26850 Haggerty Road
Farmington Hills, Michigan 48331
United States
www.ghd.com

GHD Reference No: 11208058-Whom-9

July 28, 2023

City of Bay City WWTP
Attn: IPP Coordinator
2905 North Water Street
Bay City, Michigan, 48708

Semi-Annual Compliance Report (January 1 to June 30, 2023)
RACER Bay City Industrial Land
Bay City, Michigan

To Whom It May Concern,

The following letter has been prepared by GHD on behalf of Revitalizing Auto Communities Environmental Response Trust (RACER) in accordance with Part 4 Section 3 of Industrial User (IU) permit No. 120807 as the semi-annual compliance report for the period January 1 to June 30, 2023, 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 30, 2023. Attachment 1 presents a copy of the laboratory analytical report. The analytical results exceeded the daily maximum discharge levels specified in the permit for PCBs at a concentration of 0.29 µg/L (permit limits are ND, with no detection limit exceeding 0.2 µg/l) and mercury at an estimated concentration of 0.16 µg/L (permit limits are ND, with no detection limit exceeding 0.2 µg/l). In accordance with the permit, the City of Bay City was notified of the exceedances within 24-hour of becoming aware of the violation on July 21, 2023. A re-sample is scheduled to be collected on August 2, 2023 and discharge to the City of Bay will be stopped until results of the re-sample are returned. If the results of the re-sample are in compliance with the permit limits the system will turned back on. If the results exceed the permit limits, the granular activated carbon drums will be replaced. There were no other conditions, events or circumstances identified that did not meet other permit requirements. Table 2 presents the flow readings collected periodically from the flow meter.

The RACER groundwater extraction and treatment system is operated and maintained by John York (GHD).

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,

John-Eric Pardys, P.Eng.
Engineer

+1 519 340-4316
john-eric.pardys@ghd.com

JG/kf/9

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

Location ID:			**effluent-GWTS**	**effluent-GWTS**
Sample Name:			**GW-11208058-063023-JY-001**	**GW-11208058-063023-JY-002**
Sample Date:			**06/30/2023**	**06/30/2023**
Type			**Grab**	**Composite**
Parameters	**Unit**	**Daily Maximum (Bay City Industrial User Permit)**		
Volatile Organic Compounds				
Vinyl chloride	mg/L	0.002	0.001 U	--
Metals				
Cadmium	mg/L	0.057	--	0.002 U
Chromium	mg/L	6.812	--	0.0014 J
Copper	mg/L	1.476	--	0.02 U
Iron	mg/L		--	5.3
Lead	mg/L	0.632	--	0.003 U
Mercury	mg/L	ND	--	0.00016 JB
Nickel	mg/L	2.548	--	0.0051 J
Silver	mg/L	0.2	--	0.005 U
Pesticides				
Aroclor-1016 (PCB-1016)	mg/L	ND	--	0.000096 U
Aroclor-1221 (PCB-1221)	mg/L	ND	--	0.000096 U
Aroclor-1232 (PCB-1232)	mg/L	ND	--	0.000096 U
Aroclor-1242 (PCB-1242)	mg/L	ND	--	0.00029
Aroclor-1248 (PCB-1248)	mg/L	ND	--	0.000096 U
Aroclor-1254 (PCB-1254)	mg/L	ND	--	0.000096 U
Aroclor-1260 (PCB-1260)	mg/L	ND	--	0.000096 U
General Chemistry				
Ammonia-N	mg/L	30	--	13
Biochemical oxygen demand (BOD)	mg/L	835	--	2.0 U
Chemical oxygen demand (COD)	mg/L	1670	--	15
Oil and grease (HEM), total	mg/L	100	2.8 J	--
Phosphorus	mg/L	13.8	--	0.10 U
Total suspended solids (TSS)	mg/L	1336	--	9.8
pH, lab	s.u.	6.5 to 11.0	7.1 HF	--

Notes:

(1) Effluent samples collected at the same time but divided into two sample numbers for lab analysis.
HF Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U Not detected at the associated reporting limit
J Estimated value
B Compound was found in the blank and sample
H Sample was prepped or analyzed beyond the specified holding time

