



January 29, 2016

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 (July 1 to December 31, 2015)
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 July 1 to December 31, 2015 for RACER's groundwater treatment system located at the north end of Crotty Street in Bay City, Michigan (Site).

The groundwater treatment system did not operate between July 1 and August 24, 2015 as a result of the blower motor requiring repair. Following the installation of the repaired blower motor on August 24, 2015, the treatment system ran consistently for the remainder of the semi-annual period.

Table 1 presents the results of the required semi-annual effluent sample collected from the RACER groundwater treatment system on December 10, 2015. 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 treatment system is operated and maintained by Steve Hoevemeyer (GHD) who maintains the designation of Waste Treatment Plan 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



Michael Tomka, P.E.

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

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

Sample Location:
Sample ID:
Sample Date:

**effluent-GWTS
W-12610-121015-SSH-1115
12/10/2015**

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	0.02 U
Iron	mg/L		0.1 U
Lead	mg/L	0.632	0.003 U
Mercury	mg/L	ND	0.0002 U
Nickel	mg/L	2.548	0.02 U
Silver	mg/L	0.2	0.005 U
Pesticides			
Aroclor-1016 (PCB-1016)	mg/L	ND	0.0001 U
Aroclor-1221 (PCB-1221)	mg/L	ND	0.0001 U
Aroclor-1232 (PCB-1232)	mg/L	ND	0.0001 U
Aroclor-1242 (PCB-1242)	mg/L	ND	0.0001 U
Aroclor-1248 (PCB-1248)	mg/L	ND	0.0001 U
Aroclor-1254 (PCB-1254)	mg/L	ND	0.0001 U
Aroclor-1260 (PCB-1260)	mg/L	ND	0.0001 U
Wet			
Ammonia	mg/L	30	3.4
Biochemical oxygen demand (BOD)	mg/L	835	9.3
Chemical oxygen demand (COD)	mg/L	1670	10 U
Oil and grease (HEM), polar	mg/L	100	4.8 U
pH, lab	s.u.	6.5 to 11.0	7.75 HF
Phosphorus	mg/L	13.8	0.10 U
Total suspended solids (TSS)	mg/L	1336	4.0 U

Footnotes:

- b Result Detected in the Unseeded Control blank (USB).
- 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	227722	
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		

Attachment 1

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: 240-59001-1

Client Project/Site: 12610-T03, RACER Bay City

For:

GHD Services Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Rawa Fleisher



Authorized for release by:

12/29/2015 10:14:52 AM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com

LINKS

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www.testamericainc.com

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

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

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

Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions/Glossary	6
Sample Summary	7
Detection Summary	8
Method Summary	9
Client Sample Results	10
QC Association Summary	16
QC Sample Results	19
Surrogate Summary	25
Lab Chronicle	26
Certification Summary	27
Chain of Custody	28



Case Narrative

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

Job ID: 240-59001-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: GHD Services Inc.

Project: 12610-T03, RACER Bay City

Report Number: 240-59001-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 12/11/2015; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.4 C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples W-12610-121015-SSH-1115 (240-59001-1) and TB-12610-121015-SSH-1215 (240-59001-2) were analyzed for volatile organic compounds (GCMS) in accordance with EPA Method 624. The samples were analyzed on 12/15/2015 and 12/16/2015.

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

POLYCHLORINATED BIPHENYLS (PCBS)

Sample W-12610-121015-SSH-1115 (240-59001-1) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 608. The samples were prepared on 12/12/2015 and analyzed on 12/15/2015.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A.

Case Narrative

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

Job ID: 240-59001-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with analytical batch 240-210536.

The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: W-12610-121015-SSH-1115 (240-59001-1). Reagents: 2316599, 1848564, 2333858.

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

TOTAL RECOVERABLE METALS (ICP)

Sample W-12610-121015-SSH-1115 (240-59001-1) was analyzed for total recoverable metals (ICP) in accordance with EPA Method 200.7. The samples were prepared on 12/14/2015 and analyzed on 12/15/2015.

Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: W-12610-121015-SSH-1115 (240-59001-1). The continuing calibration blanks and method blanks may not support the lower PQL.

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

MERCURY

Sample W-12610-121015-SSH-1115 (240-59001-1) was analyzed for mercury in accordance with EPA Method 245.1. The samples were prepared on 12/14/2015 and analyzed on 12/15/2015.

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

HEM AND SGT-HEM

Sample W-12610-121015-SSH-1115 (240-59001-1) was analyzed for HEM and SGT-HEM in accordance with EPA Method 1664A. The samples were analyzed on 12/22/2015.

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

TOTAL SUSPENDED SOLIDS

Sample W-12610-121015-SSH-1115 (240-59001-1) was analyzed for total suspended solids in accordance with SM 2540D. The samples were analyzed on 12/15/2015.

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

AMMONIA

Sample W-12610-121015-SSH-1115 (240-59001-1) was analyzed for ammonia in accordance with EPA Method 350.2. The samples were prepared and analyzed on 12/22/2015.

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

CHEMICAL OXYGEN DEMAND

Sample W-12610-121015-SSH-1115 (240-59001-1) was analyzed for chemical oxygen demand in accordance with EPA Method 410.4. The samples were analyzed on 12/14/2015.

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

TOTAL PHOSPHORUS

Sample W-12610-121015-SSH-1115 (240-59001-1) was analyzed for total phosphorus in accordance with SM 4500 P E. The samples were prepared on 12/28/2015 and analyzed on 12/29/2015.

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

BIOCHEMICAL OXYGEN DEMAND

Sample W-12610-121015-SSH-1115 (240-59001-1) was analyzed for Biochemical oxygen demand in accordance with SM 5210B. The

Case Narrative

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

Job ID: 240-59001-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

samples were analyzed on 12/11/2015.

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

PH

Sample W-12610-121015-SSH-1115 (240-59001-1) was analyzed for pH in accordance with SM 4500 H+ B. The samples were analyzed past the method recommended 15 minute holding time on 12/11/2015.

No 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: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

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

Sample Summary

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-59001-1	W-12610-121015-SSH-1115	Water	12/10/15 08:30	12/11/15 09:30
240-59001-2	TB-12610-121015-SSH-1215	Water	12/10/15 08:45	12/11/15 09:30

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Detection Summary

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

Client Sample ID: W-12610-121015-SSH-1115

Lab Sample ID: 240-59001-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Ammonia (as N)	3.4		2.0	mg/L	1		350.2	Total/NA
pH	7.75	HF	0.100	SU	1		4500 H+ B-2000	Total/NA
Biochemical Oxygen Demand	9.3		2.0	mg/L	1		5210B-2001	Total/NA

Client Sample ID: TB-12610-121015-SSH-1215

Lab Sample ID: 240-59001-2

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Method Summary

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

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
350.2	Nitrogen, Ammonia, Distillation	MCAWW	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
SM4500 P E-1999	Phosphorus	SM	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 Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

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

Client Sample ID: W-12610-121015-SSH-1115

Date Collected: 12/10/15 08:30

Date Received: 12/11/15 09:30

Lab Sample ID: 240-59001-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	ug/L			12/15/15 08:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		61 - 120				12/15/15 08:02	1
1,2-Dichloroethane-d4 (Surr)	91		78 - 125				12/15/15 08:02	1
Toluene-d8 (Surr)	94		80 - 120				12/15/15 08:02	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

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

Client Sample ID: TB-12610-121015-SSH-1215

Date Collected: 12/10/15 08:45

Date Received: 12/11/15 09:30

Lab Sample ID: 240-59001-2

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	ug/L	-		12/16/15 04:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		61 - 120				12/16/15 04:14	1
1,2-Dichloroethane-d4 (Surr)	91		78 - 125				12/16/15 04:14	1
Toluene-d8 (Surr)	93		80 - 120				12/16/15 04:14	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

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

Client Sample ID: W-12610-121015-SSH-1115

Date Collected: 12/10/15 08:30

Date Received: 12/11/15 09:30

Lab Sample ID: 240-59001-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	ug/L		12/12/15 08:14	12/15/15 15:27	1
Aroclor-1221	0.10	U	0.10	ug/L		12/12/15 08:14	12/15/15 15:27	1
Aroclor-1232	0.10	U	0.10	ug/L		12/12/15 08:14	12/15/15 15:27	1
Aroclor-1242	0.10	U	0.10	ug/L		12/12/15 08:14	12/15/15 15:27	1
Aroclor-1248	0.10	U	0.10	ug/L		12/12/15 08:14	12/15/15 15:27	1
Aroclor-1254	0.10	U	0.10	ug/L		12/12/15 08:14	12/15/15 15:27	1
Aroclor-1260	0.10	U	0.10	ug/L		12/12/15 08:14	12/15/15 15:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	60		10 - 114	12/12/15 08:14	12/15/15 15:27	1
Tetrachloro-m-xylene	32		15 - 131	12/12/15 08:14	12/15/15 15:27	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

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

Client Sample ID: W-12610-121015-SSH-1115

Date Collected: 12/10/15 08:30

Date Received: 12/11/15 09:30

Lab Sample ID: 240-59001-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	ug/L		12/14/15 09:30	12/15/15 19:32	1
Cadmium	2.0	U	2.0	ug/L		12/14/15 09:30	12/15/15 19:32	1
Chromium	5.0	U	5.0	ug/L		12/14/15 09:30	12/15/15 19:32	1
Copper	20	U	20	ug/L		12/14/15 09:30	12/15/15 19:32	1
Iron	100	U	100	ug/L		12/14/15 09:30	12/15/15 19:32	1
Nickel	20	U	20	ug/L		12/14/15 09:30	12/15/15 19:32	1
Lead	3.0	U	3.0	ug/L		12/14/15 09:30	12/15/15 19:32	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: W-12610-121015-SSH-1115

Date Collected: 12/10/15 08:30

Date Received: 12/11/15 09:30

Lab Sample ID: 240-59001-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		12/14/15 14:00	12/15/15 12:34	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

General Chemistry

Client Sample ID: W-12610-121015-SSH-1115

Date Collected: 12/10/15 08:30

Date Received: 12/11/15 09:30

Lab Sample ID: 240-59001-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	4.8	U	4.8	mg/L			12/22/15 08:10	1
Ammonia (as N)	3.4		2.0	mg/L		12/22/15 06:45	12/22/15 10:43	1
Chemical Oxygen Demand	10	U	10	mg/L			12/14/15 12:12	1
pH	7.75	HF	0.100	SU			12/11/15 16:43	1
Biochemical Oxygen Demand	9.3		2.0	mg/L			12/11/15 15:44	1
Total Suspended Solids	4.0	U	4.0	mg/L			12/15/15 10:39	1
Total Phosphorus as P	0.10	U	0.10	mg/L		12/28/15 05:19	12/29/15 04:48	1

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

GC/MS VOA

Analysis Batch: 210776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-59001-1	W-12610-121015-SSH-1115	Total/NA	Water	624	
LCS 240-210776/6	Lab Control Sample	Total/NA	Water	624	
MB 240-210776/7	Method Blank	Total/NA	Water	624	

Analysis Batch: 210952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-59001-2	TB-12610-121015-SSH-1215	Total/NA	Water	624	
LCS 240-210952/6	Lab Control Sample	Total/NA	Water	624	
MB 240-210952/7	Method Blank	Total/NA	Water	624	

GC Semi VOA

Prep Batch: 210536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-59001-1	W-12610-121015-SSH-1115	Total/NA	Water	3520C	
LCS 240-210536/14-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-210536/13-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 210803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-59001-1	W-12610-121015-SSH-1115	Total/NA	Water	608	210536
LCS 240-210536/14-A	Lab Control Sample	Total/NA	Water	608	210536
MB 240-210536/13-A	Method Blank	Total/NA	Water	608	210536

Metals

Prep Batch: 210685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-59001-1	W-12610-121015-SSH-1115	Total Recoverable	Water	200.7	
240-59001-1 MS	W-12610-121015-SSH-1115	Total Recoverable	Water	200.7	
240-59001-1 MSD	W-12610-121015-SSH-1115	Total Recoverable	Water	200.7	
LCS 240-210685/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
MB 240-210685/1-A	Method Blank	Total Recoverable	Water	200.7	

Prep Batch: 210689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-59001-1	W-12610-121015-SSH-1115	Total/NA	Water	245.1	
240-59001-1 MS	W-12610-121015-SSH-1115	Total/NA	Water	245.1	
240-59001-1 MSD	W-12610-121015-SSH-1115	Total/NA	Water	245.1	
LCS 240-210689/2-A	Lab Control Sample	Total/NA	Water	245.1	
MB 240-210689/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 211008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-59001-1	W-12610-121015-SSH-1115	Total Recoverable	Water	200.7 Rev 4.4	210685
240-59001-1 MS	W-12610-121015-SSH-1115	Total Recoverable	Water	200.7 Rev 4.4	210685
240-59001-1 MSD	W-12610-121015-SSH-1115	Total Recoverable	Water	200.7 Rev 4.4	210685
LCS 240-210685/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	210685
MB 240-210685/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	210685

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

Metals (Continued)

Analysis Batch: 211084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-59001-1	W-12610-121015-SSH-1115	Total/NA	Water	245.1	210689
240-59001-1 MS	W-12610-121015-SSH-1115	Total/NA	Water	245.1	210689
240-59001-1 MSD	W-12610-121015-SSH-1115	Total/NA	Water	245.1	210689
LCS 240-210689/2-A	Lab Control Sample	Total/NA	Water	245.1	210689
MB 240-210689/1-A	Method Blank	Total/NA	Water	245.1	210689

General Chemistry

Analysis Batch: 210450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-59001-1	W-12610-121015-SSH-1115	Total/NA	Water	5210B-2001	
LCS 240-210450/3	Lab Control Sample	Total/NA	Water	5210B-2001	
SCB 240-210450/2	Method Blank	Total/NA	Water	5210B-2001	
USB 240-210450/1	Method Blank	Total/NA	Water	5210B-2001	

Analysis Batch: 210511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-59001-1	W-12610-121015-SSH-1115	Total/NA	Water	4500 H+ B-2000	
LCS 240-210511/2	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	

Analysis Batch: 210663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-59001-1	W-12610-121015-SSH-1115	Total/NA	Water	410.4	
240-59001-1 MS	W-12610-121015-SSH-1115	Total/NA	Water	410.4	
LCS 240-210663/38	Lab Control Sample	Total/NA	Water	410.4	
MB 240-210663/37	Method Blank	Total/NA	Water	410.4	

Analysis Batch: 210870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-59001-1	W-12610-121015-SSH-1115	Total/NA	Water	SM 2540D	
LCS 240-210870/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 240-210870/1	Method Blank	Total/NA	Water	SM 2540D	

Analysis Batch: 211886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-59001-1	W-12610-121015-SSH-1115	Total/NA	Water	1664A	
LCS 240-211886/2	Lab Control Sample	Total/NA	Water	1664A	
MB 240-211886/1	Method Blank	Total/NA	Water	1664A	

Prep Batch: 211941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-59001-1	W-12610-121015-SSH-1115	Total/NA	Water	Distill/Ammonia	
LCS 240-211941/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	
MB 240-211941/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 211946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-59001-1	W-12610-121015-SSH-1115	Total/NA	Water	350.2	211941
LCS 240-211941/2-A	Lab Control Sample	Total/NA	Water	350.2	211941
MB 240-211941/1-A	Method Blank	Total/NA	Water	350.2	211941

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QC Association Summary

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

General Chemistry (Continued)

Prep Batch: 212355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-59001-1	W-12610-121015-SSH-1115	Total/NA	Water	365.2/365.3/365	
240-59001-1 MS	W-12610-121015-SSH-1115	Total/NA	Water	365.2/365.3/365	
240-59001-1 MSD	W-12610-121015-SSH-1115	Total/NA	Water	365.2/365.3/365	
LCS 240-212355/11-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	
MB 240-212355/10-A	Method Blank	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 212395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-59001-1	W-12610-121015-SSH-1115	Total/NA	Water	SM4500 P E-1999	212355
240-59001-1 MS	W-12610-121015-SSH-1115	Total/NA	Water	SM4500 P E-1999	212355
240-59001-1 MSD	W-12610-121015-SSH-1115	Total/NA	Water	SM4500 P E-1999	212355
LCS 240-212355/11-A	Lab Control Sample	Total/NA	Water	SM4500 P E-1999	212355
MB 240-212355/10-A	Method Blank	Total/NA	Water	SM4500 P E-1999	212355

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

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

Lab Sample ID: MB 240-210776/7

Matrix: Water

Analysis Batch: 210776

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	ug/L	-		12/14/15 18:05	1
Surrogate	%Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		61 - 120				12/14/15 18:05	1
1,2-Dichloroethane-d4 (Surr)	90		78 - 125				12/14/15 18:05	1
Toluene-d8 (Surr)	94		80 - 120				12/14/15 18:05	1

Lab Sample ID: LCS 240-210776/6

Matrix: Water

Analysis Batch: 210776

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	16.2		ug/L	-	81	10 - 251
Surrogate	%Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	86		61 - 120				
1,2-Dichloroethane-d4 (Surr)	90		78 - 125				
Toluene-d8 (Surr)	97		80 - 120				

Lab Sample ID: MB 240-210952/7

Matrix: Water

Analysis Batch: 210952

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	ug/L	-		12/15/15 19:40	1
Surrogate	%Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	73		61 - 120				12/15/15 19:40	1
1,2-Dichloroethane-d4 (Surr)	86		78 - 125				12/15/15 19:40	1
Toluene-d8 (Surr)	89		80 - 120				12/15/15 19:40	1

Lab Sample ID: LCS 240-210952/6

Matrix: Water

Analysis Batch: 210952

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	15.2		ug/L	-	76	10 - 251
Surrogate	%Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	78		61 - 120				
1,2-Dichloroethane-d4 (Surr)	93		78 - 125				
Toluene-d8 (Surr)	92		80 - 120				

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

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

Lab Sample ID: MB 240-210536/13-A

Matrix: Water

Analysis Batch: 210803

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 210536

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	ug/L		12/12/15 08:14	12/15/15 15:45	1
Aroclor-1221	0.10	U	0.10	ug/L		12/12/15 08:14	12/15/15 15:45	1
Aroclor-1232	0.10	U	0.10	ug/L		12/12/15 08:14	12/15/15 15:45	1
Aroclor-1242	0.10	U	0.10	ug/L		12/12/15 08:14	12/15/15 15:45	1
Aroclor-1248	0.10	U	0.10	ug/L		12/12/15 08:14	12/15/15 15:45	1
Aroclor-1254	0.10	U	0.10	ug/L		12/12/15 08:14	12/15/15 15:45	1
Aroclor-1260	0.10	U	0.10	ug/L		12/12/15 08:14	12/15/15 15:45	1
Surrogate	%Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	68		10 - 114			12/12/15 08:14	12/15/15 15:45	1
Tetrachloro-m-xylene	67		15 - 131			12/12/15 08:14	12/15/15 15:45	1

Lab Sample ID: LCS 240-210536/14-A

Matrix: Water

Analysis Batch: 210803

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 210536

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	1.71		ug/L		68	50 - 114
Aroclor-1260	2.50	1.83		ug/L		73	8 - 127
Surrogate	%Recovery	LCS Qualifier	Limits				
DCB Decachlorobiphenyl	50		10 - 114				
Tetrachloro-m-xylene	64		15 - 131				

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-210685/1-A

Matrix: Water

Analysis Batch: 211008

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 210685

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	ug/L		12/14/15 09:30	12/15/15 12:22	1
Cadmium	2.0	U	2.0	ug/L		12/14/15 09:30	12/15/15 12:22	1
Chromium	5.0	U	5.0	ug/L		12/14/15 09:30	12/15/15 12:22	1
Copper	20	U	20	ug/L		12/14/15 09:30	12/15/15 12:22	1
Iron	100	U	100	ug/L		12/14/15 09:30	12/15/15 12:22	1
Nickel	20	U	20	ug/L		12/14/15 09:30	12/15/15 12:22	1
Lead	3.0	U	3.0	ug/L		12/14/15 09:30	12/15/15 12:22	1

Lab Sample ID: LCS 240-210685/2-A

Matrix: Water

Analysis Batch: 211008

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 210685

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	50.0	51.2		ug/L		102	85 - 115
Cadmium	50.0	50.8		ug/L		102	85 - 115
Chromium	200	188		ug/L		94	85 - 115

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

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

Lab Sample ID: LCS 240-210685/2-A

Matrix: Water

Analysis Batch: 211008

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 210685

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	250	237		ug/L		95	85 - 115
Iron	1000	971		ug/L		97	85 - 115
Nickel	500	487		ug/L		97	85 - 115
Lead	500	471		ug/L		94	85 - 115

Lab Sample ID: 240-59001-1 MS

Matrix: Water

Analysis Batch: 211008

Client Sample ID: W-12610-121015-SSH-1115

Prep Type: Total Recoverable

Prep Batch: 210685

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	5.0	U	50.0	52.9		ug/L		106	75 - 125
Cadmium	2.0	U	50.0	55.7		ug/L		111	75 - 125
Chromium	5.0	U	200	186		ug/L		93	75 - 125
Copper	20	U	250	265		ug/L		103	75 - 125
Iron	100	U	1000	1020		ug/L		93	75 - 125
Nickel	20	U	500	502		ug/L		100	75 - 125
Lead	3.0	U	500	473		ug/L		95	75 - 125

Lab Sample ID: 240-59001-1 MSD

Matrix: Water

Analysis Batch: 211008

Client Sample ID: W-12610-121015-SSH-1115

Prep Type: Total Recoverable

Prep Batch: 210685

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Silver	5.0	U	50.0	52.7		ug/L		105	75 - 125	0	20
Cadmium	2.0	U	50.0	55.0		ug/L		110	75 - 125	1	20
Chromium	5.0	U	200	187		ug/L		93	75 - 125	0	20
Copper	20	U	250	261		ug/L		102	75 - 125	2	20
Iron	100	U	1000	1030		ug/L		95	75 - 125	1	20
Nickel	20	U	500	498		ug/L		99	75 - 125	1	20
Lead	3.0	U	500	468		ug/L		94	75 - 125	1	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-210689/1-A

Matrix: Water

Analysis Batch: 211084

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 210689

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		12/14/15 14:00	12/15/15 12:31	1

Lab Sample ID: LCS 240-210689/2-A

Matrix: Water

Analysis Batch: 211084

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 210689

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.70		ug/L		94	85 - 115

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: 240-59001-1 MS

Matrix: Water

Analysis Batch: 211084

Client Sample ID: W-12610-121015-SSH-1115

Prep Type: Total/NA

Prep Batch: 210689

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.20	U	1.00	0.990		ug/L		99	70 - 130

Lab Sample ID: 240-59001-1 MSD

Matrix: Water

Analysis Batch: 211084

Client Sample ID: W-12610-121015-SSH-1115

Prep Type: Total/NA

Prep Batch: 210689

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.20	U	1.00	0.971		ug/L		97	70 - 130	2	20

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 240-211886/1

Matrix: Water

Analysis Batch: 211886

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	mg/L			12/22/15 08:10	1

Lab Sample ID: LCS 240-211886/2

Matrix: Water

Analysis Batch: 211886

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	36.0		mg/L		90	78 - 114

Method: 350.2 - Nitrogen, Ammonia, Distillation

Lab Sample ID: MB 240-211941/1-A

Matrix: Water

Analysis Batch: 211946

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 211941

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	2.0	U	2.0	mg/L		12/22/15 06:45	12/22/15 10:37	1

Lab Sample ID: LCS 240-211941/2-A

Matrix: Water

Analysis Batch: 211946

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 211941

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	11.1	11.2		mg/L		101	85 - 114

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

Method: 410.4 - COD

Lab Sample ID: MB 240-210663/37

Matrix: Water

Analysis Batch: 210663

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	10	U	10	mg/L	-		12/14/15 12:00	1

Lab Sample ID: LCS 240-210663/38

Matrix: Water

Analysis Batch: 210663

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	68.0	61.9		mg/L	-	91	90 - 110

Lab Sample ID: 240-59001-1 MS

Matrix: Water

Analysis Batch: 210663

Client Sample ID: W-12610-121015-SSH-1115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	10	U	50.0	57.5		mg/L	-	107	90 - 110

Method: 4500 H+ B-2000 - pH

Lab Sample ID: LCS 240-210511/2

Matrix: Water

Analysis Batch: 210511

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	6.15	6.180		SU	-	100	97 - 103

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

Lab Sample ID: SCB 240-210450/2

Matrix: Water

Analysis Batch: 210450

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

Analyte	SCB Result	SCB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.0	U	2.0	mg/L	-		12/11/15 12:44	1

Lab Sample ID: USB 240-210450/1

Matrix: Water

Analysis Batch: 210450

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

Analyte	USB Result	USB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.0	U	2.0	mg/L	-		12/11/15 12:42	1

Lab Sample ID: LCS 240-210450/3

Matrix: Water

Analysis Batch: 210450

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	206		mg/L	-	104	85 - 115

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

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

Lab Sample ID: MB 240-210870/1

Matrix: Water

Analysis Batch: 210870

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	mg/L			12/15/15 10:39	1

Lab Sample ID: LCS 240-210870/2

Matrix: Water

Analysis Batch: 210870

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	74.4	65.0		mg/L		87	73 - 113

Method: SM4500 P E-1999 - Phosphorus

Lab Sample ID: MB 240-212355/10-A

Matrix: Water

Analysis Batch: 212395

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 212355

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	mg/L		12/28/15 05:17	12/29/15 04:48	1

Lab Sample ID: LCS 240-212355/11-A

Matrix: Water

Analysis Batch: 212395

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 212355

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	6.79	6.63		mg/L		98	53 - 134

Lab Sample ID: 240-59001-1 MS

Matrix: Water

Analysis Batch: 212395

Client Sample ID: W-12610-121015-SSH-1115

Prep Type: Total/NA

Prep Batch: 212355

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	0.521		mg/L		104	10 - 199

Lab Sample ID: 240-59001-1 MSD

Matrix: Water

Analysis Batch: 212395

Client Sample ID: W-12610-121015-SSH-1115

Prep Type: Total/NA

Prep Batch: 212355

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	0.514		mg/L		103	10 - 199	1	20

TestAmerica Canton

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (61-120)	12DCE (78-125)	TOL (80-120)
240-59001-1	W-12610-121015-SSH-1115	83	91	94
240-59001-2	TB-12610-121015-SSH-1215	84	91	93
LCS 240-210776/6	Lab Control Sample	86	90	97
LCS 240-210952/6	Lab Control Sample	78	93	92
MB 240-210776/7	Method Blank	88	90	94
MB 240-210952/7	Method Blank	73	86	89

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCB2 (10-114)	TCX2 (15-131)
240-59001-1	W-12610-121015-SSH-1115	60	32
LCS 240-210536/14-A	Lab Control Sample	50	64
MB 240-210536/13-A	Method Blank	68	67

Surrogate Legend

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

Client Sample ID: W-12610-121015-SSH-1115

Lab Sample ID: 240-59001-1

Date Collected: 12/10/15 08:30

Matrix: Water

Date Received: 12/11/15 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	210776	12/15/15 08:02	TJL1	TAL CAN
Total/NA	Prep	3520C			210536	12/12/15 08:14	JDR	TAL CAN
Total/NA	Analysis	608		1	210803	12/15/15 15:27	LSH	TAL CAN
Total Recoverable	Prep	200.7			210685	12/14/15 09:30	WKD	TAL CAN
Total Recoverable	Analysis	200.7 Rev 4.4		1	211008	12/15/15 19:32	KLC	TAL CAN
Total/NA	Prep	245.1			210689	12/14/15 14:00	WKD	TAL CAN
Total/NA	Analysis	245.1		1	211084	12/15/15 12:34	WAL	TAL CAN
Total/NA	Analysis	1664A		1	211886	12/22/15 08:10	BLW	TAL CAN
Total/NA	Prep	Distill/Ammonia			211941	12/22/15 06:45	JAS	TAL CAN
Total/NA	Analysis	350.2		1	211946	12/22/15 10:43	JAS	TAL CAN
Total/NA	Analysis	410.4		1	210663	12/14/15 12:12	TPH	TAL CAN
Total/NA	Analysis	4500 H+ B-2000		1	210511	12/11/15 16:43	GNR	TAL CAN
Total/NA	Analysis	5210B-2001		1	210450	12/11/15 15:44	DTN	TAL CAN
Total/NA	Analysis	SM 2540D		1	210870	12/15/15 10:39	GNR	TAL CAN
Total/NA	Prep	365.2/365.3/365			212355	12/28/15 05:19	TPH	TAL CAN
Total/NA	Analysis	SM4500 P E-1999		1	212395	12/29/15 04:48	TPH	TAL CAN

Client Sample ID: TB-12610-121015-SSH-1215

Lab Sample ID: 240-59001-2

Date Collected: 12/10/15 08:45

Matrix: Water

Date Received: 12/11/15 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	210952	12/16/15 04:14	TJL1	TAL CAN

Laboratory References:

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

Certification Summary

Client: GHD Services Inc.
Project/Site: 12610-T03, RACER Bay City

TestAmerica Job ID: 240-59001-1

Laboratory: TestAmerica Canton

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

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-15
Illinois	NELAP	5	200004	07-31-16
Kansas	NELAP	7	E-10336	01-31-16 *
Kentucky (UST)	State Program	4	58	02-26-16
Kentucky (VW)	State Program	4	98016	12-31-15
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-15
Nevada	State Program	9	OH-000482008A	07-31-16
New Jersey	NELAP	2	OH001	06-30-16
New York	NELAP	2	10975	03-31-16
Ohio VAP	State Program	5	CL0024	09-14-17
Oregon	NELAP	10	4062	02-23-16
Pennsylvania	NELAP	3	68-00340	08-31-16
Texas	NELAP	6	T104704517-15-5	08-31-16
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-16
Washington	State Program	10	C971	01-12-16
West Virginia DEP	State Program	3	210	12-31-15
Wisconsin	State Program	5	999518190	08-31-16

* Certification renewal pending - certification considered valid.

TestAmerica Canton

**CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS**



240-59001 Chain of Custody

Phone: 810.229.2763 Fax:

Chain of Custody Record

1.71 C.I. 5

122378

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

TAL-8210 (0713)

[illegible]

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u> pH	<u>Preservative</u> Added (mls)	<u>Lot #</u>
W-12610-121015-SSH-1115	240-59001-E-1	Plastic 500ml - with Sulfuric Acid	<2	_____	_____
W-12610-121015-SSH-1115	240-59001-F-1	Plastic 500ml - with Nitric Acid	<2	_____	_____
W-12610-121015-SSH-1115	240-59001-J-1	Amber Glass 1 liter - Sulfuric Acid	_____	_____	_____
W-12610-121015-SSH-1115	240-59001-K-1	Amber Glass 1 liter - Sulfuric Acid	_____	_____	_____

Attachment 2

Certification Statement

"I, David Favero, certify under penalty of law that this document (January 29, 2016 GHD Semi-Annual Compliance Report (July 1 to December 31, 2015)), and all attachments were prepared under my 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

Jan 28, 2016

(Date)