present in groundwater.

2. Background

GHD submitted the January 3, 2018 GWMP based on the conference call with the Michigan Department of Environmental Quality (MDEQ) and Environmental Protection Agency (EPA) on December 20, 2018. As per the GWMP, groundwater was sampled from monitoring wells MW-03-12, MW-29, MW-D-103, MW-304-I and MW-304-D. Based on the GWMP, monitoring well MW-303-I was also planned to be sampled. However, MW-303-I could not be located and MW-303-D was sampled in its place. Each of the groundwater monitoring wells selected for sampling (except MW-303-D) was selected due to historic elevated concentration(s) of TCE in groundwater.

3. Groundwater Sampling

On January 23 and 24, 2019, GHD collected groundwater samples from the six monitoring wells described in Section 2. Prior to groundwater purging and sampling, static groundwater elevations were measured and recorded. Groundwater samples were collected from the monitoring wells using low-flow purging and sampling techniques with a bladder pump or peristaltic pump and dedicated tubing. Field parameters collected during purging included pH, temperature, conductivity, oxidation/reduction potential

(ORP), dissolved oxygen (DO), and turbidity. Groundwater samples were collected after the field parameters stabilized. The groundwater monitoring wells sampled are identified in Figure 2.

The groundwater samples were analyzed using USEPA Method 8260 for VOCs and Method 8082 for polychlorinated biphenyls (PCBs). The groundwater samples were shipped under chain-of-custody protocol to Test America Laboratories in North Canton, OH and analyzed under a 1 week turn-around-time (TAT).

All derived purge water along with any decontamination water were containerized and left on-site pending results from the sampling event.

4. Groundwater Results

Groundwater analytical results were compared against MDEQ Part 201 Groundwater Cleanup Criteria. The following is a summary of the results:

- PCBs were non-detect in all monitoring wells sampled. This includes all Aroclor isomers (1016 through 1260).
- TCE exceeded the MDEQ Part 201 Residential and Non-Residential Drinking Water Criteria (DWC) in each monitoring well sampled.
- TCE also exceeded Groundwater Surface Water interface (GSI) and Residential and Non-Residential Volatilization to Indoor Air Inhalation (VIAI) at MW-29, MW-304I, and MW-D-103.
- Other various VOCs exceeded GSI and/or DWC at MW-29, MW-304I, and MW-D-103.
- All other analyzed constituents were not detected or detected at concentrations below criteria.

Groundwater sampling locations are shown in Figure 2 and a summary of results compared against MDEQ Cleanup Criteria is presented in Table 2. The Laboratory Analytical Report is presented in Attachment 2.

5. Data Quality

Based on the assessment detailed in Attachment 1, the laboratory analytical data provide in Attachment 2 and summarized in Table 2, the data are acceptable without qualification.

6. Discussion of Results

During the January 23 and 24, 2019 groundwater sampling event, groundwater was collected from monitoring wells with known VOC impacts and analyzed for VOCs and PCBs. The purpose of the analysis was to determine if PCBs are present in the dissolved phase and if PCBs were associated with the VOC impacts. The results of the data confirmed TCE and other VOCs were present in groundwater consistent with previous data. The PCB results were non-detect; therefore, PCBs are not present at these locations with highly elevated VOC concentrations and there is no evidence that PCBs have impacted groundwater.

7. Closing

Please feel free to contact the undersigned at (248) 893-3410 should you require clarification or further information on any aspect of this letter.

Sincerely,

GHD

Thomas M. Kinney, C.P.G.

TMK/MC/ds/4/PR

Attachments: Figure 1: Site Location
Figure 2: Site Map with Monitoring Well Locations
Table 1: Sample Analysis Summary
Table 2: Summary of Groundwater Analytical Results
Attachment 1: Data Quality Memorandum
Attachment 2: Laboratory Analytical Report

SOURCE: USGS QUADRANGLE MAP; SAUGATUCK, MICHIGAN, 2017

0 1000 2000ft

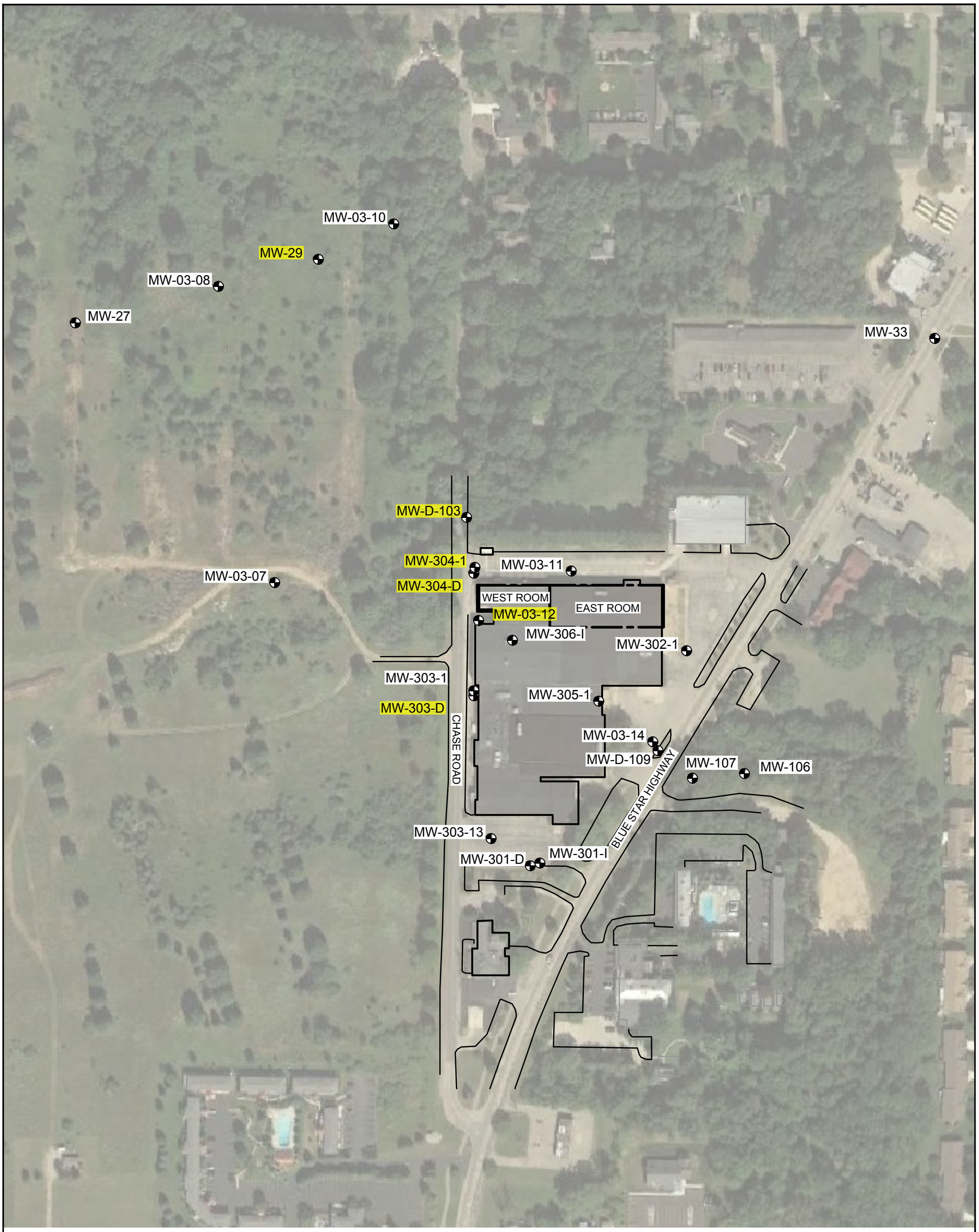
HAWORTH
200 BLUE STAR HIGHWAY
DOUGLAS, MICHIGAN

11152042-02
Jul 31, 2018

SITE LOCATION

FIGURE 1

CAD File: I:\drawings\11150000s\11152042\11152042-REPORTS\11152042-02(001)GN-DE008.dwg



NOTE: WELL LOCATIONS FROM WESTON SOLUTIONS FIGURE 2

LEGEND

AREA

MW-D-103 INDICATES WELL SAMPLED

MW-03-07 MONITORING WELL

Source: GOOGLE EARTH (DIGITAL GLOBE 9/9/2017)

0 100 200ft

Coordinate System:
STATE PLANE
MI-NAD83

HAWORTH
200 BLUE STAR HIGHWAY
DOUGLAS, MICHIGAN

11152042-04

Mar 12, 2019

SITE MAP MONITORING WELL LOCATIONS

FIGURE 2

CAD File: I:\drawings\11150000s\11152042\11152042-REPORTS\11152042-04(001)\11152042-04(001)GN-DE001.dwg

Table 1

Sample Analysis Summary
Former Douglas Facility
Douglas, Michigan

Sample ID	Location Description	Collection Date (mm/dd/yy)	Sample Type	Matrix Code	QA/QC	Parent ID	Analysis
Rinsate-11152042-012319-JY-001	NA	1/23/2019	Groundwater	WG	Rinsate		VOCs, PCBs
TB-11152042-012319	NA	1/23/2019	Groundwater	WG	TB		VOCs
GW-11152042-012319-JY-001	MW-29	1/23/2019	Groundwater	WG			VOCs, PCBs
GW-11152042-012319-JY-002	MW-D-103	1/23/2019	Groundwater	WG			VOCs, PCBs
GW-11152042-012319-JY-003	MW304I	1/23/2019	Groundwater	WG			VOCs, PCBs
GW-11152042-012319-JY-004	MW-304I	1/23/2019	Groundwater	WG	Duplicate	- JY-003	VOCs, PCBs
GW-11152042-012319-JY-005	MW-304D	1/23/2019	Groundwater	WG			VOCs, PCBs
GW-11152042-012319-JY-006	MW-3-12	1/23/2019	Groundwater	WG	MS/MSD		VOCs, PCBs
GW-11152042-012419-JY-007	MW-303D	1/24/2019	Groundwater	WG			VOCs, PCBs

Notes:
QA/QC - Quality Assurance/Quality Control
Parent ID - Orignal sample from which a duplicate sample was collected from.
WG - Groundwater Sample
VOCs - Volatile organic compounds
PCBs - Polychlorinated biphenyls

Table 2

Summary of Groundwater Analytical Results
Former Douglas Facility
Douglas, Michigan

Sample Location:		**MDEQ Generic Groundwater Cleanup Criteria: Residential and Nonresidential** [1]					**MW-29**	**MW-303D**	**MW-304D**	**MW-304I**	**MW-304I**	**MW-3-12**	**MW-D-103**
Sample Identification:		Residential	Non-Residential	Groundwater	Residential Groundwater	Non-Residential Groundwater	**1/23/2019**	**1/24/2019**	**1/23/2019**	**1/23/2019**	**1/23/2019**	**1/23/2019**	**1/23/2019**
Sample Type:		Drinking Water	Drinking Water	Surface Water	Volatilization to	Volatilization to					**Duplicate**		
Sample Depth:				Interface	Indoor Air Inhalation	Indoor Air Inhalation							
		a	**b**	**c**	**d**	**e**							
Polychlorinated Biphenyls (PCBs)	**Units**												
Aroclor-1016 (PCB-1016)	ug/L	0.5	0.5	0.2	45	45	0.097 U	0.095 U	0.095 U	0.099 U	0.098 U	0.095 U	0.095 U
Aroclor-1221 (PCB-1221)	ug/L	0.5	0.5	0.2	45	45	0.097 U	0.095 U	0.095 U	0.099 U	0.098 U	0.095 U	0.095 U
Aroclor-1232 (PCB-1232)	ug/L	0.5	0.5	0.2	45	45	0.097 U	0.095 U	0.095 U	0.099 U	0.098 U	0.095 U	0.095 U
Aroclor-1242 (PCB-1242)	ug/L	0.5	0.5	0.2	45	45	0.097 U	0.095 U	0.095 U	0.099 U	0.098 U	0.095 U	0.095 U
Aroclor-1248 (PCB-1248)	ug/L	0.5	0.5	0.2	45	45	0.097 U	0.095 U	0.095 U	0.099 U	0.098 U	0.095 U	0.095 U
Aroclor-1254 (PCB-1254)	ug/L	0.5	0.5	0.2	45	45	0.097 U	0.095 U	0.095 U	0.099 U	0.098 U	0.095 U	0.095 U
Aroclor-1260 (PCB-1260)	ug/L	0.5	0.5	0.2	45	45	0.097 U	0.095 U	0.095 U	0.099 U	0.098 U	0.095 U	0.095 U
Total PCBs	ug/L	0.5	0.5	0.2	45	45	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	ug/L	200	200	89	660000	1300000	200 U	1.0 U	2.0 U	**250 J[abc]**	**290 J[abc]**	2.8 J	1000 U
1,1,2,2-Tetrachloroethane	ug/L	8.5	35	78	12000	77000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
1,1,2-Trichloroethane	ug/L	5	5	330	17000	110000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
1,1-Dichloroethane	ug/L	880	2500	740	1000000	2300000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
1,1-Dichloroethene	ug/L	7	7	130	200	1300	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
1,2,4-Trichlorobenzene	ug/L	70	70	99	300000	300000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2	0.2	NA	220	1200	400 U	2.0 U	4.0 U	2000 U	2000 U	16 U	2000 U
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05	0.05	5.7	2400	15000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
1,2-Dichlorobenzene	ug/L	600	600	13	160000	160000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
1,2-Dichloroethane	ug/L	5	5	360	9600	59000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
1,2-Dichloropropane	ug/L	5	5	230	16000	36000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
1,3-Dichlorobenzene	ug/L	6.6	19	28	18000	41000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
1,4-Dichlorobenzene	ug/L	75	75	17	16000	74000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13000	38000	2200	240000000	240000000	2000 U	10 U	20 U	10000 U	10000 U	80 U	10000 U
2-Hexanone	ug/L	1000	2900	ID	4200000	8700000	2000 U	10 U	20 U	10000 U	10000 U	80 U	10000 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1800	5200	ID	20000000	20000000	2000 U	10 U	20 U	10000 U	10000 U	80 U	10000 U
Acetone	ug/L	730	2100	1700	1000000000	1000000000	2000 U	10 U	20 U	10000 U	10000 U	80 U	10000 U
Benzene	ug/L	5	5	200	5600	35000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Bromodichloromethane	ug/L	80	80	ID	4800	37000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Bromoform	ug/L	80	80	ID	470000	3100000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Bromomethane (Methyl bromide)	ug/L	10	29	5	4000	9000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Carbon disulfide	ug/L	800	2300	ID	250000	550000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Carbon tetrachloride	ug/L	5	5	38	370	2400	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Chlorobenzene	ug/L	100	100	25	210000	470000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Chloroethane	ug/L	430	1700	1100	5700000	5700000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Chloroform (Trichloromethane)	ug/L	80	80	350	28000	180000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Chloromethane (Methyl chloride)	ug/L	260	1100	ID	8600	45000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
cis-1,2-Dichloroethene	ug/L	70	70	620	93000	210000	**1700[abc]**	0.25 J	1.7 J	**1100[abc]**	**1200[abc]**	5.7 J	**9100[abc]**
cis-1,3-Dichloropropene	ug/L	NA	NA	NA	NA	NA	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Cyclohexane	ug/L	NA	NA	NA	NA	NA	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Dibromochloromethane	ug/L	80	80	ID	14000	110000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Dichlorodifluoromethane (CFC-12)	ug/L	1700	4800	ID	220000	300000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Ethylbenzene	ug/L	74	74	18	110000	170000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Isopropyl benzene	ug/L	800	2300	28	56000	56000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Methyl acetate	ug/L	NA	NA	NA	NA	NA	2000 U	10 U	20 U	10000 U	10000 U	80 U	10000 U
Methyl cyclohexane	ug/L	NA	NA	NA	NA	NA	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Methyl tert butyl ether (MTBE)	ug/L	40	40	7100	47000000	47000000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Methylene chloride	ug/L	5	5	1500	220000	1400000	1000 U	5.0 U	10 U	5000 U	5000 U	40 U	5000 U
Styrene	ug/L	100	100	80	170000	310000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Tetrachloroethene	ug/L	5	5	60	25000	170000	200 U	1.0 U	2.0 U	1000 U	1000 U	1.2 J	1000 U
Toluene	ug/L	790	790	270	530000	530000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
trans-1,2-Dichloroethene	ug/L	100	100	1500	85000	200000	94 J	1.0 U	0.42 J	1000 U	1000 U	8.0 U	**660 J[ab]**
trans-1,3-Dichloropropene	ug/L	NA	NA	NA	NA	NA	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Trichloroethene	ug/L	5	5	200	2200	4900	**5000[abcde]**	**6.1[ab]**	**47[ab]**	**25000[abcde]**	**27000[abcde]**	**140[ab]**	**23000[abcde]**
Trichlorofluoromethane (CFC-11)	ug/L	2600	7300	NA	1100000	1100000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Trifluorotrichloroethane (CFC-113)	ug/L	170000	170000	32	170000	170000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Vinyl chloride	ug/L	2	2	13	1100	13000	200 U	1.0 U	2.0 U	1000 U	1000 U	8.0 U	1000 U
Xylenes (total)	ug/L	280	280	49	190000	190000	400 U	2.0 U	4.0 U	2000 U	2000 U	16 U	2000 U

Notes:
-- Not analyzed.
ug/L - Microgram per liter.
[1] MDEQ (Michigan) Generic groundwater cleanup criteria, administrative rule R 299.44 effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended (Part 201 Groundwater Criteria).
NA - Criteria not available.
U - Not present at or above the associated value.
ID - Insufficient data to develop criterion.
2.6[ab] Indicates a concentration exceedance of Part 201 Cleanup Criteria.
J - Indicates an estimated value.

