



July 22, 2020

Reference No. 11208058

City of Bay City WWTP
Attn: IPP Coordinator
2905 North Water Street
Bay City, Michigan
U.S.A. 48708

To Whom It May Concern:

**Re: Semi-Annual Compliance Report (January 1 to June 30, 2020)
RACER Bay City Industrial Land
Bay City, Michigan**

The following letter has been prepared by GHD on behalf of Revitalizing Auto Communities Environmental Response Trust (RACER) in accordance with Part 4 Section 3 of Industrial User (IU) permit No. 120807 as the semi-annual compliance report for the period January 1 to June 30 for RACER's groundwater extraction and treatment system located at the north end of Crotty Street in Bay City, Michigan (Site).

The groundwater extraction and treatment system operated consistently for the semi-annual period with the exception of short periods when the system was down for maintenance or as a result of an alarm condition.

Table 1 presents the results of the required semi-annual effluent sample collected from the RACER groundwater extraction and treatment system on May 29, 2020. Attachment 1 presents a copy of the laboratory analytical report. The analytical results did not identify an exceedance of the daily maximum discharge levels specified in the permit, and there were no other conditions, events or circumstances identified that did not meet other permit requirements. Table 2 presents the flow readings collected periodically from the flow meter.

The RACER groundwater extraction and treatment system is operated and maintained by Steve Hoevermeyer (GHD) who maintains the designation of Waste Treatment Plant Operator – Industrial or Commercial (A-1d Impoundment, A-2b Filtration of Wastewater, B-2c Oil-Water Separation, and B-3b Carbon Adsorption).

See Attachment 2 for the certification statement prepared in accordance with Section 106-23(d) of the Bay City sewer ordinance.



Should you have any questions on the above, please do not hesitate to contact us.

Sincerely,

GHD

A handwritten signature in blue ink that reads "J. Pardys". The signature is fluid and cursive, with a long horizontal stroke at the end.

John-Eric Pardys, P.Eng.

JEP/kf/2

cc: Grant Trigger (RACER)
Dave Favero (RACER)

Encl. Table 1 – Effluent Results Summary
Table 2 – Flow Meter Readings
Attachment 1 – Laboratory Analytical Report
Attachment 2 – Certification Statement

**Analytical Results Summary
Effluent Sampling
Bay City Industrial Land
Bay City, Michigan**

Sample Location:

Sample ID:

Sample Date:

effluent-GWTS

W-12610-052920-SSH-2002

5/29/20

Parameters VOAs	Units	Daily Maximum (Bay City Industrial User Permit)	
Vinyl chloride	mg/L	0.002	0.001 U
Metals			
Cadmium	mg/L	0.057	0.002 U
Chromium	mg/L	6.812	0.005 U
Copper	mg/L	1.476	0.01 J
Iron	mg/L		0.058 J
Lead	mg/L	0.632	0.003 U
Mercury	mg/L	ND	0.0002 U
Nickel	mg/L	2.548	0.0072 J
Silver	mg/L	0.2	0.005 U
Pesticides			
Aroclor-1016 (PCB-1016)	mg/L	ND	0.000095 U
Aroclor-1221 (PCB-1221)	mg/L	ND	0.000095 U
Aroclor-1232 (PCB-1232)	mg/L	ND	0.000095 U
Aroclor-1242 (PCB-1242)	mg/L	ND	0.000095 U
Aroclor-1248 (PCB-1248)	mg/L	ND	0.000095 U
Aroclor-1254 (PCB-1254)	mg/L	ND	0.000095 U
Aroclor-1260 (PCB-1260)	mg/L	ND	0.000095 U
Wet			
Ammonia	mg/L	30	0.20 U
Biochemical oxygen demand (BOD)	mg/L	835	2.0 U
Chemical oxygen demand (COD)	mg/L	1670	6.7 J
Oil and grease (HEM), polar	mg/L	100	5.8 U
pH, lab	s.u.	6.5 to 11.0	7.7 HF
Phosphorus	mg/L	13.8	4.0 U
Total suspended solids (TSS)	mg/L	1336	4.0 U

Notes:

HF Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

U Not detected at the associated reporting limit

J Estimated value

**Flow Meter Readings
Bay City Industrial Land
Bay City, Michigan**

Date	Flow Meter reading (gallons)	Cumulative Total: (gallons)	Volume to be invoiced annually (July to June 30)	Comments
22-Jun-20	270975	1017073		- City invoiced for discharge
28-May-20	268089	1014187		- Collected effluent sample
28-Apr-20	263922	1010020		
25-Mar-20	248006	994104		
20-Feb-20	227965	974063		
27-Jan-20	220321	966419		
5-Dec-19	200031	946129		- Collected PFAS effluent sample
25-Nov-19	192582	938680		
29-Oct-19	176533	922631		
28-Aug-19	168508	914606		
17-Jul-19	159490	905588		
17-Jun-19	144380	890478	122047	- City invoiced for discharge
31-May-19				- Collected effluent sample
17-May-19	123482	869580		
19-Apr-19	105745	851843		
22-Mar-19	81364	827462		
28-Feb-19	77720	823818		
29-Jan-19	77720	823818		
20-Jan-19				- Collected effluent sample
12-Dec-18	77570	823668		- Collected effluent sample
29-Nov-18	76972	823070		
26-Sep-18	59303	805401		
30-Aug-18	53199	799297		
30-Jul-18	52454	798552		
20-Jun-18	35274	781372		
1-Jun-18				- Collected effluent sample
1-Jun-18	22333	768431	88271	- City invoiced for discharge
31-May-18	20490	766588		
30-Apr-18	18529	764627		
29-Mar-18	11243	757341		
8-Mar-18	122667	746098		- Last reading before
8-Mar-18	0	746098		- New Flow meter installed
30-Nov-17				- Collected effluent sample
25-Oct-17	73702	697133		
12-Jul-17	60991	684422		
28-Jun-17	56911	680342		
13-Jun-17	56729	680160	137544	- City invoiced for discharge
22-May-17	56722	680153		
9-May-17				- Collected effluent sample
27-Apr-17	55126	678557		
2-Feb-17	5813	629244		
16-Jan-17				- Collected effluent sample

**Flow Meter Readings
Bay City Industrial Land
Bay City, Michigan**

Date	Flow Meter reading (gallons)	Cumulative Total: (gallons)	Volume to be invoiced annually (July to June 30)	Comments
14-Jan-17	609074	623431		
14-Jan-17	0	623431		
16-Dec-16	609074	623431		
11-Nov-16	608980	623337		
28-Oct-16	608865	623222		
30-Sep-16	607717	622074		
31-Aug-16	607298	621655		
20-Jul-16	561893	576250		
29-Jun-16	556457	570814		
14-Jun-16	528259	542616	523666	- Collected effluent sample,
31-May-16	521920	536277		
27-Apr-16	462204	476561		
21-Mar-16	409836	424193		
29-Feb-16	394550	408907		
10-Feb-16	387410	401767		
30-Dec-15	351550	365907		
10-Dec-15				- Collected effluent sample
23-Nov-15	289731	304088		
30-Oct-15	260771	275128		
29-Sep-15	252638	266995		
28-Aug-15	241397	255754		
29-Jul-15	232315	246672		
30-Jun-15	232315	246672		
25-Jun-15	232315	246672		
18-Jun-15	224490	238847		
6-May-15	197766	212123		
30-Apr-15	175234	189591		
19-Mar-15	67425	81782		
16-Mar-15				- Collected effluent sample
13-Feb-15	46303	60660		
27-Jan-15	31004	45361		
29-Dec-14	31004	45361		
26-Nov-14	31004	45361		
23-Oct-14	31004	45361		
23-Sep-14	11504	25861		
5-Sep-14	6337	20694		- Collected effluent sample
18-Aug-14	4593	18950		
28-Jul-14	4593	18950		
16-Jun-14	4593	18950	18950	- City invoiced for discharge

Attachment 1

ANALYTICAL REPORT

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

Laboratory Job ID: 240-131038-1
Client Project/Site: 11208058, RACER Bay City

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

Attn: Ms. Ruth Mickle



Authorized for release by:
6/15/2020 11:31:14 AM

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

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

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



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Case Narrative

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

Job ID: 240-131038-1

Laboratory: Eurofins TestAmerica, Canton

Narrative

Job Narrative 240-131038-1

Comments

No additional comments.

Receipt

The sample was received on 5/30/2020 10:20 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.6° C.

GC/MS VOA

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

GC Semi VOA

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

Metals

Method 200.7 Rev 4.4: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: W-12610-052920-SSH-2002 (240-131038-1). The continuing calibration blanks and method blanks may not support the lower PQL.

