

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



**GHD Reference No:** 11208058

**July 18, 2022**

**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, 2022)  
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, 2022 for RACER's groundwater extraction and treatment system located at the north end of Crotty Street in Bay City, Michigan (Site).

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

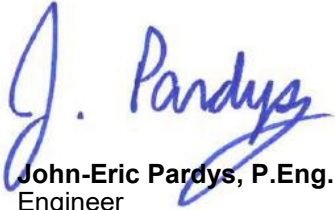
Table 1 presents the results of the required semi-annual effluent sample collected from the RACER groundwater extraction and treatment system on May 26, 2022. Attachment 1 presents a copy of the laboratory analytical report. The analytical results did not identify an exceedance of the daily maximum discharge levels specified in the permit, and there were no other conditions, events or circumstances identified that did not meet other permit requirements. Table 2 presents the flow readings collected periodically from the flow meter.

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

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

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

Sincerely,



**John-Eric Pardys, P.Eng.**  
Engineer

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

JEP/kf/7

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-11208058-052622-SSH-EFF2022

5/26/22

Parameters	Units	Daily Maximum (Bay City Industrial User Permit)	
<b>VOCs</b>			
Vinyl chloride	mg/L	0.002	0.001 U
<b>Metals</b>			
Cadmium	mg/L	0.057	0.00032 J
Chromium	mg/L	6.812	0.005 U
Copper	mg/L	1.476	0.025 B
Iron	mg/L		0.49
Lead	mg/L	0.632	0.003 U
Mercury	mg/L	ND	0.0002 U
Nickel	mg/L	2.548	0.007 J
Silver	mg/L	0.2	0.005 U
<b>Pesticides</b>			
Aroclor-1016 (PCB-1016)	mg/L	ND	0.000099 U
Aroclor-1221 (PCB-1221)	mg/L	ND	0.000099 U
Aroclor-1232 (PCB-1232)	mg/L	ND	0.000099 U
Aroclor-1242 (PCB-1242)	mg/L	ND	0.000099 U
Aroclor-1248 (PCB-1248)	mg/L	ND	0.000099 U
Aroclor-1254 (PCB-1254)	mg/L	ND	0.000099 U
Aroclor-1260 (PCB-1260)	mg/L	ND	0.000099 U
<b>Wet</b>			
Ammonia	mg/L	30	7.1
Biochemical oxygen demand (BOD)	mg/L	835	2.0 U
Chemical oxygen demand (COD)	mg/L	1670	34
Oil and grease (HEM), polar	mg/L	100	5.5
pH, lab	s.u.	6.5 to 11.0	7.4 HF
Phosphorus	mg/L	13.8	0.10 U
Total suspended solids (TSS)	mg/L	1336	2.2 J

## Notes:

- HF Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.  
 U Not detected at the associated reporting limit  
 J Estimated value  
 B Compound was found in the blank and sample  
 H Sample was prepped or analyzed beyond the specified holding time  
 H3 Sample was received and analyzed past holding time  
 \*+ LCS and/or LCSD is outside acceptance limits, high biased

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

<b>Date</b>	<b>Flow Meter reading (gallons)</b>	<b>Cumulative Total: (gallons)</b>	<b>Volume to be invoiced annually (July to June 30)</b>	<b>Comments</b>
13-Jun-22	613476	1359574	<b>204431</b>	- City invoiced for discharge
26-May-22				- Collected effluent sample
24-May-22	610180	1356278		
26-Apr-22	592790	1338888		
23-Mar-22	592060	1338158		
1-Mar-22	580971	1327069		
24-Jan-22	580938	1327036		
27-Dec-21	553735	1299833		
23-Dec-21				- Collected effluent sample
29-Nov-21	533997	1280095		
27-Sep-21	475843	1221941		
20-Aug-21	436048	1182146		
30-Jul-21	421003	1167101		
23-Jun-21	409045	1155143	<b>139856</b>	- Collected effluent sample and City invoiced for discharge
27-May-21	400420	1146518		
29-Apr-21	397390	1143488		
23-Mar-21	371797	1117895		
22-Feb-21	348776	1094874		
21-Dec-20	308935	1055033		
10-Dec-20				- Collected effluent sample
9-Dec-20	304649	1050747		
12-Oct-20	278099	1024197		
10-Sep-20	277899	1023997		
25-Aug-20	277020	1023118		
22-Jul-20	274190	1020288		
22-Jun-20	270975	1017073		
4-Jun-20	269189	1015287	<b>124809</b>	- City invoiced for discharge
28-May-20	268089	1014187		- Collected effluent sample
28-Apr-20	263922	1010020		
25-Mar-20	248006	994104		
20-Feb-20	227965	974063		
27-Jan-20	220321	966419		
5-Dec-19	200031	946129		- Collected PFAS effluent sample
25-Nov-19	192582	938680		
29-Oct-19	176533	922631		
28-Aug-19	168508	914606		
17-Jul-19	159490	905588		
17-Jun-19	144380	890478	<b>122047</b>	- City invoiced for discharge
31-May-19				- Collected effluent sample
17-May-19	123482	869580		
19-Apr-19	105745	851843		
22-Mar-19	81364	827462		
28-Feb-19	77720	823818		
29-Jan-19	77720	823818		
20-Jan-19				- Collected effluent sample
12-Dec-18	77570	823668		- Collected effluent sample
29-Nov-18	76972	823070		
26-Sep-18	59303	805401		
30-Aug-18	53199	799297		
30-Jul-18	52454	798552		
20-Jun-18	35274	781372		
1-Jun-18				- Collected effluent sample
1-Jun-18	22333	768431	<b>88271</b>	- City invoiced for discharge
31-May-18	20490	766588		