Attachment 1
Data Quality Memorandum

Memorandum

February 6, 2019

To:	Tom Kinney	Ref. No.:	11152042
From:	James Abston/tl/2/Det	Tel:	248-893-3381

Subject: **Analytical Results and Reduced Validation**
Groundwater Sampling
Hayworth, Inc.
Douglas, Michigan
January 2019

1. Introduction

This document details a reduced validation of analytical results for water samples collected in support of the groundwater sampling at the Hayworth, Inc. site during January 2019. Samples were submitted to Test America Laboratories located in North Canton, Ohio. 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 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) and matrix spikes (MS).

The QA/QC criteria by which these data have been assessed are outlined in the analytical method referenced in Table 3 and applicable guidance from the documents entitled:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review", USEPA 540-R-08-01, June 2008

Item i) will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria for the analysis is summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding time.

All samples were properly preserved, 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.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation with the exception of toluene. However, the associated sample results were non-detect and therefore no qualification was required.

4. Surrogate Spike Recoveries

In accordance with the method employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for VOC and PCB determinations were spiked with the appropriate number of surrogate compounds prior to sample extraction and analysis.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries were within the laboratory control limits.

5. Laboratory Control Sample Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the method employed, independent of sample matrix effects.

For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS contained the compounds specified in the method. All LCS recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy with the exception of one high recovery for 4-Methyl-2-pentanone. The associated sample results were non-detect and therefore no qualification was required.

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.

MS/MSD analyses were performed as specified in Table 1.

The MS/MSD samples were spiked with the compounds specified in the method. All percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

7. Field QA/QC Samples

The field QA/QC consisted of one trip blank sample and one field duplicate sample set.

7.1 Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, one trip blank sample was submitted to the laboratory for volatile organic compound (VOC) analysis. All results were non-detect for the compounds of interest.

7.2 Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one field duplicate sample was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with this duplicate sample must be less than 100 percent for soil samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is two times the RL value for soil samples.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

8. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were reported as estimated (J) in Table 2 unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Table 2.

9. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable without qualification.

Table 1

Sample Collection and Analysis Summary
Groundwater Sampling
Hayworth, Inc.
Douglas, Michigan
January 2019

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters: TCL VOC	Analysis/Parameters: PCBs	Comments
GW-11152042-012319-JY-001	MW-29	Water	01/23/2019	09:05	X	X	
GW-11152042-012319-JY-006	MW-3-12	Water	01/23/2019	17:25	X	X	MS/MSD
GW-11152042-012419-JY-007	MW-303D	Water	01/24/2019	09:00	X	X	
GW-11152042-012319-JY-005	MW-304D	Water	01/23/2019	15:40	X	X	
GW-11152042-012319-JY-003	MW-304I	Water	01/23/2019	13:25	X	X	
GW-11152042-012319-JY-004	MW-304I	Water	01/23/2019	13:35	X	X	FD (GW-11152042-012319-JY-003)
GW-11152042-012319-JY-002	MW-D-103	Water	01/23/2019	11:10	X	X	
RINSATE-11152042-012319	RINSATE	Water	01/23/2019	--	X	X	
TB-11152042-012319	TRIPBLANK	Water	01/23/2019	--	X		

Notes:

FD - Field Duplicate sample of sample in parenthesis
MS/MSD - Matrix Spike/Matrix Spike Duplicate
VOC - Volatile Organic Compounds
PCB - Polychlorinated Biphenyls

Table 2

Validated Analytical Results Summary
Groundwater Sampling
Hayworth, Inc.
Douglas, Michigan
January 2019

Location ID:		**MW-29**	**MW-3-12**	**MW-303D**	**MW-304D**
Sample Name:		**GW-11152042-012319-JY-001**	**GW-11152042-012319-JY-006**	**GW-11152042-012419-JY-007**	**GW-11152042-012319-JY-005**
Sample Date:		**01/23/2019**	**01/23/2019**	**01/24/2019**	**01/23/2019**
Parameters	**Unit**				
Volatile Organic Compounds, BTEX					
1,1,1-Trichloroethane	µg/L	200 U	2.8 J	1.0 U	2.0 U
1,1,2,2-Tetrachloroethane	µg/L	200 U	8.0 U	1.0 U	2.0 U
1,1,2-Trichloroethane	µg/L	200 U	8.0 U	1.0 U	2.0 U
1,1-Dichloroethane	µg/L	200 U	8.0 U	1.0 U	2.0 U
1,1-Dichloroethene	µg/L	200 U	8.0 U	1.0 U	2.0 U
1,2,4-Trichlorobenzene	µg/L	200 U	8.0 U	1.0 U	2.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	400 U	16 U	2.0 U	4.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	200 U	8.0 U	1.0 U	2.0 U
1,2-Dichlorobenzene	µg/L	200 U	8.0 U	1.0 U	2.0 U
1,2-Dichloroethane	µg/L	200 U	8.0 U	1.0 U	2.0 U
1,2-Dichloropropane	µg/L	200 U	8.0 U	1.0 U	2.0 U
1,3-Dichlorobenzene	µg/L	200 U	8.0 U	1.0 U	2.0 U
1,4-Dichlorobenzene	µg/L	200 U	8.0 U	1.0 U	2.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	2000 U	80 U	10 U	20 U
2-Hexanone	µg/L	2000 U	80 U	10 U	20 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	2000 U	80 U	10 U	20 U
Acetone	µg/L	2000 U	80 U	10 U	20 U
Benzene	µg/L	200 U	8.0 U	1.0 U	2.0 U
Bromodichloromethane	µg/L	200 U	8.0 U	1.0 U	2.0 U
Bromoform	µg/L	200 U	8.0 U	1.0 U	2.0 U
Bromomethane (Methyl bromide)	µg/L	200 U	8.0 U	1.0 U	2.0 U
Carbon disulfide	µg/L	200 U	8.0 U	1.0 U	2.0 U
Carbon tetrachloride	µg/L	200 U	8.0 U	1.0 U	2.0 U
Chlorobenzene	µg/L	200 U	8.0 U	1.0 U	2.0 U
Chloroethane	µg/L	200 U	8.0 U	1.0 U	2.0 U
Chloroform (Trichloromethane)	µg/L	200 U	8.0 U	1.0 U	2.0 U
Chloromethane (Methyl chloride)	µg/L	200 U	8.0 U	1.0 U	2.0 U
cis-1,2-Dichloroethene	µg/L	1700	5.7 J	0.25 J	1.7 J
cis-1,3-Dichloropropene	µg/L	200 U	8.0 U	1.0 U	2.0 U
Cyclohexane	µg/L	200 U	8.0 U	1.0 U	2.0 U
Dibromochloromethane	µg/L	200 U	8.0 U	1.0 U	2.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	200 U	8.0 U	1.0 U	2.0 U
Ethylbenzene	µg/L	200 U	8.0 U	1.0 U	2.0 U
Isopropyl benzene	µg/L	200 U	8.0 U	1.0 U	2.0 U
Methyl acetate	µg/L	2000 U	80 U	10 U	20 U
Methyl cyclohexane	µg/L	200 U	8.0 U	1.0 U	2.0 U

Table 2

Validated Analytical Results Summary
Groundwater Sampling
Hayworth, Inc.
Douglas, Michigan
January 2019

Location ID:		**MW-29**	**MW-3-12**	**MW-303D**	**MW-304D**
Sample Name:		**GW-11152042-012319-JY-001**	**GW-11152042-012319-JY-006**	**GW-11152042-012419-JY-007**	**GW-11152042-012319-JY-005**
Sample Date:		**01/23/2019**	**01/23/2019**	**01/24/2019**	**01/23/2019**
Parameters	**Unit**				
Volatile Organic Compounds, BTEX					
Methyl tert butyl ether (MTBE)	µg/L	200 U	8.0 U	1.0 U	2.0 U
Methylene chloride	µg/L	1000 U	40 U	5.0 U	10 U
Styrene	µg/L	200 U	8.0 U	1.0 U	2.0 U
Tetrachloroethene	µg/L	200 U	1.2 J	1.0 U	2.0 U
Toluene	µg/L	200 U	8.0 U	1.0 U	2.0 U
trans-1,2-Dichloroethene	µg/L	94 J	8.0 U	1.0 U	0.42 J
trans-1,3-Dichloropropene	µg/L	200 U	8.0 U	1.0 U	2.0 U
Trichloroethene	µg/L	5000	140	6.1	47
Trichlorofluoromethane (CFC-11)	µg/L	200 U	8.0 U	1.0 U	2.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	200 U	8.0 U	1.0 U	2.0 U
Vinyl chloride	µg/L	200 U	8.0 U	1.0 U	2.0 U
Xylenes (total)	µg/L	400 U	16 U	2.0 U	4.0 U
PCBs					
Aroclor-1016 (PCB-1016)	µg/L	0.097 U	0.095 U	0.095 U	0.095 U
Aroclor-1221 (PCB-1221)	µg/L	0.097 U	0.095 U	0.095 U	0.095 U
Aroclor-1232 (PCB-1232)	µg/L	0.097 U	0.095 U	0.095 U	0.095 U
Aroclor-1242 (PCB-1242)	µg/L	0.097 U	0.095 U	0.095 U	0.095 U
Aroclor-1248 (PCB-1248)	µg/L	0.097 U	0.095 U	0.095 U	0.095 U
Aroclor-1254 (PCB-1254)	µg/L	0.097 U	0.095 U	0.095 U	0.095 U
Aroclor-1260 (PCB-1260)	µg/L	0.097 U	0.095 U	0.095 U	0.095 U
Total PCBs	µg/L	0	0	0	0

Table 2

Validated Analytical Results Summary
Groundwater Sampling
Hayworth, Inc.
Douglas, Michigan
January 2019

Location ID:		**MW-304I**	**MW-304I**	**MW-D-103**
Sample Name:		**GW-11152042-012319-JY-003**	**GW-11152042-012319-JY-004**	**GW-11152042-012319-JY-002**
Sample Date:		**01/23/2019**	**01/23/2019**	**01/23/2019**
			Duplicate	
Parameters	**Unit**			
Volatile Organic Compounds, BTEX				
1,1,1-Trichloroethane	µg/L	250 J	290 J	1000 U
1,1,2,2-Tetrachloroethane	µg/L	1000 U	1000 U	1000 U
1,1,2-Trichloroethane	µg/L	1000 U	1000 U	1000 U
1,1-Dichloroethane	µg/L	1000 U	1000 U	1000 U
1,1-Dichloroethene	µg/L	1000 U	1000 U	1000 U
1,2,4-Trichlorobenzene	µg/L	1000 U	1000 U	1000 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	2000 U	2000 U	2000 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1000 U	1000 U	1000 U
1,2-Dichlorobenzene	µg/L	1000 U	1000 U	1000 U
1,2-Dichloroethane	µg/L	1000 U	1000 U	1000 U
1,2-Dichloropropane	µg/L	1000 U	1000 U	1000 U
1,3-Dichlorobenzene	µg/L	1000 U	1000 U	1000 U
1,4-Dichlorobenzene	µg/L	1000 U	1000 U	1000 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10000 U	10000 U	10000 U
2-Hexanone	µg/L	10000 U	10000 U	10000 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10000 U	10000 U	10000 U
Acetone	µg/L	10000 U	10000 U	10000 U
Benzene	µg/L	1000 U	1000 U	1000 U
Bromodichloromethane	µg/L	1000 U	1000 U	1000 U
Bromoform	µg/L	1000 U	1000 U	1000 U
Bromomethane (Methyl bromide)	µg/L	1000 U	1000 U	1000 U
Carbon disulfide	µg/L	1000 U	1000 U	1000 U
Carbon tetrachloride	µg/L	1000 U	1000 U	1000 U
Chlorobenzene	µg/L	1000 U	1000 U	1000 U
Chloroethane	µg/L	1000 U	1000 U	1000 U
Chloroform (Trichloromethane)	µg/L	1000 U	1000 U	1000 U
Chloromethane (Methyl chloride)	µg/L	1000 U	1000 U	1000 U
cis-1,2-Dichloroethene	µg/L	1100	1200	9100
cis-1,3-Dichloropropene	µg/L	1000 U	1000 U	1000 U
Cyclohexane	µg/L	1000 U	1000 U	1000 U
Dibromochloromethane	µg/L	1000 U	1000 U	1000 U
Dichlorodifluoromethane (CFC-12)	µg/L	1000 U	1000 U	1000 U
Ethylbenzene	µg/L	1000 U	1000 U	1000 U
Isopropyl benzene	µg/L	1000 U	1000 U	1000 U
Methyl acetate	µg/L	10000 U	10000 U	10000 U
Methyl cyclohexane	µg/L	1000 U	1000 U	1000 U

Table 2

Validated Analytical Results Summary
Groundwater Sampling
Hayworth, Inc.
Douglas, Michigan
January 2019