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

General Chemistry

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

Organic Prep

Methods 3510C, 608: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-436860.

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

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

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)
MQL	Method Quantitation Limit
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: 11208058, RACER Bay City

Job ID: 240-131038-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-131038-1	W-12610-052920-SSH-2002	Water	05/29/20 09:15	05/30/20 10:20	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Detection Summary

Client: GHD Services Inc.
 Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

Client Sample ID: W-12610-052920-SSH-2002

Lab Sample ID: 240-131038-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	10	J	20	3.5	ug/L	1		200.7 Rev 4.4	Total Recoverable
Iron	58	J	100	26	ug/L	1		200.7 Rev 4.4	Total Recoverable
Nickel	7.2	J	20	2.2	ug/L	1		200.7 Rev 4.4	Total Recoverable
Chemical Oxygen Demand	6.7	J	10	4.1	mg/L	1		410.4	Total/NA
pH	7.7	HF	0.1	0.1	SU	1		4500 H+ B-2000	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Canton



Method Summary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL CAN
608	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	TAL CAN
200.7 Rev 4.4	Metals (ICP)	EPA	TAL CAN
245.1	Mercury (CVAA)	EPA	TAL CAN
1664A	HEM and SGT-HEM	1664A	TAL BUF
410.4	COD	MCAWW	TAL CAN
4500 H+ B-2000	pH	SM	TAL CAN
4500 NH3 D-2011	Ammonia	SM	TAL CAN
5210B-2001	BOD, 5-Day	SM	TAL CAN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CAN
SM4500 P E-1999	Phosphorus	SM	TAL CAN
1664A	HEM and SGT-HEM (SPE)	1664A	TAL BUF
200.7	Preparation, Total Recoverable Metals	EPA	TAL CAN
245.1	Preparation, Mercury	EPA	TAL CAN
608	Liquid-Liquid Extraction (Separatory Funnel)	40CFR136A	TAL CAN

Protocol References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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

Client Sample Results

Client: GHD Services Inc.
 Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Client Sample ID: W-12610-052920-SSH-2002

Date Collected: 05/29/20 09:15

Date Received: 05/30/20 10:20

Lab Sample ID: 240-131038-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.20	ug/L			06/03/20 01:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		47 - 134		06/03/20 01:02	1
1,2-Dichloroethane-d4 (Surr)	101		75 - 130		06/03/20 01:02	1
Toluene-d8 (Surr)	92		69 - 122		06/03/20 01:02	1



Client Sample Results

Client: GHD Services Inc.
 Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Client Sample ID: W-12610-052920-SSH-2002

Date Collected: 05/29/20 09:15

Date Received: 05/30/20 10:20

Lab Sample ID: 240-131038-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		06/04/20 08:07	06/08/20 10:37	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		06/04/20 08:07	06/08/20 10:37	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		06/04/20 08:07	06/08/20 10:37	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		06/04/20 08:07	06/08/20 10:37	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		06/04/20 08:07	06/08/20 10:37	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		06/04/20 08:07	06/08/20 10:37	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		06/04/20 08:07	06/08/20 10:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>DCB Decachlorobiphenyl</i>	90		10 - 114				06/04/20 08:07	06/08/20 10:37	1
<i>Tetrachloro-m-xylene</i>	88		15 - 131				06/04/20 08:07	06/08/20 10:37	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Client Sample ID: W-12610-052920-SSH-2002

Date Collected: 05/29/20 09:15

Date Received: 05/30/20 10:20

Lab Sample ID: 240-131038-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	0.62	ug/L		06/01/20 16:00	06/02/20 12:51	1
Cadmium	2.0	U	2.0	0.20	ug/L		06/01/20 16:00	06/02/20 12:51	1
Chromium	5.0	U	5.0	0.63	ug/L		06/01/20 16:00	06/02/20 12:51	1
Copper	10	J	20	3.5	ug/L		06/01/20 16:00	06/02/20 12:51	1
Iron	58	J	100	26	ug/L		06/01/20 16:00	06/02/20 12:51	1
Nickel	7.2	J	20	2.2	ug/L		06/01/20 16:00	06/02/20 12:51	1
Lead	3.0	U	3.0	2.8	ug/L		06/01/20 16:00	06/02/20 12:51	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: W-12610-052920-SSH-2002