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

<b>Date</b>	<b>Flow Meter reading (gallons)</b>	<b>Cumulative Total: (gallons)</b>	<b>Volume to be invoiced annually (July to June 30)</b>	<b>Comments</b>
30-Apr-18	18529	764627		
29-Mar-18	11243	757341		
8-Mar-18	122667	746098		- Last reading before
8-Mar-18	0	746098		- New Flow meter installed
30-Nov-17				- Collected effluent sample
25-Oct-17	73702	697133		
12-Jul-17	60991	684422		
28-Jun-17	56911	680342		
13-Jun-17	56729	680160	<b>137544</b>	- City invoiced for discharge
22-May-17	56722	680153		
9-May-17				- Collected effluent sample
27-Apr-17	55126	678557		
2-Feb-17	5813	629244		
16-Jan-17				- Collected effluent sample
14-Jan-17	609074	623431		
14-Jan-17	0	623431		
16-Dec-16	609074	623431		
11-Nov-16	608980	623337		
28-Oct-16	608865	623222		
30-Sep-16	607717	622074		
31-Aug-16	607298	621655		
20-Jul-16	561893	576250		
29-Jun-16	556457	570814		
14-Jun-16	528259	542616	<b>523666</b>	- Collected effluent sample,
31-May-16	521920	536277		
27-Apr-16	462204	476561		
21-Mar-16	409836	424193		
29-Feb-16	394550	408907		
10-Feb-16	387410	401767		
30-Dec-15	351550	365907		
10-Dec-15				- Collected effluent sample
23-Nov-15	289731	304088		
30-Oct-15	260771	275128		
29-Sep-15	252638	266995		
28-Aug-15	241397	255754		
29-Jul-15	232315	246672		
30-Jun-15	232315	246672		
25-Jun-15	232315	246672		
18-Jun-15	224490	238847		
6-May-15	197766	212123		
30-Apr-15	175234	189591		
19-Mar-15	67425	81782		
16-Mar-15				- Collected effluent sample
13-Feb-15	46303	60660		
27-Jan-15	31004	45361		
29-Dec-14	31004	45361		
26-Nov-14	31004	45361		
23-Oct-14	31004	45361		
23-Sep-14	11504	25861		
5-Sep-14	6337	20694		- Collected effluent sample
18-Aug-14	4593	18950		
28-Jul-14	4593	18950		
16-Jun-14	4593	18950	<b>18950</b>	- City invoiced for discharge

# Attachment 1

## Laboratory Analytical Report

## ANALYTICAL REPORT

Eurofins Canton  
180 S. Van Buren Avenue  
Barberton, OH 44203  
Tel: (330)497-9396

Laboratory Job ID: 240-167329-1  
Client Project/Site: 11208058, RACER Bay City

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

Attn: Ms. Ruth Mickle



Authorized for release by:  
6/16/2022 12:51:59 PM

Denise Heckler, Project Manager II  
(330)966-9477

[Denise.Heckler@et.eurofinsus.com](mailto:Denise.Heckler@et.eurofinsus.com)

### LINKS

Review your project  
results through



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[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

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

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

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# Case Narrative

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

Job ID: 240-167329-1

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## Job ID: 240-167329-1

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### Laboratory: Eurofins Canton

#### Narrative

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#### Job Narrative 240-167329-1

#### Comments

The BOD was analyzed at NEORSD.

#### Receipt

The sample was received on 5/27/2022 10:00 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.7° C.

#### GC/MS VOA

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

#### GC Semi VOA

Method 608: Surrogate recovery for the following method blank was outside the upper control limit: W-11208058-052622-SSH-EFF2022 (240-167329-1). The sample associated with this blank did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

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.

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

#### General Chemistry

Method SM 2540D: Insufficient sample volume was provided to produce results within the specifications of SM 2540D which requires at least 2.5 mg dried residue with a sample volume not to exceed 1L. A sample volume less than 1L, that yielded less than 2.5 mg dried residue, was provided for the following sample: W-11208058-052622-SSH-EFF2022 (240-167329-1).

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

#### Organic Prep

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

# Definitions/Glossary

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

Job ID: 240-167329-1

## Qualifiers

### GC/MS VOA

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

### GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
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
F1	MS and/or MSD recovery exceeds control limits.
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.
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
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)

Eurofins Canton

# Definitions/Glossary

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

Job ID: 240-167329-1

## Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TNTC	Too Numerous To Count

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# Sample Summary

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

Job ID: 240-167329-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-167329-1	W-11208058-052622-SSH-EFF2022	Water	05/26/22 10:10	05/27/22 10:00

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# Detection Summary

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

Job ID: 240-167329-1

**Client Sample ID: W-11208058-052622-SSH-EFF2022**

**Lab Sample ID: 240-167329-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.32	J	2.0	0.20	ug/L	1		200.7 Rev 4.4	Total Recoverable
Copper	25	B	20	3.5	ug/L	1		200.7 Rev 4.4	Total Recoverable
Iron	490		100	83	ug/L	1		200.7 Rev 4.4	Total Recoverable
Nickel	7.0	J	20	2.2	ug/L	1		200.7 Rev 4.4	Total Recoverable
HEM	5.5		4.8	0.98	mg/L	1		1664A	Total/NA
Chemical Oxygen Demand	34	F1	10	1.8	mg/L	1		410.4	Total/NA
pH	7.4	HF	0.1	0.1	SU	1		4500 H+ B-2000	Total/NA
Ammonia	7.1		0.20	0.076	mg/L	1		4500 NH3 H	Total/NA
Total Suspended Solids	2.2	J	6.7	1.7	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton



# Method Summary

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

Job ID: 240-167329-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL CAN
608	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	TAL CAN
200.7 Rev 4.4	Metals (ICP)	EPA	TAL CAN
245.1	Mercury (CVAA)	EPA	TAL CAN
1664A	HEM and SGT-HEM	1664A	TAL CAN
410.4	COD	MCAWW	TAL CAN
4500 H+ B-2000	pH	SM	TAL CAN
4500 NH3 H	Ammonia	SM	TAL CAN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CAN
SM4500 P E-1999	Phosphorus	SM	TAL CAN
Subcontract	BOD	None	NEORS
200.7	Preparation, Total Recoverable Metals	EPA	TAL CAN
245.1	Preparation, Mercury	EPA	TAL CAN
608	Liquid-Liquid Extraction (Separatory Funnel)	40CFR136A	TAL CAN

### Protocol References:

1664A = EPA-821-98-002

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

EPA = US Environmental Protection Agency

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

None = None

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

### Laboratory References:

NEORS = Northeast Ohio Regional Sewer District, 4747 East 49th Street, Cuyahoga Heights, OH 44125, TEL (216)641-6000

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

# Client Sample Results

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

Job ID: 240-167329-1

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

Client Sample ID: W-11208058-052622-SSH-EFF2022

Date Collected: 05/26/22 10:10

Date Received: 05/27/22 10:00

Lab Sample ID: 240-167329-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.45	ug/L			06/07/22 02:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		56 - 136					06/07/22 02:54	1
1,2-Dichloroethane-d4 (Surr)	128		62 - 137					06/07/22 02:54	1
Toluene-d8 (Surr)	98		78 - 122					06/07/22 02:54	1

# Client Sample Results

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

Job ID: 240-167329-1

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

**Client Sample ID: W-11208058-052622-SSH-EFF2022**

**Date Collected: 05/26/22 10:10**

**Date Received: 05/27/22 10:00**

**Lab Sample ID: 240-167329-1**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.099	U	0.099	0.055	ug/L		06/09/22 08:22	06/13/22 10:11	1
Aroclor-1221	0.099	U	0.099	0.056	ug/L		06/09/22 08:22	06/13/22 10:11	1
Aroclor-1232	0.099	U	0.099	0.073	ug/L		06/09/22 08:22	06/13/22 10:11	1
Aroclor-1242	0.099	U	0.099	0.075	ug/L		06/09/22 08:22	06/13/22 10:11	1
Aroclor-1248	0.099	U	0.099	0.050	ug/L		06/09/22 08:22	06/13/22 10:11	1
Aroclor-1254	0.099	U	0.099	0.040	ug/L		06/09/22 08:22	06/13/22 10:11	1
Aroclor-1260	0.099	U	0.099	0.046	ug/L		06/09/22 08:22	06/13/22 10:11	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
<i>DCB Decachlorobiphenyl</i>	80		10 - 114				06/09/22 08:22	06/13/22 10:11	1
<i>Tetrachloro-m-xylene</i>	81		15 - 131				06/09/22 08:22	06/13/22 10:11	1

# Client Sample Results

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

Job ID: 240-167329-1

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

Client Sample ID: W-11208058-052622-SSH-EFF2022

Date Collected: 05/26/22 10:10

Date Received: 05/27/22 10:00

Lab Sample ID: 240-167329-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	5.0	U	5.0	0.62	ug/L		05/31/22 12:00	06/01/22 23:06	1
<b>Cadmium</b>	<b>0.32</b>	<b>J</b>	2.0	0.20	ug/L		05/31/22 12:00	06/01/22 23:06	1
Chromium	5.0	U	5.0	4.0	ug/L		05/31/22 12:00	06/01/22 23:06	1
<b>Copper</b>	<b>25</b>	<b>B</b>	20	3.5	ug/L		05/31/22 12:00	06/01/22 23:06	1
<b>Iron</b>	<b>490</b>		100	83	ug/L		05/31/22 12:00	06/01/22 23:06	1
<b>Nickel</b>	<b>7.0</b>	<b>J</b>	20	2.2	ug/L		05/31/22 12:00	06/01/22 23:06	1
Lead	3.0	U	3.0	2.8	ug/L		05/31/22 12:00	06/01/22 23:06	1

# Client Sample Results

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

Job ID: 240-167329-1

## Method: 245.1 - Mercury (CVAA)

Client Sample ID: W-11208058-052622-SSH-EFF2022

Lab Sample ID: 240-167329-1

Date Collected: 05/26/22 10:10

Matrix: Water

Date Received: 05/27/22 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		05/31/22 12:00	06/01/22 15:51	1

1

2

3

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# Client Sample Results

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

Job ID: 240-167329-1

## General Chemistry

Client Sample ID: W-11208058-052622-SSH-EFF2022

Lab Sample ID: 240-167329-1

Date Collected: 05/26/22 10:10

Matrix: Water

Date Received: 05/27/22 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.5		4.8	0.98	mg/L			06/08/22 08:48	1
Chemical Oxygen Demand	34	F1	10	1.8	mg/L			06/02/22 11:54	1
pH	7.4	HF	0.1	0.1	SU			06/01/22 08:44	1
Ammonia	7.1		0.20	0.076	mg/L			06/01/22 12:54	1
Total Suspended Solids	2.2	J	6.7	1.7	mg/L			06/02/22 10:40	1
Total Phosphorus as P	0.10	U	0.10	0.017	mg/L			06/08/22 09:04	1

# QC Association Summary

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

Job ID: 240-167329-1

## GC/MS VOA

### Analysis Batch: 529283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-167329-1	W-11208058-052622-SSH-EFF2022	Total/NA	Water	624	
MB 240-529283/32	Method Blank	Total/NA	Water	624	
LCS 240-529283/33	Lab Control Sample	Total/NA	Water	624	

## GC Semi VOA

### Prep Batch: 529870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-167329-1	W-11208058-052622-SSH-EFF2022	Total/NA	Water	608	
MB 240-529870/25-A	Method Blank	Total/NA	Water	608	
LCS 240-529870/26-A	Lab Control Sample	Total/NA	Water	608	