Location ID:		**MW-304I**	**MW-304I**	**MW-D-103**
Sample Name:		**GW-11152042-012319-JY-003**	**GW-11152042-012319-JY-004**	**GW-11152042-012319-JY-002**
Sample Date:		**01/23/2019**	**01/23/2019**	**01/23/2019**
			Duplicate	
Parameters	**Unit**			
Volatile Organic Compounds, BTEX				
Methyl tert butyl ether (MTBE)	µg/L	1000 U	1000 U	1000 U
Methylene chloride	µg/L	5000 U	5000 U	5000 U
Styrene	µg/L	1000 U	1000 U	1000 U
Tetrachloroethene	µg/L	1000 U	1000 U	1000 U
Toluene	µg/L	1000 U	1000 U	1000 U
trans-1,2-Dichloroethene	µg/L	1000 U	1000 U	660 J
trans-1,3-Dichloropropene	µg/L	1000 U	1000 U	1000 U
Trichloroethene	µg/L	25000	27000	23000
Trichlorofluoromethane (CFC-11)	µg/L	1000 U	1000 U	1000 U
Trifluorotrichloroethane (CFC-113)	µg/L	1000 U	1000 U	1000 U
Vinyl chloride	µg/L	1000 U	1000 U	1000 U
Xylenes (total)	µg/L	2000 U	2000 U	2000 U
PCBs				
Aroclor-1016 (PCB-1016)	µg/L	0.099 U	0.098 U	0.095 U
Aroclor-1221 (PCB-1221)	µg/L	0.099 U	0.098 U	0.095 U
Aroclor-1232 (PCB-1232)	µg/L	0.099 U	0.098 U	0.095 U
Aroclor-1242 (PCB-1242)	µg/L	0.099 U	0.098 U	0.095 U
Aroclor-1248 (PCB-1248)	µg/L	0.099 U	0.098 U	0.095 U
Aroclor-1254 (PCB-1254)	µg/L	0.099 U	0.098 U	0.095 U
Aroclor-1260 (PCB-1260)	µg/L	0.099 U	0.098 U	0.095 U
Total PCBs	µg/L	0	0	0

Notes:

J - Estimated concentration
U - Not detected at the associated reporting limit
PCB - Polychlorinated biphenyl

Table 3

Analytical Methods
Groundwater Sampling
Hayworth, Inc.
Douglas, Michigan
January 2019

Parameter	Method	Matrix	Preservation	Holding Time: Collection to Extraction (Days)	Holding Time: Collection or Extraction to Analysis (Days)
Polychlorinated Biphenyls (PCBs)	SW-846 8082	Water	Iced, 0-6° C	14	40
Volatile Organic Compounds (VOC)	SW-846 8260B	Water	pH < 2 and Iced, 0-6° C	-	14

Notes:

Method References:
SW-846 -"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

Attachment 2
Laboratory Analytical Report

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-107325-1
Client Project/Site: 11152042, Hayworth, Douglas, MI

For:
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Attn: James Abston

Denise D Heckler

Authorized for release by:
1/31/2019 1:18:08 PM

Denise Heckler, Project Manager II
(330)966-9477
denise.heckler@testamericainc.com

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.

Table of Contents

Case Narrative

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Job ID: 240-107325-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative
240-107325-1

Comments
No additional comments.

Receipt
The samples were received on 1/25/2019 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.6º C, 1.1º C and 1.5º C.

GC/MS VOA
Method(s) 8260B: The MS/MSD for batch 365924 was not analyzed due to an instrument malfunction.

Method(s) 8260B: The laboratory control sample (LCS) for analytical batch 240-366099 recovered outside control limits for the following analyte: 4-Methyl-2-pentanone. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data has been reported.

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

GC Semi VOA
Method(s) 8082A: The following samples required a copper clean-up to reduce matrix interferences caused by sulfur: GW-11152042-012319-JY-006 (240-107325-8), GW-11152042-012319-JY-006 (240-107325-8[MS]) and GW-11152042-012319-JY-006 (240-107325-8[MSD]).3987385

Method(s) 8082A: The following samples required a copper clean-up to reduce matrix interferences caused by sulfur: GW-11152042-012319-JY-002 (240-107325-4), GW-11152042-012319-JY-003 (240-107325-5), GW-11152042-012319-JY-005 (240-107325-7) and GW-11152042-012419-JY-007 (240-107325-9).3987385

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

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

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

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

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	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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)

Sample Summary

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-107325-1	TB-11152042-012319	Water	01/23/19 00:00	01/25/19 09:00
240-107325-2	RINSATE-11152042-012319	Water	01/23/19 00:00	01/25/19 09:00
240-107325-3	GW-11152042-012319-JY-001	Water	01/23/19 09:05	01/25/19 09:00
240-107325-4	GW-11152042-012319-JY-002	Water	01/23/19 11:10	01/25/19 09:00
240-107325-5	GW-11152042-012319-JY-003	Water	01/23/19 13:25	01/25/19 09:00
240-107325-6	GW-11152042-012319-JY-004	Water	01/23/19 13:35	01/25/19 09:00
240-107325-7	GW-11152042-012319-JY-005	Water	01/23/19 15:40	01/25/19 09:00
240-107325-8	GW-11152042-012319-JY-006	Water	01/23/19 17:25	01/25/19 09:00
240-107325-9	GW-11152042-012419-JY-007	Water	01/24/19 09:00	01/25/19 09:00

Detection Summary

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Client Sample ID: TB-11152042-012319 — Lab Sample ID: 240-107325-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.15	J	1.0	0.14	ug/L	1		8260B	Total/NA

Client Sample ID: RINSATE-11152042-012319 — Lab Sample ID: 240-107325-2

No Detections.

Client Sample ID: GW-11152042-012319-JY-001 — Lab Sample ID: 240-107325-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	5000		200	20	ug/L	200		8260B	Total/NA
cis-1,2-Dichloroethene	1700		200	32	ug/L	200		8260B	Total/NA
trans-1,2-Dichloroethene	94	J	200	38	ug/L	200		8260B	Total/NA

Client Sample ID: GW-11152042-012319-JY-002 — Lab Sample ID: 240-107325-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	23000		1000	100	ug/L	1000		8260B	Total/NA
cis-1,2-Dichloroethene	9100		1000	160	ug/L	1000		8260B	Total/NA
trans-1,2-Dichloroethene	660	J	1000	190	ug/L	1000		8260B	Total/NA

Client Sample ID: GW-11152042-012319-JY-003 — Lab Sample ID: 240-107325-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	25000		1000	100	ug/L	1000		8260B	Total/NA
1,1,1-Trichloroethane	250	J	1000	240	ug/L	1000		8260B	Total/NA
cis-1,2-Dichloroethene	1100		1000	160	ug/L	1000		8260B	Total/NA

Client Sample ID: GW-11152042-012319-JY-004 — Lab Sample ID: 240-107325-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	27000		1000	100	ug/L	1000		8260B	Total/NA
1,1,1-Trichloroethane	290	J	1000	240	ug/L	1000		8260B	Total/NA
cis-1,2-Dichloroethene	1200		1000	160	ug/L	1000		8260B	Total/NA

Client Sample ID: GW-11152042-012319-JY-005 — Lab Sample ID: 240-107325-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	47		2.0	0.20	ug/L	2		8260B	Total/NA
cis-1,2-Dichloroethene	1.7	J	2.0	0.32	ug/L	2		8260B	Total/NA
trans-1,2-Dichloroethene	0.42	J	2.0	0.38	ug/L	2		8260B	Total/NA

Client Sample ID: GW-11152042-012319-JY-006 — Lab Sample ID: 240-107325-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	1.2	J	8.0	1.2	ug/L	8		8260B	Total/NA
Trichloroethene	140		8.0	0.80	ug/L	8		8260B	Total/NA
1,1,1-Trichloroethane	2.8	J	8.0	1.9	ug/L	8		8260B	Total/NA
cis-1,2-Dichloroethene	5.7	J	8.0	1.3	ug/L	8		8260B	Total/NA

Client Sample ID: GW-11152042-012419-JY-007 — Lab Sample ID: 240-107325-9

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Client Sample ID: GW-11152042-012419-JY-007 (Continued) — Lab Sample ID: 240-107325-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	6.1		1.0	0.10	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	0.25	J	1.0	0.16	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL CAN
5030B	Purge and Trap	SW846	TAL CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: TB-11152042-012319
Date Collected: 01/23/19 00:00
Date Received: 01/25/19 09:00

Lab Sample ID: 240-107325-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			01/29/19 17:58	1
Benzene	1.0	U	1.0	0.13	ug/L			01/29/19 17:58	1
Dichlorobromomethane	1.0	U	1.0	0.17	ug/L			01/29/19 17:58	1
Bromoform	1.0	U	1.0	0.76	ug/L			01/29/19 17:58	1
Bromomethane	1.0	U	1.0	0.42	ug/L			01/29/19 17:58	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			01/29/19 17:58	1
Carbon disulfide	1.0	U	1.0	0.28	ug/L			01/29/19 17:58	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			01/29/19 17:58	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			01/29/19 17:58	1
Chloroethane	1.0	U	1.0	0.83	ug/L			01/29/19 17:58	1
Chloroform	1.0	U	1.0	0.13	ug/L			01/29/19 17:58	1
Chloromethane	1.0	U	1.0	0.20	ug/L			01/29/19 17:58	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			01/29/19 17:58	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			01/29/19 17:58	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			01/29/19 17:58	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			01/29/19 17:58	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			01/29/19 17:58	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			01/29/19 17:58	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			01/29/19 17:58	1
2-Hexanone	10	U	10	0.54	ug/L			01/29/19 17:58	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			01/29/19 17:58	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			01/29/19 17:58	1
Styrene	1.0	U	1.0	0.10	ug/L			01/29/19 17:58	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			01/29/19 17:58	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			01/29/19 17:58	1
Toluene	**0.15**	**J**	1.0	0.14	ug/L			01/29/19 17:58	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			01/29/19 17:58	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			01/29/19 17:58	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			01/29/19 17:58	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			01/29/19 17:58	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			01/29/19 17:58	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			01/29/19 17:58	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.91	ug/L			01/29/19 17:58	1
Ethylene Dibromide	1.0	U	1.0	0.12	ug/L			01/29/19 17:58	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			01/29/19 17:58	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			01/29/19 17:58	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			01/29/19 17:58	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			01/29/19 17:58	1
Methyl acetate	10	U	10	1.7	ug/L			01/29/19 17:58	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			01/29/19 17:58	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			01/29/19 17:58	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			01/29/19 17:58	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			01/29/19 17:58	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			01/29/19 17:58	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			01/29/19 17:58	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			01/29/19 17:58	1
Chlorodibromomethane	1.0	U	1.0	0.39	ug/L			01/29/19 17:58	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			01/29/19 17:58	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		70 - 121		01/29/19 17:58	1
4-Bromofluorobenzene (Surr)	98		59 - 120		01/29/19 17:58	1
Toluene-d8 (Surr)	96		70 - 123		01/29/19 17:58	1
Dibromofluoromethane (Surr)	95		75 - 128		01/29/19 17:58	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: RINSATE-11152042-012319
Date Collected: 01/23/19 00:00
Date Received: 01/25/19 09:00

Lab Sample ID: 240-107325-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			01/29/19 18:22	1
Benzene	1.0	U	1.0	0.13	ug/L			01/29/19 18:22	1
Dichlorobromomethane	1.0	U	1.0	0.17	ug/L			01/29/19 18:22	1
Bromoform	1.0	U	1.0	0.76	ug/L			01/29/19 18:22	1
Bromomethane	1.0	U	1.0	0.42	ug/L			01/29/19 18:22	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			01/29/19 18:22	1
Carbon disulfide	1.0	U	1.0	0.28	ug/L			01/29/19 18:22	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			01/29/19 18:22	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			01/29/19 18:22	1
Chloroethane	1.0	U	1.0	0.83	ug/L			01/29/19 18:22	1
Chloroform	1.0	U	1.0	0.13	ug/L			01/29/19 18:22	1
Chloromethane	1.0	U	1.0	0.20	ug/L			01/29/19 18:22	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			01/29/19 18:22	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			01/29/19 18:22	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			01/29/19 18:22	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			01/29/19 18:22	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			01/29/19 18:22	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			01/29/19 18:22	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			01/29/19 18:22	1
2-Hexanone	10	U	10	0.54	ug/L			01/29/19 18:22	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			01/29/19 18:22	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			01/29/19 18:22	1
Styrene	1.0	U	1.0	0.10	ug/L			01/29/19 18:22	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			01/29/19 18:22	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			01/29/19 18:22	1
Toluene	1.0	U	1.0	0.14	ug/L			01/29/19 18:22	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			01/29/19 18:22	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			01/29/19 18:22	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			01/29/19 18:22	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			01/29/19 18:22	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			01/29/19 18:22	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			01/29/19 18:22	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.91	ug/L			01/29/19 18:22	1
Ethylene Dibromide	1.0	U	1.0	0.12	ug/L			01/29/19 18:22	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			01/29/19 18:22	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			01/29/19 18:22	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			01/29/19 18:22	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			01/29/19 18:22	1
Methyl acetate	10	U	10	1.7	ug/L			01/29/19 18:22	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			01/29/19 18:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			01/29/19 18:22	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			01/29/19 18:22	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			01/29/19 18:22	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			01/29/19 18:22	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			01/29/19 18:22	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			01/29/19 18:22	1
Chlorodibromomethane	1.0	U	1.0	0.39	ug/L			01/29/19 18:22	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			01/29/19 18:22	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		70 - 121		01/29/19 18:22	1
4-Bromofluorobenzene (Surr)	100		59 - 120		01/29/19 18:22	1
Toluene-d8 (Surr)	96		70 - 123		01/29/19 18:22	1
Dibromofluoromethane (Surr)	96		75 - 128		01/29/19 18:22	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-11152042-012319-JY-001
Date Collected: 01/23/19 09:05
Date Received: 01/25/19 09:00

Lab Sample ID: 240-107325-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	2000	U	2000	1100	ug/L			01/29/19 18:46	200
Benzene	200	U	200	26	ug/L			01/29/19 18:46	200
Dichlorobromomethane	200	U	200	34	ug/L			01/29/19 18:46	200
Bromoform	200	U	200	150	ug/L			01/29/19 18:46	200
Bromomethane	200	U	200	84	ug/L			01/29/19 18:46	200
2-Butanone (MEK)	2000	U	2000	230	ug/L			01/29/19 18:46	200
Carbon disulfide	200	U	200	56	ug/L			01/29/19 18:46	200
Carbon tetrachloride	200	U	200	52	ug/L			01/29/19 18:46	200
Chlorobenzene	200	U	200	28	ug/L			01/29/19 18:46	200
Chloroethane	200	U	200	170	ug/L			01/29/19 18:46	200
Chloroform	200	U	200	26	ug/L			01/29/19 18:46	200
Chloromethane	200	U	200	40	ug/L			01/29/19 18:46	200
1,1-Dichloroethane	200	U	200	34	ug/L			01/29/19 18:46	200
1,2-Dichloroethane	200	U	200	42	ug/L			01/29/19 18:46	200
1,1-Dichloroethene	200	U	200	38	ug/L			01/29/19 18:46	200
1,2-Dichloropropane	200	U	200	30	ug/L			01/29/19 18:46	200
cis-1,3-Dichloropropene	200	U	200	120	ug/L			01/29/19 18:46	200
trans-1,3-Dichloropropene	200	U	200	130	ug/L			01/29/19 18:46	200
Ethylbenzene	200	U	200	22	ug/L			01/29/19 18:46	200
2-Hexanone	2000	U	2000	110	ug/L			01/29/19 18:46	200
Methylene Chloride	1000	U	1000	520	ug/L			01/29/19 18:46	200
4-Methyl-2-pentanone (MIBK)	2000	U	2000	84	ug/L			01/29/19 18:46	200
Styrene	200	U	200	20	ug/L			01/29/19 18:46	200
1,1,2,2-Tetrachloroethane	200	U	200	26	ug/L			01/29/19 18:46	200
Tetrachloroethene	200	U	200	30	ug/L			01/29/19 18:46	200
Toluene	200	U	200	28	ug/L			01/29/19 18:46	200
Trichloroethene	**5000**		200	20	ug/L			01/29/19 18:46	200
Vinyl chloride	200	U	200	40	ug/L			01/29/19 18:46	200
Xylenes, Total	400	U	400	30	ug/L			01/29/19 18:46	200
1,1,1-Trichloroethane	200	U	200	48	ug/L			01/29/19 18:46	200
1,1,2-Trichloroethane	200	U	200	18	ug/L			01/29/19 18:46	200
Cyclohexane	200	U	200	48	ug/L			01/29/19 18:46	200
1,2-Dibromo-3-Chloropropane	400	U	400	180	ug/L			01/29/19 18:46	200
Ethylene Dibromide	200	U	200	24	ug/L			01/29/19 18:46	200
Dichlorodifluoromethane	200	U	200	70	ug/L			01/29/19 18:46	200
cis-1,2-Dichloroethene	**1700**		200	32	ug/L			01/29/19 18:46	200
trans-1,2-Dichloroethene	**94**	**J**	200	38	ug/L			01/29/19 18:46	200
Isopropylbenzene	200	U	200	18	ug/L			01/29/19 18:46	200
Methyl acetate	2000	U	2000	340	ug/L			01/29/19 18:46	200
Methyl tert-butyl ether	200	U	200	14	ug/L			01/29/19 18:46	200
1,1,2-Trichloro-1,2,2-trifluoroethane	200	U	200	82	ug/L			01/29/19 18:46	200
1,2,4-Trichlorobenzene	200	U	200	52	ug/L			01/29/19 18:46	200
1,2-Dichlorobenzene	200	U	200	30	ug/L			01/29/19 18:46	200
1,3-Dichlorobenzene	200	U	200	30	ug/L			01/29/19 18:46	200
1,4-Dichlorobenzene	200	U	200	32	ug/L			01/29/19 18:46	200
Trichlorofluoromethane	200	U	200	90	ug/L			01/29/19 18:46	200
Chlorodibromomethane	200	U	200	78	ug/L			01/29/19 18:46	200
Methylcyclohexane	200	U	200	66	ug/L			01/29/19 18:46	200