Table 2

Flow Meter Readings
Bay City Industrial Land
Bay City, Michigan

Date	Flow Meter Totalized Reading (gallons)	Cumulative Total: (gallons)	Volume to be Invoiced Annually (July to June 30)	Comments
30-Jun-23	826,566	1,572,664		- Collected effluent sample
12-Jun-23	813,114	1,559,212		
5-May-23	784,200	1,530,298		
10-Apr-23	783,184	1,529,282		
20-Mar-23	777,866	1,523,964		
14-Feb-23	762,917	1,509,015		
16-Jan-23	757,367	1,503,465		- Collected effluent sample
5-Dec-22	700,568	1,446,666		
21-Nov-22	689,378	1,435,476		
25-Oct-22	688,227	1,434,325		
12-Sep-22	684,028	1,430,126		
23-Aug-22	672,428	1,418,526		- Collected effluent sample
17-Jun-22	619,110	1,365,208		
13-Jun-22	613,476	1,359,574	**204,431**	- City invoiced for discharge
26-May-22				- Collected effluent sample
24-May-22	610,180	1,356,278		
26-Apr-22	592,790	1,338,888		
23-Mar-22	592,060	1,338,158		
1-Mar-22	580,971	1,327,069		
24-Jan-22	580,938	1,327,036		
27-Dec-21	553,735	1,299,833		
23-Dec-21				- Collected effluent sample
29-Nov-21	533,997	1,280,095		
27-Sep-21	475,843	1,221,941		
20-Aug-21	436,048	1,182,146		
30-Jul-21	421,003	1,167,101		
23-Jun-21	409,045	1,155,143	**139,856**	- Collected effluent sample and City invoiced for discharge
27-May-21	400,420	1,146,518		
29-Apr-21	397,390	1,143,488		
23-Mar-21	371,797	1,117,895		
22-Feb-21	348,776	1,094,874		
21-Dec-20	308,935	1,055,033		
10-Dec-20				- Collected effluent sample
9-Dec-20	304,649	1,050,747		
12-Oct-20	278,099	1,024,197		
10-Sep-20	277,899	1,023,997		
25-Aug-20	277,020	1,023,118		
22-Jul-20	274,190	1,020,288		
22-Jun-20	270,975	1,017,073		
4-Jun-20	269,189	1,015,287	**124,809**	- City invoiced for discharge
28-May-20	268,089	1,014,187		- Collected effluent sample
28-Apr-20	263,922	1,010,020		
25-Mar-20	248,006	994,104		
20-Feb-20	227,965	974,063		
27-Jan-20	220,321	966,419		

Table 2

Flow Meter Readings
Bay City Industrial Land
Bay City, Michigan

Date	Flow Meter Totalized Reading (gallons)	Cumulative Total: (gallons)	Volume to be Invoiced Annually (July to June 30)	Comments
5-Dec-19	200,031	946,129		- Collected PFAS effluent sample
25-Nov-19	192,582	938,680		
29-Oct-19	176,533	922,631		
28-Aug-19	168,508	914,606		
17-Jul-19	159,490	905,588		
17-Jun-19	144,380	890,478	**122,047**	- City invoiced for discharge
31-May-19				- Collected effluent sample
17-May-19	123,482	869,580		
19-Apr-19	105,745	851,843		
22-Mar-19	81,364	827,462		
28-Feb-19	77,720	823,818		
29-Jan-19	77,720	823,818		
20-Jan-19				- Collected effluent sample
12-Dec-18	77,570	823,668		- Collected effluent sample
29-Nov-18	76,972	823,070		
26-Sep-18	59,303	805,401		
30-Aug-18	53,199	799,297		
30-Jul-18	52,454	798,552		
20-Jun-18	35,274	781,372		
1-Jun-18				- Collected effluent sample
1-Jun-18	22,333	768,431	**88,271**	- City invoiced for discharge
31-May-18	20,490	766,588		
30-Apr-18	18,529	764,627		
29-Mar-18	11,243	757,341		
8-Mar-18	122,667	746,098		- Last reading before
8-Mar-18	0	746,098		- New Flow meter installed
30-Nov-17				- Collected effluent sample
25-Oct-17	73,702	697,133		
12-Jul-17	60,991	684,422		
28-Jun-17	56,911	680,342		
13-Jun-17	56,729	680,160	**137,544**	- City invoiced for discharge
22-May-17	56,722	680,153		
9-May-17				- Collected effluent sample
27-Apr-17	55,126	678,557		
2-Feb-17	5,813	629,244		
16-Jan-17				- Collected effluent sample
14-Jan-17	609,074	623,431		
14-Jan-17	0	623,431		
16-Dec-16	609,074	623,431		
11-Nov-16	608,980	623,337		
28-Oct-16	608,865	623,222		
30-Sep-16	607,717	622,074		
31-Aug-16	607,298	621,655		
20-Jul-16	561,893	576,250		
29-Jun-16	556,457	570,814		
14-Jun-16	528,259	542,616	**523,666**	- Collected effluent sample,
31-May-16	521,920	536,277		
27-Apr-16	462,204	476,561		
21-Mar-16	409,836	424,193		
29-Feb-16	394,550	408,907		
10-Feb-16	387,410	401,767		

Table 2

Flow Meter Readings
Bay City Industrial Land
Bay City, Michigan

Date	Flow Meter Totalized Reading (gallons)	Cumulative Total: (gallons)	Volume to be Invoiced Annually (July to June 30)	Comments
30-Dec-15	351,550	365,907		
10-Dec-15				- Collected effluent sample
23-Nov-15	289,731	304,088		
30-Oct-15	260,771	275,128		
29-Sep-15	252,638	266,995		
28-Aug-15	241,397	255,754		
29-Jul-15	232,315	246,672		
30-Jun-15	232,315	246,672		
25-Jun-15	232,315	246,672		
18-Jun-15	224,490	238,847		
6-May-15	197,766	212,123		
30-Apr-15	175,234	189,591		
19-Mar-15	67,425	81,782		
16-Mar-15				- Collected effluent sample
13-Feb-15	46,303	60,660		
27-Jan-15	31,004	45,361		
29-Dec-14	31,004	45,361		
26-Nov-14	31,004	45,361		
23-Oct-14	31,004	45,361		
23-Sep-14	11,504	25,861		
5-Sep-14	6,337	20,694		- Collected effluent sample
18-Aug-14	4,593	18,950		
28-Jul-14	4,593	18,950		
16-Jun-14	4,593	18,950	**18,950**	- City invoiced for discharge