### Analysis Batch: 530258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-167329-1	W-11208058-052622-SSH-EFF2022	Total/NA	Water	608	529870
MB 240-529870/25-A	Method Blank	Total/NA	Water	608	529870
LCS 240-529870/26-A	Lab Control Sample	Total/NA	Water	608	529870

## Metals

### Prep Batch: 528535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-167329-1	W-11208058-052622-SSH-EFF2022	Total Recoverable	Water	200.7	
MB 240-528535/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 240-528535/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

### Prep Batch: 528536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-167329-1	W-11208058-052622-SSH-EFF2022	Total/NA	Water	245.1	
MB 240-528536/1-A	Method Blank	Total/NA	Water	245.1	
LCS 240-528536/2-A	Lab Control Sample	Total/NA	Water	245.1	

### Analysis Batch: 528786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-167329-1	W-11208058-052622-SSH-EFF2022	Total/NA	Water	245.1	528536
MB 240-528536/1-A	Method Blank	Total/NA	Water	245.1	528536
LCS 240-528536/2-A	Lab Control Sample	Total/NA	Water	245.1	528536

### Analysis Batch: 528856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-167329-1	W-11208058-052622-SSH-EFF2022	Total Recoverable	Water	200.7 Rev 4.4	528535
MB 240-528535/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	528535
LCS 240-528535/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	528535

## General Chemistry

### Analysis Batch: 528688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-167329-1	W-11208058-052622-SSH-EFF2022	Total/NA	Water	4500 H+ B-2000	
LCS 240-528688/2	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	

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# QC Association Summary

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

Job ID: 240-167329-1

## General Chemistry

### Analysis Batch: 528783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-167329-1	W-11208058-052622-SSH-EFF2022	Total/NA	Water	4500 NH3 H	
MB 240-528783/46	Method Blank	Total/NA	Water	4500 NH3 H	
LCS 240-528783/47	Lab Control Sample	Total/NA	Water	4500 NH3 H	

### Analysis Batch: 528913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-167329-1	W-11208058-052622-SSH-EFF2022	Total/NA	Water	SM 2540D	
MB 240-528913/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 240-528913/2	Lab Control Sample	Total/NA	Water	SM 2540D	

### Analysis Batch: 528934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-167329-1	W-11208058-052622-SSH-EFF2022	Total/NA	Water	410.4	
MB 240-528934/9	Method Blank	Total/NA	Water	410.4	
LCS 240-528934/10	Lab Control Sample	Total/NA	Water	410.4	
240-167329-1 MS	W-11208058-052622-SSH-EFF2022	Total/NA	Water	410.4	
240-167329-1 MSD	W-11208058-052622-SSH-EFF2022	Total/NA	Water	410.4	

### Analysis Batch: 529693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-167329-1	W-11208058-052622-SSH-EFF2022	Total/NA	Water	1664A	
MB 240-529693/1	Method Blank	Total/NA	Water	1664A	
LCS 240-529693/2	Lab Control Sample	Total/NA	Water	1664A	

### Analysis Batch: 529703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-167329-1	W-11208058-052622-SSH-EFF2022	Total/NA	Water	SM4500 P E-1999	
MB 240-529703/3	Method Blank	Total/NA	Water	SM4500 P E-1999	
LCS 240-529703/4	Lab Control Sample	Total/NA	Water	SM4500 P E-1999	

# QC Sample Results

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

Job ID: 240-167329-1

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

**Lab Sample ID: MB 240-529283/32**  
**Matrix: Water**  
**Analysis Batch: 529283**

**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			06/06/22 22:45	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		56 - 136					06/06/22 22:45	1
1,2-Dichloroethane-d4 (Surr)	124		62 - 137					06/06/22 22:45	1
Toluene-d8 (Surr)	98		78 - 122					06/06/22 22:45	1

**Lab Sample ID: LCS 240-529283/33**  
**Matrix: Water**  
**Analysis Batch: 529283**

**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	24.8		ug/L		124	10 - 251
Surrogate	%Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	107		56 - 136				
1,2-Dichloroethane-d4 (Surr)	101		62 - 137				
Toluene-d8 (Surr)	101		78 - 122				

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

**Lab Sample ID: MB 240-529870/25-A**  
**Matrix: Water**  
**Analysis Batch: 530258**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 529870**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		06/09/22 08:22	06/13/22 09:40	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		06/09/22 08:22	06/13/22 09:40	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		06/09/22 08:22	06/13/22 09:40	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		06/09/22 08:22	06/13/22 09:40	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		06/09/22 08:22	06/13/22 09:40	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		06/09/22 08:22	06/13/22 09:40	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		06/09/22 08:22	06/13/22 09:40	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	117	S1+	10 - 114				06/09/22 08:22	06/13/22 09:40	1
Tetrachloro-m-xylene	101		15 - 131				06/09/22 08:22	06/13/22 09:40	1

**Lab Sample ID: LCS 240-529870/26-A**  
**Matrix: Water**  
**Analysis Batch: 530258**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 529870**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	1.92		ug/L		77	50 - 114
Aroclor-1260	2.50	2.66		ug/L		106	8 - 127

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# QC Sample Results

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

Job ID: 240-167329-1

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

**Lab Sample ID: LCS 240-529870/26-A**  
**Matrix: Water**  
**Analysis Batch: 530258**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 529870**

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	113		10 - 114
Tetrachloro-m-xylene	73		15 - 131

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

**Lab Sample ID: MB 240-528535/1-A**  
**Matrix: Water**  
**Analysis Batch: 528856**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 528535**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Silver	5.0	U	5.0	0.62	ug/L		05/31/22 12:00	06/01/22 22:11	1
Cadmium	2.0	U	2.0	0.20	ug/L		05/31/22 12:00	06/01/22 22:11	1
Chromium	5.0	U	5.0	4.0	ug/L		05/31/22 12:00	06/01/22 22:11	1
Copper	3.80	J	20	3.5	ug/L		05/31/22 12:00	06/01/22 22:11	1
Iron	100	U	100	83	ug/L		05/31/22 12:00	06/01/22 22:11	1
Nickel	20	U	20	2.2	ug/L		05/31/22 12:00	06/01/22 22:11	1
Lead	3.0	U	3.0	2.8	ug/L		05/31/22 12:00	06/01/22 22:11	1