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		70 - 121		01/29/19 18:46	200
4-Bromofluorobenzene (Surr)	98		59 - 120		01/29/19 18:46	200
Toluene-d8 (Surr)	95		70 - 123		01/29/19 18:46	200
Dibromofluoromethane (Surr)	95		75 - 128		01/29/19 18:46	200

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-11152042-012319-JY-002
Date Collected: 01/23/19 11:10
Date Received: 01/25/19 09:00

Lab Sample ID: 240-107325-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10000	U	10000	5400	ug/L			01/30/19 15:35	1000
Benzene	1000	U	1000	130	ug/L			01/30/19 15:35	1000
Dichlorobromomethane	1000	U	1000	170	ug/L			01/30/19 15:35	1000
Bromoform	1000	U	1000	760	ug/L			01/30/19 15:35	1000
Bromomethane	1000	U	1000	420	ug/L			01/30/19 15:35	1000
2-Butanone (MEK)	10000	U	10000	1200	ug/L			01/30/19 15:35	1000
Carbon disulfide	1000	U	1000	280	ug/L			01/30/19 15:35	1000
Carbon tetrachloride	1000	U	1000	260	ug/L			01/30/19 15:35	1000
Chlorobenzene	1000	U	1000	140	ug/L			01/30/19 15:35	1000
Chloroethane	1000	U	1000	830	ug/L			01/30/19 15:35	1000
Chloroform	1000	U	1000	130	ug/L			01/30/19 15:35	1000
Chloromethane	1000	U	1000	200	ug/L			01/30/19 15:35	1000
1,1-Dichloroethane	1000	U	1000	170	ug/L			01/30/19 15:35	1000
1,2-Dichloroethane	1000	U	1000	210	ug/L			01/30/19 15:35	1000
1,1-Dichloroethene	1000	U	1000	190	ug/L			01/30/19 15:35	1000
1,2-Dichloropropane	1000	U	1000	150	ug/L			01/30/19 15:35	1000
cis-1,3-Dichloropropene	1000	U	1000	610	ug/L			01/30/19 15:35	1000
trans-1,3-Dichloropropene	1000	U	1000	670	ug/L			01/30/19 15:35	1000
Ethylbenzene	1000	U	1000	110	ug/L			01/30/19 15:35	1000
2-Hexanone	10000	U	10000	540	ug/L			01/30/19 15:35	1000
Methylene Chloride	5000	U	5000	2600	ug/L			01/30/19 15:35	1000
4-Methyl-2-pentanone (MIBK)	10000	U *	10000	420	ug/L			01/30/19 15:35	1000
Styrene	1000	U	1000	100	ug/L			01/30/19 15:35	1000
1,1,2,2-Tetrachloroethane	1000	U	1000	130	ug/L			01/30/19 15:35	1000
Tetrachloroethene	1000	U	1000	150	ug/L			01/30/19 15:35	1000
Toluene	1000	U	1000	140	ug/L			01/30/19 15:35	1000
Trichloroethene	**23000**		1000	100	ug/L			01/30/19 15:35	1000
Vinyl chloride	1000	U	1000	200	ug/L			01/30/19 15:35	1000
Xylenes, Total	2000	U	2000	150	ug/L			01/30/19 15:35	1000
1,1,1-Trichloroethane	1000	U	1000	240	ug/L			01/30/19 15:35	1000
1,1,2-Trichloroethane	1000	U	1000	90	ug/L			01/30/19 15:35	1000
Cyclohexane	1000	U	1000	240	ug/L			01/30/19 15:35	1000
1,2-Dibromo-3-Chloropropane	2000	U	2000	910	ug/L			01/30/19 15:35	1000
Ethylene Dibromide	1000	U	1000	120	ug/L			01/30/19 15:35	1000
Dichlorodifluoromethane	1000	U	1000	350	ug/L			01/30/19 15:35	1000
cis-1,2-Dichloroethene	**9100**		1000	160	ug/L			01/30/19 15:35	1000
trans-1,2-Dichloroethene	**660**	**J**	1000	190	ug/L			01/30/19 15:35	1000
Isopropylbenzene	1000	U	1000	90	ug/L			01/30/19 15:35	1000
Methyl acetate	10000	U	10000	1700	ug/L			01/30/19 15:35	1000
Methyl tert-butyl ether	1000	U	1000	70	ug/L			01/30/19 15:35	1000
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	U	1000	410	ug/L			01/30/19 15:35	1000
1,2,4-Trichlorobenzene	1000	U	1000	260	ug/L			01/30/19 15:35	1000
1,2-Dichlorobenzene	1000	U	1000	150	ug/L			01/30/19 15:35	1000
1,3-Dichlorobenzene	1000	U	1000	150	ug/L			01/30/19 15:35	1000
1,4-Dichlorobenzene	1000	U	1000	160	ug/L			01/30/19 15:35	1000
Trichlorofluoromethane	1000	U	1000	450	ug/L			01/30/19 15:35	1000
Chlorodibromomethane	1000	U	1000	390	ug/L			01/30/19 15:35	1000
Methylcyclohexane	1000	U	1000	330	ug/L			01/30/19 15:35	1000

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		70 - 121		01/30/19 15:35	1000
4-Bromofluorobenzene (Surr)	101		59 - 120		01/30/19 15:35	1000
Toluene-d8 (Surr)	97		70 - 123		01/30/19 15:35	1000
Dibromofluoromethane (Surr)	96		75 - 128		01/30/19 15:35	1000

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-11152042-012319-JY-003
Date Collected: 01/23/19 13:25
Date Received: 01/25/19 09:00

Lab Sample ID: 240-107325-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10000	U	10000	5400	ug/L			01/30/19 15:58	1000
Benzene	1000	U	1000	130	ug/L			01/30/19 15:58	1000
Dichlorobromomethane	1000	U	1000	170	ug/L			01/30/19 15:58	1000
Bromoform	1000	U	1000	760	ug/L			01/30/19 15:58	1000
Bromomethane	1000	U	1000	420	ug/L			01/30/19 15:58	1000
2-Butanone (MEK)	10000	U	10000	1200	ug/L			01/30/19 15:58	1000
Carbon disulfide	1000	U	1000	280	ug/L			01/30/19 15:58	1000
Carbon tetrachloride	1000	U	1000	260	ug/L			01/30/19 15:58	1000
Chlorobenzene	1000	U	1000	140	ug/L			01/30/19 15:58	1000
Chloroethane	1000	U	1000	830	ug/L			01/30/19 15:58	1000
Chloroform	1000	U	1000	130	ug/L			01/30/19 15:58	1000
Chloromethane	1000	U	1000	200	ug/L			01/30/19 15:58	1000
1,1-Dichloroethane	1000	U	1000	170	ug/L			01/30/19 15:58	1000
1,2-Dichloroethane	1000	U	1000	210	ug/L			01/30/19 15:58	1000
1,1-Dichloroethene	1000	U	1000	190	ug/L			01/30/19 15:58	1000
1,2-Dichloropropane	1000	U	1000	150	ug/L			01/30/19 15:58	1000
cis-1,3-Dichloropropene	1000	U	1000	610	ug/L			01/30/19 15:58	1000
trans-1,3-Dichloropropene	1000	U	1000	670	ug/L			01/30/19 15:58	1000
Ethylbenzene	1000	U	1000	110	ug/L			01/30/19 15:58	1000
2-Hexanone	10000	U	10000	540	ug/L			01/30/19 15:58	1000
Methylene Chloride	5000	U	5000	2600	ug/L			01/30/19 15:58	1000
4-Methyl-2-pentanone (MIBK)	10000	U *	10000	420	ug/L			01/30/19 15:58	1000
Styrene	1000	U	1000	100	ug/L			01/30/19 15:58	1000
1,1,2,2-Tetrachloroethane	1000	U	1000	130	ug/L			01/30/19 15:58	1000
Tetrachloroethene	1000	U	1000	150	ug/L			01/30/19 15:58	1000
Toluene	1000	U	1000	140	ug/L			01/30/19 15:58	1000
Trichloroethene	**25000**		1000	100	ug/L			01/30/19 15:58	1000
Vinyl chloride	1000	U	1000	200	ug/L			01/30/19 15:58	1000
Xylenes, Total	2000	U	2000	150	ug/L			01/30/19 15:58	1000
1,1,1-Trichloroethane	**250**	**J**	1000	240	ug/L			01/30/19 15:58	1000
1,1,2-Trichloroethane	1000	U	1000	90	ug/L			01/30/19 15:58	1000
Cyclohexane	1000	U	1000	240	ug/L			01/30/19 15:58	1000
1,2-Dibromo-3-Chloropropane	2000	U	2000	910	ug/L			01/30/19 15:58	1000
Ethylene Dibromide	1000	U	1000	120	ug/L			01/30/19 15:58	1000
Dichlorodifluoromethane	1000	U	1000	350	ug/L			01/30/19 15:58	1000
cis-1,2-Dichloroethene	**1100**		1000	160	ug/L			01/30/19 15:58	1000
trans-1,2-Dichloroethene	1000	U	1000	190	ug/L			01/30/19 15:58	1000
Isopropylbenzene	1000	U	1000	90	ug/L			01/30/19 15:58	1000
Methyl acetate	10000	U	10000	1700	ug/L			01/30/19 15:58	1000
Methyl tert-butyl ether	1000	U	1000	70	ug/L			01/30/19 15:58	1000
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	U	1000	410	ug/L			01/30/19 15:58	1000
1,2,4-Trichlorobenzene	1000	U	1000	260	ug/L			01/30/19 15:58	1000
1,2-Dichlorobenzene	1000	U	1000	150	ug/L			01/30/19 15:58	1000
1,3-Dichlorobenzene	1000	U	1000	150	ug/L			01/30/19 15:58	1000
1,4-Dichlorobenzene	1000	U	1000	160	ug/L			01/30/19 15:58	1000
Trichlorofluoromethane	1000	U	1000	450	ug/L			01/30/19 15:58	1000
Chlorodibromomethane	1000	U	1000	390	ug/L			01/30/19 15:58	1000
Methylcyclohexane	1000	U	1000	330	ug/L			01/30/19 15:58	1000

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		70 - 121		01/30/19 15:58	1000
4-Bromofluorobenzene (Surr)	98		59 - 120		01/30/19 15:58	1000
Toluene-d8 (Surr)	96		70 - 123		01/30/19 15:58	1000
Dibromofluoromethane (Surr)	94		75 - 128		01/30/19 15:58	1000

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-11152042-012319-JY-004
Date Collected: 01/23/19 13:35
Date Received: 01/25/19 09:00

Lab Sample ID: 240-107325-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10000	U	10000	5400	ug/L			01/30/19 16:22	1000
Benzene	1000	U	1000	130	ug/L			01/30/19 16:22	1000
Dichlorobromomethane	1000	U	1000	170	ug/L			01/30/19 16:22	1000
Bromoform	1000	U	1000	760	ug/L			01/30/19 16:22	1000
Bromomethane	1000	U	1000	420	ug/L			01/30/19 16:22	1000
2-Butanone (MEK)	10000	U	10000	1200	ug/L			01/30/19 16:22	1000
Carbon disulfide	1000	U	1000	280	ug/L			01/30/19 16:22	1000
Carbon tetrachloride	1000	U	1000	260	ug/L			01/30/19 16:22	1000
Chlorobenzene	1000	U	1000	140	ug/L			01/30/19 16:22	1000
Chloroethane	1000	U	1000	830	ug/L			01/30/19 16:22	1000
Chloroform	1000	U	1000	130	ug/L			01/30/19 16:22	1000
Chloromethane	1000	U	1000	200	ug/L			01/30/19 16:22	1000
1,1-Dichloroethane	1000	U	1000	170	ug/L			01/30/19 16:22	1000
1,2-Dichloroethane	1000	U	1000	210	ug/L			01/30/19 16:22	1000
1,1-Dichloroethene	1000	U	1000	190	ug/L			01/30/19 16:22	1000
1,2-Dichloropropane	1000	U	1000	150	ug/L			01/30/19 16:22	1000
cis-1,3-Dichloropropene	1000	U	1000	610	ug/L			01/30/19 16:22	1000
trans-1,3-Dichloropropene	1000	U	1000	670	ug/L			01/30/19 16:22	1000
Ethylbenzene	1000	U	1000	110	ug/L			01/30/19 16:22	1000
2-Hexanone	10000	U	10000	540	ug/L			01/30/19 16:22	1000
Methylene Chloride	5000	U	5000	2600	ug/L			01/30/19 16:22	1000
4-Methyl-2-pentanone (MIBK)	10000	U *	10000	420	ug/L			01/30/19 16:22	1000
Styrene	1000	U	1000	100	ug/L			01/30/19 16:22	1000
1,1,2,2-Tetrachloroethane	1000	U	1000	130	ug/L			01/30/19 16:22	1000
Tetrachloroethene	1000	U	1000	150	ug/L			01/30/19 16:22	1000
Toluene	1000	U	1000	140	ug/L			01/30/19 16:22	1000
Trichloroethene	**27000**		1000	100	ug/L			01/30/19 16:22	1000
Vinyl chloride	1000	U	1000	200	ug/L			01/30/19 16:22	1000
Xylenes, Total	2000	U	2000	150	ug/L			01/30/19 16:22	1000
1,1,1-Trichloroethane	**290**	**J**	1000	240	ug/L			01/30/19 16:22	1000
1,1,2-Trichloroethane	1000	U	1000	90	ug/L			01/30/19 16:22	1000
Cyclohexane	1000	U	1000	240	ug/L			01/30/19 16:22	1000
1,2-Dibromo-3-Chloropropane	2000	U	2000	910	ug/L			01/30/19 16:22	1000
Ethylene Dibromide	1000	U	1000	120	ug/L			01/30/19 16:22	1000
Dichlorodifluoromethane	1000	U	1000	350	ug/L			01/30/19 16:22	1000
cis-1,2-Dichloroethene	**1200**		1000	160	ug/L			01/30/19 16:22	1000
trans-1,2-Dichloroethene	1000	U	1000	190	ug/L			01/30/19 16:22	1000
Isopropylbenzene	1000	U	1000	90	ug/L			01/30/19 16:22	1000
Methyl acetate	10000	U	10000	1700	ug/L			01/30/19 16:22	1000
Methyl tert-butyl ether	1000	U	1000	70	ug/L			01/30/19 16:22	1000
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	U	1000	410	ug/L			01/30/19 16:22	1000
1,2,4-Trichlorobenzene	1000	U	1000	260	ug/L			01/30/19 16:22	1000
1,2-Dichlorobenzene	1000	U	1000	150	ug/L			01/30/19 16:22	1000
1,3-Dichlorobenzene	1000	U	1000	150	ug/L			01/30/19 16:22	1000
1,4-Dichlorobenzene	1000	U	1000	160	ug/L			01/30/19 16:22	1000
Trichlorofluoromethane	1000	U	1000	450	ug/L			01/30/19 16:22	1000
Chlorodibromomethane	1000	U	1000	390	ug/L			01/30/19 16:22	1000
Methylcyclohexane	1000	U	1000	330	ug/L			01/30/19 16:22	1000

