July 16, 2018 Reference No. 012610

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, 2018)
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, 2018 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 June 1, 2018. 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. As previously identified to you, the flow volumes in 2017 appeared to be light when compared to previous flow rates. A new flow meter was installed in the first quarter of 2018 to improve the accuracy of the flow volumes.

The RACER groundwater extraction and treatment system is operated and maintained by Steve Hoevemeyer (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.

GHD
14496 Sheldon Road Suite 200 Plymouth Michigan 48170 USA
T 734 453 5123 **F** 734 453 3792 **W** www.ghd.com

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

Sincerely,

GHD

John-Eric Pardys, P.Eng.

JEP/kf/4

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

Table 1

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

Sample Location:			**effluent-GWTS**	**effluent-GWTS**
Sample ID:			**W-12610-060118-SSH-18101**	**W-12610-060118-SSH-18102**
Sample Date:			**6/1/2018**	**6/1/2018**
				Duplicate
Parameters	**Units**	**Daily Maximum**		
VOAs		**(Bay City Industrial User Permit)**		
Vinyl chloride	mg/L	0.002	0.001 U	0.001 U
Metals				
Cadmium	mg/L	0.057	0.002 U	0.002 U
Chromium	mg/L	6.812	0.00083 J	0.0011 J
Copper	mg/L	1.476	0.02 U	0.02 U
Iron	mg/L		0.043 J	0.045 J
Lead	mg/L	0.632	0.003 U	0.003 U
Mercury	mg/L	ND	0.0002 U	0.0002 U
Nickel	mg/L	2.548	0.043	0.043
Silver	mg/L	0.2	0.005 U	0.005 U
Pesticides				
Aroclor-1016 (PCB-1016)	mg/L	ND	0.000097 U	0.000097 U
Aroclor-1221 (PCB-1221)	mg/L	ND	0.000097 U	0.000097 U
Aroclor-1232 (PCB-1232)	mg/L	ND	0.000097 U	0.000097 U
Aroclor-1242 (PCB-1242)	mg/L	ND	0.000097 U	0.000097 U
Aroclor-1248 (PCB-1248)	mg/L	ND	0.000097 U	0.000097 U
Aroclor-1254 (PCB-1254)	mg/L	ND	0.000097 U	0.000097 U
Aroclor-1260 (PCB-1260)	mg/L	ND	0.000097 U	0.000097 U
Wet				
Ammonia	mg/L	30	0.30	0.28
Biochemical oxygen demand (BOD)	mg/L	835	2.0 U	2.0 U
Chemical oxygen demand (COD)	mg/L	1670	10 U	10 U
Oil and grease (HEM), polar	mg/L	100	4.8 U	4.9 U
pH, lab	s.u.	6.5 to 11.0	7.6 HF	7.6 HF
Phosphorus	mg/L	13.8	0.10 U	0.10 U
Total suspended solids (TSS)	mg/L	1336	4.0 U	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.

Table 2

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
16-Jun-14	4593	18950	**18950**	- City invoiced for discharge
28-Jul-14	4593	18950		
18-Aug-14	4593	18950		
5-Sep-14	6337	20694		- Collected effluent sample
23-Sep-14	11504	25861		
23-Oct-14	31004	45361		
26-Nov-14	31004	45361		
29-Dec-14	31004	45361		
27-Jan-15	31004	45361		
13-Feb-15	46303	60660		
16-Mar-15				- Collected effluent sample
19-Mar-15	67425	81782		
30-Apr-15	175234	189591		
6-May-15	197766	212123		
18-Jun-15	224490	238847		
25-Jun-15	232315	246672		
30-Jun-15	232315	246672		
29-Jul-15	232315	246672		
28-Aug-15	241397	255754		
29-Sep-15	252638	266995		
30-Oct-15	260771	275128		
23-Nov-15	289731	304088		
10-Dec-15				- Collected effluent sample
30-Dec-15	351550	365907		
10-Feb-16	387410	401767		
29-Feb-16	394550	408907		
21-Mar-16	409836	424193		
27-Apr-16	462204	476561		
31-May-16	521920	536277		
14-Jun-16	528259	542616	**523666**	- Collected effluent sample, City invoiced for discharge
29-Jun-16	556457	570814		
20-Jul-16	561893	576250		
31-Aug-16	607298	621655		
30-Sep-16	607717	622074		
28-Oct-16	608865	623222		
11-Nov-16	608980	623337		
16-Dec-16	609074	623431		
14-Jan-17	609074	623431		
14-Jan-17	0	623431		
16-Jan-17				- Collected effluent sample
2-Feb-17	5813	629244		