Date Collected: 05/29/20 09:15

Date Received: 05/30/20 10:20

Lab Sample ID: 240-131038-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		06/01/20 16:00	06/02/20 18:02	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

General Chemistry

Client Sample ID: W-12610-052920-SSH-2002

Date Collected: 05/29/20 09:15

Date Received: 05/30/20 10:20

Lab Sample ID: 240-131038-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.8	U	5.8	1.6	mg/L		06/02/20 18:37	06/02/20 18:37	1
Chemical Oxygen Demand	6.7	J	10	4.1	mg/L			06/11/20 11:08	1
pH	7.7	HF	0.1	0.1	SU			05/30/20 12:09	1
Ammonia	0.20	U	0.20	0.093	mg/L			06/11/20 10:35	1
Biochemical Oxygen Demand	2.0	U	2.0	1.2	mg/L			05/30/20 09:28	1
Total Suspended Solids	4.0	U	4.0	2.2	mg/L			06/04/20 09:20	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			06/12/20 06:22	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

GC/MS VOA

Analysis Batch: 436508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-131038-1	W-12610-052920-SSH-2002	Total/NA	Water	624	
MB 240-436508/32	Method Blank	Total/NA	Water	624	
LCS 240-436508/33	Lab Control Sample	Total/NA	Water	624	

GC Semi VOA

Prep Batch: 436860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-131038-1	W-12610-052920-SSH-2002	Total/NA	Water	608	
MB 240-436860/15-A	Method Blank	Total/NA	Water	608	
LCS 240-436860/16-A	Lab Control Sample	Total/NA	Water	608	
LCSD 240-436860/17-A	Lab Control Sample Dup	Total/NA	Water	608	

Analysis Batch: 437216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-131038-1	W-12610-052920-SSH-2002	Total/NA	Water	608	436860
MB 240-436860/15-A	Method Blank	Total/NA	Water	608	436860
LCS 240-436860/16-A	Lab Control Sample	Total/NA	Water	608	436860
LCSD 240-436860/17-A	Lab Control Sample Dup	Total/NA	Water	608	436860

Metals

Prep Batch: 436389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-131038-1	W-12610-052920-SSH-2002	Total Recoverable	Water	200.7	
MB 240-436389/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 240-436389/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
240-131038-1 MS	W-12610-052920-SSH-2002	Total Recoverable	Water	200.7	
240-131038-1 MSD	W-12610-052920-SSH-2002	Total Recoverable	Water	200.7	

Prep Batch: 436392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-131038-1	W-12610-052920-SSH-2002	Total/NA	Water	245.1	
MB 240-436392/1-A	Method Blank	Total/NA	Water	245.1	
LCS 240-436392/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 436562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-131038-1	W-12610-052920-SSH-2002	Total Recoverable	Water	200.7 Rev 4.4	436389
MB 240-436389/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	436389
LCS 240-436389/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	436389
240-131038-1 MS	W-12610-052920-SSH-2002	Total Recoverable	Water	200.7 Rev 4.4	436389
240-131038-1 MSD	W-12610-052920-SSH-2002	Total Recoverable	Water	200.7 Rev 4.4	436389

Analysis Batch: 436810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-131038-1	W-12610-052920-SSH-2002	Total/NA	Water	245.1	436392
MB 240-436392/1-A	Method Blank	Total/NA	Water	245.1	436392
LCS 240-436392/2-A	Lab Control Sample	Total/NA	Water	245.1	436392

Eurofins TestAmerica, Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

General Chemistry

Analysis Batch: 436243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-131038-1	W-12610-052920-SSH-2002	Total/NA	Water	4500 H+ B-2000	
LCS 240-436243/2	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	

Analysis Batch: 436244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-131038-1	W-12610-052920-SSH-2002	Total/NA	Water	5210B-2001	
SCB 240-436244/2	Method Blank	Total/NA	Water	5210B-2001	
USB 240-436244/1	Method Blank	Total/NA	Water	5210B-2001	
LCS 240-436244/3	Lab Control Sample	Total/NA	Water	5210B-2001	

Analysis Batch: 436882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-131038-1	W-12610-052920-SSH-2002	Total/NA	Water	SM 2540D	
MB 240-436882/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 240-436882/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 437904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-131038-1	W-12610-052920-SSH-2002	Total/NA	Water	410.4	
MB 240-437904/9	Method Blank	Total/NA	Water	410.4	
LCS 240-437904/10	Lab Control Sample	Total/NA	Water	410.4	
240-131038-1 MS	W-12610-052920-SSH-2002	Total/NA	Water	410.4	
240-131038-1 MSD	W-12610-052920-SSH-2002	Total/NA	Water	410.4	

Analysis Batch: 437959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-131038-1	W-12610-052920-SSH-2002	Total/NA	Water	4500 NH3 D-2011	
MB 240-437959/7	Method Blank	Total/NA	Water	4500 NH3 D-2011	
LCS 240-437959/8	Lab Control Sample	Total/NA	Water	4500 NH3 D-2011	

Analysis Batch: 438078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-131038-1	W-12610-052920-SSH-2002	Total/NA	Water	SM4500 P E-1999	
MB 240-438078/3	Method Blank	Total/NA	Water	SM4500 P E-1999	
LCS 240-438078/4	Lab Control Sample	Total/NA	Water	SM4500 P E-1999	
240-131038-1 MS	W-12610-052920-SSH-2002	Total/NA	Water	SM4500 P E-1999	
240-131038-1 MSD	W-12610-052920-SSH-2002	Total/NA	Water	SM4500 P E-1999	

Prep Batch: 534464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-131038-1	W-12610-052920-SSH-2002	Total/NA	Water	1664A	
MB 480-534464/1-A	Method Blank	Total/NA	Water	1664A	
LCS 480-534464/2-A	Lab Control Sample	Total/NA	Water	1664A	

Eurofins TestAmerica, Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

General Chemistry

Analysis Batch: 534465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-131038-1	W-12610-052920-SSH-2002	Total/NA	Water	1664A	534464
MB 480-534464/1-A	Method Blank	Total/NA	Water	1664A	534464
LCS 480-534464/2-A	Lab Control Sample	Total/NA	Water	1664A	534464

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-436508/32
Matrix: Water
Analysis Batch: 436508

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.20	ug/L			06/02/20 23:23	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		47 - 134					06/02/20 23:23	1
1,2-Dichloroethane-d4 (Surr)	103		75 - 130					06/02/20 23:23	1
Toluene-d8 (Surr)	91		69 - 122					06/02/20 23:23	1

Lab Sample ID: LCS 240-436508/33
Matrix: Water
Analysis Batch: 436508

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	20.0	21.7		ug/L		109	10 - 251
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	108		47 - 134				
1,2-Dichloroethane-d4 (Surr)	95		75 - 130				
Toluene-d8 (Surr)	93		69 - 122				

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 240-436860/15-A
Matrix: Water
Analysis Batch: 437216

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436860

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		06/04/20 08:07	06/08/20 09:22	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		06/04/20 08:07	06/08/20 09:22	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		06/04/20 08:07	06/08/20 09:22	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		06/04/20 08:07	06/08/20 09:22	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		06/04/20 08:07	06/08/20 09:22	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		06/04/20 08:07	06/08/20 09:22	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		06/04/20 08:07	06/08/20 09:22	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	105		10 - 114				06/04/20 08:07	06/08/20 09:22	1
Tetrachloro-m-xylene	90		15 - 131				06/04/20 08:07	06/08/20 09:22	1

Lab Sample ID: LCS 240-436860/16-A
Matrix: Water
Analysis Batch: 437216

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436860

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	2.10		ug/L		84	50 - 114
Aroclor-1260	2.50	1.83		ug/L		73	8 - 127

Eurofins TestAmerica, Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Lab Sample ID: LCS 240-436860/16-A
Matrix: Water
Analysis Batch: 437216

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436860

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	90		10 - 114
Tetrachloro-m-xylene	83		15 - 131

Lab Sample ID: LCSD 240-436860/17-A
Matrix: Water
Analysis Batch: 437216

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 436860

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
Aroclor-1016	2.50	2.11		ug/L		84	50 - 114	0	30	
Aroclor-1260	2.50	1.97		ug/L		79	8 - 127	8	30	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	88		10 - 114
Tetrachloro-m-xylene	86		15 - 131

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-436389/1-A
Matrix: Water
Analysis Batch: 436562

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 436389

Analyte	MB MB		RL	MDL	Unit	D	Prepared		Analyzed		Dil Fac
	Result	Qualifier									
Silver	5.0	U	5.0	0.62	ug/L		06/01/20 16:00	06/02/20 12:18		1	
Cadmium	2.0	U	2.0	0.20	ug/L		06/01/20 16:00	06/02/20 12:18		1	
Chromium	5.0	U	5.0	0.63	ug/L		06/01/20 16:00	06/02/20 12:18		1	
Copper	20	U	20	3.5	ug/L		06/01/20 16:00	06/02/20 12:18		1	
Iron	100	U	100	26	ug/L		06/01/20 16:00	06/02/20 12:18		1	
Nickel	20	U	20	2.2	ug/L		06/01/20 16:00	06/02/20 12:18		1	
Lead	3.0	U	3.0	2.8	ug/L		06/01/20 16:00	06/02/20 12:18		1	

Lab Sample ID: LCS 240-436389/2-A
Matrix: Water
Analysis Batch: 436562

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 436389

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
Silver	100	103		ug/L		103	85 - 115	
Cadmium	1000	1020		ug/L		102	85 - 115	
Chromium	1000	965		ug/L		97	85 - 115	
Copper	1000	982		ug/L		98	85 - 115	
Iron	10000	9690		ug/L		97	85 - 115	
Nickel	1000	994		ug/L		99	85 - 115	
Lead	1000	919		ug/L		92	85 - 115	

Lab Sample ID: 240-131038-1 MS
Matrix: Water
Analysis Batch: 436562

Client Sample ID: W-12610-052920-SSH-2002
Prep Type: Total Recoverable
Prep Batch: 436389

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.	
									Limits	
Silver	5.0	U	100	109		ug/L		109	75 - 125	

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: 240-131038-1 MS
Matrix: Water
Analysis Batch: 436562

Client Sample ID: W-12610-052920-SSH-2002
Prep Type: Total Recoverable
Prep Batch: 436389

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	2.0	U	1000	1060		ug/L		106	75 - 125
Chromium	5.0	U	1000	1000		ug/L		100	75 - 125
Copper	10	J	1000	1040		ug/L		103	75 - 125
Iron	58	J	10000	10100		ug/L		100	75 - 125
Nickel	7.2	J	1000	1040		ug/L		103	75 - 125
Lead	3.0	U	1000	942		ug/L		94	75 - 125

Lab Sample ID: 240-131038-1 MSD
Matrix: Water
Analysis Batch: 436562

Client Sample ID: W-12610-052920-SSH-2002
Prep Type: Total Recoverable
Prep Batch: 436389

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Silver	5.0	U	100	108		ug/L		108	75 - 125	1	20
Cadmium	2.0	U	1000	1060		ug/L		106	75 - 125	0	20
Chromium	5.0	U	1000	984		ug/L		98	75 - 125	2	20
Copper	10	J	1000	1030		ug/L		102	75 - 125	1	20
Iron	58	J	10000	9990		ug/L		99	75 - 125	1	20
Nickel	7.2	J	1000	1050		ug/L		104	75 - 125	1	20
Lead	3.0	U	1000	945		ug/L		95	75 - 125	0	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-436392/1-A
Matrix: Water
Analysis Batch: 436810

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436392

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		06/01/20 16:00	06/02/20 17:12	1

Lab Sample ID: LCS 240-436392/2-A
Matrix: Water
Analysis Batch: 436810

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436392

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.33		ug/L		107	85 - 115

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 480-534464/1-A
Matrix: Water
Analysis Batch: 534465

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 534464

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	1.4	mg/L		06/02/20 18:37	06/02/20 18:37	1

QC Sample Results

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

Method: 1664A - HEM and SGT-HEM (Continued)

Lab Sample ID: LCS 480-534464/2-A
Matrix: Water
Analysis Batch: 534465

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 534464
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.0	32.50		mg/L		81	78 - 114

Method: 410.4 - COD

Lab Sample ID: MB 240-437904/9
Matrix: Water
Analysis Batch: 437904

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	10	U	10	4.1	mg/L			06/11/20 11:07	1

Lab Sample ID: LCS 240-437904/10
Matrix: Water
Analysis Batch: 437904

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	98.5	106		mg/L		107	90 - 110

Lab Sample ID: 240-131038-1 MS
Matrix: Water
Analysis Batch: 437904

Client Sample ID: W-12610-052920-SSH-2002
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	6.7	J	50.0	55.3		mg/L		97	90 - 110

Lab Sample ID: 240-131038-1 MSD
Matrix: Water
Analysis Batch: 437904

Client Sample ID: W-12610-052920-SSH-2002
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand	6.7	J	50.0	57.7		mg/L		102	90 - 110	4	20

Method: 4500 H+ B-2000 - pH

Lab Sample ID: LCS 240-436243/2
Matrix: Water
Analysis Batch: 436243

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	6.00	6.1		SU		102	97 - 103

Method: 4500 NH3 D-2011 - Ammonia

Lab Sample ID: MB 240-437959/7
Matrix: Water
Analysis Batch: 437959

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.20	U	0.20	0.093	mg/L			06/11/20 09:52	1

Eurofins TestAmerica, Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

Method: 4500 NH3 D-2011 - Ammonia (Continued)

Lab Sample ID: LCS 240-437959/8
Matrix: Water
Analysis Batch: 437959

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	2.59	2.43		mg/L		94	85 - 114

Method: 5210B-2001 - BOD, 5-Day

Lab Sample ID: SCB 240-436244/2
Matrix: Water
Analysis Batch: 436244

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

Analyte	SCB Result	SCB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.0	U	2.0	1.2	mg/L			05/30/20 09:28	1

Lab Sample ID: USB 240-436244/1
Matrix: Water
Analysis Batch: 436244

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

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.0	U	2.0	1.2	mg/L			05/30/20 09:28	1

Lab Sample ID: LCS 240-436244/3
Matrix: Water
Analysis Batch: 436244

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Biochemical Oxygen Demand	198	215		mg/L		109	85 - 115

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 240-436882/1
Matrix: Water
Analysis Batch: 436882

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	2.2	mg/L			06/04/20 09:20	1

Lab Sample ID: LCS 240-436882/2
Matrix: Water
Analysis Batch: 436882

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	83.0	95.0		mg/L		114	64 - 120

Method: SM4500 P E-1999 - Phosphorus

Lab Sample ID: MB 240-438078/3
Matrix: Water
Analysis Batch: 438078

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			06/12/20 06:10	1

Eurofins TestAmerica, Canton

QC Sample Results

Client: GHD Services Inc.
 Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

Method: SM4500 P E-1999 - Phosphorus (Continued)

Lab Sample ID: LCS 240-438078/4
Matrix: Water
Analysis Batch: 438078

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.478	0.446		mg/L		93	77 - 120

Lab Sample ID: 240-131038-1 MS
Matrix: Water
Analysis Batch: 438078

Client Sample ID: W-12610-052920-SSH-2002
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.10	U	0.500	0.535		mg/L		107	38 - 156

Lab Sample ID: 240-131038-1 MSD
Matrix: Water
Analysis Batch: 438078

Client Sample ID: W-12610-052920-SSH-2002
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Phosphorus as P	0.10	U	0.500	0.521		mg/L		104	38 - 156	3	29

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB	DCA	TOL
		(47-134)	(75-130)	(69-122)
240-131038-1	W-12610-052920-SSH-2002	102	101	92
LCS 240-436508/33	Lab Control Sample	108	95	93
MB 240-436508/32	Method Blank	102	103	91

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCBP2	TCX2
		(10-114)	(15-131)
240-131038-1	W-12610-052920-SSH-2002	90	88
LCS 240-436860/16-A	Lab Control Sample	90	83
LCSD 240-436860/17-A	Lab Control Sample Dup	88	86
MB 240-436860/15-A	Method Blank	105	90