Attachment 1

Laboratory Analytical Report

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Ruth Mickle
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Generated 7/13/2023 8:09:02 AM

JOB DESCRIPTION

11208058, RACER Bay City

JOB NUMBER

240-187979-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

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Authorized for release by
Denise Heckler, Project Manager II
Denise.Heckler@et.eurofinsus.com
(330)966-9477

Table of Contents

Case Narrative

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

Job ID: 240-187979-1

Job ID: 240-187979-1

Laboratory: Eurofins Cleveland

Narrative

Job Narrative
240-187979-1

Comments
No additional comments.

Receipt
The samples were received on 7/1/2023 9:35 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.1º C.

GC/MS VOA
Method 624.1: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container(s): GW-11208058-063023-JY-001 (240-187979-1).

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

GC Semi VOA
Method 608.3: The following sample appears to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the sample do not directly match any of the laboratory's Aroclor standards used for instrument calibration: GW-11208058-063023-JY-002 (240-187979-2). The sample has been quantified and reported using the best overall Aroclor/standard pattern match relative to the reference standards.

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

Metals
Method 200.7 Rev 4.4: Some requested practical quantitation limits (PQLs) fall below the laboratory's verified standard quantitation limit. The continuing calibration blanks and method blanks may not support the lower PQL.

Method 245.1: The method blank for preparation batch 240-579732 contained Mercury above the reporting limit (RL). None of the samples associated with this method blank contained mercury above the reporting limit; therefore, re-digestion of samples were not performed. GW-11208058-063023-JY-002 (240-187979-2)

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

General Chemistry
Method SM 5210B: The glucose-glutamic acid standard (LCS) recovered outside the recovery limits specified in the method in batch 240-579274. The method holding time had expired, therefore the analysis was not repeated. The data was qualified and reported.

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

Organic Prep
Methods 3510C, 608: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-579829.

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

Definitions/Glossary

Client: GHD Services Inc.
Job ID: 240-187979-1
Project/Site: 11208058, RACER Bay City

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
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Sample Summary

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

Job ID: 240-187979-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-187979-1	GW-11208058-063023-JY-001	Water	06/30/23 09:30	07/01/23 09:35
240-187979-2	GW-11208058-063023-JY-002	Water	06/30/23 10:00	07/01/23 09:35
240-187979-3	TRIP BLANK	Water	06/30/23 00:00	07/01/23 09:35

Detection Summary

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

Job ID: 240-187979-1

Client Sample ID: GW-11208058-063023-JY-001 — Lab Sample ID: 240-187979-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HEM	2.8	J	4.9	0.99	mg/L	1		1664B	Total/NA
pH	7.1	HF	0.1	0.1	SU	1		4500 H+ B-2000	Total/NA

Client Sample ID: GW-11208058-063023-JY-002 — Lab Sample ID: 240-187979-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.29		0.096	0.073	ug/L	1		608.3	Total/NA
Chromium	1.4	J	5.0	0.76	ug/L	1		200.7 Rev 4.4	Total Recoverable
Iron	5300		100	83	ug/L	1		200.7 Rev 4.4	Total Recoverable
Nickel	5.1	J	20	2.2	ug/L	1		200.7 Rev 4.4	Total Recoverable
Mercury	0.16	J B	0.20	0.13	ug/L	1		245.1	Total/NA
Chemical Oxygen Demand	15		10	1.8	mg/L	1		410.4	Total/NA
Ammonia	13		2.0	0.76	mg/L	10		4500 NH3 H	Total/NA
Total Suspended Solids	9.8		4.0	0.40	mg/L	1		SM 2540D	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 240-187979-3

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

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

Job ID: 240-187979-1

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

Protocol References:

1664B = EPA-821-98-002

EPA = US Environmental Protection Agency

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

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

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

Job ID: 240-187979-1

Method: EPA 624.1 - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-11208058-063023-JY-001
Date Collected: 06/30/23 09:30
Date Received: 07/01/23 09:35

Lab Sample ID: 240-187979-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.45	ug/L			07/10/23 16:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*62 - 137*		*07/10/23 16:23*	*1*
4-Bromofluorobenzene (Surr)	*91*		*56 - 136*		*07/10/23 16:23*	*1*
Toluene-d8 (Surr)	*99*		*78 - 122*		*07/10/23 16:23*	*1*

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

Job ID: 240-187979-1

Method: EPA 624.1 - Volatile Organic Compounds (GC/MS)

Client Sample ID: TRIP BLANK
Date Collected: 06/30/23 00:00
Date Received: 07/01/23 09:35

Lab Sample ID: 240-187979-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.45	ug/L			07/10/23 14:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*62 - 137*		*07/10/23 14:41*	*1*
4-Bromofluorobenzene (Surr)	*90*		*56 - 136*		*07/10/23 14:41*	*1*
Toluene-d8 (Surr)	*100*		*78 - 122*		*07/10/23 14:41*	*1*