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		70 - 121		01/30/19 16:22	1000
4-Bromofluorobenzene (Surr)	98		59 - 120		01/30/19 16:22	1000
Toluene-d8 (Surr)	96		70 - 123		01/30/19 16:22	1000
Dibromofluoromethane (Surr)	94		75 - 128		01/30/19 16:22	1000

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-11152042-012319-JY-005
Date Collected: 01/23/19 15:40
Date Received: 01/25/19 09:00

Lab Sample ID: 240-107325-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	20	U	20	11	ug/L			01/30/19 16:46	2
Benzene	2.0	U	2.0	0.26	ug/L			01/30/19 16:46	2
Dichlorobromomethane	2.0	U	2.0	0.34	ug/L			01/30/19 16:46	2
Bromoform	2.0	U	2.0	1.5	ug/L			01/30/19 16:46	2
Bromomethane	2.0	U	2.0	0.84	ug/L			01/30/19 16:46	2
2-Butanone (MEK)	20	U	20	2.3	ug/L			01/30/19 16:46	2
Carbon disulfide	2.0	U	2.0	0.56	ug/L			01/30/19 16:46	2
Carbon tetrachloride	2.0	U	2.0	0.52	ug/L			01/30/19 16:46	2
Chlorobenzene	2.0	U	2.0	0.28	ug/L			01/30/19 16:46	2
Chloroethane	2.0	U	2.0	1.7	ug/L			01/30/19 16:46	2
Chloroform	2.0	U	2.0	0.26	ug/L			01/30/19 16:46	2
Chloromethane	2.0	U	2.0	0.40	ug/L			01/30/19 16:46	2
1,1-Dichloroethane	2.0	U	2.0	0.34	ug/L			01/30/19 16:46	2
1,2-Dichloroethane	2.0	U	2.0	0.42	ug/L			01/30/19 16:46	2
1,1-Dichloroethene	2.0	U	2.0	0.38	ug/L			01/30/19 16:46	2
1,2-Dichloropropane	2.0	U	2.0	0.30	ug/L			01/30/19 16:46	2
cis-1,3-Dichloropropene	2.0	U	2.0	1.2	ug/L			01/30/19 16:46	2
trans-1,3-Dichloropropene	2.0	U	2.0	1.3	ug/L			01/30/19 16:46	2
Ethylbenzene	2.0	U	2.0	0.22	ug/L			01/30/19 16:46	2
2-Hexanone	20	U	20	1.1	ug/L			01/30/19 16:46	2
Methylene Chloride	10	U	10	5.2	ug/L			01/30/19 16:46	2
4-Methyl-2-pentanone (MIBK)	20	U *	20	0.84	ug/L			01/30/19 16:46	2
Styrene	2.0	U	2.0	0.20	ug/L			01/30/19 16:46	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.26	ug/L			01/30/19 16:46	2
Tetrachloroethene	2.0	U	2.0	0.30	ug/L			01/30/19 16:46	2
Toluene	2.0	U	2.0	0.28	ug/L			01/30/19 16:46	2
Trichloroethene	**47**		2.0	0.20	ug/L			01/30/19 16:46	2
Vinyl chloride	2.0	U	2.0	0.40	ug/L			01/30/19 16:46	2
Xylenes, Total	4.0	U	4.0	0.30	ug/L			01/30/19 16:46	2
1,1,1-Trichloroethane	2.0	U	2.0	0.48	ug/L			01/30/19 16:46	2
1,1,2-Trichloroethane	2.0	U	2.0	0.18	ug/L			01/30/19 16:46	2
Cyclohexane	2.0	U	2.0	0.48	ug/L			01/30/19 16:46	2
1,2-Dibromo-3-Chloropropane	4.0	U	4.0	1.8	ug/L			01/30/19 16:46	2
Ethylene Dibromide	2.0	U	2.0	0.24	ug/L			01/30/19 16:46	2
Dichlorodifluoromethane	2.0	U	2.0	0.70	ug/L			01/30/19 16:46	2
cis-1,2-Dichloroethene	**1.7**	**J**	2.0	0.32	ug/L			01/30/19 16:46	2
trans-1,2-Dichloroethene	**0.42**	**J**	2.0	0.38	ug/L			01/30/19 16:46	2
Isopropylbenzene	2.0	U	2.0	0.18	ug/L			01/30/19 16:46	2
Methyl acetate	20	U	20	3.4	ug/L			01/30/19 16:46	2
Methyl tert-butyl ether	2.0	U	2.0	0.14	ug/L			01/30/19 16:46	2
1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	U	2.0	0.82	ug/L			01/30/19 16:46	2
1,2,4-Trichlorobenzene	2.0	U	2.0	0.52	ug/L			01/30/19 16:46	2
1,2-Dichlorobenzene	2.0	U	2.0	0.30	ug/L			01/30/19 16:46	2
1,3-Dichlorobenzene	2.0	U	2.0	0.30	ug/L			01/30/19 16:46	2
1,4-Dichlorobenzene	2.0	U	2.0	0.32	ug/L			01/30/19 16:46	2
Trichlorofluoromethane	2.0	U	2.0	0.90	ug/L			01/30/19 16:46	2
Chlorodibromomethane	2.0	U	2.0	0.78	ug/L			01/30/19 16:46	2
Methylcyclohexane	2.0	U	2.0	0.66	ug/L			01/30/19 16:46	2

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		70 - 121		01/30/19 16:46	2
4-Bromofluorobenzene (Surr)	97		59 - 120		01/30/19 16:46	2
Toluene-d8 (Surr)	96		70 - 123		01/30/19 16:46	2
Dibromofluoromethane (Surr)	95		75 - 128		01/30/19 16:46	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-11152042-012319-JY-006
Date Collected: 01/23/19 17:25
Date Received: 01/25/19 09:00

Lab Sample ID: 240-107325-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	80	U	80	43	ug/L			01/30/19 17:10	8
Benzene	8.0	U	8.0	1.0	ug/L			01/30/19 17:10	8
Dichlorobromomethane	8.0	U	8.0	1.4	ug/L			01/30/19 17:10	8
Bromoform	8.0	U	8.0	6.1	ug/L			01/30/19 17:10	8
Bromomethane	8.0	U	8.0	3.4	ug/L			01/30/19 17:10	8
2-Butanone (MEK)	80	U	80	9.3	ug/L			01/30/19 17:10	8
Carbon disulfide	8.0	U	8.0	2.2	ug/L			01/30/19 17:10	8
Carbon tetrachloride	8.0	U	8.0	2.1	ug/L			01/30/19 17:10	8
Chlorobenzene	8.0	U	8.0	1.1	ug/L			01/30/19 17:10	8
Chloroethane	8.0	U	8.0	6.6	ug/L			01/30/19 17:10	8
Chloroform	8.0	U	8.0	1.0	ug/L			01/30/19 17:10	8
Chloromethane	8.0	U	8.0	1.6	ug/L			01/30/19 17:10	8
1,1-Dichloroethane	8.0	U	8.0	1.4	ug/L			01/30/19 17:10	8
1,2-Dichloroethane	8.0	U	8.0	1.7	ug/L			01/30/19 17:10	8
1,1-Dichloroethene	8.0	U	8.0	1.5	ug/L			01/30/19 17:10	8
1,2-Dichloropropane	8.0	U	8.0	1.2	ug/L			01/30/19 17:10	8
cis-1,3-Dichloropropene	8.0	U	8.0	4.9	ug/L			01/30/19 17:10	8
trans-1,3-Dichloropropene	8.0	U	8.0	5.4	ug/L			01/30/19 17:10	8
Ethylbenzene	8.0	U	8.0	0.88	ug/L			01/30/19 17:10	8
2-Hexanone	80	U	80	4.3	ug/L			01/30/19 17:10	8
Methylene Chloride	40	U	40	21	ug/L			01/30/19 17:10	8
4-Methyl-2-pentanone (MIBK)	80	U * F1	80	3.4	ug/L			01/30/19 17:10	8
Styrene	8.0	U	8.0	0.80	ug/L			01/30/19 17:10	8
1,1,2,2-Tetrachloroethane	8.0	U	8.0	1.0	ug/L			01/30/19 17:10	8
Tetrachloroethene	**1.2**	**J**	8.0	1.2	ug/L			01/30/19 17:10	8
Toluene	8.0	U	8.0	1.1	ug/L			01/30/19 17:10	8
Trichloroethene	**140**		8.0	0.80	ug/L			01/30/19 17:10	8
Vinyl chloride	8.0	U	8.0	1.6	ug/L			01/30/19 17:10	8
Xylenes, Total	16	U	16	1.2	ug/L			01/30/19 17:10	8
1,1,1-Trichloroethane	**2.8**	**J**	8.0	1.9	ug/L			01/30/19 17:10	8
1,1,2-Trichloroethane	8.0	U	8.0	0.72	ug/L			01/30/19 17:10	8
Cyclohexane	8.0	U	8.0	1.9	ug/L			01/30/19 17:10	8
1,2-Dibromo-3-Chloropropane	16	U	16	7.3	ug/L			01/30/19 17:10	8
Ethylene Dibromide	8.0	U	8.0	0.96	ug/L			01/30/19 17:10	8
Dichlorodifluoromethane	8.0	U	8.0	2.8	ug/L			01/30/19 17:10	8
cis-1,2-Dichloroethene	**5.7**	**J**	8.0	1.3	ug/L			01/30/19 17:10	8
trans-1,2-Dichloroethene	8.0	U	8.0	1.5	ug/L			01/30/19 17:10	8
Isopropylbenzene	8.0	U	8.0	0.72	ug/L			01/30/19 17:10	8
Methyl acetate	80	U F1	80	14	ug/L			01/30/19 17:10	8
Methyl tert-butyl ether	8.0	U	8.0	0.56	ug/L			01/30/19 17:10	8
1,1,2-Trichloro-1,2,2-trifluoroethane	8.0	U	8.0	3.3	ug/L			01/30/19 17:10	8
1,2,4-Trichlorobenzene	8.0	U	8.0	2.1	ug/L			01/30/19 17:10	8
1,2-Dichlorobenzene	8.0	U	8.0	1.2	ug/L			01/30/19 17:10	8
1,3-Dichlorobenzene	8.0	U	8.0	1.2	ug/L			01/30/19 17:10	8
1,4-Dichlorobenzene	8.0	U	8.0	1.3	ug/L			01/30/19 17:10	8
Trichlorofluoromethane	8.0	U	8.0	3.6	ug/L			01/30/19 17:10	8
Chlorodibromomethane	8.0	U	8.0	3.1	ug/L			01/30/19 17:10	8
Methylcyclohexane	8.0	U	8.0	2.6	ug/L			01/30/19 17:10	8

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		70 - 121		01/30/19 17:10	8
4-Bromofluorobenzene (Surr)	95		59 - 120		01/30/19 17:10	8
Toluene-d8 (Surr)	95		70 - 123		01/30/19 17:10	8
Dibromofluoromethane (Surr)	96		75 - 128		01/30/19 17:10	8

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-11152042-012419-JY-007
Date Collected: 01/24/19 09:00
Date Received: 01/25/19 09:00

Lab Sample ID: 240-107325-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			01/30/19 18:22	1
Benzene	1.0	U	1.0	0.13	ug/L			01/30/19 18:22	1
Dichlorobromomethane	1.0	U	1.0	0.17	ug/L			01/30/19 18:22	1
Bromoform	1.0	U	1.0	0.76	ug/L			01/30/19 18:22	1
Bromomethane	1.0	U	1.0	0.42	ug/L			01/30/19 18:22	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			01/30/19 18:22	1
Carbon disulfide	1.0	U	1.0	0.28	ug/L			01/30/19 18:22	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			01/30/19 18:22	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			01/30/19 18:22	1
Chloroethane	1.0	U	1.0	0.83	ug/L			01/30/19 18:22	1
Chloroform	1.0	U	1.0	0.13	ug/L			01/30/19 18:22	1
Chloromethane	1.0	U	1.0	0.20	ug/L			01/30/19 18:22	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			01/30/19 18:22	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			01/30/19 18:22	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			01/30/19 18:22	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			01/30/19 18:22	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			01/30/19 18:22	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			01/30/19 18:22	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			01/30/19 18:22	1
2-Hexanone	10	U	10	0.54	ug/L			01/30/19 18:22	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			01/30/19 18:22	1
4-Methyl-2-pentanone (MIBK)	10	U *	10	0.42	ug/L			01/30/19 18:22	1
Styrene	1.0	U	1.0	0.10	ug/L			01/30/19 18:22	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			01/30/19 18:22	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			01/30/19 18:22	1
Toluene	1.0	U	1.0	0.14	ug/L			01/30/19 18:22	1
Trichloroethene	**6.1**		1.0	0.10	ug/L			01/30/19 18:22	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			01/30/19 18:22	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			01/30/19 18:22	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			01/30/19 18:22	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			01/30/19 18:22	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			01/30/19 18:22	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.91	ug/L			01/30/19 18:22	1
Ethylene Dibromide	1.0	U	1.0	0.12	ug/L			01/30/19 18:22	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			01/30/19 18:22	1
cis-1,2-Dichloroethene	**0.25**	**J**	1.0	0.16	ug/L			01/30/19 18:22	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			01/30/19 18:22	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			01/30/19 18:22	1
Methyl acetate	10	U	10	1.7	ug/L			01/30/19 18:22	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			01/30/19 18:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			01/30/19 18:22	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			01/30/19 18:22	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			01/30/19 18:22	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			01/30/19 18:22	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			01/30/19 18:22	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			01/30/19 18:22	1
Chlorodibromomethane	1.0	U	1.0	0.39	ug/L			01/30/19 18:22	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			01/30/19 18:22	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		70 - 121		01/30/19 18:22	1
4-Bromofluorobenzene (Surr)	97		59 - 120		01/30/19 18:22	1
Toluene-d8 (Surr)	96		70 - 123		01/30/19 18:22	1
Dibromofluoromethane (Surr)	95		75 - 128		01/30/19 18:22	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: RINSATE-11152042-012319
Date Collected: 01/23/19 00:00
Date Received: 01/25/19 09:00