**Lab Sample ID: LCS 240-528535/2-A**  
**Matrix: Water**  
**Analysis Batch: 528856**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 528535**

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Silver	100	101		ug/L		101	85 - 115
Cadmium	1000	975		ug/L		97	85 - 115
Chromium	1000	968		ug/L		97	85 - 115
Copper	1000	963		ug/L		96	85 - 115
Iron	10000	9280		ug/L		93	85 - 115
Nickel	1000	996		ug/L		100	85 - 115
Lead	1000	949		ug/L		95	85 - 115

## Method: 245.1 - Mercury (CVAA)

**Lab Sample ID: MB 240-528536/1-A**  
**Matrix: Water**  
**Analysis Batch: 528786**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 528536**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.20	U	0.20	0.13	ug/L		05/31/22 12:00	06/01/22 15:27	1

**Lab Sample ID: LCS 240-528536/2-A**  
**Matrix: Water**  
**Analysis Batch: 528786**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 528536**

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Mercury	5.00	5.38		ug/L		108	85 - 115

# QC Sample Results

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

Job ID: 240-167329-1

## Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 240-529693/1  
Matrix: Water  
Analysis Batch: 529693

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	1.0	mg/L			06/08/22 08:48	1

Lab Sample ID: LCS 240-529693/2  
Matrix: Water  
Analysis Batch: 529693

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	34.50		mg/L		86	78 - 114

## Method: 410.4 - COD

Lab Sample ID: MB 240-528934/9  
Matrix: Water  
Analysis Batch: 528934

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			06/02/22 11:54	1

Lab Sample ID: LCS 240-528934/10  
Matrix: Water  
Analysis Batch: 528934

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	59.0	55.7		mg/L		94	90 - 110

Lab Sample ID: 240-167329-1 MS  
Matrix: Water  
Analysis Batch: 528934

Client Sample ID: W-11208058-052622-SSH-EFF2022  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	34	F1	50.0	80.4		mg/L		92	90 - 110

Lab Sample ID: 240-167329-1 MSD  
Matrix: Water  
Analysis Batch: 528934

Client Sample ID: W-11208058-052622-SSH-EFF2022  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chemical Oxygen Demand	34	F1	50.0	78.5	F1	mg/L		88	90 - 110	2	20

## Method: 4500 H+ B-2000 - pH

Lab Sample ID: LCS 240-528688/2  
Matrix: Water  
Analysis Batch: 528688

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	9.33	9.2		SU		99	97 - 103

# QC Sample Results

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

Job ID: 240-167329-1

## Method: 4500 NH3 H - Ammonia

Lab Sample ID: MB 240-528783/46  
Matrix: Water  
Analysis Batch: 528783

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			06/01/22 12:30	1

Lab Sample ID: LCS 240-528783/47  
Matrix: Water  
Analysis Batch: 528783

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	6.19		mg/L		97	90 - 110

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

Lab Sample ID: MB 240-528913/1  
Matrix: Water  
Analysis Batch: 528913

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	1.0	mg/L			06/02/22 10:40	1

Lab Sample ID: LCS 240-528913/2  
Matrix: Water  
Analysis Batch: 528913

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	45.0	34.5		mg/L		77	64 - 120

## Method: SM4500 P E-1999 - Phosphorus

Lab Sample ID: MB 240-529703/3  
Matrix: Water  
Analysis Batch: 529703

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	0.017	mg/L			06/08/22 09:04	1

Lab Sample ID: LCS 240-529703/4  
Matrix: Water  
Analysis Batch: 529703

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	0.631	0.620		mg/L		98	77 - 120

# Surrogate Summary

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

Job ID: 240-167329-1

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB	DCA	TOL
		(56-136)	(62-137)	(78-122)
240-167329-1	W-11208058-052622-SSH-EFF2	99	128	98
LCS 240-529283/33	Lab Control Sample	107	101	101
MB 240-529283/32	Method Blank	99	124	98

#### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

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

TOL = Toluene-d8 (Surr)

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCBP2	TCX2
		(10-114)	(15-131)
240-167329-1	W-11208058-052622-SSH-EFF2	80	81
LCS 240-529870/26-A	Lab Control Sample	113	73
MB 240-529870/25-A	Method Blank	117 S1+	101

#### Surrogate Legend

DCBP = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

# Lab Chronicle

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

Job ID: 240-167329-1

**Client Sample ID: W-11208058-052622-SSH-EFF2022**

**Lab Sample ID: 240-167329-1**

**Date Collected: 05/26/22 10:10**

**Matrix: Water**

**Date Received: 05/27/22 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	529283	06/07/22 02:54	HMB	TAL CAN
Total/NA	Prep	608			529870	06/09/22 08:22	SDE	TAL CAN
Total/NA	Analysis	608		1	530258	06/13/22 10:11	LSH	TAL CAN
Total Recoverable	Prep	200.7			528535	05/31/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	200.7 Rev 4.4		1	528856	06/01/22 23:06	KLC	TAL CAN
Total/NA	Prep	245.1			528536	05/31/22 12:00	SHB	TAL CAN
Total/NA	Analysis	245.1		1	528786	06/01/22 15:51	DSH	TAL CAN
Total/NA	Analysis	1664A		1	529693	06/08/22 08:48	JMR	TAL CAN
Total/NA	Analysis	410.4		1	528934	06/02/22 11:54	KMS	TAL CAN
Total/NA	Analysis	4500 H+ B-2000		1	528688	06/01/22 08:44	MED	TAL CAN
Total/NA	Analysis	4500 NH3 H		1	528783	06/01/22 12:54	AJ	TAL CAN
Total/NA	Analysis	SM 2540D		1	528913	06/02/22 10:40	MED	TAL CAN
Total/NA	Analysis	SM4500 P E-1999		1	529703	06/08/22 09:04	BLW	TAL CAN

**Laboratory References:**

NEORS = Northeast Ohio Regional Sewer District, 4747 East 49th Street, Cuyahoga Heights, OH 44125, TEL (216)641-6000

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396



# Accreditation/Certification Summary

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

Job ID: 240-167329-1

## Laboratory: Eurofins Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-22
Georgia	State	4062	02-23-22 *
Illinois	NELAP	200004	07-31-22
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-22
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-23-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-22
Texas	NELAP	T104704517-22-17	08-31-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22


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

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**Chain of Custody Record**



4.7/4.7

<b>Client Information</b>		Sampler: <u>S. Heineneyer</u>		Lab PM: Heckler, Denise D	Carrier Tracking No(s):	COC No: 240-94256-28267.1			
Client Contact: Ms. Ruth Mickle		Phone: 616 437 7737		E-Mail: Denise.Heckler@et.eurofins.com	State of Origin: MI	Page: Page 1 of 1			
Company: GHD Services Inc.		PWSID:		Job #:					
Address: 26850 Haggerty Rd.		Due Date Requested: 6/8/22		Analysis Requested					
City: Farmington Hills		TAT Requested (days): 14		Total Number of Containers					
State, Zip: MI, 48331		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Preservation Codes:					
Phone: 248 8933100		Purchase Order Requested		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 Other:					
Email: ruth.mickle@ghd.com		Project Name: 11208058		M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - H2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)					
Project Name: 11208058, RACER Bay City		Project #: 24006288		Special Instructions/Note:					
Site: <u>effluent</u>		SSOW#:		Field Filtered Sample (Yes or No)					
Sample Identification		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=on-site, A=lab)	
W-11208058-052622-SSH-EFF2022		5/20/22		10:10		C, G		Water	
 240-167329 Chain of Custody									
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Radiological									
Deliverable Requested: I, II, III, IV, Other (specify)									
Empty Kit Relinquished by: _____ Date: _____									
Relinquished by: <u>SA M...</u> Date/Time: 5/20/22 1400 Company: GHD									
Relinquished by: _____ Date/Time: _____ Company: _____									
Relinquished by: _____ Date/Time: _____ Company: _____									
Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Custody Seal No: 1761862 1761863									
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months									
Special Instructions/QC Requirements:									
Time: _____ Method of Shipment: _____									
Relinquished by: <u>Jamy Long</u> Date/Time: 5/27/22 1000 Company: PETN									
Relinquished by: _____ Date/Time: _____ Company: _____									
Relinquished by: _____ Date/Time: _____ Company: _____									
Cooler Temperature(s) °C and Other Remarks:									



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Eurofins - Canton Sample Receipt Form/Narrative Login # : \_\_\_\_\_

Barberton Facility

Client GHD Site Name \_\_\_\_\_ Cooler unpacked by: Nancy Boyer

Cooler Received on 5-27-22 Opened on 5-27-22

FedEx: 1<sup>st</sup> Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other

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

Eurofins Cooler # \_\_\_\_\_ Packing material used: Wet Ice ~~Foam Box~~ ~~Bubble Wrap~~ Client Cooler Box Other \_\_\_\_\_

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt  See Multiple Cooler Form

IR GUN# IR-13 (CF 0.0 °C) Observed Cooler Temp. 4.7 °C Corrected Cooler Temp. 4.7 °C

IR GUN #IR-15 (CF -0.7°C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No

-Were the seals on the outside of the cooler(s) signed & dated? Yes No NA

-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No

-Were tamper/custody seals intact and uncompromised? Yes No NA

3. Shippers' packing slip attached to the cooler(s)? Yes No

4. Did custody papers accompany the sample(s)? Yes No

5. Were the custody papers relinquished & signed in the appropriate place? Yes No

6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No

7. Did all bottles arrive in good condition (Unbroken)? Yes No

8. Could all bottle labels (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)?

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# HC157842

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 # \_\_\_\_\_ 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) \_\_\_\_\_ 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: \_\_\_\_\_





## Northeast Ohio Regional Sewer District Analytical Services

4747 E. 49th Street, Cleveland, OH 44125

(216) 641-6000

Monday, June 13, 2022

Nate Pietras  
Eurofins Canton  
180 S. Van Buren Avenue  
Barberton, OH 44203

RE: Eurofins, TBOD, 13312

Version: v.0

Dear Nate Pietras

The Northeast Ohio Regional Sewer District Analytical Services Department received 1 sample(s) on Friday, May 27, 2022, for the analyses presented in the following report.

Any issues with sample receipt and/or subsequent analytical events are noted in the Workorder Summary. Deviations from laboratory-defined and/or method-specified quality control requirements are similarly noted and subsequent sample results are qualified. Except for results flagged with AA, <, D, R, T, and/or F, qualification generally indicates results are estimated concentrations or estimated counts. Appropriate use of this report's data to satisfy any regulatory or other programmatic requirement(s) is the responsibility of the client and/or data end-users.

MDLs for BOD, solids, and E. coli are displayed due to reporting software limitations. Technically, MDLs are not applicable, nor can they be derived for these methods. As a result, MDLs are set to be equivalent to the practical quantitation limits dictated by regulation and/or method requirements.

The laboratory maintains NELAP accreditation for non-potable water, drinking water, and solids analyses (NH DES #2238) and is Ohio EPA certified for drinking water testing (OEPA #498, #1349). Analyses which are not accredited or certified are noted as such. Where applicable, any additional requirements found in 40 CFR 136 (Clean Water Act, Analytical Methods) and 40 CFR 141 (Safe Drinking Water Act, Monitoring and Analytical Requirements) have been incorporated into accredited methods.

If you have any questions related to these analytical results, please feel free to contact me.

Sincerely,

Jeroen Van Acker, Laboratory Data Specialist  
vanackerj@neorsd.org  
(216) 641-6000

Report Date: Monday, June 13, 2022 2:18:28 PM

Version: v.0

WO: 13312

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## Northeast Ohio Regional Sewer District Analytical Services

4747 E. 49th Street, Cleveland, OH 44125

(216) 641-6000

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### Data Qualifiers

>: Above test range

A: Recovery (i.e. accuracy) QC criteria not met

AA, <: Below MDL or PQL

AE: Analytical data not valid

B: Target analyte detected in blank

D: BOD seed did not meet method performance criteria

F: BOD standard did not meet method recovery criteria

H: Received and/or analyzed past hold time

IN: Sample, analysis, or other issue

J:  $MDL \leq \text{Sample result} < PQL$

P: Precision QC criteria not met

R: >30% between high and low valid BOD dilution results

T: Sample received >24 hours after collection & outside of the required temperature range; result may not be accurate

### NELAP Accreditation Status (Accr)

N: Not Accredited

NA: Not Applicable

PE: Pending

X: Suspended

Y: Accredited

### Acronyms & Definitions

%R: Percent Recovery

AQ: Aqueous (non-potable water or liquid)

CCB: Continuing Calibration Blank

CCV: Continuing Calibration Verification

DF: Dilution Factor

DUP: Lab Duplicate

DW: Drinking Water

ICB: Initial Calibration Blank

ICV: Initial/Independent Calibration Verification

IS: Internal Standard

LCB: Laboratory Control Blank

LCS: Laboratory Control Standard

MDL: Method Detection Limit

MPN: Most Probable Number

MS: Matrix Spike

MSD: Matrix Spike Duplicate

NELAP: National Environmental Laboratory Accreditation Program

PQL: Practical Quantitation Limit

RPD: Relative Percent Difference

RLC: Reporting Limit Check

S: Solid

SURR: Surrogate

Report Date: Monday, June 13, 2022 2:18:28 PM

Version: v.0

WO: 13312

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## Northeast Ohio Regional Sewer District Analytical Services

4747 E. 49th Street, Cleveland, OH 44125

(216) 641-6000

### Sample Summary

Lab ID	Sample ID	Matrix	Method	Date Collected	Date Received
13312001	WSSHEFF(240-167329-1)	AQ	SM5210 B	05/26/2022 10:10	05/27/2022 13:13

- 1
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## Northeast Ohio Regional Sewer District Analytical Services

4747 E. 49th Street, Cleveland, OH 44125

(216) 641-6000

### Analytical Results

<b>Lab ID:</b>	13312001	<b>Date Collected:</b>	05/26/2022 10:10	<b>Matrix:</b>	Aqueous
<b>Sample ID:</b>	WSSHEFF(240-167329-1)	<b>Date Received:</b>	05/27/2022 13:13		

Parameter	Results	Units	PQL	MDL	DF	Prepared	Analyzed	By	Accr
<b>SM5210 B</b>									
BOD, Total	<2.0	mg/L	2.0	2.0	1	05/27/22 17:13	05/27/22 17:13	DNM	Y

### Batch Comments

#### ANCH/13622

BOD: B - The method blank did not meet acceptable quality control criteria and indicates blank contamination. Therefore, the result is considered an estimate.





# Northeast Ohio Regional Sewer District Analytical Services

4747 E. 49th Street, Cleveland, OH 44125

(216) 641-6000

**Chain of Custody Record**

**Eurofins Canton**  
180 S. Van Buren Avenue  
Barberston, OH 44203  
Phone: 330-487-9396 Fax: 330-487-0772

Environment Testing  
America

**Client Information (Sub Contract Lab)**  
Client Contact: Shipping/Receiving  
Company: Northeast Ohio Regional Sewer District  
Address: 4747 East 49th Street, Cuyahoga Heights, OH, 44125  
Phone: 216-641-6000(Tel)  
Email: 11208058 or 12610, RAGER Bay City

**Sampler:** Lab Pk: Hecker, Denise D  
Phone: Denise.Hecker@st.eurofins.com  
Accreditations Required (See note):

**COC No:** 240-152628.1  
**Page:** Page 1 of 1  
**Job #:** 240-167329-1

**Analysis Requested:**  
M - Hexane  
N - None  
O - AsNaO2  
P - Na2O4S  
R - Na2SO3  
S - H2SO4  
T - TSP Dodecylhydrate  
U - Acetone  
V - MCAA  
W - TSS  
Y - Triolein  
Z - other (specify)

**Preservation Codes:**  
A - HCL  
B - H2O2  
C - Volatile  
D - Acid  
E - SOA  
F - HI  
G - TSP Dodecylhydrate  
H - Acetone  
I - MCAA  
J - TSS  
K - Triolein  
L - other (specify)

**Due Date Requested:** 6/10/2022  
**TAT Requested (days):**

**Sample Date:** 5/26/22  
**Sample Time:** 10:10 Eastern  
**Sample Type (C=comp, G=grab):** G  
**Matrix (W=water, S=solid, G=grab):** W  
**Preservation Code:** Water

**Sample Identification - Client ID (Lab ID)**  
W-11208058-052622-SSH-EFF-2022 (240-167329-1)

**Field Filtered Sample (Yes or No)**  
**Perform MS/MSD (Yes or No)**  
**Sub (BODY) BOD**

**Special Instructions/Note:**  
1312001

**Method of Shipment:**  
Received by: *Heather W*  
Date/Time: 5/27/22 13:13  
Company: MEDS/D  
Received by: *Heather W*  
Date/Time: 5/27/22 13:13  
Company: MEDS/D  
Received by: *Heather W*  
Date/Time: 5/27/22 13:13  
Company: MEDS/D  
Cooler Temperature(s) °C and Other Remarks: *ON ICE, ALL PASS*