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

Job ID: 240-187979-1

Method: EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Client Sample ID: GW-11208058-063023-JY-002
Date Collected: 06/30/23 10:00
Date Received: 07/01/23 09:35

Lab Sample ID: 240-187979-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	0.054	ug/L		07/07/23 08:31	07/10/23 12:54	1
Aroclor-1221	0.096	U	0.096	0.055	ug/L		07/07/23 08:31	07/10/23 12:54	1
Aroclor-1232	0.096	U	0.096	0.071	ug/L		07/07/23 08:31	07/10/23 12:54	1
Aroclor-1242	**0.29**		0.096	0.073	ug/L		07/07/23 08:31	07/10/23 12:54	1
Aroclor-1248	0.096	U	0.096	0.048	ug/L		07/07/23 08:31	07/10/23 12:54	1
Aroclor-1254	0.096	U	0.096	0.038	ug/L		07/07/23 08:31	07/10/23 12:54	1
Aroclor-1260	0.096	U	0.096	0.044	ug/L		07/07/23 08:31	07/10/23 12:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*71*		*10 - 174*	*07/07/23 08:31*	*07/10/23 12:54*	*1*
Tetrachloro-m-xylene	*66*		*10 - 149*	*07/07/23 08:31*	*07/10/23 12:54*	*1*

Client Sample Results

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

Job ID: 240-187979-1

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

Client Sample ID: GW-11208058-063023-JY-002
Date Collected: 06/30/23 10:00
Date Received: 07/01/23 09:35

Lab Sample ID: 240-187979-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	0.62	ug/L		07/07/23 14:00	07/10/23 15:12	1
Cadmium	2.0	U	2.0	0.45	ug/L		07/07/23 14:00	07/10/23 15:12	1
Chromium	**1.4**	**J**	5.0	0.76	ug/L		07/07/23 14:00	07/10/23 15:12	1
Copper	20	U	20	3.5	ug/L		07/07/23 14:00	07/10/23 15:12	1
Iron	**5300**		100	83	ug/L		07/07/23 14:00	07/10/23 15:12	1
Nickel	**5.1**	**J**	20	2.2	ug/L		07/07/23 14:00	07/10/23 15:12	1
Lead	3.0	U	3.0	2.8	ug/L		07/07/23 14:00	07/10/23 15:12	1

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

Job ID: 240-187979-1

Method: EPA 245.1 - Mercury (CVAA)

Client Sample ID: GW-11208058-063023-JY-002
Date Collected: 06/30/23 10:00
Date Received: 07/01/23 09:35

Lab Sample ID: 240-187979-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.16	J B	0.20	0.13	ug/L		07/06/23 14:00	07/07/23 14:36	1

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

Job ID: 240-187979-1

General Chemistry

Client Sample ID: GW-11208058-063023-JY-001
Date Collected: 06/30/23 09:30
Date Received: 07/01/23 09:35

Lab Sample ID: 240-187979-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (1664B)	2.8	J	4.9	0.99	mg/L			07/07/23 09:03	1
pH (SM 4500 H+ B-2000)	7.1	HF	0.1	0.1	SU			07/05/23 10:17	1

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

Job ID: 240-187979-1

General Chemistry

Client Sample ID: GW-11208058-063023-JY-002
Date Collected: 06/30/23 10:00
Date Received: 07/01/23 09:35

Lab Sample ID: 240-187979-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand (EPA 410.4)	**15**		10	1.8	mg/L			07/07/23 10:55	1
Ammonia (SM 4500 NH3 H)	**13**		2.0	0.76	mg/L			07/11/23 15:17	10
Biochemical Oxygen Demand (SM 5210B-2001)	2.0	U *-	2.0	2.0	mg/L			07/01/23 14:05	1
Total Suspended Solids (SM 2540D)	**9.8**		4.0	0.40	mg/L			07/05/23 08:42	1
Total Phosphorus as P (SM4500 P E-1999)	0.10	U	0.10	0.076	mg/L			07/12/23 09:14	1

GC/MS VOA

Analysis Batch: 580006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-187979-1	GW-11208058-063023-JY-001	Total/NA	Water	624.1	
240-187979-3	TRIP BLANK	Total/NA	Water	624.1	
MB 240-580006/9	Method Blank	Total/NA	Water	624.1	
LCS 240-580006/5	Lab Control Sample	Total/NA	Water	624.1	

GC Semi VOA

Prep Batch: 579829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-187979-2	GW-11208058-063023-JY-002	Total/NA	Water	608	
MB 240-579829/12-A	Method Blank	Total/NA	Water	608	
LCS 240-579829/13-A	Lab Control Sample	Total/NA	Water	608	

Analysis Batch: 580073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-187979-2	GW-11208058-063023-JY-002	Total/NA	Water	608.3	579829
MB 240-579829/12-A	Method Blank	Total/NA	Water	608.3	579829
LCS 240-579829/13-A	Lab Control Sample	Total/NA	Water	608.3	579829

Metals

Prep Batch: 579731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-187979-2	GW-11208058-063023-JY-002	Total Recoverable	Water	200.7	
MB 240-579731/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 240-579731/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
240-187979-2 MS	GW-11208058-063023-JY-002	Total Recoverable	Water	200.7	
240-187979-2 MSD	GW-11208058-063023-JY-002	Total Recoverable	Water	200.7	