Lab Sample ID: 240-107325-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.057	ug/L		01/28/19 15:05	01/30/19 10:03	1
Aroclor-1221	0.10	U	0.10	0.058	ug/L		01/28/19 15:05	01/30/19 10:03	1
Aroclor-1232	0.10	U	0.10	0.076	ug/L		01/28/19 15:05	01/30/19 10:03	1
Aroclor-1242	0.10	U	0.10	0.078	ug/L		01/28/19 15:05	01/30/19 10:03	1
Aroclor-1248	0.10	U	0.10	0.051	ug/L		01/28/19 15:05	01/30/19 10:03	1
Aroclor-1254	0.10	U	0.10	0.041	ug/L		01/28/19 15:05	01/30/19 10:03	1
Aroclor-1260	0.10	U	0.10	0.047	ug/L		01/28/19 15:05	01/30/19 10:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*68*		*22 - 120*	*01/28/19 15:05*	*01/30/19 10:03*	*1*
DCB Decachlorobiphenyl	*53*		*10 - 120*	*01/28/19 15:05*	*01/30/19 10:03*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-11152042-012319-JY-001
Date Collected: 01/23/19 09:05
Date Received: 01/25/19 09:00

Lab Sample ID: 240-107325-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	0.054	ug/L		01/28/19 15:05	01/30/19 10:24	1
Aroclor-1221	0.097	U	0.097	0.055	ug/L		01/28/19 15:05	01/30/19 10:24	1
Aroclor-1232	0.097	U	0.097	0.072	ug/L		01/28/19 15:05	01/30/19 10:24	1
Aroclor-1242	0.097	U	0.097	0.074	ug/L		01/28/19 15:05	01/30/19 10:24	1
Aroclor-1248	0.097	U	0.097	0.049	ug/L		01/28/19 15:05	01/30/19 10:24	1
Aroclor-1254	0.097	U	0.097	0.039	ug/L		01/28/19 15:05	01/30/19 10:24	1
Aroclor-1260	0.097	U	0.097	0.045	ug/L		01/28/19 15:05	01/30/19 10:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*57*		*22 - 120*	*01/28/19 15:05*	*01/30/19 10:24*	*1*
DCB Decachlorobiphenyl	*55*		*10 - 120*	*01/28/19 15:05*	*01/30/19 10:24*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-11152042-012319-JY-002
Date Collected: 01/23/19 11:10
Date Received: 01/25/19 09:00

Lab Sample ID: 240-107325-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/28/19 15:05	01/30/19 10:45	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/28/19 15:05	01/30/19 10:45	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/28/19 15:05	01/30/19 10:45	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/28/19 15:05	01/30/19 10:45	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/28/19 15:05	01/30/19 10:45	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/28/19 15:05	01/30/19 10:45	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/28/19 15:05	01/30/19 10:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*75*		*22 - 120*	*01/28/19 15:05*	*01/30/19 10:45*	*1*
DCB Decachlorobiphenyl	*62*		*10 - 120*	*01/28/19 15:05*	*01/30/19 10:45*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-11152042-012319-JY-003
Date Collected: 01/23/19 13:25
Date Received: 01/25/19 09:00

Lab Sample ID: 240-107325-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.099	U	0.099	0.055	ug/L		01/28/19 15:05	01/30/19 11:06	1
Aroclor-1221	0.099	U	0.099	0.056	ug/L		01/28/19 15:05	01/30/19 11:06	1
Aroclor-1232	0.099	U	0.099	0.073	ug/L		01/28/19 15:05	01/30/19 11:06	1
Aroclor-1242	0.099	U	0.099	0.075	ug/L		01/28/19 15:05	01/30/19 11:06	1
Aroclor-1248	0.099	U	0.099	0.050	ug/L		01/28/19 15:05	01/30/19 11:06	1
Aroclor-1254	0.099	U	0.099	0.040	ug/L		01/28/19 15:05	01/30/19 11:06	1
Aroclor-1260	0.099	U	0.099	0.046	ug/L		01/28/19 15:05	01/30/19 11:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*36*	*p*	*22 - 120*	*01/28/19 15:05*	*01/30/19 11:06*	*1*
DCB Decachlorobiphenyl	*42*	*p*	*10 - 120*	*01/28/19 15:05*	*01/30/19 11:06*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-11152042-012319-JY-004
Date Collected: 01/23/19 13:35
Date Received: 01/25/19 09:00

Lab Sample ID: 240-107325-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.098	U	0.098	0.055	ug/L		01/28/19 15:05	01/30/19 11:28	1
Aroclor-1221	0.098	U	0.098	0.056	ug/L		01/28/19 15:05	01/30/19 11:28	1
Aroclor-1232	0.098	U	0.098	0.073	ug/L		01/28/19 15:05	01/30/19 11:28	1
Aroclor-1242	0.098	U	0.098	0.075	ug/L		01/28/19 15:05	01/30/19 11:28	1
Aroclor-1248	0.098	U	0.098	0.049	ug/L		01/28/19 15:05	01/30/19 11:28	1
Aroclor-1254	0.098	U	0.098	0.039	ug/L		01/28/19 15:05	01/30/19 11:28	1
Aroclor-1260	0.098	U	0.098	0.045	ug/L		01/28/19 15:05	01/30/19 11:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*66*		*22 - 120*	*01/28/19 15:05*	*01/30/19 11:28*	*1*
DCB Decachlorobiphenyl	*67*		*10 - 120*	*01/28/19 15:05*	*01/30/19 11:28*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-11152042-012319-JY-005
Date Collected: 01/23/19 15:40
Date Received: 01/25/19 09:00

Lab Sample ID: 240-107325-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/28/19 15:05	01/30/19 11:49	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/28/19 15:05	01/30/19 11:49	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/28/19 15:05	01/30/19 11:49	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/28/19 15:05	01/30/19 11:49	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/28/19 15:05	01/30/19 11:49	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/28/19 15:05	01/30/19 11:49	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/28/19 15:05	01/30/19 11:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*64*		*22 - 120*	*01/28/19 15:05*	*01/30/19 11:49*	*1*
DCB Decachlorobiphenyl	*55*		*10 - 120*	*01/28/19 15:05*	*01/30/19 11:49*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-11152042-012319-JY-006
Date Collected: 01/23/19 17:25
Date Received: 01/25/19 09:00

Lab Sample ID: 240-107325-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/28/19 15:05	01/30/19 08:59	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/28/19 15:05	01/30/19 08:59	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/28/19 15:05	01/30/19 08:59	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/28/19 15:05	01/30/19 08:59	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/28/19 15:05	01/30/19 08:59	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/28/19 15:05	01/30/19 08:59	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/28/19 15:05	01/30/19 08:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*72*		*22 - 120*	*01/28/19 15:05*	*01/30/19 08:59*	*1*
DCB Decachlorobiphenyl	*76*		*10 - 120*	*01/28/19 15:05*	*01/30/19 08:59*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-11152042-012419-JY-007
Date Collected: 01/24/19 09:00
Date Received: 01/25/19 09:00

Lab Sample ID: 240-107325-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/28/19 15:05	01/30/19 12:10	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/28/19 15:05	01/30/19 12:10	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/28/19 15:05	01/30/19 12:10	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/28/19 15:05	01/30/19 12:10	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/28/19 15:05	01/30/19 12:10	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/28/19 15:05	01/30/19 12:10	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/28/19 15:05	01/30/19 12:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*69*		*22 - 120*	*01/28/19 15:05*	*01/30/19 12:10*	*1*
DCB Decachlorobiphenyl	*71*		*10 - 120*	*01/28/19 15:05*	*01/30/19 12:10*	*1*

QC Association Summary

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

GC/MS VOA

Analysis Batch: 365924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107325-1	TB-11152042-012319	Total/NA	Water	8260B	
240-107325-2	RINSATE-11152042-012319	Total/NA	Water	8260B	
240-107325-3	GW-11152042-012319-JY-001	Total/NA	Water	8260B	
MB 240-365924/7	Method Blank	Total/NA	Water	8260B	
LCS 240-365924/4	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 366099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107325-4	GW-11152042-012319-JY-002	Total/NA	Water	8260B	
240-107325-5	GW-11152042-012319-JY-003	Total/NA	Water	8260B	
240-107325-6	GW-11152042-012319-JY-004	Total/NA	Water	8260B	
240-107325-7	GW-11152042-012319-JY-005	Total/NA	Water	8260B	
240-107325-8	GW-11152042-012319-JY-006	Total/NA	Water	8260B	
240-107325-9	GW-11152042-012419-JY-007	Total/NA	Water	8260B	
MB 240-366099/7	Method Blank	Total/NA	Water	8260B	
LCS 240-366099/4	Lab Control Sample	Total/NA	Water	8260B	
240-107325-8 MS	GW-11152042-012319-JY-006	Total/NA	Water	8260B	
240-107325-8 MSD	GW-11152042-012319-JY-006	Total/NA	Water	8260B	

GC Semi VOA

Prep Batch: 365821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107325-2	RINSATE-11152042-012319	Total/NA	Water	3520C	
240-107325-3	GW-11152042-012319-JY-001	Total/NA	Water	3520C	
240-107325-4	GW-11152042-012319-JY-002	Total/NA	Water	3520C	
240-107325-5	GW-11152042-012319-JY-003	Total/NA	Water	3520C	
240-107325-6	GW-11152042-012319-JY-004	Total/NA	Water	3520C	
240-107325-7	GW-11152042-012319-JY-005	Total/NA	Water	3520C	
240-107325-8	GW-11152042-012319-JY-006	Total/NA	Water	3520C	
240-107325-9	GW-11152042-012419-JY-007	Total/NA	Water	3520C	
MB 240-365821/21-A	Method Blank	Total/NA	Water	3520C	
LCS 240-365821/22-A	Lab Control Sample	Total/NA	Water	3520C	
240-107325-8 MS	GW-11152042-012319-JY-006	Total/NA	Water	3520C	
240-107325-8 MSD	GW-11152042-012319-JY-006	Total/NA	Water	3520C	

Analysis Batch: 366016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107325-2	RINSATE-11152042-012319	Total/NA	Water	8082A	365821
240-107325-3	GW-11152042-012319-JY-001	Total/NA	Water	8082A	365821
240-107325-4	GW-11152042-012319-JY-002	Total/NA	Water	8082A	365821
240-107325-5	GW-11152042-012319-JY-003	Total/NA	Water	8082A	365821
240-107325-6	GW-11152042-012319-JY-004	Total/NA	Water	8082A	365821
240-107325-7	GW-11152042-012319-JY-005	Total/NA	Water	8082A	365821
240-107325-8	GW-11152042-012319-JY-006	Total/NA	Water	8082A	365821
240-107325-9	GW-11152042-012419-JY-007	Total/NA	Water	8082A	365821
MB 240-365821/21-A	Method Blank	Total/NA	Water	8082A	365821
LCS 240-365821/22-A	Lab Control Sample	Total/NA	Water	8082A	365821
240-107325-8 MS	GW-11152042-012319-JY-006	Total/NA	Water	8082A	365821
240-107325-8 MSD	GW-11152042-012319-JY-006	Total/NA	Water	8082A	365821

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-365924/7
Matrix: Water
Analysis Batch: 365924

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			01/29/19 14:19	1
Benzene	1.0	U	1.0	0.13	ug/L			01/29/19 14:19	1
Dichlorobromomethane	1.0	U	1.0	0.17	ug/L			01/29/19 14:19	1
Bromoform	1.0	U	1.0	0.76	ug/L			01/29/19 14:19	1
Bromomethane	1.0	U	1.0	0.42	ug/L			01/29/19 14:19	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			01/29/19 14:19	1
Carbon disulfide	1.0	U	1.0	0.28	ug/L			01/29/19 14:19	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			01/29/19 14:19	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			01/29/19 14:19	1
Chloroethane	1.0	U	1.0	0.83	ug/L			01/29/19 14:19	1
Chloroform	1.0	U	1.0	0.13	ug/L			01/29/19 14:19	1
Chloromethane	1.0	U	1.0	0.20	ug/L			01/29/19 14:19	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			01/29/19 14:19	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			01/29/19 14:19	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			01/29/19 14:19	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			01/29/19 14:19	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			01/29/19 14:19	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			01/29/19 14:19	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			01/29/19 14:19	1
2-Hexanone	10	U	10	0.54	ug/L			01/29/19 14:19	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			01/29/19 14:19	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			01/29/19 14:19	1
Styrene	1.0	U	1.0	0.10	ug/L			01/29/19 14:19	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			01/29/19 14:19	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			01/29/19 14:19	1
Toluene	1.0	U	1.0	0.14	ug/L			01/29/19 14:19	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			01/29/19 14:19	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			01/29/19 14:19	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			01/29/19 14:19	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			01/29/19 14:19	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			01/29/19 14:19	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			01/29/19 14:19	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.91	ug/L			01/29/19 14:19	1
Ethylene Dibromide	1.0	U	1.0	0.12	ug/L			01/29/19 14:19	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			01/29/19 14:19	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			01/29/19 14:19	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			01/29/19 14:19	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			01/29/19 14:19	1
Methyl acetate	10	U	10	1.7	ug/L			01/29/19 14:19	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			01/29/19 14:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			01/29/19 14:19	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			01/29/19 14:19	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			01/29/19 14:19	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			01/29/19 14:19	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			01/29/19 14:19	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			01/29/19 14:19	1
Chlorodibromomethane	1.0	U	1.0	0.39	ug/L			01/29/19 14:19	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			01/29/19 14:19	1

QC Sample Results

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		70 - 121		01/29/19 14:19	1
4-Bromofluorobenzene (Surr)	100		59 - 120		01/29/19 14:19	1
Toluene-d8 (Surr)	97		70 - 123		01/29/19 14:19	1
Dibromofluoromethane (Surr)	95		75 - 128		01/29/19 14:19	1

Lab Sample ID: LCS 240-365924/4
Matrix: Water
Analysis Batch: 365924

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	20.3		ug/L		101	21 - 162
Benzene	10.0	10.5		ug/L		105	80 - 123
Dichlorobromomethane	10.0	9.15		ug/L		91	77 - 125
Bromoform	10.0	7.25		ug/L		73	49 - 141
Bromomethane	10.0	9.31		ug/L		93	41 - 175
2-Butanone (MEK)	20.0	26.2		ug/L		131	39 - 163
Carbon disulfide	10.0	9.90		ug/L		99	60 - 138
Carbon tetrachloride	10.0	9.52		ug/L		95	63 - 140
Chlorobenzene	10.0	9.14		ug/L		91	80 - 121
Chloroethane	10.0	10.1		ug/L		101	33 - 173
Chloroform	10.0	9.61		ug/L		96	79 - 127
Chloromethane	10.0	12.6		ug/L		126	54 - 143
1,1-Dichloroethane	10.0	10.9		ug/L		109	75 - 133
1,2-Dichloroethane	10.0	9.90		ug/L		99	71 - 135
1,1-Dichloroethene	10.0	9.91		ug/L		99	65 - 139
1,2-Dichloropropane	10.0	11.5		ug/L		115	78 - 133
cis-1,3-Dichloropropene	10.0	10.2		ug/L		102	64 - 132
trans-1,3-Dichloropropene	10.0	9.23		ug/L		92	55 - 128
Ethylbenzene	10.0	9.28		ug/L		93	80 - 120
2-Hexanone	20.0	26.0		ug/L		130	43 - 148
Methylene Chloride	10.0	10.2		ug/L		102	70 - 134
4-Methyl-2-pentanone (MIBK)	20.0	27.0		ug/L		135	49 - 143
Styrene	10.0	9.01		ug/L		90	79 - 120
1,1,2,2-Tetrachloroethane	10.0	11.0		ug/L		110	65 - 139
Tetrachloroethene	10.0	8.37		ug/L		84	74 - 130
Toluene	10.0	9.77		ug/L		98	78 - 129
Trichloroethene	10.0	8.93		ug/L		89	76 - 125
Vinyl chloride	10.0	11.0		ug/L		110	58 - 143
Xylenes, Total	20.0	19.1		ug/L		95	80 - 120
1,1,1-Trichloroethane	10.0	9.72		ug/L		97	69 - 134
1,1,2-Trichloroethane	10.0	10.1		ug/L		101	78 - 133
Cyclohexane	10.0	12.3		ug/L		123	58 - 145
1,2-Dibromo-3-Chloropropane	10.0	8.74		ug/L		87	46 - 132
Ethylene Dibromide	10.0	9.51		ug/L		95	77 - 123
Dichlorodifluoromethane	10.0	9.84		ug/L		98	29 - 148
cis-1,2-Dichloroethene	10.0	9.49		ug/L		95	76 - 128
trans-1,2-Dichloroethene	10.0	9.78		ug/L		98	78 - 133
Isopropylbenzene	10.0	9.30		ug/L		93	74 - 120
Methyl acetate	20.0	27.3		ug/L		137	52 - 145
Methyl tert-butyl ether	10.0	10.4		ug/L		104	51 - 133
1,1,2-Trichloro-1,2,2-trifluoroetha ne	10.0	9.09		ug/L		91	50 - 156
1,2,4-Trichlorobenzene	10.0	8.40		ug/L		84	42 - 133
1,2-Dichlorobenzene	10.0	8.92		ug/L		89	78 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-365924/4
Matrix: Water
Analysis Batch: 365924