**Deliverable Requested:** I, II, III, IV, Other (specify) Primary Deliverable Rank: 2  
**Unconfirmed**  
**Possible Hazard Identification**  
**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

**Empty Kit Relinquished by:** Date: \_\_\_\_\_ Time: \_\_\_\_\_  
**Relinquished by:** *Pratt* Date/Time: 5/27/22 13:13 Company: TNC  
**Relinquished by:** Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
**Relinquished by:** Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

**Custody Seals Intact:** Custody Seal No.: \_\_\_\_\_  
Δ Yes Δ No

Ver: 06/08/2021





# Northeast Ohio Regional Sewer District Analytical Services

4747 E. 49th Street, Cleveland, OH 44125

(216) 641-6000



Northeast Ohio Regional Sewer District Analytical Services

4747 E. 49th Street, Cleveland, OH 44125

(216) 641-0000

## Preliminary Workorder Billables

<b>WO:</b>	13312	<b>Account:</b>	EUR001
<b>WO ID:</b>	Eurofins, TBOD	<b>Client:</b>	Eurofins TestAmerica
<b>Create Date:</b>	05/27/2022 13:44	<b>Profile:</b>	BOD & NO3NO2
<b>Due Date:</b>	06/13/2022 13:13	<b>PO:</b>	
<b>WO TAT:</b>	10 Work days from receipt	<b>Project Manager:</b>	J. Van Acker
<b>Report:</b>	NEORS D Workorder Report W/ QC	<b>Chain:</b>	13312

**Report To:** Nate Pietras  
Eurofins Canton  
180 S. Van Buren Avenue  
Barberton, OH 44203

**Invoice To:** Nate Pietras  
Eurofins Canton  
180 S. Van Buren Avenue  
Barberton, OH 44203

**CC:**

## Invoice Summary

Description	TAT	Quantity
BOD by EPA5210 B	10	1

## Charge Details

Lab ID	Sample ID	Collected	Received	TAT	Mx
13312001	WSSHEFF(240-167329-1)	05/26/2022 10:10	05/27/2022 13:13	W010	Aqueous
	BOD by EPA5210 B			10	

Reviewed By:  
JVA  
JUN 1 2022  
Analytical Services  
NEORS D

Friday, May 27, 2022 3:35:01 PM  
Page 1 of 1





# Northeast Ohio Regional Sewer District Analytical Services

4747 E. 49th Street, Cleveland, OH 44125

(216) 641-6000



## Northeast Ohio Regional Sewer District

### External Client Sample Receipt Checklist

Form 5056-14

WO#: 13312 Client: Eurofins Checked / Logged In By (Initials): EH Employee ID: 11769

Turn Around Time (circle): Rush 24hrs Rush 48hrs Rush \_\_\_ Days STD 10-Day TAT STD 15-Day TAT

Samples received on ICE? Yes  No  N/A

Sample temperatures w/in range if collected > 24 hrs Yes  No  N/A

and received on ICE? If not w/in range: Temps recorded and if client elects to proceed with analysis, add T flag in LIMS and narrate

Shipping container/cooler in good condition? Yes  No

Evidence tape or custody seals intact? Yes  No  N/A

COC present and complete? Yes  No

OEPA SSR/ODH DW form present and complete? Yes  No  N/A

COC agrees with sample container labels? Yes  No

Samples in proper container/bottle? Yes  No

Sample containers intact? Yes  No

Sufficient sample volume for testing? Yes  No

All samples received within Hold Time? Yes  No

Are requested analyses appropriate and/or correct? Yes  No

Samples properly Field Preserved and/or Field Filtered? Yes  No  N/A

Did sample(s) require Aliquoting? Preservation? (circle) Yes  No

If Yes: 1) Date/Time Aliquot and/or Preserve: \_\_\_\_\_ Analyst (Initials): \_\_\_\_\_ EID: \_\_\_\_\_

2) Circle Preservative: NONE H<sub>2</sub>SO<sub>4</sub> HNO<sub>3</sub> HCl NaOH Other =

Field Preserved Metals >24hrs pushed thru pH batching? Yes  NA

Did sample require Filtration in Sample Receiving? Yes  No

If Yes: 1) Date/Time Filtered: \_\_\_\_\_ Analyst (Initials): \_\_\_\_\_ EID: \_\_\_\_\_

2) Circle Test filtered for: DRP Cr<sup>6+</sup> Hg Metals Chlorophyll Other =

BOD aliquot pH checked (if applicable), adjusted (6.5-7.5)? Yes  N/A

Cl<sub>2</sub> Check (circle): N/A BOD CN N<sub>x</sub> Phenol 544/545 WETT Other: \_\_\_\_\_

If performed in Sample Receiving (circle): < 0.1 mg/L > 0.1 mg/L

Cl<sub>2</sub> to be checked in Lab Area (circle):  
Micro Organics Other \_\_\_\_\_

Supervisor, QA, PM or Client notified of any issues? Yes  N/A

Approved deviations **documented in writing** by client? Yes  N/A

#### Sample Deviations, Corrective Actions, Other Comments:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date/Time Client Contacted: \_\_\_\_\_ By (Initials): \_\_\_\_\_ EID: \_\_\_\_\_



# Attachment 2

## Certification Statement

Certification Statement

"I, David Favero, certify under penalty of law that this document (July 15, 2022 GHD Semi-Annual Compliance Report (January 1 to June 30, 2022)), and all attachments were prepared under by direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

*David Favero*

\_\_\_\_\_  
RACER, Deputy Cleanup Manager – Michigan

7/18/2022

\_\_\_\_\_  
(Date)