Prep Batch: 579732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-187979-2	GW-11208058-063023-JY-002	Total/NA	Water	245.1	
MB 240-579732/1-A	Method Blank	Total/NA	Water	245.1	
LCS 240-579732/2-A	Lab Control Sample	Total/NA	Water	245.1	
240-187979-2 MS	GW-11208058-063023-JY-002	Total/NA	Water	245.1	
240-187979-2 MSD	GW-11208058-063023-JY-002	Total/NA	Water	245.1	

Analysis Batch: 580069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-187979-2	GW-11208058-063023-JY-002	Total/NA	Water	245.1	579732
MB 240-579732/1-A	Method Blank	Total/NA	Water	245.1	579732
LCS 240-579732/2-A	Lab Control Sample	Total/NA	Water	245.1	579732
240-187979-2 MS	GW-11208058-063023-JY-002	Total/NA	Water	245.1	579732
240-187979-2 MSD	GW-11208058-063023-JY-002	Total/NA	Water	245.1	579732

Analysis Batch: 580082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-187979-2	GW-11208058-063023-JY-002	Total Recoverable	Water	200.7 Rev 4.4	579731
MB 240-579731/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	579731
LCS 240-579731/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	579731
240-187979-2 MS	GW-11208058-063023-JY-002	Total Recoverable	Water	200.7 Rev 4.4	579731
240-187979-2 MSD	GW-11208058-063023-JY-002	Total Recoverable	Water	200.7 Rev 4.4	579731

General Chemistry

Analysis Batch: 579274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-187979-2	GW-11208058-063023-JY-002	Total/NA	Water	5210B-2001	
SCB 240-579274/2	Method Blank	Total/NA	Water	5210B-2001	
USB 240-579274/1	Method Blank	Total/NA	Water	5210B-2001	
LCS 240-579274/3	Lab Control Sample	Total/NA	Water	5210B-2001	

Analysis Batch: 579557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-187979-2	GW-11208058-063023-JY-002	Total/NA	Water	SM 2540D	
MB 240-579557/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 240-579557/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 579592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-187979-1	GW-11208058-063023-JY-001	Total/NA	Water	4500 H+ B-2000	
LCS 240-579592/2	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	
LCSD 240-579592/3	Lab Control Sample Dup	Total/NA	Water	4500 H+ B-2000	
240-187979-1 DU	GW-11208058-063023-JY-001	Total/NA	Water	4500 H+ B-2000	

Analysis Batch: 579846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-187979-1	GW-11208058-063023-JY-001	Total/NA	Water	1664B	
MB 240-579846/1	Method Blank	Total/NA	Water	1664B	
LCS 240-579846/2	Lab Control Sample	Total/NA	Water	1664B	

Analysis Batch: 579878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-187979-2	GW-11208058-063023-JY-002	Total/NA	Water	410.4	
MB 240-579878/41	Method Blank	Total/NA	Water	410.4	
LCS 240-579878/42	Lab Control Sample	Total/NA	Water	410.4	

Analysis Batch: 580109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-580109/44	Method Blank	Total/NA	Water	4500 NH3 H	
LCS 240-580109/45	Lab Control Sample	Total/NA	Water	4500 NH3 H	

Analysis Batch: 580314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-187979-2	GW-11208058-063023-JY-002	Total/NA	Water	4500 NH3 H	
MB 240-580314/14	Method Blank	Total/NA	Water	4500 NH3 H	
LCS 240-580314/15	Lab Control Sample	Total/NA	Water	4500 NH3 H	

Analysis Batch: 580328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-187979-2	GW-11208058-063023-JY-002	Total/NA	Water	SM4500 P E-1999	
MB 240-580328/3	Method Blank	Total/NA	Water	SM4500 P E-1999	
LCS 240-580328/4	Lab Control Sample	Total/NA	Water	SM4500 P E-1999	

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-580006/9
Matrix: Water
Analysis Batch: 580006

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	0.45	ug/L			07/10/23 12:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*62 - 137*		*07/10/23 12:32*	*1*
4-Bromofluorobenzene (Surr)	*88*		*56 - 136*		*07/10/23 12:32*	*1*
Toluene-d8 (Surr)	*99*		*78 - 122*		*07/10/23 12:32*	*1*

Lab Sample ID: LCS 240-580006/5
Matrix: Water
Analysis Batch: 580006

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	17.8		ug/L		89	5 - 195

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*62 - 137*
4-Bromofluorobenzene (Surr)	*95*		*56 - 136*
Toluene-d8 (Surr)	*104*		*78 - 122*

Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 240-579829/12-A
Matrix: Water
Analysis Batch: 580073

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 579829

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		07/07/23 08:31	07/10/23 11:52	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		07/07/23 08:31	07/10/23 11:52	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		07/07/23 08:31	07/10/23 11:52	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		07/07/23 08:31	07/10/23 11:52	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		07/07/23 08:31	07/10/23 11:52	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		07/07/23 08:31	07/10/23 11:52	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		07/07/23 08:31	07/10/23 11:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*90*		*10 - 174*	*07/07/23 08:31*	*07/10/23 11:52*	*1*
Tetrachloro-m-xylene	*85*		*10 - 149*	*07/07/23 08:31*	*07/10/23 11:52*	*1*

Lab Sample ID: LCS 240-579829/13-A
Matrix: Water
Analysis Batch: 580073

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 579829

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	2.22		ug/L		89	50 - 140
Aroclor-1260	2.50	2.28		ug/L		91	8 - 140

Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Lab Sample ID: LCS 240-579829/13-A
Matrix: Water
Analysis Batch: 580073

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 579829

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*88*		*10 - 174*
Tetrachloro-m-xylene	*84*		*10 - 149*

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-579731/1-A
Matrix: Water
Analysis Batch: 580082

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 579731

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	0.62	ug/L		07/07/23 14:00	07/10/23 15:04	1
Cadmium	2.0	U	2.0	0.45	ug/L		07/07/23 14:00	07/10/23 15:04	1
Chromium	5.0	U	5.0	0.76	ug/L		07/07/23 14:00	07/10/23 15:04	1
Copper	20	U	20	3.5	ug/L		07/07/23 14:00	07/10/23 15:04	1
Iron	100	U	100	83	ug/L		07/07/23 14:00	07/10/23 15:04	1
Nickel	20	U	20	2.2	ug/L		07/07/23 14:00	07/10/23 15:04	1
Lead	3.0	U	3.0	2.8	ug/L		07/07/23 14:00	07/10/23 15:04	1

Lab Sample ID: LCS 240-579731/2-A
Matrix: Water
Analysis Batch: 580082

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 579731

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	100	99.0		ug/L		99	85 - 115
Cadmium	1000	973		ug/L		97	85 - 115
Chromium	1000	929		ug/L		93	85 - 115
Copper	1000	964		ug/L		96	85 - 115
Iron	10000	9380		ug/L		94	85 - 115
Nickel	1000	947		ug/L		95	85 - 115
Lead	1000	929		ug/L		93	85 - 115

Lab Sample ID: 240-187979-2 MS
Matrix: Water
Analysis Batch: 580082

Client Sample ID: GW-11208058-063023-JY-002
Prep Type: Total Recoverable
Prep Batch: 579731

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	5.0	U	100	102		ug/L		102	70 - 130
Cadmium	2.0	U	1000	997		ug/L		100	70 - 130
Chromium	1.4	J	1000	952		ug/L		95	70 - 130
Copper	20	U	1000	1000		ug/L		100	70 - 130
Iron	5300		10000	14900		ug/L		97	70 - 130
Nickel	5.1	J	1000	970		ug/L		96	70 - 130
Lead	3.0	U	1000	936		ug/L		94	70 - 130

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

Lab Sample ID: 240-187979-2 MSD — **Client Sample ID: GW-11208058-063023-JY-002**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 580082 — **Prep Batch: 579731**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Silver	5.0	U	100	103		ug/L		103	70 - 130	0	20
Cadmium	2.0	U	1000	1010		ug/L		101	70 - 130	1	20
Chromium	1.4	J	1000	960		ug/L		96	70 - 130	1	20
Copper	20	U	1000	1020		ug/L		102	70 - 130	1	20
Iron	5300		10000	15000		ug/L		97	70 - 130	1	20
Nickel	5.1	J	1000	983		ug/L		98	70 - 130	1	20
Lead	3.0	U	1000	944		ug/L		94	70 - 130	1	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-579732/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 580069 — **Prep Batch: 579732**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.201		0.20	0.13	ug/L		07/06/23 14:00	07/07/23 14:32	1

Lab Sample ID: LCS 240-579732/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 580069 — **Prep Batch: 579732**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.27		ug/L		85	85 - 115

Lab Sample ID: 240-187979-2 MS — **Client Sample ID: GW-11208058-063023-JY-002**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 580069 — **Prep Batch: 579732**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.16	J B	1.00	1.11		ug/L		96	70 - 130

Lab Sample ID: 240-187979-2 MSD — **Client Sample ID: GW-11208058-063023-JY-002**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 580069 — **Prep Batch: 579732**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.16	J B	1.00	1.06		ug/L		91	70 - 130	4	20

Method: 1664B - HEM and SGT-HEM

Lab Sample ID: MB 240-579846/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 579846

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	1.0	mg/L			07/07/23 09:03	1

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

Lab Sample ID: LCS 240-579846/2
Matrix: Water
Analysis Batch: 579846

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	35.0		mg/L		88	78 - 114

Method: 410.4 - COD

Lab Sample ID: MB 240-579878/41
Matrix: Water
Analysis Batch: 579878

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	1.8	mg/L			07/07/23 10:55	1

Lab Sample ID: LCS 240-579878/42
Matrix: Water
Analysis Batch: 579878

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	46.4	44.8		mg/L		97	90 - 110

Method: 4500 H+ B-2000 - pH

Lab Sample ID: LCS 240-579592/2
Matrix: Water
Analysis Batch: 579592

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	9.24	9.3		SU		100	97 - 103

Lab Sample ID: LCSD 240-579592/3
Matrix: Water
Analysis Batch: 579592

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
pH	9.24	9.3		SU		100	97 - 103	0	20

Lab Sample ID: 240-187979-1 DU
Matrix: Water
Analysis Batch: 579592

Client Sample ID: GW-11208058-063023-JY-001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.1	HF	7.1		SU		0.1	20

Method: 4500 NH3 H - Ammonia

Lab Sample ID: MB 240-580109/44
Matrix: Water
Analysis Batch: 580109

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	0.076	mg/L			07/10/23 13:53	1

Method: 4500 NH3 H - Ammonia (Continued)

Lab Sample ID: LCS 240-580109/45
Matrix: Water
Analysis Batch: 580109

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	6.37	6.28		mg/L		99	90 - 110

Lab Sample ID: MB 240-580314/14
Matrix: Water
Analysis Batch: 580314

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	0.076	mg/L			07/11/23 15:02	1

Lab Sample ID: LCS 240-580314/15
Matrix: Water
Analysis Batch: 580314

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	6.37	5.98		mg/L		94	90 - 110

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

Lab Sample ID: SCB 240-579274/2
Matrix: Water
Analysis Batch: 579274

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

Analyte	SCB Result	SCB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.0	U	2.0	2.0	mg/L			07/01/23 10:28	1

Lab Sample ID: USB 240-579274/1
Matrix: Water
Analysis Batch: 579274

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	2.0	mg/L			07/01/23 10:27	1

Lab Sample ID: LCS 240-579274/3
Matrix: Water
Analysis Batch: 579274

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	143	*-	mg/L		72	85 - 115

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

Lab Sample ID: MB 240-579557/1
Matrix: Water
Analysis Batch: 579557

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	0.40	mg/L			07/05/23 08:42	1

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

Lab Sample ID: LCS 240-579557/2
Matrix: Water
Analysis Batch: 579557

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			35.6	30.0		mg/L		84	64 - 120		

Method: SM4500 P E-1999 - Phosphorus

Lab Sample ID: MB 240-580328/3
Matrix: Water
Analysis Batch: 580328

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	0.076	mg/L			07/12/23 09:14	1

Lab Sample ID: LCS 240-580328/4
Matrix: Water
Analysis Batch: 580328

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			0.784	0.799		mg/L		102	77 - 120		

Surrogate Summary

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

Job ID: 240-187979-1

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		DCA	BFB	TOL
Lab Sample ID	Client Sample ID	(62-137)	(56-136)	(78-122)
240-187979-1	GW-11208058-063023-JY-001	90	91	99
240-187979-3	TRIP BLANK	90	90	100
LCS 240-580006/5	Lab Control Sample	88	95	104
MB 240-580006/9	Method Blank	88	88	99

Surrogate Legend

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

Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		DCBP1	TCX1
Lab Sample ID	Client Sample ID	(10-174)	(10-149)
240-187979-2	GW-11208058-063023-JY-002	71	66
LCS 240-579829/13-A	Lab Control Sample	88	84
MB 240-579829/12-A	Method Blank	90	85

Surrogate Legend

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Lab Chronicle

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

Job ID: 240-187979-1

Client Sample ID: GW-11208058-063023-JY-001

Lab Sample ID: 240-187979-1
Matrix: Water
Date Collected: 06/30/23 09:30
Date Received: 07/01/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	624.1		1	580006	HMB	EET CLE	07/10/23 16:23
Total/NA	Analysis	1664B		1	579846	JMR	EET CLE	07/07/23 09:03
Total/NA	Analysis	4500 H+ B-2000		1	579592	RP	EET CLE	07/05/23 10:17

Client Sample ID: GW-11208058-063023-JY-002

Lab Sample ID: 240-187979-2
Matrix: Water
Date Collected: 06/30/23 10:00
Date Received: 07/01/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	608			579829	LK2	EET CLE	07/07/23 08:31
Total/NA	Analysis	608.3		1	580073	RR	EET CLE	07/10/23 12:54
Total Recoverable	Prep	200.7			579731	GK	EET CLE	07/07/23 14:00
Total Recoverable	Analysis	200.7 Rev 4.4		1	580082	RKT	EET CLE	07/10/23 15:12
Total/NA	Prep	245.1			579732	GK	EET CLE	07/06/23 14:00
Total/NA	Analysis	245.1		1	580069	AJC	EET CLE	07/07/23 14:36
Total/NA	Analysis	410.4		1	579878	ALT	EET CLE	07/07/23 10:55
Total/NA	Analysis	4500 NH3 H		10	580314	MED	EET CLE	07/11/23 15:17
Total/NA	Analysis	5210B-2001		1	579274	BLW	EET CLE	07/01/23 14:05
Total/NA	Analysis	SM 2540D		1	579557	MS	EET CLE	07/05/23 08:42
Total/NA	Analysis	SM4500 P E-1999		1	580328	BLW	EET CLE	07/12/23 09:14

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-187979-3
Matrix: Water
Date Collected: 06/30/23 00:00
Date Received: 07/01/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	624.1		1	580006	HMB	EET CLE	07/10/23 14:41

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc.
Job ID: 240-187979-1
Project/Site: 11208058, RACER Bay City

Laboratory: Eurofins Cleveland

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-24
Georgia	State	4062	02-27-24
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-28-24
Kentucky (WW)	State	KY98016	12-31-23
Michigan	State	9135	02-27-24
Minnesota	NELAP	039-999-348	12-31-23
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	07-01-24
New York	NELAP	10975	04-02-24
Ohio	State	8303	02-27-24
Ohio VAP	State	ORELAP 4062	02-27-24
Oregon	NELAP	4062	02-27-24
Pennsylvania	NELAP	68-00340	08-31-24
Texas	NELAP	T104704517-22-17	08-31-23
Virginia	NELAP	460175	09-14-23
West Virginia DEP	State	210	12-31-23

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

MICHIGAN 190

Chain of Custody Record

4.7/5.1

eurofins | Environment Testing

Client Information	Sampler: John York	Lab PM: Heckler, Denise D	Carrier Tracking No(s): Eurofins GHD to Brighton	COC No: 240-109047-38912.1
Client Contact: Ms. Ruth Mickle	Phone: 734 231 6088	E-Mail: Denise.Heckler@et.eurofinsus.com	State of Origin: Michigan	Page: Page 1 of 1
Company: GHD Services Inc.	PWSID:			Job #:
Address: 26850 Haggerty Rd	Due Date Requested:			
City: Farmington Hills	TAT Requested (days): STD			
State, Zip: MI, 48331	Compliance Project: Δ Yes Δ No			
Phone: 612-524-6872(Tel)	PO #: Purchase Order Requested			
Email: ruth.mickle@ghd.com	WO #: 11208058			
Project Name: 11208058, RACER Bay City	Project #: 24006288			
Site:	SSOW#:			

Analysis Requested

240-187979 Chain of Custody

Preservation Codes:

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

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	624.1_LL_PREC - Vinyl chloride	410.4, 4500_P_E, SM4500_NH3_H	200.7 - Select Metals + Hg	608.3_PCB_PREC - PCBs	5210B - BOD	2540D - TSS	1664B_NP - HEM	SM4500_H+ - pH	Special Instructions/Note:
			Preservation Code:		X	X	A	S	D	N	N	N	S	N	
GW-11208058-063023-JY-001	6/30/23	0930	G	Water			X						X	X	Treatment EFF.
GW-11208058-063023-JY-00	"	1000	C	Water				X	X	X	X	X			" "
								X	X	X	X	X			
Trip Blank	"	—	—	WQ			X								

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

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

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

Special Instructions/QC Requirements:

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	6-30-23 1030	GHD	Leah M. Smith	07-01-23 935	EETM
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 06/08/2021

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
GW-11208058-063023-JY-001	240-187979-A-1	Voa Vial 40ml - Hydrochloric Acid				
GW-11208058-063023-JY-001	240-187979-B-1	Voa Vial 40ml - Hydrochloric Acid				
GW-11208058-063023-JY-001	240-187979-C-1	Voa Vial 40ml - Hydrochloric Acid				
GW-11208058-063023-JY-001	240-187979-D-1	Plastic 125mL - unpreserved				
GW-11208058-063023-JY-001	240-187979-E-1	Amber Glass 1 liter - Sulfuric Acid				
GW-11208058-063023-JY-001	240-187979-F-1	Amber Glass 1 liter - Sulfuric Acid				
GW-11208058-063023-JY-002	240-187979-A-2	Plastic 250ml - with Sulfuric Acid	<2			
GW-11208058-063023-JY-002	240-187979-B-2	Plastic 500ml - with Nitric Acid	<2			
GW-11208058-063023-JY-002	240-187979-C-2	Plastic 1 liter - unpreserved				
GW-11208058-063023-JY-002	240-187979-D-2	Plastic 1 liter - unpreserved				
GW-11208058-063023-JY-002	240-187979-E-2	Amber Glass 1 liter - unpreserved				
GW-11208058-063023-JY-002	240-187979-F-2	Amber Glass 1 liter - unpreserved				
TRIP BLANK	240-187979-A-3	Voa Vial 40ml - Hydrochloric Acid				
TRIP BLANK	240-187979-B-3	Voa Vial 40ml - Hydrochloric Acid				

Eurofins – Cleveland Sample Receipt Form/Narrative **Login # :** 187979
Barberton Facility

Client GHD Services Site Name _____ Cooler unpacked by: Lark M. Smith

Cooler Received on 07-01-23 Opened on 07-01-23

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

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

Eurofins Cooler # EC Foam Box Client Cooler Box Other _____

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

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN # 13 (CF +0.4 °C) Observed Cooler Temp. 4.7 °C Corrected Cooler Temp. 5.1 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____	(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 (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?	(Y)	(N) (Y)
10. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11. Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	Yes	(No)
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	(Yes)	No NA pH Strip Lot# 10BDH4321
14. Were VOAs on the COC?	(Yes)	No
15. Were air bubbles >6 mm in any VOA vials? ● ← Larger than this.	(Yes)	No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # 62225	(Yes)	No
17. 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 _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page | Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) 1x Trip were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Attachment 2

Certification Statement

Certification Statement

"I, Dave Favero, certify under penalty of law that this document (July 28, 2023 GHD Semi-Annual Compliance Report (January 1 to June 30, 2023)), 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."

July 28, 2023

RACER, Deputy Cleanup Manager – Michigan (Date)