Table 2

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
27-Apr-17	55126	678557		
9-May-17				- Collected effluent sample
22-May-17	56722	680153		
13-Jun-17	56729	680160	**137544**	- City invoiced for discharge
28-Jun-17	56911	680342		
12-Jul-17	60991	684422		
25-Oct-17	73702	697133		
30-Nov-17				- Collected effluent sample
8-Mar-18	122667	746098		- Last reading before replacing flow meter
8-Mar-18	0	746098		- New Flow meter installed
29-Mar-18	11243	757341		
30-Apr-18	18529	764627		
31-May-18	20490	766588		
1-Jun-18				- Collected effluent sample
1-Jun-18	22333	768431	**88271**	- City invoiced for discharge
20-Jun-18	35274	781372		

Attachment 1
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: 240-96473-1
Client Project/Site: 12610-T04, RACER Bay City

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

Attn: Ms. Ruth Mickle

Denise D Heckler

Authorized for release by:
6/15/2018 7:45:02 PM

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

Table of Contents

Job ID: 240-96473-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative
240-96473-1

Comments
No additional comments.

Receipt
The samples were received on 6/2/2018 9:35 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.7º C and 1.9º C.

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

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

Metals
Method(s) 200.7 Rev 4.4, 6010B, 6010D: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: W-12610-060118-SSH-18101 (240-96473-1) and W-12610-060118-SSH-18102 (240-96473-2). 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
Method(s) SM 5210B: The USB dilution water D.O. depletion was greater than 0.2 mg/L. The associated sample results in batch 240-329747 are qualified and reported.

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

Organic Prep
Method(s) 3520C, 608: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-330044.

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

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
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.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
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.
s	Seeded Control Blank (SCB) Recovery High

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: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-96473-1	W-12610-060118-SSH-18101	Water	06/01/18 09:15	06/02/18 09:35
240-96473-2	W-12610-060118-SSH-18102	Water	06/01/18 09:20	06/02/18 09:35

Detection Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

Client Sample ID: W-12610-060118-SSH-18101 — Lab Sample ID: 240-96473-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.83	J	5.0	0.63	ug/L	1		200.7 Rev 4.4	Total Recoverable
Iron	43	J	100	26	ug/L	1		200.7 Rev 4.4	Total Recoverable
Nickel	43		20	2.2	ug/L	1		200.7 Rev 4.4	Total Recoverable
pH	7.6	HF	0.1	0.1	SU	1		4500 H+ B-2000	Total/NA
Ammonia	0.30		0.20	0.093	mg/L	1		SM 4500 NH3 D	Total/NA

Client Sample ID: W-12610-060118-SSH-18102 — Lab Sample ID: 240-96473-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	1.1	J	5.0	0.63	ug/L	1		200.7 Rev 4.4	Total Recoverable
Iron	45	J	100	26	ug/L	1		200.7 Rev 4.4	Total Recoverable
Nickel	43		20	2.2	ug/L	1		200.7 Rev 4.4	Total Recoverable
pH	7.6	HF	0.1	0.1	SU	1		4500 H+ B-2000	Total/NA
Ammonia	0.28		0.20	0.093	mg/L	1		SM 4500 NH3 D	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

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 CAN
410.4	COD	MCAWW	TAL CAN
4500 H+ B-2000	pH	SM	TAL CAN
5210B-2001	BOD, 5-Day	SM	TAL CAN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CAN
SM 4500 NH3 D	Ammonia	SM	TAL CAN
SM4500 P E-1999	Phosphorus	SM	TAL CAN
200.7	Preparation, Total Recoverable Metals	EPA	TAL CAN
245.1	Preparation, Mercury	EPA	TAL CAN
608	Liquid-Liquid Extraction (Continuous)	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 CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

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

Client Sample ID: W-12610-060118-SSH-18101
Date Collected: 06/01/18 09:15
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.040	ug/L			06/05/18 07:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*69 - 120*		*06/05/18 07:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*61 - 138*		*06/05/18 07:08*	*1*
Toluene-d8 (Surr)	*112*		*73 - 120*		*06/05/18 07:08*	*1*

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

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

Client Sample ID: W-12610-060118-SSH-18102
Date Collected: 06/01/18 09:20
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.040	ug/L			06/05/18 07:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*		*06/05/18 07:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*61 - 138*		*06/05/18 07:31*	*1*
Toluene-d8 (Surr)	*113*		*73 - 120*		*06/05/18 07:31*	*1*

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

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

Client Sample ID: W-12610-060118-SSH-18101
Date Collected: 06/01/18 09:15
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	0.054	ug/L		06/05/18 07:45	06/06/18 23:43	1
Aroclor-1221	0.097	U	0.097	0.055	ug/L		06/05/18 07:45	06/06/18 23:43	1
Aroclor-1232	0.097	U	0.097	0.072	ug/L		06/05/18 07:45	06/06/18 23:43	1
Aroclor-1242	0.097	U	0.097	0.074	ug/L		06/05/18 07:45	06/06/18 23:43	1
Aroclor-1248	0.097	U	0.097	0.049	ug/L		06/05/18 07:45	06/06/18 23:43	1
Aroclor-1254	0.097	U	0.097	0.039	ug/L		06/05/18 07:45	06/06/18 23:43	1
Aroclor-1260	0.097	U	0.097	0.045	ug/L		06/05/18 07:45	06/06/18 23:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*69*		*10 - 114*	*06/05/18 07:45*	*06/06/18 23:43*	*1*
Tetrachloro-m-xylene	*64*		*15 - 131*	*06/05/18 07:45*	*06/06/18 23:43*	*1*

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

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

Client Sample ID: W-12610-060118-SSH-18102
Date Collected: 06/01/18 09:20
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	0.054	ug/L		06/05/18 07:45	06/07/18 00:03	1
Aroclor-1221	0.097	U	0.097	0.055	ug/L		06/05/18 07:45	06/07/18 00:03	1
Aroclor-1232	0.097	U	0.097	0.072	ug/L		06/05/18 07:45	06/07/18 00:03	1
Aroclor-1242	0.097	U	0.097	0.074	ug/L		06/05/18 07:45	06/07/18 00:03	1
Aroclor-1248	0.097	U	0.097	0.049	ug/L		06/05/18 07:45	06/07/18 00:03	1
Aroclor-1254	0.097	U	0.097	0.039	ug/L		06/05/18 07:45	06/07/18 00:03	1
Aroclor-1260	0.097	U	0.097	0.045	ug/L		06/05/18 07:45	06/07/18 00:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*79*		*10 - 114*	*06/05/18 07:45*	*06/07/18 00:03*	*1*
Tetrachloro-m-xylene	*66*		*15 - 131*	*06/05/18 07:45*	*06/07/18 00:03*	*1*

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

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

Client Sample ID: W-12610-060118-SSH-18101
Date Collected: 06/01/18 09:15
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	0.62	ug/L		06/04/18 14:00	06/11/18 20:00	1
Cadmium	2.0	U	2.0	0.20	ug/L		06/04/18 14:00	06/11/18 20:00	1
Chromium	**0.83**	**J**	5.0	0.63	ug/L		06/04/18 14:00	06/11/18 20:00	1
Copper	20	U	20	3.5	ug/L		06/04/18 14:00	06/11/18 20:00	1
Iron	**43**	**J**	100	26	ug/L		06/04/18 14:00	06/11/18 20:00	1
Nickel	**43**		20	2.2	ug/L		06/04/18 14:00	06/11/18 20:00	1
Lead	3.0	U	3.0	2.8	ug/L		06/04/18 14:00	06/11/18 20:00	1

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

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

Client Sample ID: W-12610-060118-SSH-18102
Date Collected: 06/01/18 09:20
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	0.62	ug/L		06/04/18 14:00	06/11/18 20:04	1
Cadmium	2.0	U	2.0	0.20	ug/L		06/04/18 14:00	06/11/18 20:04	1
Chromium	**1.1**	**J**	5.0	0.63	ug/L		06/04/18 14:00	06/11/18 20:04	1
Copper	20	U	20	3.5	ug/L		06/04/18 14:00	06/11/18 20:04	1
Iron	**45**	**J**	100	26	ug/L		06/04/18 14:00	06/11/18 20:04	1
Nickel	**43**		20	2.2	ug/L		06/04/18 14:00	06/11/18 20:04	1
Lead	3.0	U	3.0	2.8	ug/L		06/04/18 14:00	06/11/18 20:04	1

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: W-12610-060118-SSH-18101
Date Collected: 06/01/18 09:15
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		06/04/18 12:00	06/05/18 14:33	1

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: W-12610-060118-SSH-18102
Date Collected: 06/01/18 09:20
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		06/04/18 12:00	06/05/18 14:35	1

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

General Chemistry

Client Sample ID: W-12610-060118-SSH-18101
Date Collected: 06/01/18 09:15
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	4.8	U	4.8	0.99	mg/L			06/15/18 10:17	1
Chemical Oxygen Demand	10	U	10	4.1	mg/L			06/11/18 11:40	1
pH	**7.6**	**HF**	0.1	0.1	SU			06/02/18 10:53	1
Biochemical Oxygen Demand	2.0	U	2.0	1.2	mg/L			06/02/18 11:13	1
Total Suspended Solids	4.0	U	4.0	2.2	mg/L			06/07/18 09:20	1
Ammonia	**0.30**		0.20	0.093	mg/L			06/11/18 10:45	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			06/12/18 11:54	1

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

General Chemistry

Client Sample ID: W-12610-060118-SSH-18102
Date Collected: 06/01/18 09:20
Date Received: 06/02/18 09:35

Lab Sample ID: 240-96473-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	4.9	U	4.9	1.0	mg/L			06/15/18 10:17	1
Chemical Oxygen Demand	10	U	10	4.1	mg/L			06/11/18 11:41	1
pH	**7.6**	**HF**	0.1	0.1	SU			06/02/18 10:55	1
Biochemical Oxygen Demand	2.0	U	2.0	1.2	mg/L			06/02/18 11:20	1
Total Suspended Solids	4.0	U	4.0	2.2	mg/L			06/07/18 09:20	1
Ammonia	**0.28**		0.20	0.093	mg/L			06/11/18 10:48	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			06/12/18 11:58	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

GC/MS VOA

Analysis Batch: 329974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	624	
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	624	
MB 240-329974/32	Method Blank	Total/NA	Water	624	
LCS 240-329974/33	Lab Control Sample	Total/NA	Water	624	

GC Semi VOA

Prep Batch: 330044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	608	
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	608	
MB 240-330044/12-A	Method Blank	Total/NA	Water	608	
LCS 240-330044/13-A	Lab Control Sample	Total/NA	Water	608	

Analysis Batch: 330369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	608	330044
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	608	330044
MB 240-330044/12-A	Method Blank	Total/NA	Water	608	330044
LCS 240-330044/13-A	Lab Control Sample	Total/NA	Water	608	330044

Metals

Prep Batch: 329854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total Recoverable	Water	200.7	
240-96473-2	W-12610-060118-SSH-18102	Total Recoverable	Water	200.7	
MB 240-329854/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 240-329854/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Prep Batch: 329860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	245.1	
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	245.1	
MB 240-329860/1-A	Method Blank	Total/NA	Water	245.1	
LCS 240-329860/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 330279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	245.1	329860
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	245.1	329860
MB 240-329860/1-A	Method Blank	Total/NA	Water	245.1	329860
LCS 240-329860/2-A	Lab Control Sample	Total/NA	Water	245.1	329860

Analysis Batch: 331132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total Recoverable	Water	200.7 Rev 4.4	329854
240-96473-2	W-12610-060118-SSH-18102	Total Recoverable	Water	200.7 Rev 4.4	329854
MB 240-329854/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	329854
LCS 240-329854/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	329854

General Chemistry

Analysis Batch: 329746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	4500 H+ B-2000	
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	4500 H+ B-2000	
LCS 240-329746/2	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	

Analysis Batch: 329747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	5210B-2001	
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	5210B-2001	
SCB 240-329747/2	Method Blank	Total/NA	Water	5210B-2001	
USB 240-329747/1	Method Blank	Total/NA	Water	5210B-2001	
LCS 240-329747/3	Lab Control Sample	Total/NA	Water	5210B-2001	

Analysis Batch: 330472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	SM 2540D	
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	SM 2540D	
MB 240-330472/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 240-330472/2	Lab Control Sample	Total/NA	Water	SM 2540D	
240-96473-1 DU	W-12610-060118-SSH-18101	Total/NA	Water	SM 2540D	

Analysis Batch: 330950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	410.4	
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	410.4	
MB 240-330950/9	Method Blank	Total/NA	Water	410.4	
LCS 240-330950/10	Lab Control Sample	Total/NA	Water	410.4	

Analysis Batch: 331046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	SM 4500 NH3 D	
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	SM 4500 NH3 D	
MB 240-331046/7	Method Blank	Total/NA	Water	SM 4500 NH3 D	
LCS 240-331046/8	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	

Analysis Batch: 331226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	SM4500 P E-1999	
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	SM4500 P E-1999	
MB 240-331226/3	Method Blank	Total/NA	Water	SM4500 P E-1999	
LCS 240-331226/4	Lab Control Sample	Total/NA	Water	SM4500 P E-1999	
240-96473-2 MS	W-12610-060118-SSH-18102	Total/NA	Water	SM4500 P E-1999	
240-96473-2 MSD	W-12610-060118-SSH-18102	Total/NA	Water	SM4500 P E-1999	

Analysis Batch: 331854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-1	W-12610-060118-SSH-18101	Total/NA	Water	1664A	

General Chemistry (Continued)

Analysis Batch: 331854 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-96473-2	W-12610-060118-SSH-18102	Total/NA	Water	1664A	
MB 240-331854/1	Method Blank	Total/NA	Water	1664A	
LCS 240-331854/2	Lab Control Sample	Total/NA	Water	1664A	

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

Lab Sample ID: MB 240-329974/32
Matrix: Water
Analysis Batch: 329974

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	0.040	ug/L			06/05/18 04:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*69 - 120*		*06/05/18 04:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*61 - 138*		*06/05/18 04:04*	*1*
Toluene-d8 (Surr)	*103*		*73 - 120*		*06/05/18 04:04*	*1*

Lab Sample ID: LCS 240-329974/33
Matrix: Water
Analysis Batch: 329974

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	19.2		ug/L		96	10 - 251

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*69 - 120*
1,2-Dichloroethane-d4 (Surr)	*91*		*61 - 138*
Toluene-d8 (Surr)	*105*		*73 - 120*

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

Lab Sample ID: MB 240-330044/12-A
Matrix: Water
Analysis Batch: 330369

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 330044

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		06/05/18 07:45	06/06/18 21:46	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		06/05/18 07:45	06/06/18 21:46	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		06/05/18 07:45	06/06/18 21:46	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		06/05/18 07:45	06/06/18 21:46	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		06/05/18 07:45	06/06/18 21:46	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		06/05/18 07:45	06/06/18 21:46	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		06/05/18 07:45	06/06/18 21:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*76*		*10 - 114*	*06/05/18 07:45*	*06/06/18 21:46*	*1*
Tetrachloro-m-xylene	*69*		*15 - 131*	*06/05/18 07:45*	*06/06/18 21:46*	*1*

Lab Sample ID: LCS 240-330044/13-A
Matrix: Water
Analysis Batch: 330369

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 330044

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	1.71		ug/L		69	50 - 114
Aroclor-1260	2.50	1.93		ug/L		77	8 - 127

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

Lab Sample ID: LCS 240-330044/13-A
Matrix: Water
Analysis Batch: 330369

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 330044

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*78*		*10 - 114*
Tetrachloro-m-xylene	*68*		*15 - 131*

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-329854/1-A
Matrix: Water
Analysis Batch: 331132

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 329854

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	0.62	ug/L		06/04/18 14:00	06/11/18 18:16	1
Cadmium	2.0	U	2.0	0.20	ug/L		06/04/18 14:00	06/11/18 18:16	1
Chromium	5.0	U	5.0	0.63	ug/L		06/04/18 14:00	06/11/18 18:16	1
Copper	20	U	20	3.5	ug/L		06/04/18 14:00	06/11/18 18:16	1
Iron	100	U	100	26	ug/L		06/04/18 14:00	06/11/18 18:16	1
Nickel	20	U	20	2.2	ug/L		06/04/18 14:00	06/11/18 18:16	1
Lead	3.0	U	3.0	2.8	ug/L		06/04/18 14:00	06/11/18 18:16	1

Lab Sample ID: LCS 240-329854/2-A
Matrix: Water
Analysis Batch: 331132

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 329854

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	50.0	51.0		ug/L		102	85 - 115
Cadmium	50.0	51.6		ug/L		103	85 - 115
Chromium	200	196		ug/L		98	85 - 115
Copper	250	248		ug/L		99	85 - 115
Iron	1000	1090		ug/L		109	85 - 115
Nickel	500	515		ug/L		103	85 - 115
Lead	500	492		ug/L		98	85 - 115

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-329860/1-A
Matrix: Water
Analysis Batch: 330279

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 329860

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		06/04/18 12:00	06/05/18 14:14	1

Lab Sample ID: LCS 240-329860/2-A
Matrix: Water
Analysis Batch: 330279

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 329860

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.43		ug/L		109	85 - 115

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 240-331854/1
Matrix: Water
Analysis Batch: 331854

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	1.0	mg/L			06/15/18 10:17	1

Lab Sample ID: LCS 240-331854/2
Matrix: Water
Analysis Batch: 331854

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.0	39.10		mg/L		98	78 - 114

Method: 410.4 - COD

Lab Sample ID: MB 240-330950/9
Matrix: Water
Analysis Batch: 330950

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			06/11/18 11:09	1

Lab Sample ID: LCS 240-330950/10
Matrix: Water
Analysis Batch: 330950

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	49.6	44.8		mg/L		90	90 - 110

Method: 4500 H+ B-2000 - pH

Lab Sample ID: LCS 240-329746/2
Matrix: Water
Analysis Batch: 329746

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	9.19	9.2		SU		100	97 - 103

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

Lab Sample ID: SCB 240-329747/2
Matrix: Water
Analysis Batch: 329747

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	1.46	J s	2.0	1.2	mg/L			06/02/18 10:23	1

Method: 5210B-2001 - BOD, 5-Day (Continued)

Lab Sample ID: USB 240-329747/1
Matrix: Water
Analysis Batch: 329747

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			06/02/18 10:21	1

Lab Sample ID: LCS 240-329747/3
Matrix: Water
Analysis Batch: 329747

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	194		mg/L		98	85 - 115

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

Lab Sample ID: MB 240-330472/1
Matrix: Water
Analysis Batch: 330472

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			06/07/18 09:20	1

Lab Sample ID: LCS 240-330472/2
Matrix: Water
Analysis Batch: 330472

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	33.7	26.0		mg/L		77	64 - 120

Lab Sample ID: 240-96473-1 DU
Matrix: Water
Analysis Batch: 330472

Client Sample ID: W-12610-060118-SSH-18101
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	4.0	U	4.0	U	mg/L		NC	10

Method: SM 4500 NH3 D - Ammonia

Lab Sample ID: MB 240-331046/7
Matrix: Water
Analysis Batch: 331046

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			06/11/18 08:03	1

Lab Sample ID: LCS 240-331046/8
Matrix: Water
Analysis Batch: 331046

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	5.00	4.64		mg/L		93	85 - 114

Method: SM4500 P E-1999 - Phosphorus

Lab Sample ID: MB 240-331226/3
Matrix: Water
Analysis Batch: 331226

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			06/12/18 10:56	1

Lab Sample ID: LCS 240-331226/4
Matrix: Water
Analysis Batch: 331226

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	0.447	0.458		mg/L		102	77 - 120

Lab Sample ID: 240-96473-2 MS
Matrix: Water
Analysis Batch: 331226

Client Sample ID: W-12610-060118-SSH-18102
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	0.486		mg/L		97	38 - 156

Lab Sample ID: 240-96473-2 MSD
Matrix: Water
Analysis Batch: 331226

Client Sample ID: W-12610-060118-SSH-18102
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	0.485		mg/L		97	38 - 156	0	29

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DCA	TOL
Lab Sample ID	Client Sample ID	(69-120)	(61-138)	(73-120)
240-96473-1	W-12610-060118-SSH-18101	101	110	112
240-96473-2	W-12610-060118-SSH-18102	102	107	113
LCS 240-329974/33	Lab Control Sample	97	91	105
MB 240-329974/32	Method Blank	95	94	103

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)	
		DCBP1	TCX1
Lab Sample ID	Client Sample ID	(10-114)	(15-131)
240-96473-1	W-12610-060118-SSH-18101	69	64
240-96473-2	W-12610-060118-SSH-18102	79	66
LCS 240-330044/13-A	Lab Control Sample	78	68
MB 240-330044/12-A	Method Blank	76	69

Surrogate Legend

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

Client Sample ID: W-12610-060118-SSH-18101

Lab Sample ID: 240-96473-1
Matrix: Water
Date Collected: 06/01/18 09:15
Date Received: 06/02/18 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	329974	06/05/18 07:08	TJL1	TAL CAN
Total/NA	Prep	608			330044	06/05/18 07:45	WKD	TAL CAN
Total/NA	Analysis	608		1	330369	06/06/18 23:43	KMG	TAL CAN
Total Recoverable	Prep	200.7			329854	06/04/18 14:00	MBB	TAL CAN
Total Recoverable	Analysis	200.7 Rev 4.4		1	331132	06/11/18 20:00	KLC	TAL CAN
Total/NA	Prep	245.1			329860	06/04/18 12:00	MBB	TAL CAN
Total/NA	Analysis	245.1		1	330279	06/05/18 14:33	AJC	TAL CAN
Total/NA	Analysis	1664A		1	331854	06/15/18 10:17	JESW	TAL CAN
Total/NA	Analysis	410.4		1	330950	06/11/18 11:40	TPH	TAL CAN
Total/NA	Analysis	4500 H+ B-2000		1	329746	06/02/18 10:53	LKG	TAL CAN
Total/NA	Analysis	5210B-2001		1	329747	06/02/18 11:13	LKG	TAL CAN
Total/NA	Analysis	SM 2540D		1	330472	06/07/18 09:20	MMM	TAL CAN
Total/NA	Analysis	SM 4500 NH3 D		1	331046	06/11/18 10:45	JAS	TAL CAN
Total/NA	Analysis	SM4500 P E-1999		1	331226	06/12/18 11:54	TPH	TAL CAN

Client Sample ID: W-12610-060118-SSH-18102

Lab Sample ID: 240-96473-2
Matrix: Water
Date Collected: 06/01/18 09:20
Date Received: 06/02/18 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	329974	06/05/18 07:31	TJL1	TAL CAN
Total/NA	Prep	608			330044	06/05/18 07:45	WKD	TAL CAN
Total/NA	Analysis	608		1	330369	06/07/18 00:03	KMG	TAL CAN
Total Recoverable	Prep	200.7			329854	06/04/18 14:00	MBB	TAL CAN
Total Recoverable	Analysis	200.7 Rev 4.4		1	331132	06/11/18 20:04	KLC	TAL CAN
Total/NA	Prep	245.1			329860	06/04/18 12:00	MBB	TAL CAN
Total/NA	Analysis	245.1		1	330279	06/05/18 14:35	AJC	TAL CAN
Total/NA	Analysis	1664A		1	331854	06/15/18 10:17	JESW	TAL CAN
Total/NA	Analysis	410.4		1	330950	06/11/18 11:41	TPH	TAL CAN
Total/NA	Analysis	4500 H+ B-2000		1	329746	06/02/18 10:55	LKG	TAL CAN
Total/NA	Analysis	5210B-2001		1	329747	06/02/18 11:20	LKG	TAL CAN
Total/NA	Analysis	SM 2540D		1	330472	06/07/18 09:20	MMM	TAL CAN
Total/NA	Analysis	SM 4500 NH3 D		1	331046	06/11/18 10:48	JAS	TAL CAN
Total/NA	Analysis	SM4500 P E-1999		1	331226	06/12/18 11:58	TPH	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: 12610-T04, RACER Bay City

TestAmerica Job ID: 240-96473-1

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	06-30-18 *
Illinois	NELAP	5	200004	07-31-18 *
Kansas	NELAP	7	E-10336	01-31-19
Kentucky (UST)	State Program	4	58	02-23-19
Kentucky (WW)	State Program	4	98016	12-31-18
Minnesota	NELAP	5	039-999-348	12-31-18
Minnesota (Petrofund)	State Program	1	3506	07-31-18 *
Nevada	State Program	9	OH-000482008A	07-31-18 *
New Jersey	NELAP	2	OH001	06-30-18 *
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	08-31-18 *
Texas	NELAP	6	T104704517-17-9	08-31-18 *
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-18 *
Washington	State Program	10	C971	01-12-19
West Virginia DEP	State Program	3	210	12-31-18

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

1.6/C1.7
1.8/C1.9

Chain of Custody Record

267206

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: JE Pardys	Site Contact: JE Pardys	Date: 6/1/18	COC No: 267206
Company Name: GHD	Tel/Fax: 519 340 4316	Lab Contact: D. Hechler	Carrier: FedEx	1 of 1 COCs
Address: 26850 Haggerty Rd	Analysis Turnaround Time			Sampler: S. Hoeyemeyer
City/State/Zip: Farmington Hills MI	☐ CALENDAR DAYS ☒ WORKING DAYS			For Lab Use Only:
Phone: 248 553 34001	TAT if different from Below			Walk-in Client:
Fax:	☒ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day			Lab Sampling:
Project Name: RaceTrust Bay City				Job / SDG No.:
Site: SSOW 12610-104-02				
PO# 24006288				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	metals	ammonia	COD	T. Phosphorus	vinyl chloride	PCBs	BOD	pH	TSS	HEM	Sample Specific Notes:
W-12610-060118-SSH-IB101	6/1/18	0915	C, G	W	11	N	N	X	X	X	X	X	X	X	X	X	X	
W-12610-060118-SSH-IB102	6/1/18	0920	C, G	W	11	N	N	X	X	X	X	X	X	X	X	X	X	

240-96473 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other 1,2,3,4

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.: 228430, 228429	Cooler Temp. (°C): Obs'd:	Corr'd:	Therm ID No.:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	GHD	6/1/18 1400	[signature]	TAL	6-2-18 935
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

6/15/2018

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 96473**
Canton Facility

Client GHD Site Name —

Cooler Received on 6-2-18 Opened on 6-2-18

Cooler unpacked by: BOF

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 ~~N/A~~ See Multiple Cooler Form
   IR GUN# IR-8 (CF +0.1 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN #36 (CF +0.3°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   ~~IR GUN # 627 (CF -1.3°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# **HC740840**
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: BOF

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): _____

TestAmerica Multiple Cooler Receipt Form/Narrative **Login # : 96473**
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
TA	8	1.6	1.7	ICE
1	1	1.8	1.9	1

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
W-12610-060118-SSH-18101	240-96473-E-1	Plastic 500ml - with Sulfuric Acid	<2	_____	_____
W-12610-060118-SSH-18101	240-96473-F-1	Plastic 500ml - with Nitric Acid	<2	_____	_____
W-12610-060118-SSH-18101	240-96473-J-1	Amber Glass 1 liter - Sulfuric Acid	_____	_____	_____
W-12610-060118-SSH-18101	240-96473-K-1	Amber Glass 1 liter - Sulfuric Acid	_____	_____	_____
W-12610-060118-SSH-18102	240-96473-E-2	Plastic 500ml - with Sulfuric Acid	<2	_____	_____
W-12610-060118-SSH-18102	240-96473-F-2	Plastic 500ml - with Nitric Acid	<2	_____	_____
W-12610-060118-SSH-18102	240-96473-J-2	Amber Glass 1 liter - Sulfuric Acid	_____	_____	_____
W-12610-060118-SSH-18102	240-96473-K-2	Amber Glass 1 liter - Sulfuric Acid	_____	_____	_____

Attachment 2
Certification Statement

Certification Statement

"I, __David Favero_____, certify under penalty of law that this document (July 16, 2018 GHD Semi-Annual Compliance Report (January 1 to June 30, 2018)), 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."

David Favero _____ July 16, 2018

RACER, Deputy Cleanup Manager – Michigan (Date)