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	10.0	8.63		ug/L		86	78 - 120
1,4-Dichlorobenzene	10.0	8.52		ug/L		85	78 - 120
Trichlorofluoromethane	10.0	9.81		ug/L		98	51 - 164
Chlorodibromomethane	10.0	8.37		ug/L		84	70 - 132
Methylcyclohexane	10.0	9.75		ug/L		97	60 - 125
m-Xylene & p-Xylene	10.0	9.72		ug/L		97	80 - 120
o-Xylene	10.0	9.35		ug/L		94	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 121*
4-Bromofluorobenzene (Surr)	*106*		*59 - 120*
Toluene-d8 (Surr)	*98*		*70 - 123*
Dibromofluoromethane (Surr)	*94*		*75 - 128*

Lab Sample ID: MB 240-366099/7
Matrix: Water
Analysis Batch: 366099

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			01/30/19 15:00	1
Benzene	1.0	U	1.0	0.13	ug/L			01/30/19 15:00	1
Dichlorobromomethane	1.0	U	1.0	0.17	ug/L			01/30/19 15:00	1
Bromoform	1.0	U	1.0	0.76	ug/L			01/30/19 15:00	1
Bromomethane	1.0	U	1.0	0.42	ug/L			01/30/19 15:00	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			01/30/19 15:00	1
Carbon disulfide	1.0	U	1.0	0.28	ug/L			01/30/19 15:00	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			01/30/19 15:00	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			01/30/19 15:00	1
Chloroethane	1.0	U	1.0	0.83	ug/L			01/30/19 15:00	1
Chloroform	1.0	U	1.0	0.13	ug/L			01/30/19 15:00	1
Chloromethane	1.0	U	1.0	0.20	ug/L			01/30/19 15:00	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			01/30/19 15:00	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			01/30/19 15:00	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			01/30/19 15:00	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			01/30/19 15:00	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			01/30/19 15:00	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			01/30/19 15:00	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			01/30/19 15:00	1
2-Hexanone	10	U	10	0.54	ug/L			01/30/19 15:00	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			01/30/19 15:00	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			01/30/19 15:00	1
Styrene	1.0	U	1.0	0.10	ug/L			01/30/19 15:00	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			01/30/19 15:00	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			01/30/19 15:00	1
Toluene	1.0	U	1.0	0.14	ug/L			01/30/19 15:00	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			01/30/19 15:00	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			01/30/19 15:00	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			01/30/19 15:00	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-366099/7
Matrix: Water
Analysis Batch: 366099

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			01/30/19 15:00	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			01/30/19 15:00	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			01/30/19 15:00	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.91	ug/L			01/30/19 15:00	1
Ethylene Dibromide	1.0	U	1.0	0.12	ug/L			01/30/19 15:00	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			01/30/19 15:00	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			01/30/19 15:00	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			01/30/19 15:00	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			01/30/19 15:00	1
Methyl acetate	10	U	10	1.7	ug/L			01/30/19 15:00	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			01/30/19 15:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			01/30/19 15:00	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			01/30/19 15:00	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			01/30/19 15:00	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			01/30/19 15:00	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			01/30/19 15:00	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			01/30/19 15:00	1
Chlorodibromomethane	1.0	U	1.0	0.39	ug/L			01/30/19 15:00	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			01/30/19 15:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 121*		*01/30/19 15:00*	*1*
4-Bromofluorobenzene (Surr)	*100*		*59 - 120*		*01/30/19 15:00*	*1*
Toluene-d8 (Surr)	*96*		*70 - 123*		*01/30/19 15:00*	*1*
Dibromofluoromethane (Surr)	*95*		*75 - 128*		*01/30/19 15:00*	*1*

Lab Sample ID: LCS 240-366099/4
Matrix: Water
Analysis Batch: 366099

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	24.1		ug/L		120	21 - 162
Benzene	10.0	10.5		ug/L		105	80 - 123
Dichlorobromomethane	10.0	9.31		ug/L		93	77 - 125
Bromoform	10.0	7.60		ug/L		76	49 - 141
Bromomethane	10.0	9.48		ug/L		95	41 - 175
2-Butanone (MEK)	20.0	28.3		ug/L		141	39 - 163
Carbon disulfide	10.0	10.4		ug/L		104	60 - 138
Carbon tetrachloride	10.0	9.65		ug/L		97	63 - 140
Chlorobenzene	10.0	9.21		ug/L		92	80 - 121
Chloroethane	10.0	10.4		ug/L		104	33 - 173
Chloroform	10.0	9.93		ug/L		99	79 - 127
Chloromethane	10.0	12.9		ug/L		129	54 - 143
1,1-Dichloroethane	10.0	10.9		ug/L		109	75 - 133
1,2-Dichloroethane	10.0	10.1		ug/L		101	71 - 135
1,1-Dichloroethene	10.0	10.4		ug/L		104	65 - 139
1,2-Dichloropropane	10.0	11.4		ug/L		114	78 - 133
cis-1,3-Dichloropropene	10.0	10.6		ug/L		106	64 - 132

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-366099/4
Matrix: Water
Analysis Batch: 366099

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	10.0	9.37		ug/L		94	55 - 128
Ethylbenzene	10.0	9.34		ug/L		93	80 - 120
2-Hexanone	20.0	28.2		ug/L		141	43 - 148
Methylene Chloride	10.0	11.0		ug/L		110	70 - 134
4-Methyl-2-pentanone (MIBK)	20.0	29.8	*	ug/L		149	49 - 143
Styrene	10.0	9.12		ug/L		91	79 - 120
1,1,2,2-Tetrachloroethane	10.0	11.7		ug/L		117	65 - 139
Tetrachloroethene	10.0	8.51		ug/L		85	74 - 130
Toluene	10.0	9.73		ug/L		97	78 - 129
Trichloroethene	10.0	9.16		ug/L		92	76 - 125
Vinyl chloride	10.0	11.0		ug/L		110	58 - 143
Xylenes, Total	20.0	19.0		ug/L		95	80 - 120
1,1,1-Trichloroethane	10.0	9.81		ug/L		98	69 - 134
1,1,2-Trichloroethane	10.0	10.4		ug/L		104	78 - 133
Cyclohexane	10.0	12.6		ug/L		126	58 - 145
1,2-Dibromo-3-Chloropropane	10.0	9.43		ug/L		94	46 - 132
Ethylene Dibromide	10.0	9.61		ug/L		96	77 - 123
Dichlorodifluoromethane	10.0	9.83		ug/L		98	29 - 148
cis-1,2-Dichloroethene	10.0	9.59		ug/L		96	76 - 128
trans-1,2-Dichloroethene	10.0	10.0		ug/L		100	78 - 133
Isopropylbenzene	10.0	9.44		ug/L		94	74 - 120
Methyl acetate	20.0	28.5		ug/L		143	52 - 145
Methyl tert-butyl ether	10.0	10.8		ug/L		108	51 - 133
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.94		ug/L		99	50 - 156
1,2,4-Trichlorobenzene	10.0	8.67		ug/L		87	42 - 133
1,2-Dichlorobenzene	10.0	9.10		ug/L		91	78 - 120
1,3-Dichlorobenzene	10.0	8.95		ug/L		90	78 - 120
1,4-Dichlorobenzene	10.0	8.73		ug/L		87	78 - 120
Trichlorofluoromethane	10.0	10.2		ug/L		102	51 - 164
Chlorodibromomethane	10.0	8.43		ug/L		84	70 - 132
Methylcyclohexane	10.0	10.0		ug/L		100	60 - 125
m-Xylene & p-Xylene	10.0	9.40		ug/L		94	80 - 120
o-Xylene	10.0	9.60		ug/L		96	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 121*
4-Bromofluorobenzene (Surr)	*105*		*59 - 120*
Toluene-d8 (Surr)	*97*		*70 - 123*
Dibromofluoromethane (Surr)	*93*		*75 - 128*

Lab Sample ID: 240-107325-8 MS
Matrix: Water
Analysis Batch: 366099

Client Sample ID: GW-11152042-012319-JY-006
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	80	U	160	161		ug/L		101	10 - 168
Benzene	8.0	U	80.0	92.6		ug/L		116	71 - 122

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-107325-8 MS
Matrix: Water
Analysis Batch: 366099

Client Sample ID: GW-11152042-012319-JY-006
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorobromomethane	8.0	U	80.0	81.4		ug/L		102	64 - 125
Bromoform	8.0	U	80.0	63.3		ug/L		79	44 - 129
Bromomethane	8.0	U	80.0	79.3		ug/L		99	19 - 187
2-Butanone (MEK)	80	U	160	209		ug/L		131	37 - 156
Carbon disulfide	8.0	U	80.0	87.6		ug/L		110	43 - 144
Carbon tetrachloride	8.0	U	80.0	81.9		ug/L		102	41 - 143
Chlorobenzene	8.0	U	80.0	79.8		ug/L		100	70 - 123
Chloroethane	8.0	U	80.0	81.7		ug/L		102	11 - 189
Chloroform	8.0	U	80.0	86.3		ug/L		108	68 - 130
Chloromethane	8.0	U	80.0	108		ug/L		135	31 - 154
1,1-Dichloroethane	8.0	U	80.0	96.5		ug/L		121	63 - 136
1,2-Dichloroethane	8.0	U	80.0	87.6		ug/L		110	65 - 135
1,1-Dichloroethene	8.0	U	80.0	89.6		ug/L		112	53 - 140
1,2-Dichloropropane	8.0	U	80.0	99.8		ug/L		125	70 - 132
cis-1,3-Dichloropropene	8.0	U	80.0	86.4		ug/L		108	48 - 127
trans-1,3-Dichloropropene	8.0	U	80.0	81.0		ug/L		101	40 - 125
Ethylbenzene	8.0	U	80.0	82.5		ug/L		103	66 - 120
2-Hexanone	80	U	160	222		ug/L		139	42 - 150
Methylene Chloride	40	U	80.0	94.6		ug/L		118	61 - 130
4-Methyl-2-pentanone (MIBK)	80	U * F1	160	225		ug/L		141	44 - 143
Styrene	8.0	U	80.0	80.8		ug/L		101	68 - 120
1,1,2,2-Tetrachloroethane	8.0	U	80.0	92.2		ug/L		115	60 - 137
Tetrachloroethene	1.2	J	80.0	76.2		ug/L		95	51 - 136
Toluene	8.0	U	80.0	85.6		ug/L		107	62 - 132
Trichloroethene	140		80.0	222		ug/L		97	55 - 131
Vinyl chloride	8.0	U	80.0	95.4		ug/L		119	43 - 154
Xylenes, Total	16	U	160	168		ug/L		105	67 - 120
1,1,1-Trichloroethane	2.8	J	80.0	88.6		ug/L		107	51 - 138
1,1,2-Trichloroethane	8.0	U	80.0	88.4		ug/L		111	76 - 132
Cyclohexane	8.0	U	80.0	107		ug/L		134	42 - 135
1,2-Dibromo-3-Chloropropane	16	U	80.0	69.4		ug/L		87	38 - 124
Ethylene Dibromide	8.0	U	80.0	82.7		ug/L		103	71 - 123
Dichlorodifluoromethane	8.0	U	80.0	86.9		ug/L		109	28 - 136
cis-1,2-Dichloroethene	5.7	J	80.0	90.7		ug/L		106	64 - 130
trans-1,2-Dichloroethene	8.0	U	80.0	88.1		ug/L		110	68 - 133
Isopropylbenzene	8.0	U	80.0	81.2		ug/L		101	59 - 120
Methyl acetate	80	U F1	160	228		ug/L		142	41 - 142
Methyl tert-butyl ether	8.0	U	80.0	86.2		ug/L		108	41 - 136
1,1,2-Trichloro-1,2,2-trifluoroethane	8.0	U	80.0	82.4		ug/L		103	31 - 156
1,2,4-Trichlorobenzene	8.0	U	80.0	71.3		ug/L		89	30 - 126
1,2-Dichlorobenzene	8.0	U	80.0	78.3		ug/L		98	64 - 120
1,3-Dichlorobenzene	8.0	U	80.0	75.8		ug/L		95	62 - 120
1,4-Dichlorobenzene	8.0	U	80.0	75.7		ug/L		95	63 - 120
Trichlorofluoromethane	8.0	U	80.0	81.9		ug/L		102	37 - 174
Chlorodibromomethane	8.0	U	80.0	71.8		ug/L		90	60 - 129
Methylcyclohexane	8.0	U	80.0	86.3		ug/L		108	37 - 123
m-Xylene & p-Xylene	16	U	80.0	84.8		ug/L		106	63 - 121

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-107325-8 MS — **Client Sample ID: GW-11152042-012319-JY-006**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 366099

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
o-Xylene	8.0	U	80.0	83.1		ug/L		104	69 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 121*
4-Bromofluorobenzene (Surr)	*106*		*59 - 120*
Toluene-d8 (Surr)	*99*		*70 - 123*
Dibromofluoromethane (Surr)	*95*		*75 - 128*

Lab Sample ID: 240-107325-8 MSD — **Client Sample ID: GW-11152042-012319-JY-006**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 366099