Surrogate Legend

DCBP = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Lab Chronicle

Client: GHD Services Inc.
 Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

Client Sample ID: W-12610-052920-SSH-2002

Lab Sample ID: 240-131038-1

Date Collected: 05/29/20 09:15

Matrix: Water

Date Received: 05/30/20 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	436508	06/03/20 01:02	HMB	TAL CAN
Total/NA	Prep	608			436860	06/04/20 08:07	BMB	TAL CAN
Total/NA	Analysis	608		1	437216	06/08/20 10:37	KMG	TAL CAN
Total Recoverable	Prep	200.7			436389	06/01/20 16:00	SLD	TAL CAN
Total Recoverable	Analysis	200.7 Rev 4.4		1	436562	06/02/20 12:51	WKD	TAL CAN
Total/NA	Prep	245.1			436392	06/01/20 16:00	SLD	TAL CAN
Total/NA	Analysis	245.1		1	436810	06/02/20 18:02	SLD	TAL CAN
Total/NA	Prep	1664A			534464	06/02/20 18:37	CRK	TAL BUF
Total/NA	Analysis	1664A		1	534465	06/02/20 18:37	T1S	TAL BUF
Total/NA	Analysis	410.4		1	437904	06/11/20 11:08	TPH	TAL CAN
Total/NA	Analysis	4500 H+ B-2000		1	436243	05/30/20 12:09	BLW	TAL CAN
Total/NA	Analysis	4500 NH3 D-2011		1	437959	06/11/20 10:35	JR	TAL CAN
Total/NA	Analysis	5210B-2001		1	436244	05/30/20 09:28	BLW	TAL CAN
Total/NA	Analysis	SM 2540D		1	436882	06/04/20 09:20	JR	TAL CAN
Total/NA	Analysis	SM4500 P E-1999		1	438078	06/12/20 06:22	TPH	TAL CAN

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-20
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-20
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-20
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-20
Texas	NELAP	T104704517-18-10	08-31-20
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Laboratory: Eurofins TestAmerica, Buffalo

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-0686	07-06-20
California	State	2931	04-01-20 *
Connecticut	State	PH-0568	09-30-20
Florida	NELAP	E87672	06-30-20
Georgia	State	10026 (NY)	04-01-21
Georgia	State Program	N/A	03-31-09 *
Georgia (DW)	State	956	04-01-21
Illinois	NELAP	200003	06-07-20
Iowa	State	374	02-28-21
Kansas	NELAP	E-10187	02-01-21
Kentucky (DW)	State	90029	12-31-20
Kentucky (UST)	State	30	04-01-21
Kentucky (WW)	State	KY90029	12-31-20
Louisiana	NELAP	02031	06-30-20
Maine	State	NY00044	12-04-20
Maryland	State	294	04-01-21
Massachusetts	State	M-NY044	06-30-20
Michigan	State	9937	03-31-20 *
Michigan	State Program	9937	04-01-09 *
Minnesota	NELAP	1524384	12-31-20
New Hampshire	NELAP	2337	11-18-20
New Jersey	NELAP	NY455	06-30-20
New York	NELAP	10026	04-02-21
North Dakota	State	R-176	03-31-20 *

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

Eurofins TestAmerica, Canton

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 11208058, RACER Bay City

Job ID: 240-131038-1

Laboratory: Eurofins TestAmerica, Buffalo (Continued)

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

Authority	Program	Identification Number	Expiration Date
Oklahoma	State	9421	09-01-20
Oregon	NELAP	NY200003	06-10-20
Pennsylvania	NELAP	68-00281	07-31-20
Rhode Island	State	LAO00328	12-30-20
Tennessee	State	02970	04-01-21
Texas	NELAP	T104704412-18-10	08-01-20
USDA	US Federal Programs	P330-18-00039	02-06-21
Virginia	NELAP	460185	09-14-20
Washington	State	C784	02-11-21
Wisconsin	State	998310390	08-31-20

Eurofins TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 131038

Client GHD Site Name _____ Cooler unpacked by: [Signature]
 Cooler Received on 5-30-20 Opened on 5-30-20
 FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

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

TestAmerica Cooler # 7A 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-10 (CF +0.7°C) Observed Cooler Temp. 4.7°C Corrected Cooler Temp. 5-6°C
 IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. _____°C Corrected Cooler Temp. _____°C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 7 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 NA
 -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
12. 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# HC902937
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 # _____ 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: AG

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): _____
 VOA Sample Preservation - Date/Time VOAs Frozen: _____

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>		<u>Preservative</u>	
			<u>pH</u>	<u>Temp</u>	<u>Added (mls)</u>	<u>Lot #</u>
W-12610-052920-SSH-2002	240-131038-E-1	Plastic 500ml - with Sulfuric Acid	<2	_____	_____	_____
W-12610-052920-SSH-2002	240-131038-F-1	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 240-131038-1

Login Number: 131038

List Number: 2

Creator: Sabuda, Brendan D

List Source: Eurofins TestAmerica, Buffalo

List Creation: 06/02/20 04:29 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.1 #1 ICE
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	



Attachment 2

Certification Statement

"I, David Favero, certify under penalty of law that this document (July 31, 2020 GHD Semi-Annual Compliance Report [January 1 to June 30, 2019]), and all attachments were prepared under by direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."



RACER, Deputy Cleanup Manager – Michigan

7/22/2020

(Date)