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	80	U	160	199		ug/L		125	10 - 168	21	35
Benzene	8.0	U	80.0	92.8		ug/L		116	71 - 122	0	22
Dichlorobromomethane	8.0	U	80.0	80.7		ug/L		101	64 - 125	1	27
Bromoform	8.0	U	80.0	65.2		ug/L		81	44 - 129	3	28
Bromomethane	8.0	U	80.0	76.7		ug/L		96	19 - 187	3	35
2-Butanone (MEK)	80	U	160	214		ug/L		134	37 - 156	2	35
Carbon disulfide	8.0	U	80.0	87.7		ug/L		110	43 - 144	0	33
Carbon tetrachloride	8.0	U	80.0	83.1		ug/L		104	41 - 143	2	30
Chlorobenzene	8.0	U	80.0	79.6		ug/L		99	70 - 123	0	23
Chloroethane	8.0	U	80.0	81.9		ug/L		102	11 - 189	0	35
Chloroform	8.0	U	80.0	86.8		ug/L		108	68 - 130	1	23
Chloromethane	8.0	U	80.0	109		ug/L		136	31 - 154	1	35
1,1-Dichloroethane	8.0	U	80.0	94.7		ug/L		118	63 - 136	2	23
1,2-Dichloroethane	8.0	U	80.0	88.0		ug/L		110	65 - 135	0	24
1,1-Dichloroethene	8.0	U	80.0	87.9		ug/L		110	53 - 140	2	35
1,2-Dichloropropane	8.0	U	80.0	99.6		ug/L		125	70 - 132	0	26
cis-1,3-Dichloropropene	8.0	U	80.0	88.0		ug/L		110	48 - 127	2	30
trans-1,3-Dichloropropene	8.0	U	80.0	80.6		ug/L		101	40 - 125	0	27
Ethylbenzene	8.0	U	80.0	82.6		ug/L		103	66 - 120	0	24
2-Hexanone	80	U	160	240		ug/L		150	42 - 150	8	35
Methylene Chloride	40	U	80.0	93.9		ug/L		117	61 - 130	1	29
4-Methyl-2-pentanone (MIBK)	80	U * F1	160	240	F1	ug/L		150	44 - 143	6	35
Styrene	8.0	U	80.0	80.6		ug/L		101	68 - 120	0	26
1,1,2,2-Tetrachloroethane	8.0	U	80.0	95.5		ug/L		119	60 - 137	4	31
Tetrachloroethene	1.2	J	80.0	75.6		ug/L		95	51 - 136	1	23
Toluene	8.0	U	80.0	86.5		ug/L		108	62 - 132	1	23
Trichloroethene	140		80.0	218		ug/L		92	55 - 131	2	23
Vinyl chloride	8.0	U	80.0	94.3		ug/L		118	43 - 154	1	29
Xylenes, Total	16	U	160	168		ug/L		105	67 - 120	0	25
1,1,1-Trichloroethane	2.8	J	80.0	87.2		ug/L		105	51 - 138	2	27
1,1,2-Trichloroethane	8.0	U	80.0	87.9		ug/L		110	76 - 132	1	25
Cyclohexane	8.0	U	80.0	108		ug/L		135	42 - 135	1	35
1,2-Dibromo-3-Chloropropane	16	U	80.0	72.9		ug/L		91	38 - 124	5	35
Ethylene Dibromide	8.0	U	80.0	83.8		ug/L		105	71 - 123	1	27
Dichlorodifluoromethane	8.0	U	80.0	84.8		ug/L		106	28 - 136	2	35

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-107325-8 MSD — **Client Sample ID: GW-11152042-012319-JY-006**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 366099

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	5.7	J	80.0	91.2		ug/L		107	64 - 130	1	21
trans-1,2-Dichloroethene	8.0	U	80.0	88.2		ug/L		110	68 - 133	0	24
Isopropylbenzene	8.0	U	80.0	82.5		ug/L		103	59 - 120	2	31
Methyl acetate	80	U F1	160	238	F1	ug/L		149	41 - 142	4	35
Methyl tert-butyl ether	8.0	U	80.0	90.4		ug/L		113	41 - 136	5	29
1,1,2-Trichloro-1,2,2-trifluoroethane	8.0	U	80.0	82.1		ug/L		103	31 - 156	0	35
1,2,4-Trichlorobenzene	8.0	U	80.0	74.3		ug/L		93	30 - 126	4	35
1,2-Dichlorobenzene	8.0	U	80.0	79.1		ug/L		99	64 - 120	1	30
1,3-Dichlorobenzene	8.0	U	80.0	75.9		ug/L		95	62 - 120	0	31
1,4-Dichlorobenzene	8.0	U	80.0	75.8		ug/L		95	63 - 120	0	28
Trichlorofluoromethane	8.0	U	80.0	82.7		ug/L		103	37 - 174	1	35
Chlorodibromomethane	8.0	U	80.0	71.5		ug/L		89	60 - 129	0	26
Methylcyclohexane	8.0	U	80.0	86.8		ug/L		109	37 - 123	1	35
m-Xylene & p-Xylene	16	U	80.0	84.8		ug/L		106	63 - 121	0	25
o-Xylene	8.0	U	80.0	83.6		ug/L		104	69 - 120	1	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 121*
4-Bromofluorobenzene (Surr)	*102*		*59 - 120*
Toluene-d8 (Surr)	*97*		*70 - 123*
Dibromofluoromethane (Surr)	*93*		*75 - 128*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-365821/21-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 366016 — **Prep Batch: 365821**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		01/28/19 15:05	01/30/19 07:56	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		01/28/19 15:05	01/30/19 07:56	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		01/28/19 15:05	01/30/19 07:56	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		01/28/19 15:05	01/30/19 07:56	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		01/28/19 15:05	01/30/19 07:56	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		01/28/19 15:05	01/30/19 07:56	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		01/28/19 15:05	01/30/19 07:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*76*		*22 - 120*	*01/28/19 15:05*	*01/30/19 07:56*	*1*
DCB Decachlorobiphenyl	*75*		*10 - 120*	*01/28/19 15:05*	*01/30/19 07:56*	*1*

Lab Sample ID: LCS 240-365821/22-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 366016 — **Prep Batch: 365821**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	1.80		ug/L		72	28 - 120

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 240-365821/22-A
Matrix: Water
Analysis Batch: 366016

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 365821

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aroclor-1260			2.50	2.00		ug/L		80	30 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*69*		*22 - 120*
DCB Decachlorobiphenyl	*55*		*10 - 120*

Lab Sample ID: 240-107325-8 MS
Matrix: Water
Analysis Batch: 366016

Client Sample ID: GW-11152042-012319-JY-006
Prep Type: Total/NA
Prep Batch: 365821

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aroclor-1016	0.095	U	2.38	1.78		ug/L		75	14 - 120		
Aroclor-1260	0.095	U	2.38	1.97		ug/L		83	10 - 120		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*68*		*22 - 120*
DCB Decachlorobiphenyl	*75*		*10 - 120*

Lab Sample ID: 240-107325-8 MSD
Matrix: Water
Analysis Batch: 366016

Client Sample ID: GW-11152042-012319-JY-006
Prep Type: Total/NA
Prep Batch: 365821

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor-1016	0.095	U	2.38	1.78		ug/L		75	14 - 120	0	30
Aroclor-1260	0.095	U	2.38	1.95		ug/L		82	10 - 120	1	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*71*		*22 - 120*
DCB Decachlorobiphenyl	*73*		*10 - 120*

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

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

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(70-121)	(59-120)	(70-123)	(75-128)
240-107325-1	TB-11152042-012319	107	98	96	95
240-107325-2	RINSATE-11152042-012319	107	100	96	96
240-107325-3	GW-11152042-012319-JY-001	107	98	95	95
240-107325-4	GW-11152042-012319-JY-002	104	101	97	96
240-107325-5	GW-11152042-012319-JY-003	105	98	96	94
240-107325-6	GW-11152042-012319-JY-004	104	98	96	94
240-107325-7	GW-11152042-012319-JY-005	107	97	96	95
240-107325-8	GW-11152042-012319-JY-006	108	95	95	96
240-107325-8 MS	GW-11152042-012319-JY-006	101	106	99	95
240-107325-8 MSD	GW-11152042-012319-JY-006	99	102	97	93
240-107325-9	GW-11152042-012419-JY-007	105	97	96	95
LCS 240-365924/4	Lab Control Sample	100	106	98	94
LCS 240-366099/4	Lab Control Sample	101	105	97	93
MB 240-365924/7	Method Blank	105	100	97	95
MB 240-366099/7	Method Blank	106	100	96	95

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

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

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCBP2
Lab Sample ID	Client Sample ID	(22-120)	(10-120)
240-107325-2	RINSATE-11152042-012319	68	53
240-107325-3	GW-11152042-012319-JY-001	57	55
240-107325-4	GW-11152042-012319-JY-002	75	62
240-107325-5	GW-11152042-012319-JY-003	36 p	42 p
240-107325-6	GW-11152042-012319-JY-004	66	67
240-107325-7	GW-11152042-012319-JY-005	64	55
240-107325-8	GW-11152042-012319-JY-006	72	76
240-107325-8 MS	GW-11152042-012319-JY-006	68	75
240-107325-8 MSD	GW-11152042-012319-JY-006	71	73
240-107325-9	GW-11152042-012419-JY-007	69	71
LCS 240-365821/22-A	Lab Control Sample	69	55
MB 240-365821/21-A	Method Blank	76	75

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Client Sample ID: TB-11152042-012319 — Lab Sample ID: 240-107325-1

Date Collected: 01/23/19 00:00 — **Matrix: Water**
Date Received: 01/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	365924	01/29/19 17:58	LRW	TAL CAN

Client Sample ID: RINSATE-11152042-012319 — Lab Sample ID: 240-107325-2

Date Collected: 01/23/19 00:00 — **Matrix: Water**
Date Received: 01/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	365924	01/29/19 18:22	LRW	TAL CAN
Total/NA	Prep	3520C			365821	01/28/19 15:05	BMB	TAL CAN
Total/NA	Analysis	8082A		1	366016	01/30/19 10:03	LSH	TAL CAN

Client Sample ID: GW-11152042-012319-JY-001 — Lab Sample ID: 240-107325-3

Date Collected: 01/23/19 09:05 — **Matrix: Water**
Date Received: 01/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		200	365924	01/29/19 18:46	LRW	TAL CAN
Total/NA	Prep	3520C			365821	01/28/19 15:05	BMB	TAL CAN
Total/NA	Analysis	8082A		1	366016	01/30/19 10:24	LSH	TAL CAN

Client Sample ID: GW-11152042-012319-JY-002 — Lab Sample ID: 240-107325-4

Date Collected: 01/23/19 11:10 — **Matrix: Water**
Date Received: 01/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1000	366099	01/30/19 15:35	LRW	TAL CAN
Total/NA	Prep	3520C			365821	01/28/19 15:05	BMB	TAL CAN
Total/NA	Analysis	8082A		1	366016	01/30/19 10:45	LSH	TAL CAN

Client Sample ID: GW-11152042-012319-JY-003 — Lab Sample ID: 240-107325-5

Date Collected: 01/23/19 13:25 — **Matrix: Water**
Date Received: 01/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1000	366099	01/30/19 15:58	LRW	TAL CAN
Total/NA	Prep	3520C			365821	01/28/19 15:05	BMB	TAL CAN
Total/NA	Analysis	8082A		1	366016	01/30/19 11:06	LSH	TAL CAN

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Client Sample ID: GW-11152042-012319-JY-004 — Lab Sample ID: 240-107325-6

Date Collected: 01/23/19 13:35 — **Matrix: Water**
Date Received: 01/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1000	366099	01/30/19 16:22	LRW	TAL CAN
Total/NA	Prep	3520C			365821	01/28/19 15:05	BMB	TAL CAN
Total/NA	Analysis	8082A		1	366016	01/30/19 11:28	LSH	TAL CAN

Client Sample ID: GW-11152042-012319-JY-005 — Lab Sample ID: 240-107325-7

Date Collected: 01/23/19 15:40 — **Matrix: Water**
Date Received: 01/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	366099	01/30/19 16:46	LRW	TAL CAN
Total/NA	Prep	3520C			365821	01/28/19 15:05	BMB	TAL CAN
Total/NA	Analysis	8082A		1	366016	01/30/19 11:49	LSH	TAL CAN

Client Sample ID: GW-11152042-012319-JY-006 — Lab Sample ID: 240-107325-8

Date Collected: 01/23/19 17:25 — **Matrix: Water**
Date Received: 01/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		8	366099	01/30/19 17:10	LRW	TAL CAN
Total/NA	Prep	3520C			365821	01/28/19 15:05	BMB	TAL CAN
Total/NA	Analysis	8082A		1	366016	01/30/19 08:59	LSH	TAL CAN

Client Sample ID: GW-11152042-012419-JY-007 — Lab Sample ID: 240-107325-9

Date Collected: 01/24/19 09:00 — **Matrix: Water**
Date Received: 01/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	366099	01/30/19 18:22	LRW	TAL CAN
Total/NA	Prep	3520C			365821	01/28/19 15:05	BMB	TAL CAN
Total/NA	Analysis	8082A		1	366016	01/30/19 12:10	LSH	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 11152042, Hayworth, Douglas, MI

TestAmerica Job ID: 240-107325-1

Laboratory: TestAmerica Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2927	02-23-19 *
Connecticut	State Program	1	PH-0590	12-31-19
Florida	NELAP	4	E87225	06-30-19
Illinois	NELAP	5	200004	07-31-19
Kansas	NELAP	7	E-10336	04-30-19
Kentucky (UST)	State Program	4	58	02-23-19 *
Kentucky (WW)	State Program	4	98016	12-31-19
Minnesota	NELAP	5	039-999-348	12-31-19 *
Minnesota (Petrofund)	State Program	1	3506	07-31-19
Nevada	State Program	9	OH00048	07-31-19
New Jersey	NELAP	2	OH001	06-30-19
New York	NELAP	2	10975	03-31-19 *
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-19 *
Pennsylvania	NELAP	3	68-00340	08-31-19 *
Texas	NELAP	6	T104704517-18-10	08-31-19
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-19
Washington	State Program	10	C971	01-12-20 *
West Virginia DEP	State Program	3	210	12-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

MICHIGAN 1.1/C1.1 0.6/C0.6

Chain of Custody Record

1.5/C1.5

MICHIGAN 190

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: John York	Lab PM: Heckler, Denise D	Carrier Tracking No(s): GHD To Brighton Lab	COC No: 240-57618-24689.1
Client Contact: James Abston	Phone: 734 231 6088	E-Mail: denise.heckler@testamericainc.com		Page: Page 1 of 3
Company: GHD Services Inc.				Job #: 24020519
Address: 26850 Haggerty Rd.	Due Date Requested: 1 Week TAT			
City: Farmington Hills	TAT Requested (days): 5 Days			
State, Zip: MI, 48331				
Phone: 248-893-3381(Tel)	PO #: Purchase Order Requested			
Email: james.abston@ghd.com	WO #: 11152042			
Project Name: 11152042, Hayworth, Douglas, MI	Project #: 24020519			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260A - VOC	8082 - PCB	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	N		
TB-11152042-012319	1-23-19	—	G	Water			X			
Rinsate-11152042-012319		—	G	Water			X	X		
GW-11152042-012319-JY-001		0905	G	Water			X	X		
-002		1110	G	Water			X	X		
-003		1325	G	Water			X	X		
-004		1335	G	Water			X	X		
-005		1540	G	Water			X	X		
-006		1725	G	Water		X	X	X		
GW-11152042-012419-JY -007	1-24-19	0900	G	Water			X	X		
				Water						
				Water						

240-107325 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	1-24-19 12:45	GHD	[signature]	1/24/19 12:45	TA MI
[signature]	1/24/19 12:45	TA MI	[signature]	1-25-19 0900	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

Ver: 08/04/2016

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 107325
Canton Facility

Client GHD Site Name _____ Cooler unpacked by: Ryan Gribler

Cooler Received on 1-25-19 Opened on 1-25-19

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☒ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.2** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN #36 (CF **+0**°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
   -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# **HC854592**
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # B831701VB Yes No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: RC

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____.

WI-NC-099

Login # : 107325

TestAmerica Canton Sample Receipt Multiple Cooler Form				
Cooler Description	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
TA	36	1.1	1.1	Wet Ice
TA	36	0.6	0.6	Wet Ice
TA	36	1.5	1.5	Wet Ice

☐ See Temperature Excursion Form

WI-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers