

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



Your ref: SD6 94508
Our ref: 12573440-LTR-12

March 15, 2024

**Mr. William Burbidge
City of Detroit
Great Lakes Water Authority
Industrial Waste Control Division
9300 West Jefferson Avenue
Detroit, Michigan 48209**

**GLWA Semi-Annual Report – SD6 94508
September 2023 through February 2024
12950 Eckles Road
Livonia, Michigan 48150
Permit No.: SD6 94508**

Dear Mr. Burbidge:

GHD Services Inc. (GHD) is providing the attached documents for the reporting requirements of Special Discharge Permit SD6 94508 for the period of September 2023 through February 2024 for the Eckles Road Site located at 12950 Eckles Road, Livonia, Michigan.

Great Lakes Water Authority (GLWA) Special Discharge Permit SD6 94508 was issued in June 2011, renewed in June 2015, June 2019, February 2020, November 2022, and December 2023 and is effective through December 31, 2024.

Based on the renewed special discharge permit effective January 2024, treatment of the discharge with a carbon treatment system is required prior to discharge to the sanitary sewer system. A 1,000 pound granular activated carbon (GAC) vessel was installed during April through May 2020. Bag filter housings were also installed on the influent and effluent of the GAC vessel. A second bag filter housing was installed in August 2020 to address sediment/fines observed on the surface of the GAC within the vessel.

Per previous communication with GLWA, RACER plans to continue to implement dewatering activities on an as-needed basis and in compliance with the December 2023 Special Discharge Permit (SD6-94508) to prevent unacceptable groundwater levels until final groundwater levels, dewatering methods, and discharge to the sanitary sewer, if any, are determined and implemented, and discontinuing dewatering is approved by USEPA. Note that redevelopment of the property was completed during the 2nd quarter of 2022, including construction of the new building and an HDPE liner to minimize infiltration into the area contained by a soil-bentonite barrier wall. The original groundwater treatment buildings were demolished, and the carbon treatment system and bag filters were relocated into a Conex box with new controls in 2021. Groundwater elevations are currently being monitored on a bi-monthly basis. The most recent granular activated carbon change-out was performed on December 22, 2023.

Section D: Reporting Requirements

- Reporting Period September 1, 2023 to February 29, 2023
- Dates of Sampling: September 14, 2023, October 3, 2023, November 10, 2023, December 18, 2023, January 11, 2024, and February 8, 2024. Laboratory analytical reports are attached.
- All effluent samples were collected from a sampling port downstream of the GAC vessel.
- All influent samples were collected from the influent bag filter sampling port upstream of the GAC vessel and influent bag filter.
- GWTP Total Monthly Discharges (gallons):
 - September 2023: 152,573
 - October 2023: 145,317
 - November 2023: 36,908
 - December 2023: 1,699
 - January 2024: 3,317
 - February 2024: 21,506
- Total Discharge (GWTP) during Reporting Period: 361,320 gallons.
- Signature of GHD's authorized representative who is knowledgeable of the remediation Site's discharge.

GHD certifies that the discharge complied with the permit discharge limits.

Please contact me at (248) 893-3402 if you require further information or clarification.

Regards,



Chris Meincke
Associate

+1 248 893-3402
chris.meincke@ghd.com

CM/lg/LTR-12

Encl.

Attachments: Maintenance Log
Attachment 1 – Laboratory Analytical Reports for September 14, 2023 Samples
Attachment 2 – Laboratory Analytical Reports for October 3, 2023 Samples
Attachment 3 – Laboratory Analytical Reports for November 10, 2023 Samples
Attachment 4 – Laboratory Analytical Reports for December 18, 2023 Samples
Attachment 5 – Laboratory Analytical Reports for January 11, 2024 Samples
Attachment 6 – Laboratory Analytical Reports for February 8, 2024 Samples

Attachments

Maintenance Log

SECTION D: REPORTING REQUIREMENTS/b) iii)
12950 Eckles Road
Livonia, MI 48150
Permit No.: SD6-94508
Maintenance Log - September 2023

Date	Inspection Visits	Changes or Replacements of Treatment System	Samples Taken	Quantity of Groundwater Discharged/Day (GAL) ⁽¹⁾	Notes
9/1/2023	None	None			
9/2/2023	None	None			
9/3/2023	None	None			
9/4/2023	None	None			
9/5/2023	None	None			
9/6/2023	None	None			
9/7/2023	None	None			
9/8/2023	None	None			
9/9/2023	None	None			
9/10/2023	None	None			
9/11/2023	None	None			
9/12/2023	None	None			
9/13/2023	None	None		76,603	Discharge volume 8/30-9/13
9/14/2023	None	None	WT-12573440-091423-AR-001 (eff) WT-12573440-091423-AR-002 (eff) W-12573440-091423-AR-003 (inf) FB-12573440-091423-AR-004 (field blank)	6,246	Discharge volume 9/13-9/14 Effluent/Influent Sample Collection
9/15/2023	None	None			
9/16/2023	None	None			
9/17/2023	None	None			
9/18/2023	None	None			
9/19/2023	None	None			
9/20/2023	None	None			
9/21/2023	None	None			
9/22/2023	None	None		38,524	Discharge volume 9/14-9/22
9/23/2023	None	None			
9/24/2023	None	None			
9/25/2023	None	None			
9/26/2023	None	None			
9/27/2023	None	None		26,163	Discharge volume 9/22-9/27
9/28/2023	None	None		5,037	Discharge volume 9/27-9/28
9/29/2023	None	None			
9/30/2023	None	None			
Total Monthly Discharge (gal)				152,573	

(1) - Discharge Quantity is total from previous reading

SECTION D: REPORTING REQUIREMENTS/b) iii)
12950 Eckles Road
Livonia, MI 48150
Permit No.: SD6-94508
Maintenance Log - October 2023

Date	Inspection Visits	Changes or Replacements of Treatment System	Samples Taken	Quantity of Groundwater Discharged/Day (GAL) ⁽¹⁾	Notes
10/1/2023	None	None			
10/2/2023	None	None			
10/3/2023	None	None	FB-12573440-100323-CM-001 (field blank) W-12573440-100323-CM-002 (inf) WT-12573440-100323-CM-003 (eff)	25,228	Discharge volume 9/28-10/3 Effluent/Influent Sample Collection
10/4/2023	None	None			
10/5/2023	None	None			
10/6/2023	None	None			
10/7/2023	None	None			
10/8/2023	None	None			
10/9/2023	None	None			
10/10/2023	None	None			
10/11/2023	None	None		34,312	Discharge volume 10/3-10/11
10/12/2023	None	None			
10/13/2023	None	None			
10/14/2023	None	None			
10/15/2023	None	None			
10/16/2023	None	None			
10/17/2023	None	None			
10/18/2023	None	None			
10/19/2023	None	None			
10/20/2023	None	None			
10/21/2023	None	None			
10/22/2023	None	None		39,404	Discharge volume 10/11-10/22
10/23/2023	None	None			
10/24/2023	None	None			
10/25/2023	None	None			
10/26/2023	None	None			
10/27/2023	None	None			
10/28/2023	None	None			
10/29/2023	None	None			
10/30/2023	None	None			
10/31/2023	None	None		46,373	Discharge volume 10/22-10/31

Total Monthly Discharge (gal) 145,317

(1) - Discharge Quantity is total from previous reading

SECTION D: REPORTING REQUIREMENTS/b) iii)**12950 Eckles Road****Livonia, MI 48150****Permit No.: SD6-94508****Maintenance Log - November 2023**

Date	Inspection Visits	Changes or Replacements of Treatment System	Samples Taken	Quantity of Groundwater Discharged/Day (GAL) ⁽¹⁾	Notes
11/1/2023	None	None			
11/2/2023	None	None			
11/3/2023	None	None			
11/4/2023	None	None			
11/5/2023	None	None			
11/6/2023	None	None		16,053	Discharge volume 10/31-11/6
11/7/2023	None	None		2,583	Discharge volume 11/6-11/7
11/8/2023	None	None			
11/9/2023	None	None		501	Discharge volume 11/7-11/9
11/10/2023	None	None	WT-12573440-111023-BB-001 (eff) WT-12573440-111023-BB-002 (eff) W-12573440-111023-BB-003 (inf) FB-12573440-111023-BB-004 (field blank)		Effluent/Influent Sample Collection
11/11/2023	None	None			
11/12/2023	None	None			
11/13/2023	None	None			
11/14/2023	None	None			
11/15/2023	None	None			
11/16/2023	None	None			
11/17/2023	None	None			
11/18/2023	None	None			
11/19/2023	None	None			
11/20/2023	None	None			
11/21/2023	None	None			
11/22/2023	None	None			
11/23/2023	None	None			
11/24/2023	None	None			
11/25/2023	None	None			
11/26/2023	None	None			
11/27/2023	None	None			
11/28/2023	None	None			
11/29/2023	None	None			
11/30/2023	None	None		17,771	Discharge volume 11/9-11/30

Total Monthly Discharge (gal)

36,908

(1) - Discharge Quantity is total from previous reading

SECTION D: REPORTING REQUIREMENTS/b) iii)
12950 Eckles Road
Livonia, MI 48150
Permit No.: SD6-94508
Maintenance Log - December 2023

Date	Inspection Visits	Changes or Replacements of Treatment System	Samples Taken	Quantity of Groundwater Discharged/Day (GAL) ⁽¹⁾	Notes
12/1/2023	None	None			
12/2/2023	None	None			
12/3/2023	None	None			
12/4/2023	None	None			
12/5/2023	None	None			
12/6/2023	None	None			
12/7/2023	None	None			
12/8/2023	None	None			
12/9/2023	None	None			
12/10/2023	None	None			
12/11/2023	None	None			
12/12/2023	None	None			
12/13/2023	None	None			
12/14/2023	None	None			
12/15/2023	None	None			
12/16/2023	None	None			
12/17/2023	None	None			
12/18/2023	None	None	WT-12573440-121823-BB-001 (eff) WT-12573440-121823-BB-002 (eff) W-12573440-121823-BB-003 (inf) FB-12573440-121823-BB-004 (field blank)	1,603	Discharge volume11/30-12/18 Effluent/Influent Sample Collection
12/19/2023	None	None			
12/20/2023	None	None			
12/21/2023	None	None		56	
12/22/2023	None	Carbon Change-out		40	
12/23/2023	None	None			
12/24/2023	None	None			
12/25/2023	None	None			
12/26/2023	None	None			
12/27/2023	None	None			
12/28/2023	None	None			
12/29/2023	None	None			
12/30/2023	None	None			
12/31/2023	None	None			
			Total Monthly Discharge (gal)	1,699	

(1) - Discharge Quantity is total from previous reading

SECTION D: REPORTING REQUIREMENTS/b) iii)
12950 Eckles Road
Livonia, MI 48150
Permit No.: SD6-94508
Maintenance Log - January 2024

Date	Inspection Visits	Changes or Replacements of Treatment System	Samples Taken	Quantity of Groundwater Discharged/Day (GAL) ⁽¹⁾	Notes
1/1/2024	None	None			
1/2/2024	None	None			
1/3/2024	None	None		1,206	Discharge volume 12/22-1/3
1/4/2024	None	None			
1/5/2024	None	None			
1/6/2024	None	None			
1/7/2024	None	None			
1/8/2024	None	None			
1/9/2024	None	None			
1/10/2024	None	None			
1/11/2024	None	None	WT-12573440-011124-BB-001 (effluent) WT-12573440-011124-BB-002 (effluent) W-12573440-011124-BB-003 (influent) FB-12573440-011124-BB-004 (field blank)	187	Discharge volume 1/3-1/11 Effluent/Influent Sample Collection
1/12/2024	None	None			
1/13/2024	None	None			
1/14/2024	None	None			
1/15/2024	None	None			
1/16/2024	None	None			
1/17/2024	None	None			
1/18/2024	None	None			
1/19/2024	None	None			
1/20/2024	None	None			
1/21/2024	None	None			
1/22/2024	None	None		50	Discharge volume 1/11-1/22
1/23/2024	None	None			
1/24/2024	None	None			
1/25/2024	None	None			
1/26/2024	None	None			
1/27/2024	None	None			
1/28/2024	None	None			
1/29/2024	None	None			
1/30/2024	None	None		1,874	Discharge volume 1/22-1/30
1/31/2024	None	None			
			Total Monthly Discharge (gal)	3,317	

(1) - Discharge Quantity is total from previous reading

SECTION D: REPORTING REQUIREMENTS/b) iii)**12950 Eckles Road****Livonia, MI 48150****Permit No.: SD6-94508****Maintenance Log - February 2024**

Date	Inspection Visits	Changes or Replacements of Treatment System	Samples Taken	Quantity of Groundwater Discharged/Day (GAL) ⁽¹⁾	Notes
2/1/2024	None	None			
2/2/2024	None	None			
2/3/2024	None	None			
2/4/2024	None	None			
2/5/2024	None	None			
2/6/2024	None	None		1,549	Discharge volume 1/30-2/6
2/7/2024	None	None			
2/8/2024	None	None	WT-12573440-020824-CM-001 (eff) WT-12573440-020824-CM-002 (eff) W-12573440-0208244-CM-003 (inf) FB-12573440-020824-CM-004 (field blank)		Effluent/Influent Sample Collection
2/9/2024	None	None			
2/10/2024	None	None			
2/11/2024	None	None			
2/12/2024	None	None			
2/13/2024	None	None			
2/14/2024	None	None			
2/15/2024	None	None			
2/16/2024	None	None			
2/17/2024	None	None			
2/18/2024	None	None			
2/19/2024	None	None			
2/20/2024	None	None			
2/21/2024	None	None			
2/22/2024	None	None			
2/23/2024	None	None		13,715	Discharge volume 2/6-2/23
2/24/2024	None	None			
2/25/2024	None	None			
2/26/2024	None	None			
2/27/2024	None	None			
2/28/2024	None	None			
2/29/2024	None	None		6,242	Discharge volume 2/23-2/29

Total Monthly Discharge (gal)

21,506

(1) - Discharge Quantity is total from previous reading

Attachment 1

**Laboratory Analytical Reports for
September 14, 2023 Samples**

ANALYTICAL REPORT

PREPARED FOR

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

Generated 9/25/2023 7:11:26 AM

JOB DESCRIPTION

12573440-TY37.02-2023, RACER Eckles

JOB NUMBER

240-191769-1

Eurofins Cleveland

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
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Case Narrative

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-1

Job ID: 240-191769-1

Laboratory: Eurofins Cleveland

Narrative

Job Narrative 240-191769-1

Receipt

The samples were received on 9/15/2023 10:00 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 0.9° C.

GC Semi VOA

No analytical or quality issues were noted, other than those described 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: Due to the nature of the sample matrix, a sample volume less than 1L was utilized for this procedure and produced less than the 2.5mg dried residue specified by the SM 2540D reference method. The following samples were impacted: WT-12573440-091423-AR-001 (240-191769-1) and (240-191769-C-1 DU).

Method SM 3500 CR B: The following sample(s) was received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: WT-12573440-091423-AR-001 (240-191769-1).

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 240-587471.

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

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description

U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description

U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description

H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.

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: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-191769-1	WT-12573440-091423-AR-001	Water	09/14/23 12:30	09/15/23 10:00

1

2

3

4

5

6

7

8

9

10

11

12

13

14

Detection Summary

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-1

Client Sample ID: WT-12573440-091423-AR-001

Lab Sample ID: 240-191769-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Nickel	0.59		0.010	mg/L	1		200.7 Rev 4.4	Total Recoverable

Method Summary

Client: GHD Services Inc.

Job ID: 240-191769-1

Project/Site: 12573440-TY37.02-2023, RACER Eckles

Method	Method Description	Protocol	Laboratory
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
3500-Cr B-2011	Chromium, Hexavalent	SM	EET CLE
SM 2540D	Solids, Total Suspended (TSS)	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 Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-1

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

Client Sample ID: WT-12573440-091423-AR-001

Date Collected: 09/14/23 12:30

Date Received: 09/15/23 10:00

Lab Sample ID: 240-191769-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	ug/L		09/18/23 08:48	09/18/23 22:45	1
Aroclor-1221	0.096	U	0.096	ug/L		09/18/23 08:48	09/18/23 22:45	1
Aroclor-1232	0.096	U	0.096	ug/L		09/18/23 08:48	09/18/23 22:45	1
Aroclor-1242	0.096	U	0.096	ug/L		09/18/23 08:48	09/18/23 22:45	1
Aroclor-1248	0.096	U	0.096	ug/L		09/18/23 08:48	09/18/23 22:45	1
Aroclor-1254	0.096	U	0.096	ug/L		09/18/23 08:48	09/18/23 22:45	1
Aroclor-1260	0.096	U	0.096	ug/L		09/18/23 08:48	09/18/23 22:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	70		10 - 174	09/18/23 08:48	09/18/23 22:45	1
Tetrachloro-m-xylene	70		10 - 149	09/18/23 08:48	09/18/23 22:45	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-1

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

Client Sample ID: WT-12573440-091423-AR-001

Date Collected: 09/14/23 12:30

Date Received: 09/15/23 10:00

Lab Sample ID: 240-191769-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.050	U	0.050	mg/L		09/18/23 14:00	09/20/23 03:14	1
Nickel	0.59		0.010	mg/L		09/18/23 14:00	09/20/23 03:14	1
Lead	0.050	U	0.050	mg/L		09/18/23 14:00	09/20/23 03:14	1
Zinc	0.050	U	0.050	mg/L		09/18/23 14:00	09/20/23 03:14	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-1

Method: EPA 245.1 - Mercury (CVAA)

Client Sample ID: WT-12573440-091423-AR-001

Date Collected: 09/14/23 12:30

Date Received: 09/15/23 10:00

Lab Sample ID: 240-191769-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	mg/L		09/18/23 14:00	09/19/23 15:21	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-1

General Chemistry

Client Sample ID: WT-12573440-091423-AR-001

Date Collected: 09/14/23 12:30

Date Received: 09/15/23 10:00

Lab Sample ID: 240-191769-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (1664B)	4.8	U	4.8	mg/L			09/21/23 12:09	1
Chromium, hexavalent (SM 3500-Cr B-2011)	0.010	U H	0.010	mg/L			09/15/23 13:59	1
Total Suspended Solids (SM 2540D)	8.0	U	8.0	mg/L			09/18/23 10:22	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-1

GC Semi VOA

Prep Batch: 587471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-191769-1	WT-12573440-091423-AR-001	Total/NA	Water	608	
MB 240-587471/20-A	Method Blank	Total/NA	Water	608	
LCS 240-587471/21-A	Lab Control Sample	Total/NA	Water	608	

Analysis Batch: 587599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-191769-1	WT-12573440-091423-AR-001	Total/NA	Water	608.3	587471
MB 240-587471/20-A	Method Blank	Total/NA	Water	608.3	587471
LCS 240-587471/21-A	Lab Control Sample	Total/NA	Water	608.3	587471

Metals

Prep Batch: 587462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-191769-1	WT-12573440-091423-AR-001	Total Recoverable	Water	200.7	
MB 240-587462/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 240-587462/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Prep Batch: 587465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-191769-1	WT-12573440-091423-AR-001	Total/NA	Water	245.1	
MB 240-587465/1-A	Method Blank	Total/NA	Water	245.1	
LCS 240-587465/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 587719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-191769-1	WT-12573440-091423-AR-001	Total Recoverable	Water	200.7 Rev 4.4	587462
MB 240-587462/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	587462
LCS 240-587462/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	587462

Analysis Batch: 587755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-191769-1	WT-12573440-091423-AR-001	Total/NA	Water	245.1	587465
MB 240-587465/1-A	Method Blank	Total/NA	Water	245.1	587465
LCS 240-587465/2-A	Lab Control Sample	Total/NA	Water	245.1	587465

General Chemistry

Analysis Batch: 587384

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-191769-1	WT-12573440-091423-AR-001	Total/NA	Water	3500-Cr B-2011	
MB 240-587384/3	Method Blank	Total/NA	Water	3500-Cr B-2011	
LCS 240-587384/4	Lab Control Sample	Total/NA	Water	3500-Cr B-2011	
240-191769-1 MS	WT-12573440-091423-AR-001	Total/NA	Water	3500-Cr B-2011	
240-191769-1 MSD	WT-12573440-091423-AR-001	Total/NA	Water	3500-Cr B-2011	

Analysis Batch: 587534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-191769-1	WT-12573440-091423-AR-001	Total/NA	Water	SM 2540D	
MB 240-587534/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 240-587534/2	Lab Control Sample	Total/NA	Water	SM 2540D	
240-191769-1 DU	WT-12573440-091423-AR-001	Total/NA	Water	SM 2540D	

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QC Association Summary

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-1

General Chemistry

Analysis Batch: 588094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-191769-1	WT-12573440-091423-AR-001	Total/NA	Water	1664B	
MB 240-588094/1	Method Blank	Total/NA	Water	1664B	
LCS 240-588094/2	Lab Control Sample	Total/NA	Water	1664B	

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-1

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

Lab Sample ID: MB 240-587471/20-A

Matrix: Water

Analysis Batch: 587599

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 587471

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	ug/L		09/18/23 08:48	09/19/23 01:02	1
Aroclor-1221	0.10	U	0.10	ug/L		09/18/23 08:48	09/19/23 01:02	1
Aroclor-1232	0.10	U	0.10	ug/L		09/18/23 08:48	09/19/23 01:02	1
Aroclor-1242	0.10	U	0.10	ug/L		09/18/23 08:48	09/19/23 01:02	1
Aroclor-1248	0.10	U	0.10	ug/L		09/18/23 08:48	09/19/23 01:02	1
Aroclor-1254	0.10	U	0.10	ug/L		09/18/23 08:48	09/19/23 01:02	1
Aroclor-1260	0.10	U	0.10	ug/L		09/18/23 08:48	09/19/23 01:02	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	86		10 - 174			09/18/23 08:48	09/19/23 01:02	1
Tetrachloro-m-xylene	85		10 - 149			09/18/23 08:48	09/19/23 01:02	1

Lab Sample ID: LCS 240-587471/21-A

Matrix: Water

Analysis Batch: 587599

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 587471

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	1.90		ug/L		76	50 - 140
Aroclor-1260	2.50	1.79		ug/L		71	8 - 140
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
DCB Decachlorobiphenyl	71		10 - 174				
Tetrachloro-m-xylene	79		10 - 149				

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-587462/1-A

Matrix: Water

Analysis Batch: 587719

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 587462

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.050	U	0.050	mg/L		09/18/23 14:00	09/20/23 01:52	1
Nickel	0.010	U	0.010	mg/L		09/18/23 14:00	09/20/23 01:52	1
Lead	0.050	U	0.050	mg/L		09/18/23 14:00	09/20/23 01:52	1
Zinc	0.050	U	0.050	mg/L		09/18/23 14:00	09/20/23 01:52	1

Lab Sample ID: LCS 240-587462/2-A

Matrix: Water

Analysis Batch: 587719

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 587462

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	1.00	0.905		mg/L		91	85 - 115
Nickel	1.00	0.950		mg/L		95	85 - 115
Lead	1.00	0.917		mg/L		92	85 - 115
Zinc	1.00	0.936		mg/L		94	85 - 115

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-587465/1-A
Matrix: Water
Analysis Batch: 587755

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 587465

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	mg/L		09/18/23 14:00	09/19/23 14:50	1

Lab Sample ID: LCS 240-587465/2-A
Matrix: Water
Analysis Batch: 587755

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 587465

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00500	0.00501		mg/L		100	85 - 115

Method: 1664B - HEM and SGT-HEM

Lab Sample ID: MB 240-588094/1
Matrix: Water
Analysis Batch: 588094

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	mg/L			09/21/23 12:09	1

Lab Sample ID: LCS 240-588094/2
Matrix: Water
Analysis Batch: 588094

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	34.8		mg/L		87	78 - 114

Method: 3500-Cr B-2011 - Chromium, Hexavalent

Lab Sample ID: MB 240-587384/3
Matrix: Water
Analysis Batch: 587384

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	0.010	U	0.010	mg/L			09/15/23 13:59	1

Lab Sample ID: LCS 240-587384/4
Matrix: Water
Analysis Batch: 587384

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium, hexavalent	0.250	0.215		mg/L		86	85 - 115

Lab Sample ID: 240-191769-1 MS
Matrix: Water
Analysis Batch: 587384

Client Sample ID: WT-12573440-091423-AR-001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium, hexavalent	0.010	U H	0.250	0.245		mg/L		98	85 - 115

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-1

Method: 3500-Cr B-2011 - Chromium, Hexavalent (Continued)

Lab Sample ID: 240-191769-1 MSD

Matrix: Water

Analysis Batch: 587384

Client Sample ID: WT-12573440-091423-AR-001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent	0.010	U H	0.250	0.246		mg/L		98	85 - 115	0	20

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

Lab Sample ID: MB 240-587534/1

Matrix: Water

Analysis Batch: 587534

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	mg/L			09/18/23 10:22	1

Lab Sample ID: LCS 240-587534/2

Matrix: Water

Analysis Batch: 587534

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	54.0	48.0		mg/L		89	64 - 120

Lab Sample ID: 240-191769-1 DU

Matrix: Water

Analysis Batch: 587534

Client Sample ID: WT-12573440-091423-AR-001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	8.0	U	8.0	U	mg/L		NC	10

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-1

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

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		DCBP1	TCX1
		(10-174)	(10-149)
Lab Sample ID	Client Sample ID		
240-191769-1	WT-12573440-091423-AR-001	70	70
LCS 240-587471/21-A	Lab Control Sample	71	79
MB 240-587471/20-A	Method Blank	86	85
Surrogate Legend			
DCBP = DCB Decachlorobiphenyl			
TCX = Tetrachloro-m-xylene			

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-1

Client Sample ID: WT-12573440-091423-AR-001

Lab Sample ID: 240-191769-1

Date Collected: 09/14/23 12:30

Matrix: Water

Date Received: 09/15/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	608			587471	SDE	EET CLE	09/18/23 08:48
Total/NA	Analysis	608.3		1	587599	MBB	EET CLE	09/18/23 22:45
Total Recoverable	Prep	200.7			587462	GK	EET CLE	09/18/23 14:00
Total Recoverable	Analysis	200.7 Rev 4.4		1	587719	RKT	EET CLE	09/20/23 03:14
Total/NA	Prep	245.1			587465	GK	EET CLE	09/18/23 14:00
Total/NA	Analysis	245.1		1	587755	DSH	EET CLE	09/19/23 15:21
Total/NA	Analysis	1664B		1	588094	JMR	EET CLE	09/21/23 12:09
Total/NA	Analysis	3500-Cr B-2011		1	587384	MED	EET CLE	09/15/23 13:59
Total/NA	Analysis	SM 2540D		1	587534	QUY8	EET CLE	09/18/23 10:22

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.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-1

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	07-31-24
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	T104704517-22-19	08-31-24
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-23

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

Eurofins Cleveland

Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

MICHIGAN
190



Environment Testing

[illegible]

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Eurofins – Cleveland Sample Receipt Form/Narrative				Login # : _____	
Barberton Facility					
Client <u>GHD Services</u>		Site Name <u>9 15 23</u>		Cooler unpacked by: <u>Rachelle Hader</u>	
Cooler Received on <u>9 15 23</u>		Opened on <u>9 15 23</u>			
FedEx: 1 st Grd <u>Exp</u>		UPS FAS Waypoint		Client Drop Off Eurofins Courier Other	
Receipt After-hours: Drop-off Date/Time _____			Storage Location _____		
Eurofins Cooler # <u>4C</u>	Foam Box <u>Box</u>	Client Cooler <u>Box</u>	Box	Other _____	
Packing material used: <u>Bubble Wrap</u>		Foam <u>Plastic Bag</u>	None	Other _____	
COOLANT: <u>Wet Ice</u>		Blue Ice	Dry Ice	Water	None
1. Cooler temperature upon receipt			☐ See Multiple Cooler Form		
IR GUN # <u>22</u>		(CF <u>-0.1</u> °C)	Observed Cooler Temp. <u>1.0</u> °C	Corrected Cooler Temp. <u>0.9</u> °C	
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u>			Yes ☒ No ☐		Tests that are not checked for pH by Receiving: VOAs Oil and Grease TOC
-Were the seals on the outside of the cooler(s) signed & dated?			Yes ☒ No ☐ NA ☐		
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?			Yes ☒ No ☐ NA ☐		
-Were tamper/custody seals intact and uncompromised?			Yes ☒ No ☐ NA ☐		
3. Shippers' packing slip attached to the cooler(s)?			Yes ☒ No ☐		
4. Did custody papers accompany the sample(s)?			Yes ☒ No ☐		
5. Were the custody papers relinquished & signed in the appropriate place?			Yes ☒ No ☐		
6. Was/were the person(s) who collected the samples clearly identified on the COC?			Yes ☒ No ☐		
7. Did all bottles arrive in good condition (Unbroken)?			Yes ☒ No ☐		
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?			Yes ☒ No ☐		
9. For each sample, does the COC specify preservatives <u>(Y/N)</u> , # of containers <u>(Y/N)</u> and sample type of grab/comp <u>(Y/N)</u> ?					
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# HC312502
14. Were VOAs on the COC?			Yes ☒ No ☐ NA ☐		
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 ☐ NA ☐		
17. Was a LL Hg or Me Hg trip blank present? _____			Yes ☒ No ☐ NA ☐		
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: _____			



ANALYTICAL REPORT

PREPARED FOR

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

Generated 9/27/2023 11:18:41 AM

JOB DESCRIPTION

12573440-TY37.02-2023, RACER Eckles

JOB NUMBER

240-191769-2

Eurofins Cleveland

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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9/27/2023 11:18:41 AM

Authorized for release by
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Case Narrative

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-2

Job ID: 240-191769-2

Laboratory: Eurofins Cleveland

Narrative

Job Narrative 240-191769-2

Receipt

The samples were received on 9/15/2023 10:00 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 0.9° C.

LCMS

Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte: WT-12573440-091423-AR-002 (240-191769-2) and W-12573440-091423-AR-003 (240-191769-3).

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: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-2

Qualifiers

LCMS

Qualifier	Qualifier Description
I	Value is EMPC (estimated maximum possible concentration).
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)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.

Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-191769-2	WT-12573440-091423-AR-002	Water	09/14/23 12:34	09/15/23 10:00
240-191769-3	W-12573440-091423-AR-003	Water	09/14/23 12:40	09/15/23 10:00
240-191769-4	FB-12573440-091423-AR-004	Water	09/14/23 12:45	09/15/23 10:00

Detection Summary

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-2

Client Sample ID: WT-12573440-091423-AR-002

Lab Sample ID: 240-191769-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	9.6		4.2	2.0	ng/L	1			537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.8		1.7	0.41	ng/L	1			537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.8		1.7	0.49	ng/L	1			537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.51	J	1.7	0.21	ng/L	1			537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.9		1.7	0.71	ng/L	1			537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.52	J	1.7	0.17	ng/L	1			537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.7	I	1.7	0.48	ng/L	1			537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	0.29	J I	1.7	0.16	ng/L	1			537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	14	I	1.7	0.45	ng/L	1			537 (modified)	Total/NA

Client Sample ID: W-12573440-091423-AR-003

Lab Sample ID: 240-191769-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	11		4.8	2.3	ng/L	1			537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	3.1		1.9	0.47	ng/L	1			537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.7		1.9	0.55	ng/L	1			537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.8	J	1.9	0.24	ng/L	1			537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	6.4		1.9	0.81	ng/L	1			537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.54	J	1.9	0.26	ng/L	1			537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.4	J	1.9	0.19	ng/L	1			537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.6	J	1.9	0.29	ng/L	1			537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	7.3	I	1.9	0.54	ng/L	1			537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	2.1	I	1.9	0.18	ng/L	1			537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	100		1.9	0.51	ng/L	1			537 (modified)	Total/NA

Client Sample ID: FB-12573440-091423-AR-004

Lab Sample ID: 240-191769-4

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Method Summary

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-2

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	EET SAC
3535	Solid-Phase Extraction (SPE)	SW846	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: WT-12573440-091423-AR-002

Date Collected: 09/14/23 12:34

Date Received: 09/15/23 10:00

Lab Sample ID: 240-191769-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.6		4.2	2.0	ng/L		09/23/23 08:21	09/24/23 20:58	1
Perfluoropentanoic acid (PFPeA)	1.8		1.7	0.41	ng/L		09/23/23 08:21	09/24/23 20:58	1
Perfluorohexanoic acid (PFHxA)	1.8		1.7	0.49	ng/L		09/23/23 08:21	09/24/23 20:58	1
Perfluoroheptanoic acid (PFHpA)	0.51	J	1.7	0.21	ng/L		09/23/23 08:21	09/24/23 20:58	1
Perfluorooctanoic acid (PFOA)	1.9		1.7	0.71	ng/L		09/23/23 08:21	09/24/23 20:58	1
Perfluorononanoic acid (PFNA)	1.7	U	1.7	0.23	ng/L		09/23/23 08:21	09/24/23 20:58	1
Perfluorodecanoic acid (PFDA)	1.7	U	1.7	0.26	ng/L		09/23/23 08:21	09/24/23 20:58	1
Perfluoroundecanoic acid (PFUnA)	1.7	U	1.7	0.92	ng/L		09/23/23 08:21	09/24/23 20:58	1
Perfluorododecanoic acid (PFDoA)	1.7	U	1.7	0.46	ng/L		09/23/23 08:21	09/24/23 20:58	1
Perfluorotridecanoic acid (PFTriA)	1.7	U	1.7	1.1	ng/L		09/23/23 08:21	09/24/23 20:58	1
Perfluorotetradecanoic acid (PFTeA)	1.7	U	1.7	0.61	ng/L		09/23/23 08:21	09/24/23 20:58	1
Perfluorobutanesulfonic acid (PFBS)	0.52	J	1.7	0.17	ng/L		09/23/23 08:21	09/24/23 20:58	1
Perfluoropentanesulfonic acid (PFPeS)	1.7	U	1.7	0.25	ng/L		09/23/23 08:21	09/24/23 20:58	1
Perfluorohexanesulfonic acid (PFHxS)	1.7	I	1.7	0.48	ng/L		09/23/23 08:21	09/24/23 20:58	1
Perfluoroheptanesulfonic acid (PFHpS)	0.29	J I	1.7	0.16	ng/L		09/23/23 08:21	09/24/23 20:58	1
Perfluorooctanesulfonic acid (PFOS)	14	I	1.7	0.45	ng/L		09/23/23 08:21	09/24/23 20:58	1
Perfluorononanesulfonic acid (PFNS)	1.7	U	1.7	0.31	ng/L		09/23/23 08:21	09/24/23 20:58	1
Perfluorodecanesulfonic acid (PFDS)	1.7	U	1.7	0.27	ng/L		09/23/23 08:21	09/24/23 20:58	1
Perfluorooctanesulfonamide (FOSA)	1.7	U	1.7	0.82	ng/L		09/23/23 08:21	09/24/23 20:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.2	U	4.2	1.0	ng/L		09/23/23 08:21	09/24/23 20:58	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.2	U	4.2	1.1	ng/L		09/23/23 08:21	09/24/23 20:58	1
4:2 FTS	1.7	U	1.7	0.20	ng/L		09/23/23 08:21	09/24/23 20:58	1
6:2 FTS	4.2	U	4.2	2.1	ng/L		09/23/23 08:21	09/24/23 20:58	1
8:2 FTS	1.7	U	1.7	0.39	ng/L		09/23/23 08:21	09/24/23 20:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.7	U	1.7	0.34	ng/L		09/23/23 08:21	09/24/23 20:58	1
HFPO-DA (GenX)	3.4	U	3.4	1.3	ng/L		09/23/23 08:21	09/24/23 20:58	1
9CI-PF3ONS	1.7	U	1.7	0.20	ng/L		09/23/23 08:21	09/24/23 20:58	1
11CI-PF3OUdS	1.7	U	1.7	0.27	ng/L		09/23/23 08:21	09/24/23 20:58	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	95		25 - 150	09/23/23 08:21	09/24/23 20:58	1
13C5 PFPeA	102		25 - 150	09/23/23 08:21	09/24/23 20:58	1
13C2 PFHxA	97		25 - 150	09/23/23 08:21	09/24/23 20:58	1
13C4 PFHpA	109		25 - 150	09/23/23 08:21	09/24/23 20:58	1
13C4 PFOA	99		25 - 150	09/23/23 08:21	09/24/23 20:58	1
13C5 PFNA	103		25 - 150	09/23/23 08:21	09/24/23 20:58	1
13C2 PFDA	104		25 - 150	09/23/23 08:21	09/24/23 20:58	1
13C2 PFUnA	110		25 - 150	09/23/23 08:21	09/24/23 20:58	1
13C2 PFDoA	94		25 - 150	09/23/23 08:21	09/24/23 20:58	1
13C2 PFTeDA	95		25 - 150	09/23/23 08:21	09/24/23 20:58	1
13C3 PFBS	98		25 - 150	09/23/23 08:21	09/24/23 20:58	1
18O2 PFHxS	109		25 - 150	09/23/23 08:21	09/24/23 20:58	1
13C4 PFOS	106		25 - 150	09/23/23 08:21	09/24/23 20:58	1
13C8 FOSA	110		25 - 150	09/23/23 08:21	09/24/23 20:58	1

Eurofins Cleveland

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Client Sample ID: WT-12573440-091423-AR-002

Date Collected: 09/14/23 12:34

Date Received: 09/15/23 10:00

Lab Sample ID: 240-191769-2

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d3-NMeFOSAA	104		25 - 150	09/23/23 08:21	09/24/23 20:58	1
d5-NEtFOSAA	112		25 - 150	09/23/23 08:21	09/24/23 20:58	1
M2-6:2 FTS	114		25 - 150	09/23/23 08:21	09/24/23 20:58	1
M2-8:2 FTS	119		25 - 150	09/23/23 08:21	09/24/23 20:58	1
M2-4:2 FTS	106		25 - 150	09/23/23 08:21	09/24/23 20:58	1
13C3 HFPO-DA	100		25 - 150	09/23/23 08:21	09/24/23 20:58	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: W-12573440-091423-AR-003

Date Collected: 09/14/23 12:40

Date Received: 09/15/23 10:00

Lab Sample ID: 240-191769-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	11		4.8	2.3	ng/L		09/23/23 08:21	09/24/23 21:09	1
Perfluoropentanoic acid (PFPeA)	3.1		1.9	0.47	ng/L		09/23/23 08:21	09/24/23 21:09	1
Perfluorohexanoic acid (PFHxA)	3.7		1.9	0.55	ng/L		09/23/23 08:21	09/24/23 21:09	1
Perfluoroheptanoic acid (PFHpA)	1.8	J	1.9	0.24	ng/L		09/23/23 08:21	09/24/23 21:09	1
Perfluorooctanoic acid (PFOA)	6.4		1.9	0.81	ng/L		09/23/23 08:21	09/24/23 21:09	1
Perfluorononanoic acid (PFNA)	0.54	J	1.9	0.26	ng/L		09/23/23 08:21	09/24/23 21:09	1
Perfluorodecanoic acid (PFDA)	1.9	U	1.9	0.30	ng/L		09/23/23 08:21	09/24/23 21:09	1
Perfluoroundecanoic acid (PFUnA)	1.9	U	1.9	1.0	ng/L		09/23/23 08:21	09/24/23 21:09	1
Perfluorododecanoic acid (PFDoA)	1.9	U	1.9	0.52	ng/L		09/23/23 08:21	09/24/23 21:09	1
Perfluorotridecanoic acid (PFTriA)	1.9	U	1.9	1.2	ng/L		09/23/23 08:21	09/24/23 21:09	1
Perfluorotetradecanoic acid (PFTeA)	1.9	U	1.9	0.70	ng/L		09/23/23 08:21	09/24/23 21:09	1
Perfluorobutanesulfonic acid (PFBS)	1.4	J	1.9	0.19	ng/L		09/23/23 08:21	09/24/23 21:09	1
Perfluoropentanesulfonic acid (PFPeS)	1.6	J	1.9	0.29	ng/L		09/23/23 08:21	09/24/23 21:09	1
Perfluorohexanesulfonic acid (PFHxS)	7.3	I	1.9	0.54	ng/L		09/23/23 08:21	09/24/23 21:09	1
Perfluoroheptanesulfonic acid (PFHpS)	2.1	I	1.9	0.18	ng/L		09/23/23 08:21	09/24/23 21:09	1
Perfluorooctanesulfonic acid (PFOS)	100		1.9	0.51	ng/L		09/23/23 08:21	09/24/23 21:09	1
Perfluorononanesulfonic acid (PFNS)	1.9	U	1.9	0.35	ng/L		09/23/23 08:21	09/24/23 21:09	1
Perfluorodecanesulfonic acid (PFDS)	1.9	U	1.9	0.30	ng/L		09/23/23 08:21	09/24/23 21:09	1
Perfluorooctanesulfonamide (FOSA)	1.9	U	1.9	0.93	ng/L		09/23/23 08:21	09/24/23 21:09	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.8	U	4.8	1.1	ng/L		09/23/23 08:21	09/24/23 21:09	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.8	U	4.8	1.2	ng/L		09/23/23 08:21	09/24/23 21:09	1
4:2 FTS	1.9	U	1.9	0.23	ng/L		09/23/23 08:21	09/24/23 21:09	1
6:2 FTS	4.8	U	4.8	2.4	ng/L		09/23/23 08:21	09/24/23 21:09	1
8:2 FTS	1.9	U	1.9	0.44	ng/L		09/23/23 08:21	09/24/23 21:09	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.9	U	1.9	0.38	ng/L		09/23/23 08:21	09/24/23 21:09	1
HFPO-DA (GenX)	3.8	U	3.8	1.4	ng/L		09/23/23 08:21	09/24/23 21:09	1
9CI-PF3ONS	1.9	U	1.9	0.23	ng/L		09/23/23 08:21	09/24/23 21:09	1
11CI-PF3OUdS	1.9	U	1.9	0.30	ng/L		09/23/23 08:21	09/24/23 21:09	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	78		25 - 150	09/23/23 08:21	09/24/23 21:09	1
13C5 PFPeA	79		25 - 150	09/23/23 08:21	09/24/23 21:09	1
13C2 PFHxA	92		25 - 150	09/23/23 08:21	09/24/23 21:09	1
13C4 PFHpA	98		25 - 150	09/23/23 08:21	09/24/23 21:09	1
13C4 PFOA	104		25 - 150	09/23/23 08:21	09/24/23 21:09	1
13C5 PFNA	94		25 - 150	09/23/23 08:21	09/24/23 21:09	1
13C2 PFDA	94		25 - 150	09/23/23 08:21	09/24/23 21:09	1
13C2 PFUnA	94		25 - 150	09/23/23 08:21	09/24/23 21:09	1
13C2 PFDoA	83		25 - 150	09/23/23 08:21	09/24/23 21:09	1
13C2 PFTeDA	84		25 - 150	09/23/23 08:21	09/24/23 21:09	1
13C3 PFBS	88		25 - 150	09/23/23 08:21	09/24/23 21:09	1
18O2 PFHxS	108		25 - 150	09/23/23 08:21	09/24/23 21:09	1
13C4 PFOS	92		25 - 150	09/23/23 08:21	09/24/23 21:09	1
13C8 FOSA	100		25 - 150	09/23/23 08:21	09/24/23 21:09	1

Eurofins Cleveland

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Client Sample ID: W-12573440-091423-AR-003

Date Collected: 09/14/23 12:40

Date Received: 09/15/23 10:00

Lab Sample ID: 240-191769-3

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d3-NMeFOSAA	79		25 - 150	09/23/23 08:21	09/24/23 21:09	1
d5-NEtFOSAA	98		25 - 150	09/23/23 08:21	09/24/23 21:09	1
M2-6:2 FTS	115		25 - 150	09/23/23 08:21	09/24/23 21:09	1
M2-8:2 FTS	113		25 - 150	09/23/23 08:21	09/24/23 21:09	1
M2-4:2 FTS	117		25 - 150	09/23/23 08:21	09/24/23 21:09	1
13C3 HFPO-DA	97		25 - 150	09/23/23 08:21	09/24/23 21:09	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: FB-12573440-091423-AR-004

Date Collected: 09/14/23 12:45

Date Received: 09/15/23 10:00

Lab Sample ID: 240-191769-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.6	U	4.6	2.2	ng/L		09/23/23 08:21	09/24/23 21:19	1
Perfluoropentanoic acid (PFPeA)	1.9	U	1.9	0.45	ng/L		09/23/23 08:21	09/24/23 21:19	1
Perfluorohexanoic acid (PFHxA)	1.9	U	1.9	0.54	ng/L		09/23/23 08:21	09/24/23 21:19	1
Perfluoroheptanoic acid (PFHpA)	1.9	U	1.9	0.23	ng/L		09/23/23 08:21	09/24/23 21:19	1
Perfluorooctanoic acid (PFOA)	1.9	U	1.9	0.79	ng/L		09/23/23 08:21	09/24/23 21:19	1
Perfluorononanoic acid (PFNA)	1.9	U	1.9	0.25	ng/L		09/23/23 08:21	09/24/23 21:19	1
Perfluorodecanoic acid (PFDA)	1.9	U	1.9	0.29	ng/L		09/23/23 08:21	09/24/23 21:19	1
Perfluoroundecanoic acid (PFUnA)	1.9	U	1.9	1.0	ng/L		09/23/23 08:21	09/24/23 21:19	1
Perfluorododecanoic acid (PFDoA)	1.9	U	1.9	0.51	ng/L		09/23/23 08:21	09/24/23 21:19	1
Perfluorotridecanoic acid (PFTriA)	1.9	U	1.9	1.2	ng/L		09/23/23 08:21	09/24/23 21:19	1
Perfluorotetradecanoic acid (PFTeA)	1.9	U	1.9	0.68	ng/L		09/23/23 08:21	09/24/23 21:19	1
Perfluorobutanesulfonic acid (PFBS)	1.9	U	1.9	0.19	ng/L		09/23/23 08:21	09/24/23 21:19	1
Perfluoropentanesulfonic acid (PFPeS)	1.9	U	1.9	0.28	ng/L		09/23/23 08:21	09/24/23 21:19	1
Perfluorohexanesulfonic acid (PFHxS)	1.9	U	1.9	0.53	ng/L		09/23/23 08:21	09/24/23 21:19	1
Perfluoroheptanesulfonic acid (PFHpS)	1.9	U	1.9	0.18	ng/L		09/23/23 08:21	09/24/23 21:19	1
Perfluorooctanesulfonic acid (PFOS)	1.9	U	1.9	0.50	ng/L		09/23/23 08:21	09/24/23 21:19	1
Perfluorononanesulfonic acid (PFNS)	1.9	U	1.9	0.34	ng/L		09/23/23 08:21	09/24/23 21:19	1
Perfluorodecanesulfonic acid (PFDS)	1.9	U	1.9	0.30	ng/L		09/23/23 08:21	09/24/23 21:19	1
Perfluorooctanesulfonamide (FOSA)	1.9	U	1.9	0.91	ng/L		09/23/23 08:21	09/24/23 21:19	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.6	U	4.6	1.1	ng/L		09/23/23 08:21	09/24/23 21:19	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.6	U	4.6	1.2	ng/L		09/23/23 08:21	09/24/23 21:19	1
4:2 FTS	1.9	U	1.9	0.22	ng/L		09/23/23 08:21	09/24/23 21:19	1
6:2 FTS	4.6	U	4.6	2.3	ng/L		09/23/23 08:21	09/24/23 21:19	1
8:2 FTS	1.9	U	1.9	0.43	ng/L		09/23/23 08:21	09/24/23 21:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.9	U	1.9	0.37	ng/L		09/23/23 08:21	09/24/23 21:19	1
HFPO-DA (GenX)	3.7	U	3.7	1.4	ng/L		09/23/23 08:21	09/24/23 21:19	1
9CI-PF3ONS	1.9	U	1.9	0.22	ng/L		09/23/23 08:21	09/24/23 21:19	1
11CI-PF3OUdS	1.9	U	1.9	0.30	ng/L		09/23/23 08:21	09/24/23 21:19	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	104		25 - 150	09/23/23 08:21	09/24/23 21:19	1
13C5 PFPeA	97		25 - 150	09/23/23 08:21	09/24/23 21:19	1
13C2 PFHxA	96		25 - 150	09/23/23 08:21	09/24/23 21:19	1
13C4 PFHpA	108		25 - 150	09/23/23 08:21	09/24/23 21:19	1
13C4 PFOA	100		25 - 150	09/23/23 08:21	09/24/23 21:19	1
13C5 PFNA	106		25 - 150	09/23/23 08:21	09/24/23 21:19	1
13C2 PFDA	108		25 - 150	09/23/23 08:21	09/24/23 21:19	1
13C2 PFUnA	107		25 - 150	09/23/23 08:21	09/24/23 21:19	1
13C2 PFDoA	106		25 - 150	09/23/23 08:21	09/24/23 21:19	1
13C2 PFTeDA	111		25 - 150	09/23/23 08:21	09/24/23 21:19	1
13C3 PFBS	102		25 - 150	09/23/23 08:21	09/24/23 21:19	1
18O2 PFHxS	110		25 - 150	09/23/23 08:21	09/24/23 21:19	1
13C4 PFOS	114		25 - 150	09/23/23 08:21	09/24/23 21:19	1
13C8 FOSA	111		25 - 150	09/23/23 08:21	09/24/23 21:19	1
d3-NMeFOSAA	112		25 - 150	09/23/23 08:21	09/24/23 21:19	1
d5-NEtFOSAA	48		25 - 150	09/23/23 08:21	09/24/23 21:19	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Client Sample ID: FB-12573440-091423-AR-004

Date Collected: 09/14/23 12:45

Date Received: 09/15/23 10:00

Lab Sample ID: 240-191769-4

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	118		25 - 150	09/23/23 08:21	09/24/23 21:19	1
M2-8:2 FTS	119		25 - 150	09/23/23 08:21	09/24/23 21:19	1
M2-4:2 FTS	101		25 - 150	09/23/23 08:21	09/24/23 21:19	1
13C3 HFPO-DA	99		25 - 150	09/23/23 08:21	09/24/23 21:19	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-2

LCMS

Prep Batch: 708387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-191769-2	WT-12573440-091423-AR-002	Total/NA	Water	3535	
240-191769-3	W-12573440-091423-AR-003	Total/NA	Water	3535	
240-191769-4	FB-12573440-091423-AR-004	Total/NA	Water	3535	
MB 320-708387/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-708387/2-A	Lab Control Sample	Total/NA	Water	3535	

Analysis Batch: 708543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-191769-2	WT-12573440-091423-AR-002	Total/NA	Water	537 (modified)	708387
240-191769-3	W-12573440-091423-AR-003	Total/NA	Water	537 (modified)	708387
240-191769-4	FB-12573440-091423-AR-004	Total/NA	Water	537 (modified)	708387
MB 320-708387/1-A	Method Blank	Total/NA	Water	537 (modified)	708387
LCS 320-708387/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	708387

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-708387/1-A

Matrix: Water

Analysis Batch: 708543

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 708387

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.0	U	5.0	2.4	ng/L		09/23/23 08:21	09/24/23 18:45	1
Perfluoropentanoic acid (PFPeA)	2.0	U	2.0	0.49	ng/L		09/23/23 08:21	09/24/23 18:45	1
Perfluorohexanoic acid (PFHxA)	2.0	U	2.0	0.58	ng/L		09/23/23 08:21	09/24/23 18:45	1
Perfluoroheptanoic acid (PFHpA)	2.0	U	2.0	0.25	ng/L		09/23/23 08:21	09/24/23 18:45	1
Perfluorooctanoic acid (PFOA)	2.0	U	2.0	0.85	ng/L		09/23/23 08:21	09/24/23 18:45	1
Perfluorononanoic acid (PFNA)	2.0	U	2.0	0.27	ng/L		09/23/23 08:21	09/24/23 18:45	1
Perfluorodecanoic acid (PFDA)	2.0	U	2.0	0.31	ng/L		09/23/23 08:21	09/24/23 18:45	1
Perfluoroundecanoic acid (PFUnA)	2.0	U	2.0	1.1	ng/L		09/23/23 08:21	09/24/23 18:45	1
Perfluorododecanoic acid (PFDoA)	2.0	U	2.0	0.55	ng/L		09/23/23 08:21	09/24/23 18:45	1
Perfluorotridecanoic acid (PFTriA)	2.0	U	2.0	1.3	ng/L		09/23/23 08:21	09/24/23 18:45	1
Perfluorotetradecanoic acid (PFTeA)	2.0	U	2.0	0.73	ng/L		09/23/23 08:21	09/24/23 18:45	1
Perfluorobutanesulfonic acid (PFBS)	2.0	U	2.0	0.20	ng/L		09/23/23 08:21	09/24/23 18:45	1
Perfluoropentanesulfonic acid (PFPeS)	2.0	U	2.0	0.30	ng/L		09/23/23 08:21	09/24/23 18:45	1
Perfluorohexanesulfonic acid (PFHxS)	2.0	U	2.0	0.57	ng/L		09/23/23 08:21	09/24/23 18:45	1
Perfluoroheptanesulfonic acid (PFHpS)	2.0	U	2.0	0.19	ng/L		09/23/23 08:21	09/24/23 18:45	1
Perfluorooctanesulfonic acid (PFOS)	2.0	U	2.0	0.54	ng/L		09/23/23 08:21	09/24/23 18:45	1
Perfluorononanesulfonic acid (PFNS)	2.0	U	2.0	0.37	ng/L		09/23/23 08:21	09/24/23 18:45	1
Perfluorodecanesulfonic acid (PFDS)	2.0	U	2.0	0.32	ng/L		09/23/23 08:21	09/24/23 18:45	1
Perfluorooctanesulfonamide (FOSA)	2.0	U	2.0	0.98	ng/L		09/23/23 08:21	09/24/23 18:45	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	5.0	U	5.0	1.2	ng/L		09/23/23 08:21	09/24/23 18:45	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.0	U	5.0	1.3	ng/L		09/23/23 08:21	09/24/23 18:45	1
4:2 FTS	2.0	U	2.0	0.24	ng/L		09/23/23 08:21	09/24/23 18:45	1
6:2 FTS	5.0	U	5.0	2.5	ng/L		09/23/23 08:21	09/24/23 18:45	1
8:2 FTS	2.0	U	2.0	0.46	ng/L		09/23/23 08:21	09/24/23 18:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.0	U	2.0	0.40	ng/L		09/23/23 08:21	09/24/23 18:45	1
HFPO-DA (GenX)	4.0	U	4.0	1.5	ng/L		09/23/23 08:21	09/24/23 18:45	1
9CI-PF3ONS	2.0	U	2.0	0.24	ng/L		09/23/23 08:21	09/24/23 18:45	1
11CI-PF3OUdS	2.0	U	2.0	0.32	ng/L		09/23/23 08:21	09/24/23 18:45	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	109		25 - 150	09/23/23 08:21	09/24/23 18:45	1
13C5 PFPeA	116		25 - 150	09/23/23 08:21	09/24/23 18:45	1
13C2 PFHxA	100		25 - 150	09/23/23 08:21	09/24/23 18:45	1
13C4 PFHpA	103		25 - 150	09/23/23 08:21	09/24/23 18:45	1
13C4 PFOA	96		25 - 150	09/23/23 08:21	09/24/23 18:45	1
13C5 PFNA	109		25 - 150	09/23/23 08:21	09/24/23 18:45	1
13C2 PFDA	110		25 - 150	09/23/23 08:21	09/24/23 18:45	1
13C2 PFUnA	114		25 - 150	09/23/23 08:21	09/24/23 18:45	1
13C2 PFDoA	113		25 - 150	09/23/23 08:21	09/24/23 18:45	1
13C2 PFTeDA	99		25 - 150	09/23/23 08:21	09/24/23 18:45	1
13C3 PFBS	102		25 - 150	09/23/23 08:21	09/24/23 18:45	1
18O2 PFHxS	109		25 - 150	09/23/23 08:21	09/24/23 18:45	1
13C4 PFOS	114		25 - 150	09/23/23 08:21	09/24/23 18:45	1
13C8 FOSA	108		25 - 150	09/23/23 08:21	09/24/23 18:45	1
d3-NMeFOSAA	112		25 - 150	09/23/23 08:21	09/24/23 18:45	1

Eurofins Cleveland

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-708387/1-A

Matrix: Water

Analysis Batch: 708543

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 708387

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	125		25 - 150	09/23/23 08:21	09/24/23 18:45	1
M2-6:2 FTS	121		25 - 150	09/23/23 08:21	09/24/23 18:45	1
M2-8:2 FTS	139		25 - 150	09/23/23 08:21	09/24/23 18:45	1
M2-4:2 FTS	116		25 - 150	09/23/23 08:21	09/24/23 18:45	1
13C3 HFPO-DA	100		25 - 150	09/23/23 08:21	09/24/23 18:45	1

Lab Sample ID: LCS 320-708387/2-A

Matrix: Water

Analysis Batch: 708543

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 708387

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	40.1		ng/L		100	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	40.6		ng/L		102	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	40.2		ng/L		100	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	39.2		ng/L		98	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	40.3		ng/L		101	70 - 130
Perfluorononanoic acid (PFNA)	40.0	42.4		ng/L		106	75 - 135
Perfluorodecanoic acid (PFDA)	40.0	39.8		ng/L		99	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	40.0		ng/L		100	68 - 128
Perfluorododecanoic acid (PFDoA)	40.0	43.1		ng/L		108	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	36.4		ng/L		91	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	38.6		ng/L		96	70 - 130
Perfluorobutanesulfonic acid (PFBS)	35.5	35.6		ng/L		100	67 - 127
Perfluoropentanesulfonic acid (PFPeS)	37.6	41.4		ng/L		110	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	36.5	34.6		ng/L		95	59 - 119
Perfluoroheptanesulfonic acid (PFHpS)	38.2	40.3		ng/L		106	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.2	39.8		ng/L		107	70 - 130
Perfluorononanesulfonic acid (PFNS)	38.5	41.7		ng/L		108	75 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	39.0		ng/L		101	71 - 131
Perfluorooctanesulfonamide (FOSA)	40.0	41.1		ng/L		103	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	40.7		ng/L		102	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	41.9		ng/L		105	76 - 136
4:2 FTS	37.5	40.8		ng/L		109	79 - 139
6:2 FTS	38.1	37.2		ng/L		98	59 - 175
8:2 FTS	38.4	41.0		ng/L		107	75 - 135
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	37.8		ng/L		100	79 - 139
HFPO-DA (GenX)	40.0	43.7		ng/L		109	51 - 173
9CI-PF3ONS	37.4	39.1		ng/L		105	75 - 135

Eurofins Cleveland

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-708387/2-A

Matrix: Water

Analysis Batch: 708543

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 708387

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11CI-PF3OUdS	37.8	38.3		ng/L		102	54 - 114
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
13C4 PFBA	103		25 - 150				
13C5 PFPeA	103		25 - 150				
13C2 PFHxS	104		25 - 150				
13C4 PFHpA	104		25 - 150				
13C4 PFOA	102		25 - 150				
13C5 PFNA	106		25 - 150				
13C2 PFDA	112		25 - 150				
13C2 PFUnA	111		25 - 150				
13C2 PFDoA	108		25 - 150				
13C2 PFTeDA	100		25 - 150				
13C3 PFBS	97		25 - 150				
18O2 PFHxS	115		25 - 150				
13C4 PFOS	107		25 - 150				
13C8 FOSA	104		25 - 150				
d3-NMeFOSAA	105		25 - 150				
d5-NEtFOSAA	114		25 - 150				
M2-6:2 FTS	125		25 - 150				
M2-8:2 FTS	118		25 - 150				
M2-4:2 FTS	112		25 - 150				
13C3 HFPO-DA	97		25 - 150				

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-2

Client Sample ID: WT-12573440-091423-AR-002

Lab Sample ID: 240-191769-2

Date Collected: 09/14/23 12:34

Matrix: Water

Date Received: 09/15/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			708387	JS	EET SAC	09/23/23 08:21
Total/NA	Analysis	537 (modified)		1	708543	K1S	EET SAC	09/24/23 20:58

Client Sample ID: W-12573440-091423-AR-003

Lab Sample ID: 240-191769-3

Date Collected: 09/14/23 12:40

Matrix: Water

Date Received: 09/15/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			708387	JS	EET SAC	09/23/23 08:21
Total/NA	Analysis	537 (modified)		1	708543	K1S	EET SAC	09/24/23 21:09

Client Sample ID: FB-12573440-091423-AR-004

Lab Sample ID: 240-191769-4

Date Collected: 09/14/23 12:45

Matrix: Water

Date Received: 09/15/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			708387	JS	EET SAC	09/23/23 08:21
Total/NA	Analysis	537 (modified)		1	708543	K1S	EET SAC	09/24/23 21:19

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-2

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	02-20-24
ANAB	Dept. of Defense ELAP	L2468	01-20-24
ANAB	Dept. of Energy	L2468.01	01-20-24
ANAB	ISO/IEC 17025	L2468	01-20-24
Arizona	State	AZ0708	08-11-24
Arkansas DEQ	State	88-0691	05-18-24
California	State	2897	01-22-24
Colorado	State	CA0004	08-31-24
Florida	NELAP	E87570	06-30-24
Georgia	State	4040	01-29-24
Hawaii	State	<cert No.>	01-29-24
Illinois	NELAP	200060	03-17-24
Kansas	NELAP	E-10375	10-31-23
Louisiana (All)	NELAP	01944	06-30-24
Maine	State	CA00004	04-14-24
Michigan	State	9947	01-31-24
Nevada	State	CA00044	07-31-24
New Hampshire	NELAP	2997	04-18-24
New Jersey	NELAP	CA005	06-30-24
New York	NELAP	11666	04-01-24
Ohio	State	41252	01-29-24
Oregon	NELAP	4040	01-29-24
Texas	NELAP	T104704399-19-13	05-31-24
US Fish & Wildlife	US Federal Programs	58448	04-30-24
USDA	US Federal Programs	P330-18-00239	02-28-26
Utah	NELAP	CA000442021-12	02-29-24
Virginia	NELAP	460278	03-14-24
Washington	State	C581	05-05-24
West Virginia (DW)	State	9930C	12-31-23
Wisconsin	State	998204680	08-31-24
Wyoming	State Program	8TMS-L	01-28-19 *

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

Eurofins Cleveland

Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

MICHIGAN
190

Environment Testing

[illegible]

Eurofins - Cleveland Sample Receipt Form/Narrative
Barberton Facility

Login # : _____

Client GHD Services Site Name 91523 Cooler unpacked by: Rachelle Hader
 Cooler Received on 91523 Opened on 91523
 FedEx: 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other

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

Eurofins Cooler # 4C Foam Box 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 # 22 (CF -0.1 °C) Observed Cooler Temp. 1.0 °C Corrected Cooler Temp. 0.9 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes Yes No NA
 -Were the seals on the outside of the cooler(s) signed & dated? Yes Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes Yes No NA
 -Were tamper/custody seals intact and uncompromised? Yes Yes No NA
 3. Shippers' packing slip attached to the cooler(s)? Yes Yes No NA
 4. Did custody papers accompany the sample(s)? Yes Yes No NA
 5. Were the custody papers relinquished & signed in the appropriate place? Yes Yes No NA
 6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes Yes No NA
 7. Did all bottles arrive in good condition (Unbroken)? Yes Yes No NA
 8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? Yes Yes No NA
 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 Yes No NA
 11. Sufficient quantity received to perform indicated analyses? Yes Yes No NA
 12. Are these work share samples and all listed on the COC? Yes Yes No NA
 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 Yes No NA pH Strip Lot# HC312502
 14. Were VOAs on the COC? Yes Yes No NA
 15. Were air bubbles >6 mm in any VOA vials? Yes  Larger than this. Yes Yes No NA
 16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes Yes No NA
 17. Was a LL Hg or Me Hg trip blank present? Yes Yes No NA

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: _____

180 S Van Buren Avenue
Barberton OH 44203
Phone: 330-497-9396 Fax:

Chain of Custody Record



Client Information (Sub Contract Lab)				Lab PM: Heckler Denise D E-Mail: Denise Heckler@eurofinsus.com		Carrier Tracking No(s): State of Origin: Michigan		COC No: 240-173825-1 Page: Page 1 of 1	
Company: Eurofins Environment Testing Northern Ca Address: 880 Riverside Parkway City: West Sacramento State, Zip: CA, 95605 Phone: 916-373-5600(Tel) 916-372-1059(Fax) Email: 12573440-137Y23-01 12607 RACER Eckles				Accreditations Required (See note): Job #: 240-191769-1		Preservation Codes: A HCL M Hexane B NaOH N None C Zn Acetate O AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecalhydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L EDA Y Trizma Other: Z other (specify)		Special Instructions/Note 1 flags need comment if ion ratio high or low 2 flags need comment if ion ratio high or low 3 flags need comment if ion ratio high or low	
Analysis Requested				Total Number of Containers					
Field Filtered Sample (Yes or No)				Perform MS/MSD (Yes or No)		Analytes			
Sample Date				Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=oil, B=bioreactor, A=air)	
Sample ID (Lab ID)				Sample Date		Sample Time		Sample Type (C=comp, G=grab)	
WT 12573440-091423-AR-002 (240-191769-2)				9/14/23		12:34 Eastern		Water	
WT 12573440-091423-AR-003 (240-191769-3)				9/14/23		12:40 Eastern		Water	
WT 12573440-091423-AR-004 (240-191769-4)				9/14/23		12:45 Eastern		Water	
Relinquished by:				Relinquished by:		Relinquished by:		Relinquished by:	
Relinquished by:				Relinquished by:		Relinquished by:		Relinquished by:	

Possible Hazard Identification

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

Primary Deliverable Rank: 2

Special Instructions/QC Requirements

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:

Relinquished by: _____ Date: _____ Time: _____

Relinquished by: _____ Date: _____ Time: _____

Relinquished by: _____ Date: _____ Time: _____

Method of Shipment:

Received by: _____ Date: _____ Time: _____

Received by: _____ Date: _____ Time: _____

Received by: _____ Date: _____ Time: _____

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 240-191769-2

Login Number: 191769

List Number: 2

Creator: Simmons, Jason C

List Source: Eurofins Sacramento

List Creation: 09/16/23 01:45 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.4c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: GHD Services Inc.
Project/Site: 12573440-TY37.02-2023, RACER Eckles

Job ID: 240-191769-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
240-191769-2	WT-12573440-091423-AR-002	95	102	97	109	99	103	104	110
240-191769-3	W-12573440-091423-AR-003	78	79	92	98	104	94	94	94
240-191769-4	FB-12573440-091423-AR-004	104	97	96	108	100	106	108	107
LCS 320-708387/2-A	Lab Control Sample	103	103	104	104	102	106	112	111
MB 320-708387/1-A	Method Blank	109	116	100	103	96	109	110	114

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
240-191769-2	WT-12573440-091423-AR-002	94	95	98	109	106	110	104	112
240-191769-3	W-12573440-091423-AR-003	83	84	88	108	92	100	79	98
240-191769-4	FB-12573440-091423-AR-004	106	111	102	110	114	111	112	48
LCS 320-708387/2-A	Lab Control Sample	108	100	97	115	107	104	105	114
MB 320-708387/1-A	Method Blank	113	99	102	109	114	108	112	125

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M262FTS (25-150)	M282FTS (25-150)	M242FTS (25-150)	HFPODA (25-150)
240-191769-2	WT-12573440-091423-AR-002	114	119	106	100
240-191769-3	W-12573440-091423-AR-003	115	113	117	97
240-191769-4	FB-12573440-091423-AR-004	118	119	101	99
LCS 320-708387/2-A	Lab Control Sample	125	118	112	97
MB 320-708387/1-A	Method Blank	121	139	116	100

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
M242FTS = M2-4:2 FTS
HFPODA = 13C3 HFPO-DA

Eurofins Cleveland



Tracking #. 654710133464

SO / PO / FO SAT / 2 Day / Ground / UPS / CDO / Courier
GSL / OnTrac / Goldstreak / USPS / Other

Therm ID L-04 Corr Factor (+ / -) — °C

Ice ☒ Wet ☒ Gel ☐ Other ☐

Cooler Custody Seal _____

Cooler ID

Temp Observed 24 °C Corrected 24 °C

From Temp Blank ☐ Sample ☒

Opening/Processing The Shipment	Yes	No	NA

Cooler compromised/tampered with? ☐ ☒ ☐

Cooler Temperature is acceptable? ☒ ☐ ☐

Frozen samples show signs of thaw? ☐ ☐ ☒

Initials. AS Date. 9-16-05

Unpacking/Labeling The Samples	Yes	No	NA

Containers are not broken or leaking?	☒	☐	☐

Samples compromised/tampered with? ☐ ☒ ☐

COC is complete w/o discrepancies ☒ ☐ ☐

Sample custody seal? ☐ ☐ ☒

Sample containers have legible labels? ☒ ☐ ☐

Sample date/times are provided? ☒ ☐ ☐

Appropriate containers are used? ☒ ☐ ☐

Sample bottles are completely filled? ☒ ☐ ☐

Sample preservatives verified? ☒ ☐ ☐

Is the Field Sampler's name on COC? ☐ ☐ ☒

Samples w/o discrepancies? ☒ ☐ ☐

Zero headspace? ☒ ☐ ☐

Alkalinity has no headspace? ☐ ☐ ☒

Perchlorate has headspace?

(Methods 314 331 6850)

Multiphasic samples are not present? ☒ ☐ ☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials JS Date: 9.16.03

Notes.

Trizma Lot #(s) _____

Ammonium

Acetate Lot #(s) _____

Login Completion	<u>Yes</u>	<u>No</u>	<u>NA</u>

Receipt Temperature on COC? ☒ ☐ ☐

NCM Filed? ☐ ☐ ☒

Samples received within hold time? ☐ ☐ ☒

Log Release checked in TALS? ☐ ☐ ☒

Initials. JS Date. 7-16-03

Attachment 2

**Laboratory Analytical Reports for
October 3, 2023 Samples**

ANALYTICAL REPORT

PREPARED FOR

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

Generated 10/10/2023 7:41:56 AM

JOB DESCRIPTION

12573440-T37Y23-01, RACER Eckles

JOB NUMBER

240-192759-1

Eurofins Cleveland

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



Generated
10/10/2023 7:41:56 AM

Authorized for release by
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Case Narrative

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-1

Job ID: 240-192759-1

Laboratory: Eurofins Cleveland

Narrative

Job Narrative 240-192759-1

Receipt

The samples were received on 10/4/2023 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 3.6° C.

GC Semi VOA

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

Metals

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

General Chemistry

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

Organic Prep

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

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description

U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description

U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description

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)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-192759-3	WT-12573440-100323-CM-003	Water	10/03/23 15:25	10/04/23 09:35

1

2

3

4

5

6

7

8

9

10

11

12

13

14

Detection Summary

Client: GHD Services Inc.

Job ID: 240-192759-1

Project/Site: 12573440-T37Y23-01, RACER Eckles

Client Sample ID: WT-12573440-100323-CM-003

Lab Sample ID: 240-192759-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Nickel	0.59		0.010	mg/L	1		200.7 Rev 4.4	Total Recoverable

This Detection Summary does not include radiochemical test results.

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Method Summary

Client: GHD Services Inc.

Job ID: 240-192759-1

Project/Site: 12573440-T37Y23-01, RACER Eckles

Method	Method Description	Protocol	Laboratory
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
3500-Cr B-2011	Chromium, Hexavalent	SM	EET CLE
SM 2540D	Solids, Total Suspended (TSS)	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 Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-1

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

Client Sample ID: WT-12573440-100323-CM-003

Date Collected: 10/03/23 15:25

Date Received: 10/04/23 09:35

Lab Sample ID: 240-192759-3

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	ug/L		10/05/23 08:09	10/06/23 12:14	1
Aroclor-1221	0.095	U	0.095	ug/L		10/05/23 08:09	10/06/23 12:14	1
Aroclor-1232	0.095	U	0.095	ug/L		10/05/23 08:09	10/06/23 12:14	1
Aroclor-1242	0.095	U	0.095	ug/L		10/05/23 08:09	10/06/23 12:14	1
Aroclor-1248	0.095	U	0.095	ug/L		10/05/23 08:09	10/06/23 12:14	1
Aroclor-1254	0.095	U	0.095	ug/L		10/05/23 08:09	10/06/23 12:14	1
Aroclor-1260	0.095	U	0.095	ug/L		10/05/23 08:09	10/06/23 12:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	77		10 - 174			10/05/23 08:09	10/06/23 12:14	1
Tetrachloro-m-xylene	75		10 - 149			10/05/23 08:09	10/06/23 12:14	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-1

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

Client Sample ID: WT-12573440-100323-CM-003

Date Collected: 10/03/23 15:25

Date Received: 10/04/23 09:35

Lab Sample ID: 240-192759-3

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.050	U	0.050	mg/L		10/05/23 14:00	10/06/23 13:29	1
Nickel	0.59		0.010	mg/L		10/05/23 14:00	10/06/23 13:29	1
Lead	0.050	U	0.050	mg/L		10/05/23 14:00	10/06/23 13:29	1
Zinc	0.050	U	0.050	mg/L		10/05/23 14:00	10/06/23 13:29	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-1

Method: EPA 245.1 - Mercury (CVAA)

Client Sample ID: WT-12573440-100323-CM-003

Date Collected: 10/03/23 15:25

Date Received: 10/04/23 09:35

Lab Sample ID: 240-192759-3

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	mg/L		10/05/23 14:00	10/06/23 09:34	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-1

General Chemistry

Client Sample ID: WT-12573440-100323-CM-003

Date Collected: 10/03/23 15:25

Date Received: 10/04/23 09:35

Lab Sample ID: 240-192759-3

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (1664B)	4.8	U	4.8	mg/L			10/09/23 10:18	1
Chromium, hexavalent (SM 3500-Cr B-2011)	0.010	U	0.010	mg/L			10/04/23 11:58	1
Total Suspended Solids (SM 2540D)	4.0	U	4.0	mg/L			10/06/23 08:02	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-1

GC Semi VOA

Prep Batch: 589727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-192759-3	WT-12573440-100323-CM-003	Total/NA	Water	608	
MB 240-589727/13-A	Method Blank	Total/NA	Water	608	
LCS 240-589727/14-A	Lab Control Sample	Total/NA	Water	608	

Analysis Batch: 589900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-192759-3	WT-12573440-100323-CM-003	Total/NA	Water	608.3	589727
MB 240-589727/13-A	Method Blank	Total/NA	Water	608.3	589727
LCS 240-589727/14-A	Lab Control Sample	Total/NA	Water	608.3	589727

Metals

Prep Batch: 589810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-192759-3	WT-12573440-100323-CM-003	Total Recoverable	Water	200.7	
MB 240-589810/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 240-589810/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Prep Batch: 589811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-192759-3	WT-12573440-100323-CM-003	Total/NA	Water	245.1	
MB 240-589811/1-A	Method Blank	Total/NA	Water	245.1	
LCS 240-589811/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 589960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-192759-3	WT-12573440-100323-CM-003	Total/NA	Water	245.1	589811
MB 240-589811/1-A	Method Blank	Total/NA	Water	245.1	589811
LCS 240-589811/2-A	Lab Control Sample	Total/NA	Water	245.1	589811

Analysis Batch: 589981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-192759-3	WT-12573440-100323-CM-003	Total Recoverable	Water	200.7 Rev 4.4	589810
MB 240-589810/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	589810
LCS 240-589810/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	589810

General Chemistry

Analysis Batch: 589640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-192759-3	WT-12573440-100323-CM-003	Total/NA	Water	3500-Cr B-2011	
MB 240-589640/3	Method Blank	Total/NA	Water	3500-Cr B-2011	
LCS 240-589640/4	Lab Control Sample	Total/NA	Water	3500-Cr B-2011	

Analysis Batch: 589884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-192759-3	WT-12573440-100323-CM-003	Total/NA	Water	SM 2540D	
MB 240-589884/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 240-589884/2	Lab Control Sample	Total/NA	Water	SM 2540D	

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QC Association Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-1

General Chemistry

Analysis Batch: 590066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-192759-3	WT-12573440-100323-CM-003	Total/NA	Water	1664B	
MB 240-590066/1	Method Blank	Total/NA	Water	1664B	
LCS 240-590066/2	Lab Control Sample	Total/NA	Water	1664B	

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-1

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

Lab Sample ID: MB 240-589727/13-A

Matrix: Water

Analysis Batch: 589900

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 589727

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	ug/L		10/05/23 08:09	10/06/23 15:38	1
Aroclor-1221	0.10	U	0.10	ug/L		10/05/23 08:09	10/06/23 15:38	1
Aroclor-1232	0.10	U	0.10	ug/L		10/05/23 08:09	10/06/23 15:38	1
Aroclor-1242	0.10	U	0.10	ug/L		10/05/23 08:09	10/06/23 15:38	1
Aroclor-1248	0.10	U	0.10	ug/L		10/05/23 08:09	10/06/23 15:38	1
Aroclor-1254	0.10	U	0.10	ug/L		10/05/23 08:09	10/06/23 15:38	1
Aroclor-1260	0.10	U	0.10	ug/L		10/05/23 08:09	10/06/23 15:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	67		10 - 174	10/05/23 08:09	10/06/23 15:38	1
Tetrachloro-m-xylene	53		10 - 149	10/05/23 08:09	10/06/23 15:38	1

Lab Sample ID: LCS 240-589727/14-A

Matrix: Water

Analysis Batch: 589900

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 589727

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	1.51		ug/L		60	50 - 140
Aroclor-1260	2.50	1.41		ug/L		57	8 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	53		10 - 174
Tetrachloro-m-xylene	56		10 - 149

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-589810/1-A

Matrix: Water

Analysis Batch: 589981

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 589810

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.050	U	0.050	mg/L		10/05/23 14:00	10/06/23 16:10	1
Nickel	0.010	U	0.010	mg/L		10/05/23 14:00	10/06/23 16:10	1
Lead	0.050	U	0.050	mg/L		10/05/23 14:00	10/06/23 16:10	1
Zinc	0.050	U	0.050	mg/L		10/05/23 14:00	10/06/23 16:10	1

Lab Sample ID: LCS 240-589810/2-A

Matrix: Water

Analysis Batch: 589981

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 589810

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	1.00	0.954		mg/L		95	85 - 115
Nickel	1.00	1.00		mg/L		100	85 - 115
Lead	1.00	0.955		mg/L		95	85 - 115
Zinc	1.00	0.981		mg/L		98	85 - 115

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-589811/1-A
Matrix: Water
Analysis Batch: 589960

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 589811

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	mg/L		10/05/23 14:00	10/06/23 09:22	1

Lab Sample ID: LCS 240-589811/2-A
Matrix: Water
Analysis Batch: 589960

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 589811

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00500	0.00532		mg/L		106	85 - 115

Method: 1664B - HEM and SGT-HEM

Lab Sample ID: MB 240-590066/1
Matrix: Water
Analysis Batch: 590066

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	mg/L			10/09/23 10:18	1

Lab Sample ID: LCS 240-590066/2
Matrix: Water
Analysis Batch: 590066

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	34.6		mg/L		87	78 - 114

Method: 3500-Cr B-2011 - Chromium, Hexavalent

Lab Sample ID: MB 240-589640/3
Matrix: Water
Analysis Batch: 589640

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	0.010	U	0.010	mg/L			10/04/23 11:01	1

Lab Sample ID: LCS 240-589640/4
Matrix: Water
Analysis Batch: 589640

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium, hexavalent	0.250	0.265		mg/L		106	85 - 115

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

Lab Sample ID: MB 240-589884/1
Matrix: Water
Analysis Batch: 589884

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	mg/L			10/06/23 08:02	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-1

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

Lab Sample ID: LCS 240-589884/2

Matrix: Water

Analysis Batch: 589884

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	54.0	48.0		mg/L		89	64 - 120

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-1

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

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCBP2 (10-174)	TCX2 (10-149)
240-192759-3	WT-12573440-100323-CM-003	77	75
LCS 240-589727/14-A	Lab Control Sample	53	56
MB 240-589727/13-A	Method Blank	67	53
Surrogate Legend			
DCBP = DCB Decachlorobiphenyl			
TCX = Tetrachloro-m-xylene			

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-1

Client Sample ID: WT-12573440-100323-CM-003

Lab Sample ID: 240-192759-3

Date Collected: 10/03/23 15:25

Matrix: Water

Date Received: 10/04/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	608			589727	MDH	EET CLE	10/05/23 08:09
Total/NA	Analysis	608.3		1	589900	MBB	EET CLE	10/06/23 12:14
Total Recoverable	Prep	200.7			589810	AJC	EET CLE	10/05/23 14:00
Total Recoverable	Analysis	200.7 Rev 4.4		1	589981	RKT	EET CLE	10/06/23 13:29
Total/NA	Prep	245.1			589811	AJC	EET CLE	10/05/23 14:00
Total/NA	Analysis	245.1		1	589960	GK	EET CLE	10/06/23 09:34
Total/NA	Analysis	1664B		1	590066	JMR	EET CLE	10/09/23 10:18
Total/NA	Analysis	3500-Cr B-2011		1	589640	BLW	EET CLE	10/04/23 11:58
Total/NA	Analysis	SM 2540D		1	589884	QUY8	EET CLE	10/06/23 08:02

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.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-1

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	07-31-24
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	T104704517-22-19	08-31-24
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-23

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

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[illegible]

Eurofins - Cleveland Sample Receipt Form/Narrative

Login # : _____

Barberton Facility

Client GHD Services Inc

Site Name _____

Cooler unpacked by: _____

Cooler Received on 10/4/23Opened on 10/4/23FedEx: 1st Grd Exp UPS FAS Waypoint 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 FormIR GUN # 21 (CF -0.2 °C) Observed Cooler Temp. 3.8 °C Corrected Cooler Temp. 3.6 °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)?

Yes No

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# HC312501

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

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by: _____

No Sample Dates or times.COC lists 10 containers only have 9 for Sample 003

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: _____

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>		<u>Preservative</u>	
			<u>pH</u>	<u>Temp</u>	<u>Added (mls)</u>	<u>Lot #</u>
WT-12573440-100323-CM-003	240-192759-D-3	Plastic 500ml - with Nitric Acid	_____	_____	_____	_____

ANALYTICAL REPORT

PREPARED FOR

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

Generated 10/20/2023 3:59:02 PM

JOB DESCRIPTION

12573440-T37Y23-01, RACER Eckles

JOB NUMBER

240-192759-2

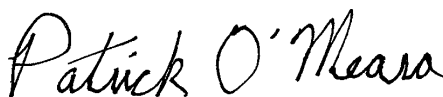
Eurofins Cleveland

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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Case Narrative

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-2

Job ID: 240-192759-2

Laboratory: Eurofins Cleveland

Narrative

Job Narrative 240-192759-2

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 10/4/2023 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 time was 3.6°C

PFAS

Method PFC_IDA: The following sample was observed to have floating particulates present in the sample bottle:

W-12573440-100323-CM-002 (240-192759-2)

preparation batch 320-712845

Method: 3535_PFC/PFC_IDA

Matrix: Aqueous

Method PFC_IDA: The "I" qualifier means the transition mass ratio for the indicated analyte was below the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty, and the reported value may have some high bias. However, analyst judgment was used to positively identify the analyte: W-12573440-100323-CM-002 (240-192759-2).

Method PFC_IDA: The "I" qualifier means the transition mass ratio for the indicated analyte above the established ratio limits for Perfluorononanoic acid (PFNA). The qualitative identification of the analyte has some degree of uncertainty, and the reported value may have some high bias. However, analyst judgment was used to positively identify the analyte: W-12573440-100323-CM-002 (240-192759-2) and WT-12573440-100323-CM-003 (240-192759-3).

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

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-2

Qualifiers

LCMS

Qualifier	Qualifier Description
I	Value is EMPC (estimated maximum possible concentration).
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)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-192759-1	FB-12573440-100323-CM-001	Water	10/03/23 15:15	10/04/23 09:35
240-192759-2	W-12573440-100323-CM-002	Water	10/03/23 15:20	10/04/23 09:35
240-192759-3	WT-12573440-100323-CM-003	Water	10/03/23 15:25	10/04/23 09:35

Detection Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-2

Client Sample ID: FB-12573440-100323-CM-001

Lab Sample ID: 240-192759-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorodecanoic acid (PFDA)	0.34	J	1.9	0.29	ng/L	1		537 (modified)	Total/NA
Perfluorodecanesulfonic acid (PFDS)	0.64	J	1.9	0.30	ng/L	1		537 (modified)	Total/NA
9CI-PF3ONS	0.54	J	1.9	0.23	ng/L	1		537 (modified)	Total/NA
11CI-PF3OUdS	0.32	J	1.9	0.30	ng/L	1		537 (modified)	Total/NA

Client Sample ID: W-12573440-100323-CM-002

Lab Sample ID: 240-192759-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	14		4.9	2.4	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	3.1		2.0	0.48	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.6		2.0	0.57	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.3	J	2.0	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	6.0		2.0	0.84	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.51	J I	2.0	0.27	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.8		2.0	0.20	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.5	J	2.0	0.29	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	6.5	I	2.0	0.56	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	1.8	J I	2.0	0.19	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	100	I	2.0	0.53	ng/L	1		537 (modified)	Total/NA

Client Sample ID: WT-12573440-100323-CM-003

Lab Sample ID: 240-192759-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	12		4.9	2.4	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	2.2		2.0	0.48	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.50	J	2.0	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.8	J	2.0	0.84	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.55	J	2.0	0.20	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.41	J I	2.0	0.30	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.5	J I	2.0	0.56	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	0.25	J I	2.0	0.19	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	14	I	2.0	0.53	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

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Method Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-2

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	EET SAC
3535	Solid-Phase Extraction (SPE)	SW846	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: FB-12573440-100323-CM-001

Date Collected: 10/03/23 15:15

Date Received: 10/04/23 09:35

Lab Sample ID: 240-192759-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.7	U	4.7	2.3	ng/L		10/13/23 06:12	10/16/23 23:42	1
Perfluoropentanoic acid (PFPeA)	1.9	U	1.9	0.47	ng/L		10/13/23 06:12	10/16/23 23:42	1
Perfluorohexanoic acid (PFHxA)	1.9	U	1.9	0.55	ng/L		10/13/23 06:12	10/16/23 23:42	1
Perfluoroheptanoic acid (PFHpA)	1.9	U	1.9	0.24	ng/L		10/13/23 06:12	10/16/23 23:42	1
Perfluorooctanoic acid (PFOA)	1.9	U	1.9	0.81	ng/L		10/13/23 06:12	10/16/23 23:42	1
Perfluorononanoic acid (PFNA)	1.9	U	1.9	0.26	ng/L		10/13/23 06:12	10/16/23 23:42	1
Perfluorodecanoic acid (PFDA)	0.34	J	1.9	0.29	ng/L		10/13/23 06:12	10/16/23 23:42	1
Perfluoroundecanoic acid (PFUnA)	1.9	U	1.9	1.0	ng/L		10/13/23 06:12	10/16/23 23:42	1
Perfluorododecanoic acid (PFDoA)	1.9	U	1.9	0.52	ng/L		10/13/23 06:12	10/16/23 23:42	1
Perfluorotridecanoic acid (PFTriA)	1.9	U	1.9	1.2	ng/L		10/13/23 06:12	10/16/23 23:42	1
Perfluorotetradecanoic acid (PFTeA)	1.9	U	1.9	0.69	ng/L		10/13/23 06:12	10/16/23 23:42	1
Perfluorobutanesulfonic acid (PFBS)	1.9	U	1.9	0.19	ng/L		10/13/23 06:12	10/16/23 23:42	1
Perfluoropentanesulfonic acid (PFPeS)	1.9	U	1.9	0.28	ng/L		10/13/23 06:12	10/16/23 23:42	1
Perfluorohexanesulfonic acid (PFHxS)	1.9	U	1.9	0.54	ng/L		10/13/23 06:12	10/16/23 23:42	1
Perfluoroheptanesulfonic acid (PFHpS)	1.9	U	1.9	0.18	ng/L		10/13/23 06:12	10/16/23 23:42	1
Perfluorooctanesulfonic acid (PFOS)	1.9	U	1.9	0.51	ng/L		10/13/23 06:12	10/16/23 23:42	1
Perfluorononanesulfonic acid (PFNS)	1.9	U	1.9	0.35	ng/L		10/13/23 06:12	10/16/23 23:42	1
Perfluorodecanesulfonic acid (PFDS)	0.64	J	1.9	0.30	ng/L		10/13/23 06:12	10/16/23 23:42	1
Perfluorooctanesulfonamide (FOSA)	1.9	U	1.9	0.93	ng/L		10/13/23 06:12	10/16/23 23:42	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.7	U	4.7	1.1	ng/L		10/13/23 06:12	10/16/23 23:42	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.7	U	4.7	1.2	ng/L		10/13/23 06:12	10/16/23 23:42	1
4:2 FTS	1.9	U	1.9	0.23	ng/L		10/13/23 06:12	10/16/23 23:42	1
6:2 FTS	4.7	U	4.7	2.4	ng/L		10/13/23 06:12	10/16/23 23:42	1
8:2 FTS	1.9	U	1.9	0.44	ng/L		10/13/23 06:12	10/16/23 23:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.9	U	1.9	0.38	ng/L		10/13/23 06:12	10/16/23 23:42	1
HFPO-DA (GenX)	3.8	U	3.8	1.4	ng/L		10/13/23 06:12	10/16/23 23:42	1
9CI-PF3ONS	0.54	J	1.9	0.23	ng/L		10/13/23 06:12	10/16/23 23:42	1
11CI-PF3OUdS	0.32	J	1.9	0.30	ng/L		10/13/23 06:12	10/16/23 23:42	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	91		25 - 150	10/13/23 06:12	10/16/23 23:42	1
13C5 PFPeA	93		25 - 150	10/13/23 06:12	10/16/23 23:42	1
13C2 PFHxA	92		25 - 150	10/13/23 06:12	10/16/23 23:42	1
13C4 PFHpA	93		25 - 150	10/13/23 06:12	10/16/23 23:42	1
13C4 PFOA	98		25 - 150	10/13/23 06:12	10/16/23 23:42	1
13C5 PFNA	92		25 - 150	10/13/23 06:12	10/16/23 23:42	1
13C2 PFDA	94		25 - 150	10/13/23 06:12	10/16/23 23:42	1
13C2 PFUnA	98		25 - 150	10/13/23 06:12	10/16/23 23:42	1
13C2 PFDoA	100		25 - 150	10/13/23 06:12	10/16/23 23:42	1
13C2 PFTeDA	109		25 - 150	10/13/23 06:12	10/16/23 23:42	1
13C3 PFBS	96		25 - 150	10/13/23 06:12	10/16/23 23:42	1
18O2 PFHxS	98		25 - 150	10/13/23 06:12	10/16/23 23:42	1
13C4 PFOS	89		25 - 150	10/13/23 06:12	10/16/23 23:42	1
13C8 FOSA	97		25 - 150	10/13/23 06:12	10/16/23 23:42	1
d3-NMeFOSAA	79		25 - 150	10/13/23 06:12	10/16/23 23:42	1
d5-NEtFOSAA	87		25 - 150	10/13/23 06:12	10/16/23 23:42	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Client Sample ID: FB-12573440-100323-CM-001

Date Collected: 10/03/23 15:15

Date Received: 10/04/23 09:35

Lab Sample ID: 240-192759-1

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	96		25 - 150	10/13/23 06:12	10/16/23 23:42	1
M2-8:2 FTS	100		25 - 150	10/13/23 06:12	10/16/23 23:42	1
M2-4:2 FTS	88		25 - 150	10/13/23 06:12	10/16/23 23:42	1
13C3 HFPO-DA	80		25 - 150	10/13/23 06:12	10/16/23 23:42	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: W-12573440-100323-CM-002

Date Collected: 10/03/23 15:20

Date Received: 10/04/23 09:35

Lab Sample ID: 240-192759-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	14		4.9	2.4	ng/L		10/13/23 06:12	10/16/23 23:53	1
Perfluoropentanoic acid (PFPeA)	3.1		2.0	0.48	ng/L		10/13/23 06:12	10/16/23 23:53	1
Perfluorohexanoic acid (PFHxA)	3.6		2.0	0.57	ng/L		10/13/23 06:12	10/16/23 23:53	1
Perfluoroheptanoic acid (PFHpA)	1.3	J	2.0	0.25	ng/L		10/13/23 06:12	10/16/23 23:53	1
Perfluorooctanoic acid (PFOA)	6.0		2.0	0.84	ng/L		10/13/23 06:12	10/16/23 23:53	1
Perfluorononanoic acid (PFNA)	0.51	J I	2.0	0.27	ng/L		10/13/23 06:12	10/16/23 23:53	1
Perfluorodecanoic acid (PFDA)	2.0	U	2.0	0.30	ng/L		10/13/23 06:12	10/16/23 23:53	1
Perfluoroundecanoic acid (PFUnA)	2.0	U	2.0	1.1	ng/L		10/13/23 06:12	10/16/23 23:53	1
Perfluorododecanoic acid (PFDoA)	2.0	U	2.0	0.54	ng/L		10/13/23 06:12	10/16/23 23:53	1
Perfluorotridecanoic acid (PFTriA)	2.0	U	2.0	1.3	ng/L		10/13/23 06:12	10/16/23 23:53	1
Perfluorotetradecanoic acid (PFTeA)	2.0	U	2.0	0.72	ng/L		10/13/23 06:12	10/16/23 23:53	1
Perfluorobutanesulfonic acid (PFBS)	2.8		2.0	0.20	ng/L		10/13/23 06:12	10/16/23 23:53	1
Perfluoropentanesulfonic acid (PFPeS)	1.5	J	2.0	0.29	ng/L		10/13/23 06:12	10/16/23 23:53	1
Perfluorohexanesulfonic acid (PFHxS)	6.5	I	2.0	0.56	ng/L		10/13/23 06:12	10/16/23 23:53	1
Perfluoroheptanesulfonic acid (PFHpS)	1.8	J I	2.0	0.19	ng/L		10/13/23 06:12	10/16/23 23:53	1
Perfluorooctanesulfonic acid (PFOS)	100	I	2.0	0.53	ng/L		10/13/23 06:12	10/16/23 23:53	1
Perfluorononanesulfonic acid (PFNS)	2.0	U	2.0	0.36	ng/L		10/13/23 06:12	10/16/23 23:53	1
Perfluorodecanesulfonic acid (PFDS)	2.0	U	2.0	0.31	ng/L		10/13/23 06:12	10/16/23 23:53	1
Perfluorooctanesulfonamide (FOSA)	2.0	U	2.0	0.96	ng/L		10/13/23 06:12	10/16/23 23:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.9	U	4.9	1.2	ng/L		10/13/23 06:12	10/16/23 23:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.9	U	4.9	1.3	ng/L		10/13/23 06:12	10/16/23 23:53	1
4:2 FTS	2.0	U	2.0	0.24	ng/L		10/13/23 06:12	10/16/23 23:53	1
6:2 FTS	4.9	U	4.9	2.5	ng/L		10/13/23 06:12	10/16/23 23:53	1
8:2 FTS	2.0	U	2.0	0.45	ng/L		10/13/23 06:12	10/16/23 23:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.0	U	2.0	0.39	ng/L		10/13/23 06:12	10/16/23 23:53	1
HFPO-DA (GenX)	3.9	U	3.9	1.5	ng/L		10/13/23 06:12	10/16/23 23:53	1
9CI-PF3ONS	2.0	U	2.0	0.24	ng/L		10/13/23 06:12	10/16/23 23:53	1
11CI-PF3OUdS	2.0	U	2.0	0.31	ng/L		10/13/23 06:12	10/16/23 23:53	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	75		25 - 150	10/13/23 06:12	10/16/23 23:53	1
13C5 PFPeA	92		25 - 150	10/13/23 06:12	10/16/23 23:53	1
13C2 PFHxA	90		25 - 150	10/13/23 06:12	10/16/23 23:53	1
13C4 PFHpA	92		25 - 150	10/13/23 06:12	10/16/23 23:53	1
13C4 PFOA	91		25 - 150	10/13/23 06:12	10/16/23 23:53	1
13C5 PFNA	92		25 - 150	10/13/23 06:12	10/16/23 23:53	1
13C2 PFDA	90		25 - 150	10/13/23 06:12	10/16/23 23:53	1
13C2 PFUnA	89		25 - 150	10/13/23 06:12	10/16/23 23:53	1
13C2 PFDoA	71		25 - 150	10/13/23 06:12	10/16/23 23:53	1
13C2 PFTeDA	83		25 - 150	10/13/23 06:12	10/16/23 23:53	1
13C3 PFBS	89		25 - 150	10/13/23 06:12	10/16/23 23:53	1
18O2 PFHxS	88		25 - 150	10/13/23 06:12	10/16/23 23:53	1
13C4 PFOS	84		25 - 150	10/13/23 06:12	10/16/23 23:53	1
13C8 FOSA	104		25 - 150	10/13/23 06:12	10/16/23 23:53	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Client Sample ID: W-12573440-100323-CM-002

Date Collected: 10/03/23 15:20

Date Received: 10/04/23 09:35

Lab Sample ID: 240-192759-2

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d3-NMeFOSAA	72		25 - 150	10/13/23 06:12	10/16/23 23:53	1
d5-NEtFOSAA	76		25 - 150	10/13/23 06:12	10/16/23 23:53	1
M2-6:2 FTS	97		25 - 150	10/13/23 06:12	10/16/23 23:53	1
M2-8:2 FTS	100		25 - 150	10/13/23 06:12	10/16/23 23:53	1
M2-4:2 FTS	104		25 - 150	10/13/23 06:12	10/16/23 23:53	1
13C3 HFPO-DA	80		25 - 150	10/13/23 06:12	10/16/23 23:53	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: WT-12573440-100323-CM-003

Date Collected: 10/03/23 15:25

Date Received: 10/04/23 09:35

Lab Sample ID: 240-192759-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	12		4.9	2.4	ng/L		10/13/23 06:12	10/17/23 00:04	1
Perfluoropentanoic acid (PFPeA)	2.2		2.0	0.48	ng/L		10/13/23 06:12	10/17/23 00:04	1
Perfluorohexanoic acid (PFHxA)	2.0	U	2.0	0.57	ng/L		10/13/23 06:12	10/17/23 00:04	1
Perfluoroheptanoic acid (PFHpA)	0.50	J	2.0	0.25	ng/L		10/13/23 06:12	10/17/23 00:04	1
Perfluorooctanoic acid (PFOA)	1.8	J	2.0	0.84	ng/L		10/13/23 06:12	10/17/23 00:04	1
Perfluorononanoic acid (PFNA)	2.0	U	2.0	0.27	ng/L		10/13/23 06:12	10/17/23 00:04	1
Perfluorodecanoic acid (PFDA)	2.0	U	2.0	0.31	ng/L		10/13/23 06:12	10/17/23 00:04	1
Perfluoroundecanoic acid (PFUnA)	2.0	U	2.0	1.1	ng/L		10/13/23 06:12	10/17/23 00:04	1
Perfluorododecanoic acid (PFDoA)	2.0	U	2.0	0.54	ng/L		10/13/23 06:12	10/17/23 00:04	1
Perfluorotridecanoic acid (PFTriA)	2.0	U	2.0	1.3	ng/L		10/13/23 06:12	10/17/23 00:04	1
Perfluorotetradecanoic acid (PFTeA)	2.0	U	2.0	0.72	ng/L		10/13/23 06:12	10/17/23 00:04	1
Perfluorobutanesulfonic acid (PFBS)	0.55	J	2.0	0.20	ng/L		10/13/23 06:12	10/17/23 00:04	1
Perfluoropentanesulfonic acid (PFPeS)	0.41	J I	2.0	0.30	ng/L		10/13/23 06:12	10/17/23 00:04	1
Perfluorohexanesulfonic acid (PFHxS)	1.5	J I	2.0	0.56	ng/L		10/13/23 06:12	10/17/23 00:04	1
Perfluoroheptanesulfonic acid (PFHpS)	0.25	J I	2.0	0.19	ng/L		10/13/23 06:12	10/17/23 00:04	1
Perfluorooctanesulfonic acid (PFOS)	14	I	2.0	0.53	ng/L		10/13/23 06:12	10/17/23 00:04	1
Perfluorononanesulfonic acid (PFNS)	2.0	U	2.0	0.36	ng/L		10/13/23 06:12	10/17/23 00:04	1
Perfluorodecanesulfonic acid (PFDS)	2.0	U	2.0	0.32	ng/L		10/13/23 06:12	10/17/23 00:04	1
Perfluorooctanesulfonamide (FOSA)	2.0	U	2.0	0.96	ng/L		10/13/23 06:12	10/17/23 00:04	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.9	U	4.9	1.2	ng/L		10/13/23 06:12	10/17/23 00:04	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.9	U	4.9	1.3	ng/L		10/13/23 06:12	10/17/23 00:04	1
4:2 FTS	2.0	U	2.0	0.24	ng/L		10/13/23 06:12	10/17/23 00:04	1
6:2 FTS	4.9	U	4.9	2.5	ng/L		10/13/23 06:12	10/17/23 00:04	1
8:2 FTS	2.0	U	2.0	0.45	ng/L		10/13/23 06:12	10/17/23 00:04	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.0	U	2.0	0.39	ng/L		10/13/23 06:12	10/17/23 00:04	1
HFPO-DA (GenX)	3.9	U	3.9	1.5	ng/L		10/13/23 06:12	10/17/23 00:04	1
9CI-PF3ONS	2.0	U	2.0	0.24	ng/L		10/13/23 06:12	10/17/23 00:04	1
11CI-PF3OUdS	2.0	U	2.0	0.32	ng/L		10/13/23 06:12	10/17/23 00:04	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	84		25 - 150	10/13/23 06:12	10/17/23 00:04	1
13C5 PFPeA	96		25 - 150	10/13/23 06:12	10/17/23 00:04	1
13C2 PFHxA	94		25 - 150	10/13/23 06:12	10/17/23 00:04	1
13C4 PFHpA	93		25 - 150	10/13/23 06:12	10/17/23 00:04	1
13C4 PFOA	96		25 - 150	10/13/23 06:12	10/17/23 00:04	1
13C5 PFNA	92		25 - 150	10/13/23 06:12	10/17/23 00:04	1
13C2 PFDA	88		25 - 150	10/13/23 06:12	10/17/23 00:04	1
13C2 PFUnA	87		25 - 150	10/13/23 06:12	10/17/23 00:04	1
13C2 PFDoA	88		25 - 150	10/13/23 06:12	10/17/23 00:04	1
13C2 PFTeDA	84		25 - 150	10/13/23 06:12	10/17/23 00:04	1
13C3 PFBS	90		25 - 150	10/13/23 06:12	10/17/23 00:04	1
18O2 PFHxS	90		25 - 150	10/13/23 06:12	10/17/23 00:04	1
13C4 PFOS	80		25 - 150	10/13/23 06:12	10/17/23 00:04	1
13C8 FOSA	97		25 - 150	10/13/23 06:12	10/17/23 00:04	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Client Sample ID: WT-12573440-100323-CM-003

Date Collected: 10/03/23 15:25

Date Received: 10/04/23 09:35

Lab Sample ID: 240-192759-3

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d3-NMeFOSAA	60		25 - 150	10/13/23 06:12	10/17/23 00:04	1
d5-NEtFOSAA	76		25 - 150	10/13/23 06:12	10/17/23 00:04	1
M2-6:2 FTS	92		25 - 150	10/13/23 06:12	10/17/23 00:04	1
M2-8:2 FTS	92		25 - 150	10/13/23 06:12	10/17/23 00:04	1
M2-4:2 FTS	80		25 - 150	10/13/23 06:12	10/17/23 00:04	1
13C3 HFPO-DA	82		25 - 150	10/13/23 06:12	10/17/23 00:04	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-2

LCMS

Prep Batch: 712845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-192759-1	FB-12573440-100323-CM-001	Total/NA	Water	3535	
240-192759-2	W-12573440-100323-CM-002	Total/NA	Water	3535	
240-192759-3	WT-12573440-100323-CM-003	Total/NA	Water	3535	
MB 320-712845/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-712845/2-A	Lab Control Sample	Total/NA	Water	3535	

Analysis Batch: 713574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-192759-1	FB-12573440-100323-CM-001	Total/NA	Water	537 (modified)	712845
240-192759-2	W-12573440-100323-CM-002	Total/NA	Water	537 (modified)	712845
240-192759-3	WT-12573440-100323-CM-003	Total/NA	Water	537 (modified)	712845
MB 320-712845/1-A	Method Blank	Total/NA	Water	537 (modified)	712845
LCS 320-712845/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	712845

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-712845/1-A

Matrix: Water

Analysis Batch: 713574

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 712845

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.0	U	5.0	2.4	ng/L		10/13/23 06:12	10/16/23 23:20	1
Perfluoropentanoic acid (PFPeA)	2.0	U	2.0	0.49	ng/L		10/13/23 06:12	10/16/23 23:20	1
Perfluorohexanoic acid (PFHxA)	2.0	U	2.0	0.58	ng/L		10/13/23 06:12	10/16/23 23:20	1
Perfluoroheptanoic acid (PFHpA)	2.0	U	2.0	0.25	ng/L		10/13/23 06:12	10/16/23 23:20	1
Perfluorooctanoic acid (PFOA)	2.0	U	2.0	0.85	ng/L		10/13/23 06:12	10/16/23 23:20	1
Perfluorononanoic acid (PFNA)	2.0	U	2.0	0.27	ng/L		10/13/23 06:12	10/16/23 23:20	1
Perfluorodecanoic acid (PFDA)	2.0	U	2.0	0.31	ng/L		10/13/23 06:12	10/16/23 23:20	1
Perfluoroundecanoic acid (PFUnA)	2.0	U	2.0	1.1	ng/L		10/13/23 06:12	10/16/23 23:20	1
Perfluorododecanoic acid (PFDoA)	2.0	U	2.0	0.55	ng/L		10/13/23 06:12	10/16/23 23:20	1
Perfluorotridecanoic acid (PFTriA)	2.0	U	2.0	1.3	ng/L		10/13/23 06:12	10/16/23 23:20	1
Perfluorotetradecanoic acid (PFTeA)	2.0	U	2.0	0.73	ng/L		10/13/23 06:12	10/16/23 23:20	1
Perfluorobutanesulfonic acid (PFBS)	2.0	U	2.0	0.20	ng/L		10/13/23 06:12	10/16/23 23:20	1
Perfluoropentanesulfonic acid (PFPeS)	2.0	U	2.0	0.30	ng/L		10/13/23 06:12	10/16/23 23:20	1
Perfluorohexanesulfonic acid (PFHxS)	2.0	U	2.0	0.57	ng/L		10/13/23 06:12	10/16/23 23:20	1
Perfluoroheptanesulfonic acid (PFHpS)	2.0	U	2.0	0.19	ng/L		10/13/23 06:12	10/16/23 23:20	1
Perfluorooctanesulfonic acid (PFOS)	2.0	U	2.0	0.54	ng/L		10/13/23 06:12	10/16/23 23:20	1
Perfluorononanesulfonic acid (PFNS)	2.0	U	2.0	0.37	ng/L		10/13/23 06:12	10/16/23 23:20	1
Perfluorodecanesulfonic acid (PFDS)	2.0	U	2.0	0.32	ng/L		10/13/23 06:12	10/16/23 23:20	1
Perfluorooctanesulfonamide (FOSA)	2.0	U	2.0	0.98	ng/L		10/13/23 06:12	10/16/23 23:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	5.0	U	5.0	1.2	ng/L		10/13/23 06:12	10/16/23 23:20	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.0	U	5.0	1.3	ng/L		10/13/23 06:12	10/16/23 23:20	1
4:2 FTS	2.0	U	2.0	0.24	ng/L		10/13/23 06:12	10/16/23 23:20	1
6:2 FTS	5.0	U	5.0	2.5	ng/L		10/13/23 06:12	10/16/23 23:20	1
8:2 FTS	2.0	U	2.0	0.46	ng/L		10/13/23 06:12	10/16/23 23:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.0	U	2.0	0.40	ng/L		10/13/23 06:12	10/16/23 23:20	1
HFPO-DA (GenX)	4.0	U	4.0	1.5	ng/L		10/13/23 06:12	10/16/23 23:20	1
9CI-PF3ONS	2.0	U	2.0	0.24	ng/L		10/13/23 06:12	10/16/23 23:20	1
11CI-PF3OUdS	2.0	U	2.0	0.32	ng/L		10/13/23 06:12	10/16/23 23:20	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	93		25 - 150	10/13/23 06:12	10/16/23 23:20	1
13C5 PFPeA	95		25 - 150	10/13/23 06:12	10/16/23 23:20	1
13C2 PFHxA	88		25 - 150	10/13/23 06:12	10/16/23 23:20	1
13C4 PFHpA	93		25 - 150	10/13/23 06:12	10/16/23 23:20	1
13C4 PFOA	96		25 - 150	10/13/23 06:12	10/16/23 23:20	1
13C5 PFNA	94		25 - 150	10/13/23 06:12	10/16/23 23:20	1
13C2 PFDA	90		25 - 150	10/13/23 06:12	10/16/23 23:20	1
13C2 PFUnA	104		25 - 150	10/13/23 06:12	10/16/23 23:20	1
13C2 PFDoA	111		25 - 150	10/13/23 06:12	10/16/23 23:20	1
13C2 PFTeDA	101		25 - 150	10/13/23 06:12	10/16/23 23:20	1
13C3 PFBS	86		25 - 150	10/13/23 06:12	10/16/23 23:20	1
18O2 PFHxS	92		25 - 150	10/13/23 06:12	10/16/23 23:20	1
13C4 PFOS	87		25 - 150	10/13/23 06:12	10/16/23 23:20	1
13C8 FOSA	100		25 - 150	10/13/23 06:12	10/16/23 23:20	1
d3-NMeFOSAA	63		25 - 150	10/13/23 06:12	10/16/23 23:20	1

Eurofins Cleveland

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-712845/1-A

Matrix: Water

Analysis Batch: 713574

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 712845

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	89		25 - 150	10/13/23 06:12	10/16/23 23:20	1
M2-6:2 FTS	90		25 - 150	10/13/23 06:12	10/16/23 23:20	1
M2-8:2 FTS	96		25 - 150	10/13/23 06:12	10/16/23 23:20	1
M2-4:2 FTS	85		25 - 150	10/13/23 06:12	10/16/23 23:20	1
13C3 HFPO-DA	76		25 - 150	10/13/23 06:12	10/16/23 23:20	1

Lab Sample ID: LCS 320-712845/2-A

Matrix: Water

Analysis Batch: 713574

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 712845

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	41.7		ng/L		104	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	37.5		ng/L		94	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	38.3		ng/L		96	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	40.0		ng/L		100	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	38.5		ng/L		96	70 - 130
Perfluorononanoic acid (PFNA)	40.0	40.2		ng/L		100	75 - 135
Perfluorodecanoic acid (PFDA)	40.0	37.2		ng/L		93	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	40.1		ng/L		100	68 - 128
Perfluorododecanoic acid (PFDoA)	40.0	38.4		ng/L		96	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	37.2		ng/L		93	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	37.1		ng/L		93	70 - 130
Perfluorobutanesulfonic acid (PFBS)	35.5	35.7		ng/L		100	67 - 127
Perfluoropentanesulfonic acid (PFPeS)	37.6	37.0		ng/L		98	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	36.5	31.4		ng/L		86	59 - 119
Perfluoroheptanesulfonic acid (PFHpS)	38.2	39.2		ng/L		103	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.2	37.4		ng/L		101	70 - 130
Perfluorononanesulfonic acid (PFNS)	38.5	37.2		ng/L		97	75 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	38.7		ng/L		100	71 - 131
Perfluorooctanesulfonamide (FOSA)	40.0	40.0		ng/L		100	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	39.5		ng/L		99	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	38.6		ng/L		96	76 - 136
4:2 FTS	37.5	36.9		ng/L		98	79 - 139
6:2 FTS	38.1	35.8		ng/L		94	59 - 175
8:2 FTS	38.4	35.0		ng/L		91	75 - 135
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	36.6		ng/L		97	79 - 139
HFPO-DA (GenX)	40.0	45.4		ng/L		113	51 - 173
9CI-PF3ONS	37.4	33.4		ng/L		89	75 - 135

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-712845/2-A

Matrix: Water

Analysis Batch: 713574

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 712845

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11CI-PF3OUdS	37.8	34.2		ng/L		91	54 - 114
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
13C4 PFBA	93		25 - 150				
13C5 PFPeA	102		25 - 150				
13C2 PFHxA	103		25 - 150				
13C4 PFHpA	98		25 - 150				
13C4 PFOA	99		25 - 150				
13C5 PFNA	99		25 - 150				
13C2 PFDA	98		25 - 150				
13C2 PFUnA	95		25 - 150				
13C2 PFDoA	103		25 - 150				
13C2 PFTeDA	109		25 - 150				
13C3 PFBS	96		25 - 150				
18O2 PFHxS	103		25 - 150				
13C4 PFOS	94		25 - 150				
13C8 FOSA	105		25 - 150				
d3-NMeFOSAA	81		25 - 150				
d5-NEtFOSAA	87		25 - 150				
M2-6:2 FTS	97		25 - 150				
M2-8:2 FTS	108		25 - 150				
M2-4:2 FTS	84		25 - 150				
13C3 HFPO-DA	78		25 - 150				

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-2

Client Sample ID: FB-12573440-100323-CM-001

Lab Sample ID: 240-192759-1

Date Collected: 10/03/23 15:15

Matrix: Water

Date Received: 10/04/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			712845	SJ	EET SAC	10/13/23 06:12
Total/NA	Analysis	537 (modified)		1	713574	K1S	EET SAC	10/16/23 23:42

Client Sample ID: W-12573440-100323-CM-002

Lab Sample ID: 240-192759-2

Date Collected: 10/03/23 15:20

Matrix: Water

Date Received: 10/04/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			712845	SJ	EET SAC	10/13/23 06:12
Total/NA	Analysis	537 (modified)		1	713574	K1S	EET SAC	10/16/23 23:53

Client Sample ID: WT-12573440-100323-CM-003

Lab Sample ID: 240-192759-3

Date Collected: 10/03/23 15:25

Matrix: Water

Date Received: 10/04/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			712845	SJ	EET SAC	10/13/23 06:12
Total/NA	Analysis	537 (modified)		1	713574	K1S	EET SAC	10/17/23 00:04

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-2

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	02-20-24
ANAB	Dept. of Defense ELAP	L2468	01-20-24
ANAB	Dept. of Energy	L2468.01	01-20-24
ANAB	ISO/IEC 17025	L2468	01-20-24
Arizona	State	AZ0708	08-11-24
Arkansas DEQ	State	88-0691	05-18-24
California	State	2897	01-22-24
Colorado	State	CA00044	08-31-24
Florida	NELAP	E87570	06-30-24
Georgia	State	4040	01-29-24
Hawaii	State	<cert No.>	01-29-24
Illinois	NELAP	200060	03-17-24
Kansas	NELAP	E-10375	10-31-23
Louisiana (All)	NELAP	01944	06-30-24
Maine	State	CA00004	04-14-24
Michigan	State	9947	01-31-24
Nevada	State	CA00044	07-31-24
New Hampshire	NELAP	2997	04-18-24
New Jersey	NELAP	CA005	06-30-24
New York	NELAP	11666	04-01-24
Ohio	State	41252	01-29-24
Oregon	NELAP	4040	01-29-24
Texas	NELAP	T104704399-23-17	05-31-24
US Fish & Wildlife	US Federal Programs	58448	04-30-24
USDA	US Federal Programs	P330-18-00239	02-28-26
Utah	NELAP	CA000442023-16	02-29-24
Virginia	NELAP	460278	03-14-24
Washington	State	C581	05-05-24
West Virginia (DW)	State	9930C	12-31-23
Wisconsin	State	998204680	08-31-24
Wyoming	State Program	8TMS-L	01-28-19 *

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

Eurofins Cleveland

Eurofins - Cleveland Sample Receipt Form/Narrative Login # : _____
Barberton Facility

Client GHD Services Inc Site Name _____ Cooler unpacked by: _____
Cooler Received on 10/4/23 Opened on 10/4/23 L Osborne
FedEx: 1st Grd Exp UPS FAS Waypoint 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 # 21 (CF -0.2 °C) Observed Cooler Temp. 3.8 °C Corrected Cooler Temp. 3.6 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____
- Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
- Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No NA
- Were tamper/custody seals intact and uncompromised? Yes No NA

3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels (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)? Yes No
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# HC312501
14. Were VOAs on the COC? Yes No
15. Were air bubbles >6 mm in any VOA vials? Yes No NA Larger than this.
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

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____
Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page Samples processed by: _____
No Sample Dates or times.
COC lists 10 containers only have 9 for Sample 003

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: _____

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>		<u>Preservative</u>	
			pH	Temp	Added (mls)	Lot #
WT-12573440-100323-CM-003	240-192759-D-3	Plastic 500ml - with Nitric Acid	_____	_____	_____	_____

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 240-192759-2

Login Number: 192759

List Number: 2

Creator: Simmons, Jason C

List Source: Eurofins Sacramento

List Creation: 10/05/23 04:23 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.3c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-192759-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
240-192759-1	FB-12573440-100323-CM-001	91	93	92	93	98	92	94	98
240-192759-2	W-12573440-100323-CM-002	75	92	90	92	91	92	90	89
240-192759-3	WT-12573440-100323-CM-003	84	96	94	93	96	92	88	87
LCS 320-712845/2-A	Lab Control Sample	93	102	103	98	99	99	98	95
MB 320-712845/1-A	Method Blank	93	95	88	93	96	94	90	104

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
240-192759-1	FB-12573440-100323-CM-001	100	109	96	98	89	97	79	87
240-192759-2	W-12573440-100323-CM-002	71	83	89	88	84	104	72	76
240-192759-3	WT-12573440-100323-CM-003	88	84	90	90	80	97	60	76
LCS 320-712845/2-A	Lab Control Sample	103	109	96	103	94	105	81	87
MB 320-712845/1-A	Method Blank	111	101	86	92	87	100	63	89

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M262FTS (25-150)	M282FTS (25-150)	M242FTS (25-150)	HFPODA (25-150)
240-192759-1	FB-12573440-100323-CM-001	96	100	88	80
240-192759-2	W-12573440-100323-CM-002	97	100	104	80
240-192759-3	WT-12573440-100323-CM-003	92	92	80	82
LCS 320-712845/2-A	Lab Control Sample	97	108	84	78
MB 320-712845/1-A	Method Blank	90	96	85	76

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
M242FTS = M2-4:2 FTS
HFPODA = 13C3 HFPO-DA

Eurofins Cleveland

Attachment 3

**Laboratory Analytical Reports for
November 10, 2023 Samples**



ANALYTICAL REPORT

PREPARED FOR

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

Generated 11/28/2023 7:20:14 AM

JOB DESCRIPTION

12573440-T37Y23-01, RACER Eckles

JOB NUMBER

240-195333-1

Eurofins Cleveland

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
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Case Narrative

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-1

Job ID: 240-195333-1

Laboratory: Eurofins Cleveland

Narrative

Job Narrative 240-195333-1

Receipt

The samples were received on 11/11/2023 9:30 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 6.2° C.

GC Semi VOA

Method 608.3: An incorrect volume of surrogate spiking solution was inadvertently added the following samples: (LCS 240-594641/2-A) and (MB 240-594641/1-A). Percent recoveries are based on the amount spiked.

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: WT-12573440-111023-BB-001 (240-195333-1).

Method SM 3500 CR B: The following sample was analyzed outside of analytical holding time due to analyst error: WT-12573440-111023-BB-001 (240-195333-1).

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

Organic Prep

Method 608: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-594641.

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

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description

U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description

U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description

H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.

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
REL	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: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-195333-1	WT-12573440-111023-BB-001	Water	11/10/23 12:20	11/11/23 09:30

1

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Detection Summary

Client: GHD Services Inc.

Job ID: 240-195333-1

Project/Site: 12573440-T37Y23-01, RACER Eckles

Client Sample ID: WT-12573440-111023-BB-001

Lab Sample ID: 240-195333-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Nickel	0.68		0.010	mg/L	1		200.7 Rev 4.4	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Method Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-1

Method	Method Description	Protocol	Laboratory
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
3500-Cr B-2011	Chromium, Hexavalent	SM	EET CLE
SM 2540D	Solids, Total Suspended (TSS)	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 Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-1

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

Client Sample ID: WT-12573440-111023-BB-001

Date Collected: 11/10/23 12:20

Date Received: 11/11/23 09:30

Lab Sample ID: 240-195333-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	ug/L		11/15/23 08:04	11/15/23 19:17	1
Aroclor-1221	0.095	U	0.095	ug/L		11/15/23 08:04	11/15/23 19:17	1
Aroclor-1232	0.095	U	0.095	ug/L		11/15/23 08:04	11/15/23 19:17	1
Aroclor-1242	0.095	U	0.095	ug/L		11/15/23 08:04	11/15/23 19:17	1
Aroclor-1248	0.095	U	0.095	ug/L		11/15/23 08:04	11/15/23 19:17	1
Aroclor-1254	0.095	U	0.095	ug/L		11/15/23 08:04	11/15/23 19:17	1
Aroclor-1260	0.095	U	0.095	ug/L		11/15/23 08:04	11/15/23 19:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	62		10 - 174	11/15/23 08:04	11/15/23 19:17	1
Tetrachloro-m-xylene	66		10 - 149	11/15/23 08:04	11/15/23 19:17	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-1

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

Client Sample ID: WT-12573440-111023-BB-001

Date Collected: 11/10/23 12:20

Date Received: 11/11/23 09:30

Lab Sample ID: 240-195333-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.050	U	0.050	mg/L		11/14/23 14:00	11/15/23 14:48	1
Nickel	0.68		0.010	mg/L		11/14/23 14:00	11/15/23 14:48	1
Lead	0.050	U	0.050	mg/L		11/14/23 14:00	11/15/23 14:48	1
Zinc	0.050	U	0.050	mg/L		11/14/23 14:00	11/15/23 14:48	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-1

Method: EPA 245.1 - Mercury (CVAA)

Client Sample ID: WT-12573440-111023-BB-001

Date Collected: 11/10/23 12:20

Date Received: 11/11/23 09:30

Lab Sample ID: 240-195333-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	mg/L		11/14/23 14:00	11/15/23 14:36	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-1

General Chemistry

Client Sample ID: WT-12573440-111023-BB-001

Date Collected: 11/10/23 12:20

Date Received: 11/11/23 09:30

Lab Sample ID: 240-195333-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (1664B)	4.8	U	4.8	mg/L			11/27/23 10:29	1
Chromium, hexavalent (SM 3500-Cr B-2011)	0.010	U H	0.010	mg/L			11/14/23 08:16	1
Total Suspended Solids (SM 2540D)	8.0	U	8.0	mg/L			11/17/23 11:22	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-1

GC Semi VOA

Prep Batch: 594641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-195333-1	WT-12573440-111023-BB-001	Total/NA	Water	608	
MB 240-594641/1-A	Method Blank	Total/NA	Water	608	
LCS 240-594641/2-A	Lab Control Sample	Total/NA	Water	608	

Analysis Batch: 594755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-195333-1	WT-12573440-111023-BB-001	Total/NA	Water	608.3	594641
MB 240-594641/1-A	Method Blank	Total/NA	Water	608.3	594641
LCS 240-594641/2-A	Lab Control Sample	Total/NA	Water	608.3	594641

Metals

Prep Batch: 594576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-195333-1	WT-12573440-111023-BB-001	Total Recoverable	Water	200.7	
MB 240-594576/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 240-594576/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Prep Batch: 594578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-195333-1	WT-12573440-111023-BB-001	Total/NA	Water	245.1	
MB 240-594578/1-A	Method Blank	Total/NA	Water	245.1	
LCS 240-594578/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 594736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-195333-1	WT-12573440-111023-BB-001	Total Recoverable	Water	200.7 Rev 4.4	594576
MB 240-594576/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	594576
LCS 240-594576/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	594576

Analysis Batch: 594753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-195333-1	WT-12573440-111023-BB-001	Total/NA	Water	245.1	594578
MB 240-594578/1-A	Method Blank	Total/NA	Water	245.1	594578
LCS 240-594578/2-A	Lab Control Sample	Total/NA	Water	245.1	594578

General Chemistry

Analysis Batch: 594485

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-195333-1	WT-12573440-111023-BB-001	Total/NA	Water	3500-Cr B-2011	
MB 240-594485/3	Method Blank	Total/NA	Water	3500-Cr B-2011	
LCS 240-594485/4	Lab Control Sample	Total/NA	Water	3500-Cr B-2011	

Analysis Batch: 595040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-195333-1	WT-12573440-111023-BB-001	Total/NA	Water	SM 2540D	
MB 240-595040/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 240-595040/2	Lab Control Sample	Total/NA	Water	SM 2540D	
240-195333-1 DU	WT-12573440-111023-BB-001	Total/NA	Water	SM 2540D	

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QC Association Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-1

General Chemistry

Analysis Batch: 595796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-195333-1	WT-12573440-111023-BB-001	Total/NA	Water	1664B	
MB 240-595796/1	Method Blank	Total/NA	Water	1664B	
LCS 240-595796/2	Lab Control Sample	Total/NA	Water	1664B	

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-1

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

Lab Sample ID: MB 240-594641/1-A

Matrix: Water

Analysis Batch: 594755

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 594641

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	ug/L		11/15/23 08:04	11/15/23 15:41	1
Aroclor-1221	0.10	U	0.10	ug/L		11/15/23 08:04	11/15/23 15:41	1
Aroclor-1232	0.10	U	0.10	ug/L		11/15/23 08:04	11/15/23 15:41	1
Aroclor-1242	0.10	U	0.10	ug/L		11/15/23 08:04	11/15/23 15:41	1
Aroclor-1248	0.10	U	0.10	ug/L		11/15/23 08:04	11/15/23 15:41	1
Aroclor-1254	0.10	U	0.10	ug/L		11/15/23 08:04	11/15/23 15:41	1
Aroclor-1260	0.10	U	0.10	ug/L		11/15/23 08:04	11/15/23 15:41	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	94		10 - 174			11/15/23 08:04	11/15/23 15:41	1
Tetrachloro-m-xylene	93		10 - 149			11/15/23 08:04	11/15/23 15:41	1

Lab Sample ID: LCS 240-594641/2-A

Matrix: Water

Analysis Batch: 594755

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 594641

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	2.04		ug/L		81	50 - 140
Aroclor-1260	2.50	1.90		ug/L		76	8 - 140
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
DCB Decachlorobiphenyl	91		10 - 174				
Tetrachloro-m-xylene	81		10 - 149				

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-594576/1-A

Matrix: Water

Analysis Batch: 594736

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 594576

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.050	U	0.050	mg/L		11/14/23 14:00	11/15/23 11:23	1
Nickel	0.010	U	0.010	mg/L		11/14/23 14:00	11/15/23 11:23	1
Lead	0.050	U	0.050	mg/L		11/14/23 14:00	11/15/23 11:23	1
Zinc	0.050	U	0.050	mg/L		11/14/23 14:00	11/15/23 11:23	1

Lab Sample ID: LCS 240-594576/2-A

Matrix: Water

Analysis Batch: 594736

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 594576

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	1.00	0.998		mg/L		100	85 - 115
Nickel	1.00	1.03		mg/L		103	85 - 115
Lead	1.00	0.970		mg/L		97	85 - 115
Zinc	1.00	1.05		mg/L		105	85 - 115

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-594578/1-A
Matrix: Water
Analysis Batch: 594753

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 594578

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	mg/L		11/14/23 14:00	11/15/23 14:12	1

Lab Sample ID: LCS 240-594578/2-A
Matrix: Water
Analysis Batch: 594753

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 594578

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00500	0.00489		mg/L		98	85 - 115

Method: 1664B - HEM and SGT-HEM

Lab Sample ID: MB 240-595796/1
Matrix: Water
Analysis Batch: 595796

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	mg/L			11/27/23 10:29	1

Lab Sample ID: LCS 240-595796/2
Matrix: Water
Analysis Batch: 595796

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	33.4		mg/L		84	78 - 114

Method: 3500-Cr B-2011 - Chromium, Hexavalent

Lab Sample ID: MB 240-594485/3
Matrix: Water
Analysis Batch: 594485

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	0.010	U	0.010	mg/L			11/14/23 08:13	1

Lab Sample ID: LCS 240-594485/4
Matrix: Water
Analysis Batch: 594485

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium, hexavalent	0.250	0.268		mg/L		107	85 - 115

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

Lab Sample ID: MB 240-595040/1
Matrix: Water
Analysis Batch: 595040

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	mg/L			11/17/23 11:22	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-1

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

Lab Sample ID: LCS 240-595040/2
Matrix: Water
Analysis Batch: 595040

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	54.0	49.0		mg/L		91	64 - 120

Lab Sample ID: 240-195333-1 DU
Matrix: Water
Analysis Batch: 595040

Client Sample ID: WT-12573440-111023-BB-001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	8.0	U	8.0	U	mg/L		NC	10

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-1

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)
240-195333-1	WT-12573440-111023-BB-001	62	66
LCS 240-594641/2-A	Lab Control Sample	91	81
MB 240-594641/1-A	Method Blank	94	93

Surrogate Legend

DCBP = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-1

Client Sample ID: WT-12573440-111023-BB-001

Lab Sample ID: 240-195333-1

Date Collected: 11/10/23 12:20

Matrix: Water

Date Received: 11/11/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	608			594641	MDH	EET CLE	11/15/23 08:04
Total/NA	Analysis	608.3		1	594755	RR	EET CLE	11/15/23 19:17
Total Recoverable	Prep	200.7			594576	TQ6W	EET CLE	11/14/23 14:00
Total Recoverable	Analysis	200.7 Rev 4.4		1	594736	KLC	EET CLE	11/15/23 14:48
Total/NA	Prep	245.1			594578	TQ6W	EET CLE	11/14/23 14:00
Total/NA	Analysis	245.1		1	594753	DSH	EET CLE	11/15/23 14:36
Total/NA	Analysis	1664B		1	595796	JMR	EET CLE	11/27/23 10:29
Total/NA	Analysis	3500-Cr B-2011		1	594485	QUY8	EET CLE	11/14/23 08:16
Total/NA	Analysis	SM 2540D		1	595040	C5SV	EET CLE	11/17/23 11:22

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.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-1

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	07-31-24
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	T104704517-22-19	08-31-24
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-23

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

Eurofins Cleveland

Eurofins - Cleveland Sample Receipt Form/Narrative

Login # : _____

Barberton Facility

Client GHD

Site Name _____

Cooler unpacked by: M. XolaCooler Received on 11-11-23Opened on 11-13-23FedEx: 1st Gfd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____

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

Storage Location _____

Eurofins Cooler # 22 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 FormIR GUN # 22 (CF 1.1 °C) Observed Cooler Temp. 3.1 °C Corrected Cooler Temp. 6.2 °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 ☐ NA ☐-Were tamper/custody seals intact and uncompromised? Yes ☒ No ☐ NA ☐3. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐4. Did custody papers accompany the sample(s)? Yes ☒ No ☐5. Were the custody papers relinquished & signed in the appropriate place? Yes ☒ No ☐6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes ☒ No ☐7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐8. Could all bottle labels (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)? Yes ☒ No ☐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# HC316719

14. Were VOAs on the COC? Yes ☒ No ☐ NA ☐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 ☐

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: _____

ANALYTICAL REPORT

PREPARED FOR

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

Generated 12/4/2023 6:44:44 AM

JOB DESCRIPTION

12573440-T37Y23-01, RACER Eckles

JOB NUMBER

240-195333-2

Eurofins Cleveland

Job Notes

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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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Case Narrative

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

Job ID: 240-195333-2

Laboratory: Eurofins Cleveland

Narrative

Job Narrative 240-195333-2

Receipt

The samples were received on 11/11/2023 9:30 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 6.2° C.

LCMS

Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was above the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte: WT-12573440-111023-BB-002 (240-195333-2).

Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was below the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte: W-12573440-111023-BB-003 (240-195333-3).

Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was lower than the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty, however, analyst judgment was used to positively identify the analyte: WT-12573440-111023-BB-002 (240-195333-2). The sample was re-analyzed with concurring result, therefore, the best set of data was reported.

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

Organic Prep

Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-722290.

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

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

Qualifiers

LCMS

Qualifier	Qualifier Description
I	Value is EMPC (estimated maximum possible concentration).
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: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-195333-2	WT-12573440-111023-BB-002	Water	11/10/23 12:25	11/11/23 09:30
240-195333-3	W-12573440-111023-BB-003	Water	11/10/23 12:15	11/11/23 09:30
240-195333-4	FB-12573440-111023-BB-004	Water	11/10/23 12:10	11/11/23 09:30

Detection Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

Client Sample ID: WT-12573440-111023-BB-002

Lab Sample ID: 240-195333-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	12		4.5	2.2	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	2.5		1.8	0.44	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.1	J I	1.8	0.52	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.25	J I	1.8	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.47	J	1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RA	2.3	I	1.8	0.49	ng/L	1		537 (modified)	Total/NA

Client Sample ID: W-12573440-111023-BB-003

Lab Sample ID: 240-195333-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	10		4.5	2.1	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	3.5		1.8	0.44	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.1		1.8	0.52	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.8		1.8	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	6.0		1.8	0.76	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.53	J	1.8	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.9		1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.4	J	1.8	0.27	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	8.9	I	1.8	0.51	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	1.7	J I	1.8	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	90	I	1.8	0.48	ng/L	1		537 (modified)	Total/NA

Client Sample ID: FB-12573440-111023-BB-004

Lab Sample ID: 240-195333-4

No Detections.

This Detection Summary does not include radiochemical test results.

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Method Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	EET SAC
3535	Solid-Phase Extraction (SPE)	SW846	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: WT-12573440-111023-BB-002

Date Collected: 11/10/23 12:25

Date Received: 11/11/23 09:30

Lab Sample ID: 240-195333-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	12		4.5	2.2	ng/L		11/22/23 05:24	11/27/23 02:20	1
Perfluoropentanoic acid (PFPeA)	2.5		1.8	0.44	ng/L		11/22/23 05:24	11/27/23 02:20	1
Perfluorohexanoic acid (PFHxA)	1.1	J I	1.8	0.52	ng/L		11/22/23 05:24	11/27/23 02:20	1
Perfluoroheptanoic acid (PFHpA)	0.25	J I	1.8	0.22	ng/L		11/22/23 05:24	11/27/23 02:20	1
Perfluorooctanoic acid (PFOA)	1.8	U	1.8	0.76	ng/L		11/22/23 05:24	11/27/23 02:20	1
Perfluorononanoic acid (PFNA)	1.8	U	1.8	0.24	ng/L		11/22/23 05:24	11/27/23 02:20	1
Perfluorodecanoic acid (PFDA)	1.8	U	1.8	0.28	ng/L		11/22/23 05:24	11/27/23 02:20	1
Perfluoroundecanoic acid (PFUnA)	1.8	U	1.8	0.99	ng/L		11/22/23 05:24	11/27/23 02:20	1
Perfluorododecanoic acid (PFDoA)	1.8	U	1.8	0.49	ng/L		11/22/23 05:24	11/27/23 02:20	1
Perfluorotridecanoic acid (PFTriA)	1.8	U	1.8	1.2	ng/L		11/22/23 05:24	11/27/23 02:20	1
Perfluorotetradecanoic acid (PFTeA)	1.8	U	1.8	0.66	ng/L		11/22/23 05:24	11/27/23 02:20	1
Perfluorobutanesulfonic acid (PFBS)	0.47	J	1.8	0.18	ng/L		11/22/23 05:24	11/27/23 02:20	1
Perfluoropentanesulfonic acid (PFPeS)	1.8	U	1.8	0.27	ng/L		11/22/23 05:24	11/27/23 02:20	1
Perfluorohexanesulfonic acid (PFHxS)	1.8	U	1.8	0.51	ng/L		11/22/23 05:24	11/27/23 02:20	1
Perfluoroheptanesulfonic acid (PFHpS)	1.8	U	1.8	0.17	ng/L		11/22/23 05:24	11/27/23 02:20	1
Perfluorononanesulfonic acid (PFNS)	1.8	U	1.8	0.33	ng/L		11/22/23 05:24	11/27/23 02:20	1
Perfluorodecanesulfonic acid (PFDS)	1.8	U	1.8	0.29	ng/L		11/22/23 05:24	11/27/23 02:20	1
Perfluorooctanesulfonamide (FOSA)	1.8	U	1.8	0.88	ng/L		11/22/23 05:24	11/27/23 02:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.5	U	4.5	1.1	ng/L		11/22/23 05:24	11/27/23 02:20	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.5	U	4.5	1.2	ng/L		11/22/23 05:24	11/27/23 02:20	1
4:2 FTS	1.8	U	1.8	0.22	ng/L		11/22/23 05:24	11/27/23 02:20	1
6:2 FTS	4.5	U	4.5	2.2	ng/L		11/22/23 05:24	11/27/23 02:20	1
8:2 FTS	1.8	U	1.8	0.41	ng/L		11/22/23 05:24	11/27/23 02:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.8	U	1.8	0.36	ng/L		11/22/23 05:24	11/27/23 02:20	1
HFPO-DA (GenX)	3.6	U	3.6	1.3	ng/L		11/22/23 05:24	11/27/23 02:20	1
9CI-PF3ONS	1.8	U	1.8	0.22	ng/L		11/22/23 05:24	11/27/23 02:20	1
11CI-PF3OUdS	1.8	U	1.8	0.29	ng/L		11/22/23 05:24	11/27/23 02:20	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	99		25 - 150	11/22/23 05:24	11/27/23 02:20	1
13C5 PFPeA	103		25 - 150	11/22/23 05:24	11/27/23 02:20	1
13C2 PFHxA	90		25 - 150	11/22/23 05:24	11/27/23 02:20	1
13C4 PFHpA	96		25 - 150	11/22/23 05:24	11/27/23 02:20	1
13C4 PFOA	99		25 - 150	11/22/23 05:24	11/27/23 02:20	1
13C5 PFNA	94		25 - 150	11/22/23 05:24	11/27/23 02:20	1
13C2 PFDA	100		25 - 150	11/22/23 05:24	11/27/23 02:20	1
13C2 PFUnA	96		25 - 150	11/22/23 05:24	11/27/23 02:20	1
13C2 PFDoA	96		25 - 150	11/22/23 05:24	11/27/23 02:20	1
13C2 PFTeDA	101		25 - 150	11/22/23 05:24	11/27/23 02:20	1
13C3 PFBS	94		25 - 150	11/22/23 05:24	11/27/23 02:20	1
18O2 PFHxS	86		25 - 150	11/22/23 05:24	11/27/23 02:20	1
13C4 PFOS	89		25 - 150	11/22/23 05:24	11/27/23 02:20	1
13C8 FOSA	94		25 - 150	11/22/23 05:24	11/27/23 02:20	1
d3-NMeFOSAA	98		25 - 150	11/22/23 05:24	11/27/23 02:20	1
d5-NEtFOSAA	101		25 - 150	11/22/23 05:24	11/27/23 02:20	1
M2-6:2 FTS	84		25 - 150	11/22/23 05:24	11/27/23 02:20	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Client Sample ID: WT-12573440-111023-BB-002

Date Collected: 11/10/23 12:25

Date Received: 11/11/23 09:30

Lab Sample ID: 240-195333-2

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-8:2 FTS	83		25 - 150	11/22/23 05:24	11/27/23 02:20	1
M2-4:2 FTS	74		25 - 150	11/22/23 05:24	11/27/23 02:20	1
13C3 HFPO-DA	88		25 - 150	11/22/23 05:24	11/27/23 02:20	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: W-12573440-111023-BB-003

Date Collected: 11/10/23 12:15

Date Received: 11/11/23 09:30

Lab Sample ID: 240-195333-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	10		4.5	2.1	ng/L		11/22/23 05:24	11/27/23 02:30	1
Perfluoropentanoic acid (PFPeA)	3.5		1.8	0.44	ng/L		11/22/23 05:24	11/27/23 02:30	1
Perfluorohexanoic acid (PFHxA)	3.1		1.8	0.52	ng/L		11/22/23 05:24	11/27/23 02:30	1
Perfluoroheptanoic acid (PFHpA)	1.8		1.8	0.22	ng/L		11/22/23 05:24	11/27/23 02:30	1
Perfluorooctanoic acid (PFOA)	6.0		1.8	0.76	ng/L		11/22/23 05:24	11/27/23 02:30	1
Perfluorononanoic acid (PFNA)	0.53	J	1.8	0.24	ng/L		11/22/23 05:24	11/27/23 02:30	1
Perfluorodecanoic acid (PFDA)	1.8	U	1.8	0.28	ng/L		11/22/23 05:24	11/27/23 02:30	1
Perfluoroundecanoic acid (PFUnA)	1.8	U	1.8	0.98	ng/L		11/22/23 05:24	11/27/23 02:30	1
Perfluorododecanoic acid (PFDoA)	1.8	U	1.8	0.49	ng/L		11/22/23 05:24	11/27/23 02:30	1
Perfluorotridecanoic acid (PFTriA)	1.8	U	1.8	1.2	ng/L		11/22/23 05:24	11/27/23 02:30	1
Perfluorotetradecanoic acid (PFTeA)	1.8	U	1.8	0.65	ng/L		11/22/23 05:24	11/27/23 02:30	1
Perfluorobutanesulfonic acid (PFBS)	1.9		1.8	0.18	ng/L		11/22/23 05:24	11/27/23 02:30	1
Perfluoropentanesulfonic acid (PFPeS)	1.4	J	1.8	0.27	ng/L		11/22/23 05:24	11/27/23 02:30	1
Perfluorohexanesulfonic acid (PFHxS)	8.9	I	1.8	0.51	ng/L		11/22/23 05:24	11/27/23 02:30	1
Perfluoroheptanesulfonic acid (PFHpS)	1.7	J I	1.8	0.17	ng/L		11/22/23 05:24	11/27/23 02:30	1
Perfluorooctanesulfonic acid (PFOS)	90	I	1.8	0.48	ng/L		11/22/23 05:24	11/27/23 02:30	1
Perfluorononanesulfonic acid (PFNS)	1.8	U	1.8	0.33	ng/L		11/22/23 05:24	11/27/23 02:30	1
Perfluorodecanesulfonic acid (PFDS)	1.8	U	1.8	0.29	ng/L		11/22/23 05:24	11/27/23 02:30	1
Perfluorooctanesulfonamide (FOSA)	1.8	U	1.8	0.88	ng/L		11/22/23 05:24	11/27/23 02:30	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.5	U	4.5	1.1	ng/L		11/22/23 05:24	11/27/23 02:30	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.5	U	4.5	1.2	ng/L		11/22/23 05:24	11/27/23 02:30	1
4:2 FTS	1.8	U	1.8	0.21	ng/L		11/22/23 05:24	11/27/23 02:30	1
6:2 FTS	4.5	U	4.5	2.2	ng/L		11/22/23 05:24	11/27/23 02:30	1
8:2 FTS	1.8	U	1.8	0.41	ng/L		11/22/23 05:24	11/27/23 02:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.8	U	1.8	0.36	ng/L		11/22/23 05:24	11/27/23 02:30	1
HFPO-DA (GenX)	3.6	U	3.6	1.3	ng/L		11/22/23 05:24	11/27/23 02:30	1
9CI-PF3ONS	1.8	U	1.8	0.21	ng/L		11/22/23 05:24	11/27/23 02:30	1
11CI-PF3OUdS	1.8	U	1.8	0.29	ng/L		11/22/23 05:24	11/27/23 02:30	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	79		25 - 150	11/22/23 05:24	11/27/23 02:30	1
13C5 PFPeA	86		25 - 150	11/22/23 05:24	11/27/23 02:30	1
13C2 PFHxA	94		25 - 150	11/22/23 05:24	11/27/23 02:30	1
13C4 PFHpA	90		25 - 150	11/22/23 05:24	11/27/23 02:30	1
13C4 PFOA	99		25 - 150	11/22/23 05:24	11/27/23 02:30	1
13C5 PFNA	94		25 - 150	11/22/23 05:24	11/27/23 02:30	1
13C2 PFDA	95		25 - 150	11/22/23 05:24	11/27/23 02:30	1
13C2 PFUnA	91		25 - 150	11/22/23 05:24	11/27/23 02:30	1
13C2 PFDoA	89		25 - 150	11/22/23 05:24	11/27/23 02:30	1
13C2 PFTeDA	87		25 - 150	11/22/23 05:24	11/27/23 02:30	1
13C3 PFBS	85		25 - 150	11/22/23 05:24	11/27/23 02:30	1
18O2 PFHxS	81		25 - 150	11/22/23 05:24	11/27/23 02:30	1
13C4 PFOS	89		25 - 150	11/22/23 05:24	11/27/23 02:30	1
13C8 FOSA	86		25 - 150	11/22/23 05:24	11/27/23 02:30	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Client Sample ID: W-12573440-111023-BB-003

Date Collected: 11/10/23 12:15

Date Received: 11/11/23 09:30

Lab Sample ID: 240-195333-3

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d3-NMeFOSAA	91		25 - 150	11/22/23 05:24	11/27/23 02:30	1
d5-NEtFOSAA	88		25 - 150	11/22/23 05:24	11/27/23 02:30	1
M2-6:2 FTS	102		25 - 150	11/22/23 05:24	11/27/23 02:30	1
M2-8:2 FTS	90		25 - 150	11/22/23 05:24	11/27/23 02:30	1
M2-4:2 FTS	102		25 - 150	11/22/23 05:24	11/27/23 02:30	1
13C3 HFPO-DA	80		25 - 150	11/22/23 05:24	11/27/23 02:30	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: FB-12573440-111023-BB-004

Date Collected: 11/10/23 12:10

Date Received: 11/11/23 09:30

Lab Sample ID: 240-195333-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.3	U	4.3	2.1	ng/L		11/22/23 05:24	11/27/23 02:40	1
Perfluoropentanoic acid (PFPeA)	1.7	U	1.7	0.42	ng/L		11/22/23 05:24	11/27/23 02:40	1
Perfluorohexanoic acid (PFHxA)	1.7	U	1.7	0.50	ng/L		11/22/23 05:24	11/27/23 02:40	1
Perfluoroheptanoic acid (PFHpA)	1.7	U	1.7	0.22	ng/L		11/22/23 05:24	11/27/23 02:40	1
Perfluorooctanoic acid (PFOA)	1.7	U	1.7	0.74	ng/L		11/22/23 05:24	11/27/23 02:40	1
Perfluorononanoic acid (PFNA)	1.7	U	1.7	0.23	ng/L		11/22/23 05:24	11/27/23 02:40	1
Perfluorodecanoic acid (PFDA)	1.7	U	1.7	0.27	ng/L		11/22/23 05:24	11/27/23 02:40	1
Perfluoroundecanoic acid (PFUnA)	1.7	U	1.7	0.95	ng/L		11/22/23 05:24	11/27/23 02:40	1
Perfluorododecanoic acid (PFDoA)	1.7	U	1.7	0.48	ng/L		11/22/23 05:24	11/27/23 02:40	1
Perfluorotridecanoic acid (PFTriA)	1.7	U	1.7	1.1	ng/L		11/22/23 05:24	11/27/23 02:40	1
Perfluorotetradecanoic acid (PFTeA)	1.7	U	1.7	0.63	ng/L		11/22/23 05:24	11/27/23 02:40	1
Perfluorobutanesulfonic acid (PFBS)	1.7	U	1.7	0.17	ng/L		11/22/23 05:24	11/27/23 02:40	1
Perfluoropentanesulfonic acid (PFPeS)	1.7	U	1.7	0.26	ng/L		11/22/23 05:24	11/27/23 02:40	1
Perfluorohexanesulfonic acid (PFHxS)	1.7	U	1.7	0.49	ng/L		11/22/23 05:24	11/27/23 02:40	1
Perfluoroheptanesulfonic acid (PFHpS)	1.7	U	1.7	0.16	ng/L		11/22/23 05:24	11/27/23 02:40	1
Perfluorooctanesulfonic acid (PFOS)	1.7	U	1.7	0.47	ng/L		11/22/23 05:24	11/27/23 02:40	1
Perfluorononanesulfonic acid (PFNS)	1.7	U	1.7	0.32	ng/L		11/22/23 05:24	11/27/23 02:40	1
Perfluorodecanesulfonic acid (PFDS)	1.7	U	1.7	0.28	ng/L		11/22/23 05:24	11/27/23 02:40	1
Perfluorooctanesulfonamide (FOSA)	1.7	U	1.7	0.85	ng/L		11/22/23 05:24	11/27/23 02:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.3	U	4.3	1.0	ng/L		11/22/23 05:24	11/27/23 02:40	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.3	U	4.3	1.1	ng/L		11/22/23 05:24	11/27/23 02:40	1
4:2 FTS	1.7	U	1.7	0.21	ng/L		11/22/23 05:24	11/27/23 02:40	1
6:2 FTS	4.3	U	4.3	2.2	ng/L		11/22/23 05:24	11/27/23 02:40	1
8:2 FTS	1.7	U	1.7	0.40	ng/L		11/22/23 05:24	11/27/23 02:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.7	U	1.7	0.35	ng/L		11/22/23 05:24	11/27/23 02:40	1
HFPO-DA (GenX)	3.5	U	3.5	1.3	ng/L		11/22/23 05:24	11/27/23 02:40	1
9CI-PF3ONS	1.7	U	1.7	0.21	ng/L		11/22/23 05:24	11/27/23 02:40	1
11CI-PF3OUdS	1.7	U	1.7	0.28	ng/L		11/22/23 05:24	11/27/23 02:40	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	101		25 - 150	11/22/23 05:24	11/27/23 02:40	1
13C5 PFPeA	97		25 - 150	11/22/23 05:24	11/27/23 02:40	1
13C2 PFHxA	90		25 - 150	11/22/23 05:24	11/27/23 02:40	1
13C4 PFHpA	96		25 - 150	11/22/23 05:24	11/27/23 02:40	1
13C4 PFOA	99		25 - 150	11/22/23 05:24	11/27/23 02:40	1
13C5 PFNA	98		25 - 150	11/22/23 05:24	11/27/23 02:40	1
13C2 PFDA	102		25 - 150	11/22/23 05:24	11/27/23 02:40	1
13C2 PFUnA	105		25 - 150	11/22/23 05:24	11/27/23 02:40	1
13C2 PFDoA	101		25 - 150	11/22/23 05:24	11/27/23 02:40	1
13C2 PFTeDA	101		25 - 150	11/22/23 05:24	11/27/23 02:40	1
13C3 PFBS	93		25 - 150	11/22/23 05:24	11/27/23 02:40	1
18O2 PFHxS	87		25 - 150	11/22/23 05:24	11/27/23 02:40	1
13C4 PFOS	93		25 - 150	11/22/23 05:24	11/27/23 02:40	1
13C8 FOSA	96		25 - 150	11/22/23 05:24	11/27/23 02:40	1
d3-NMeFOSAA	105		25 - 150	11/22/23 05:24	11/27/23 02:40	1
d5-NEtFOSAA	101		25 - 150	11/22/23 05:24	11/27/23 02:40	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Client Sample ID: FB-12573440-111023-BB-004

Date Collected: 11/10/23 12:10

Date Received: 11/11/23 09:30

Lab Sample ID: 240-195333-4

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	79		25 - 150	11/22/23 05:24	11/27/23 02:40	1
M2-8:2 FTS	91		25 - 150	11/22/23 05:24	11/27/23 02:40	1
M2-4:2 FTS	77		25 - 150	11/22/23 05:24	11/27/23 02:40	1
13C3 HFPO-DA	90		25 - 150	11/22/23 05:24	11/27/23 02:40	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - RA

Client Sample ID: WT-12573440-111023-BB-002

Date Collected: 11/10/23 12:25

Date Received: 11/11/23 09:30

Lab Sample ID: 240-195333-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	2.3	I	1.8	0.49	ng/L		11/22/23 05:24	11/30/23 00:07	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
¹³ C4 PFOS	92		25 - 150				11/22/23 05:24	11/30/23 00:07	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

LCMS

Prep Batch: 722290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-195333-2	WT-12573440-111023-BB-002	Total/NA	Water	3535	
240-195333-2 - RA	WT-12573440-111023-BB-002	Total/NA	Water	3535	
240-195333-3	W-12573440-111023-BB-003	Total/NA	Water	3535	
240-195333-4	FB-12573440-111023-BB-004	Total/NA	Water	3535	
MB 320-722290/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-722290/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-722290/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 722863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-195333-2	WT-12573440-111023-BB-002	Total/NA	Water	537 (modified)	722290
240-195333-3	W-12573440-111023-BB-003	Total/NA	Water	537 (modified)	722290
240-195333-4	FB-12573440-111023-BB-004	Total/NA	Water	537 (modified)	722290
MB 320-722290/1-A	Method Blank	Total/NA	Water	537 (modified)	722290
LCS 320-722290/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	722290
LCSD 320-722290/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	722290

Analysis Batch: 723965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-195333-2 - RA	WT-12573440-111023-BB-002	Total/NA	Water	537 (modified)	722290

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-722290/1-A

Matrix: Water

Analysis Batch: 722863

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 722290

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.0	U	5.0	2.4	ng/L		11/22/23 05:24	11/26/23 23:27	1
Perfluoropentanoic acid (PFPeA)	2.0	U	2.0	0.49	ng/L		11/22/23 05:24	11/26/23 23:27	1
Perfluorohexanoic acid (PFHxA)	2.0	U	2.0	0.58	ng/L		11/22/23 05:24	11/26/23 23:27	1
Perfluoroheptanoic acid (PFHpA)	2.0	U	2.0	0.25	ng/L		11/22/23 05:24	11/26/23 23:27	1
Perfluorooctanoic acid (PFOA)	2.0	U	2.0	0.85	ng/L		11/22/23 05:24	11/26/23 23:27	1
Perfluorononanoic acid (PFNA)	2.0	U	2.0	0.27	ng/L		11/22/23 05:24	11/26/23 23:27	1
Perfluorodecanoic acid (PFDA)	2.0	U	2.0	0.31	ng/L		11/22/23 05:24	11/26/23 23:27	1
Perfluoroundecanoic acid (PFUnA)	2.0	U	2.0	1.1	ng/L		11/22/23 05:24	11/26/23 23:27	1
Perfluorododecanoic acid (PFDoA)	2.0	U	2.0	0.55	ng/L		11/22/23 05:24	11/26/23 23:27	1
Perfluorotridecanoic acid (PFTriA)	2.0	U	2.0	1.3	ng/L		11/22/23 05:24	11/26/23 23:27	1
Perfluorotetradecanoic acid (PFTeA)	2.0	U	2.0	0.73	ng/L		11/22/23 05:24	11/26/23 23:27	1
Perfluorobutanesulfonic acid (PFBS)	2.0	U	2.0	0.20	ng/L		11/22/23 05:24	11/26/23 23:27	1
Perfluoropentanesulfonic acid (PFPeS)	2.0	U	2.0	0.30	ng/L		11/22/23 05:24	11/26/23 23:27	1
Perfluorohexanesulfonic acid (PFHxS)	2.0	U	2.0	0.57	ng/L		11/22/23 05:24	11/26/23 23:27	1
Perfluoroheptanesulfonic acid (PFHpS)	2.0	U	2.0	0.19	ng/L		11/22/23 05:24	11/26/23 23:27	1
Perfluorooctanesulfonic acid (PFOS)	2.0	U	2.0	0.54	ng/L		11/22/23 05:24	11/26/23 23:27	1
Perfluorononanesulfonic acid (PFNS)	2.0	U	2.0	0.37	ng/L		11/22/23 05:24	11/26/23 23:27	1
Perfluorodecanesulfonic acid (PFDS)	2.0	U	2.0	0.32	ng/L		11/22/23 05:24	11/26/23 23:27	1
Perfluorooctanesulfonamide (FOSA)	2.0	U	2.0	0.98	ng/L		11/22/23 05:24	11/26/23 23:27	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	5.0	U	5.0	1.2	ng/L		11/22/23 05:24	11/26/23 23:27	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.0	U	5.0	1.3	ng/L		11/22/23 05:24	11/26/23 23:27	1
4:2 FTS	2.0	U	2.0	0.24	ng/L		11/22/23 05:24	11/26/23 23:27	1
6:2 FTS	5.0	U	5.0	2.5	ng/L		11/22/23 05:24	11/26/23 23:27	1
8:2 FTS	2.0	U	2.0	0.46	ng/L		11/22/23 05:24	11/26/23 23:27	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.0	U	2.0	0.40	ng/L		11/22/23 05:24	11/26/23 23:27	1
HFPO-DA (GenX)	4.0	U	4.0	1.5	ng/L		11/22/23 05:24	11/26/23 23:27	1
9CI-PF3ONS	2.0	U	2.0	0.24	ng/L		11/22/23 05:24	11/26/23 23:27	1
11CI-PF3OUdS	2.0	U	2.0	0.32	ng/L		11/22/23 05:24	11/26/23 23:27	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	102		25 - 150	11/22/23 05:24	11/26/23 23:27	1
13C5 PFPeA	100		25 - 150	11/22/23 05:24	11/26/23 23:27	1
13C2 PFHxA	92		25 - 150	11/22/23 05:24	11/26/23 23:27	1
13C4 PFHpA	99		25 - 150	11/22/23 05:24	11/26/23 23:27	1
13C4 PFOA	104		25 - 150	11/22/23 05:24	11/26/23 23:27	1
13C5 PFNA	100		25 - 150	11/22/23 05:24	11/26/23 23:27	1
13C2 PFDA	110		25 - 150	11/22/23 05:24	11/26/23 23:27	1
13C2 PFUnA	108		25 - 150	11/22/23 05:24	11/26/23 23:27	1
13C2 PFDoA	103		25 - 150	11/22/23 05:24	11/26/23 23:27	1
13C2 PFTeDA	99		25 - 150	11/22/23 05:24	11/26/23 23:27	1
13C3 PFBS	97		25 - 150	11/22/23 05:24	11/26/23 23:27	1
18O2 PFHxS	89		25 - 150	11/22/23 05:24	11/26/23 23:27	1
13C4 PFOS	98		25 - 150	11/22/23 05:24	11/26/23 23:27	1
13C8 FOSA	91		25 - 150	11/22/23 05:24	11/26/23 23:27	1
d3-NMeFOSAA	116		25 - 150	11/22/23 05:24	11/26/23 23:27	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-722290/1-A

Matrix: Water

Analysis Batch: 722863

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 722290

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	109		25 - 150	11/22/23 05:24	11/26/23 23:27	1
M2-6:2 FTS	88		25 - 150	11/22/23 05:24	11/26/23 23:27	1
M2-8:2 FTS	109		25 - 150	11/22/23 05:24	11/26/23 23:27	1
M2-4:2 FTS	85		25 - 150	11/22/23 05:24	11/26/23 23:27	1
13C3 HFPO-DA	95		25 - 150	11/22/23 05:24	11/26/23 23:27	1

Lab Sample ID: LCS 320-722290/2-A

Matrix: Water

Analysis Batch: 722863

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 722290

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	42.8		ng/L		107	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	41.2		ng/L		103	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	42.3		ng/L		106	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	43.4		ng/L		109	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	39.1		ng/L		98	70 - 130
Perfluorononanoic acid (PFNA)	40.0	43.2		ng/L		108	75 - 135
Perfluorodecanoic acid (PFDA)	40.0	42.9		ng/L		107	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	39.4		ng/L		99	68 - 128
Perfluorododecanoic acid (PFDoA)	40.0	43.6		ng/L		109	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	40.6		ng/L		101	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	37.1		ng/L		93	70 - 130
Perfluorobutanesulfonic acid (PFBS)	35.5	31.2		ng/L		88	67 - 127
Perfluoropentanesulfonic acid (PFPeS)	37.6	33.2		ng/L		88	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	36.5	39.0		ng/L		107	59 - 119
Perfluoroheptanesulfonic acid (PFHpS)	38.2	37.5		ng/L		98	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.2	40.3		ng/L		108	70 - 130
Perfluorononanesulfonic acid (PFNS)	38.5	40.5		ng/L		105	75 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	41.2		ng/L		107	71 - 131
Perfluorooctanesulfonamide (FOSA)	40.0	43.1		ng/L		108	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	43.2		ng/L		108	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	41.8		ng/L		104	76 - 136
4:2 FTS	37.5	43.7		ng/L		116	79 - 139
6:2 FTS	38.1	40.4		ng/L		106	59 - 175
8:2 FTS	38.4	45.2		ng/L		118	75 - 135
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	37.6		ng/L		99	79 - 139
HFPO-DA (GenX)	40.0	39.4		ng/L		98	51 - 173
9CI-PF3ONS	37.4	36.4		ng/L		97	75 - 135

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-722290/2-A

Matrix: Water

Analysis Batch: 722863

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 722290

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11CI-PF3OUdS	37.8	40.1		ng/L		106	54 - 114
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
13C4 PFBA	101		25 - 150				
13C5 PFPeA	100		25 - 150				
13C2 PFHxA	98		25 - 150				
13C4 PFHpA	101		25 - 150				
13C4 PFOA	101		25 - 150				
13C5 PFNA	97		25 - 150				
13C2 PFDA	101		25 - 150				
13C2 PFUnA	107		25 - 150				
13C2 PFDoA	110		25 - 150				
13C2 PFTeDA	104		25 - 150				
13C3 PFBS	105		25 - 150				
18O2 PFHxS	93		25 - 150				
13C4 PFOS	95		25 - 150				
13C8 FOSA	92		25 - 150				
d3-NMeFOSAA	101		25 - 150				
d5-NEtFOSAA	98		25 - 150				
M2-6:2 FTS	91		25 - 150				
M2-8:2 FTS	100		25 - 150				
M2-4:2 FTS	89		25 - 150				
13C3 HFPO-DA	88		25 - 150				

Lab Sample ID: LCSD 320-722290/3-A

Matrix: Water

Analysis Batch: 722863

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 722290

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	40.0	42.3		ng/L		106	76 - 136	1	30
Perfluoropentanoic acid (PFPeA)	40.0	41.3		ng/L		103	71 - 131	0	30
Perfluorohexanoic acid (PFHxA)	40.0	46.3		ng/L		116	73 - 133	9	30
Perfluoroheptanoic acid (PFHpA)	40.0	41.0		ng/L		103	72 - 132	6	30
Perfluorooctanoic acid (PFOA)	40.0	39.2		ng/L		98	70 - 130	0	30
Perfluorononanoic acid (PFNA)	40.0	41.4		ng/L		104	75 - 135	4	30
Perfluorodecanoic acid (PFDA)	40.0	44.5		ng/L		111	76 - 136	4	30
Perfluoroundecanoic acid (PFUnA)	40.0	41.0		ng/L		102	68 - 128	4	30
Perfluorododecanoic acid (PFDoA)	40.0	43.9		ng/L		110	71 - 131	1	30
Perfluorotridecanoic acid (PFTriA)	40.0	40.7		ng/L		102	71 - 131	0	30
Perfluorotetradecanoic acid (PFTeA)	40.0	36.1		ng/L		90	70 - 130	3	30
Perfluorobutanesulfonic acid (PFBS)	35.5	33.3		ng/L		94	67 - 127	6	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	36.1		ng/L		96	66 - 126	8	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	40.1		ng/L		110	59 - 119	3	30

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-722290/3-A

Matrix: Water

Analysis Batch: 722863

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 722290

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoroheptanesulfonic acid (PFHpS)	38.2	39.6		ng/L		104	76 - 136	5	30
Perfluorooctanesulfonic acid (PFOS)	37.2	41.5		ng/L		112	70 - 130	3	30
Perfluorononanesulfonic acid (PFNS)	38.5	43.0		ng/L		112	75 - 135	6	30
Perfluorodecanesulfonic acid (PFDS)	38.6	42.6		ng/L		111	71 - 131	3	30
Perfluorooctanesulfonamide (FOSA)	40.0	44.1		ng/L		110	73 - 133	2	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	42.2		ng/L		105	76 - 136	2	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	42.0		ng/L		105	76 - 136	1	30
4:2 FTS	37.5	40.3		ng/L		108	79 - 139	8	30
6:2 FTS	38.1	42.3		ng/L		111	59 - 175	5	30
8:2 FTS	38.4	49.7		ng/L		129	75 - 135	9	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	38.8		ng/L		103	79 - 139	3	30
HFPO-DA (GenX)	40.0	38.3		ng/L		96	51 - 173	3	30
9CI-PF3ONS	37.4	39.2		ng/L		105	75 - 135	7	30
11CI-PF3OUdS	37.8	41.9		ng/L		111	54 - 114	4	30

Isotope Dilution	%Recovery	LCSD Qualifier	LCSD Limits
13C4 PFBA	97		25 - 150
13C5 PFPeA	96		25 - 150
13C2 PFHxA	93		25 - 150
13C4 PFHpA	92		25 - 150
13C4 PFOA	94		25 - 150
13C5 PFNA	96		25 - 150
13C2 PFDA	97		25 - 150
13C2 PFUnA	97		25 - 150
13C2 PFDoA	108		25 - 150
13C2 PFTeDA	103		25 - 150
13C3 PFBS	97		25 - 150
18O2 PFHxS	86		25 - 150
13C4 PFOS	89		25 - 150
13C8 FOSA	89		25 - 150
d3-NMeFOSAA	101		25 - 150
d5-NEtFOSAA	100		25 - 150
M2-6:2 FTS	87		25 - 150
M2-8:2 FTS	89		25 - 150
M2-4:2 FTS	88		25 - 150
13C3 HFPO-DA	89		25 - 150

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Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

Client Sample ID: WT-12573440-111023-BB-002

Lab Sample ID: 240-195333-2

Date Collected: 11/10/23 12:25

Matrix: Water

Date Received: 11/11/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			722290	GAT	EET SAC	11/22/23 05:24
Total/NA	Analysis	537 (modified)		1	722863	C1P	EET SAC	11/27/23 02:20
Total/NA	Prep	3535	RA		722290	GAT	EET SAC	11/22/23 05:24
Total/NA	Analysis	537 (modified)	RA	1	723965	SEY	EET SAC	11/30/23 00:07

Client Sample ID: W-12573440-111023-BB-003

Lab Sample ID: 240-195333-3

Date Collected: 11/10/23 12:15

Matrix: Water

Date Received: 11/11/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			722290	GAT	EET SAC	11/22/23 05:24
Total/NA	Analysis	537 (modified)		1	722863	C1P	EET SAC	11/27/23 02:30

Client Sample ID: FB-12573440-111023-BB-004

Lab Sample ID: 240-195333-4

Date Collected: 11/10/23 12:10

Matrix: Water

Date Received: 11/11/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			722290	GAT	EET SAC	11/22/23 05:24
Total/NA	Analysis	537 (modified)		1	722863	C1P	EET SAC	11/27/23 02:40

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	02-20-24
ANAB	Dept. of Defense ELAP	L2468	01-20-24
ANAB	Dept. of Energy	L2468.01	01-20-24
ANAB	ISO/IEC 17025	L2468	01-20-24
Arizona	State	AZ0708	08-11-24
Arkansas DEQ	State	88-0691	05-18-24
California	State	2897	01-22-24
Colorado	State	CA00044	08-31-24
Florida	NELAP	E87570	06-30-24
Georgia	State	4040	01-29-24
Hawaii	State	<cert No.>	01-29-24
Illinois	NELAP	200060	03-17-24
Kansas	NELAP	E-10375	10-31-24
Louisiana (All)	NELAP	01944	06-30-24
Maine	State	CA00004	04-14-24
Michigan	State	9947	01-31-24
Nevada	State	CA00044	07-31-24
New Hampshire	NELAP	2997	04-18-24
New Jersey	NELAP	CA005	06-30-24
New York	NELAP	11666	04-01-24
Ohio	State	41252	01-29-24
Oregon	NELAP	4040	01-29-24
Texas	NELAP	T104704399-23-17	05-31-24
US Fish & Wildlife	US Federal Programs	58448	04-30-24
USDA	US Federal Programs	P330-18-00239	02-28-26
Utah	NELAP	CA000442023-16	02-29-24
Virginia	NELAP	460278	03-14-24
Washington	State	C581	05-05-24
West Virginia (DW)	State	9930C	12-31-23
Wisconsin	State	998204680	08-31-24
Wyoming	State Program	8TMS-L	01-28-19 *

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

Eurofins Cleveland

[illegible]

Eurofins - Cleveland Sample Receipt Form/Narrative

Login # : _____

Barberton Facility

Client GHD

Site Name _____

Cooler unpacked by: M. XolaCooler Received on 11-11-23Opened on 11-13-23FedEx: 1st Gfd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____

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

Storage Location _____

Eurofins Cooler # 22 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 FormIR GUN # 22 (CF 1.1 °C) Observed Cooler Temp. 3.1 °C Corrected Cooler Temp. 6.2 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____

Yes ☒ No ☐ NA ☐-Were the seals on the outside of the cooler(s) signed & dated? Yes ☒ No ☐ NA ☐-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes ☒ No ☐ NA ☐-Were tamper/custody seals intact and uncompromised? Yes ☒ No ☐ NA ☐3. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐4. Did custody papers accompany the sample(s)? Yes ☒ No ☐5. Were the custody papers relinquished & signed in the appropriate place? Yes ☒ No ☐6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes ☒ No ☐7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐8. Could all bottle labels (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)? Yes ☒ No ☐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# HC316719

14. Were VOAs on the COC? Yes ☒ No ☐ NA ☐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 ☐

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: _____

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 240-195333-2

Login Number: 195333

List Number: 2

Creator: Simmons, Jason C

List Source: Eurofins Sacramento

List Creation: 11/14/23 03:35 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.7c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-195333-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
240-195333-2	WT-12573440-111023-BB-002	99	103	90	96	99	94	100	96
240-195333-2 - RA	WT-12573440-111023-BB-002								
240-195333-3	W-12573440-111023-BB-003	79	86	94	90	99	94	95	91
240-195333-4	FB-12573440-111023-BB-004	101	97	90	96	99	98	102	105
LCS 320-722290/2-A	Lab Control Sample	101	100	98	101	101	97	101	107
LCSD 320-722290/3-A	Lab Control Sample Dup	97	96	93	92	94	96	97	97
MB 320-722290/1-A	Method Blank	102	100	92	99	104	100	110	108

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
240-195333-2	WT-12573440-111023-BB-002	96	101	94	86	89	94	98	101
240-195333-2 - RA	WT-12573440-111023-BB-002					92			
240-195333-3	W-12573440-111023-BB-003	89	87	85	81	89	86	91	88
240-195333-4	FB-12573440-111023-BB-004	101	101	93	87	93	96	105	101
LCS 320-722290/2-A	Lab Control Sample	110	104	105	93	95	92	101	98
LCSD 320-722290/3-A	Lab Control Sample Dup	108	103	97	86	89	89	101	100
MB 320-722290/1-A	Method Blank	103	99	97	89	98	91	116	109

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M262FTS (25-150)	M282FTS (25-150)	M242FTS (25-150)	HFPODA (25-150)
240-195333-2	WT-12573440-111023-BB-002	84	83	74	88
240-195333-2 - RA	WT-12573440-111023-BB-002				
240-195333-3	W-12573440-111023-BB-003	102	90	102	80
240-195333-4	FB-12573440-111023-BB-004	79	91	77	90
LCS 320-722290/2-A	Lab Control Sample	91	100	89	88
LCSD 320-722290/3-A	Lab Control Sample Dup	87	89	88	89
MB 320-722290/1-A	Method Blank	88	109	85	95

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
M242FTS = M2-4:2 FTS
HFPODA = 13C3 HFPO-DA

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Attachment 4

**Laboratory Analytical Reports for
December 18, 2023 Samples**



ANALYTICAL REPORT

PREPARED FOR

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

Generated 12/27/2023 9:41:21 AM

JOB DESCRIPTION

12573440-T37Y23-01, RACER Eckles

JOB NUMBER

240-197173-1

Eurofins Cleveland

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



Generated
12/27/2023 9:41:21 AM

Authorized for release by
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Case Narrative

Client: GHD Services Inc.
Project: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-1

Job ID: 240-197173-1

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Job Narrative 240-197173-1

Receipt

The samples were received on 12/19/2023 10:30 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 time was 4.8°C

PCBs

Method 608.3_PCB_PREC: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-598214.

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

Metals

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

General Chemistry

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

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-1

Qualifiers

GC Semi VOA

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

Metals

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

General Chemistry

Qualifier	Qualifier Description
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)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-197173-1	WT-12573440-121823-BB-001	Water	12/18/23 14:20	12/19/23 10:30

1

2

3

4

5

6

7

8

9

10

11

12

13

14

Detection Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-1

Client Sample ID: WT-12573440-121823-BB-001

Lab Sample ID: 240-197173-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Nickel	0.59		0.010	mg/L	1		200.7 Rev 4.4	Total Recoverable

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-1

Method	Method Description	Protocol	Laboratory
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
3500-Cr B-2011	Chromium, Hexavalent	SM	EET CLE
SM 2540D	Solids, Total Suspended (TSS)	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 Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-1

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

Client Sample ID: WT-12573440-121823-BB-001

Date Collected: 12/18/23 14:20

Date Received: 12/19/23 10:30

Lab Sample ID: 240-197173-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	ug/L		12/20/23 07:55	12/21/23 13:31	1
Aroclor-1221	0.096	U	0.096	ug/L		12/20/23 07:55	12/21/23 13:31	1
Aroclor-1232	0.096	U	0.096	ug/L		12/20/23 07:55	12/21/23 13:31	1
Aroclor-1242	0.096	U	0.096	ug/L		12/20/23 07:55	12/21/23 13:31	1
Aroclor-1248	0.096	U	0.096	ug/L		12/20/23 07:55	12/21/23 13:31	1
Aroclor-1254	0.096	U	0.096	ug/L		12/20/23 07:55	12/21/23 13:31	1
Aroclor-1260	0.096	U	0.096	ug/L		12/20/23 07:55	12/21/23 13:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	83		10 - 174			12/20/23 07:55	12/21/23 13:31	1
Tetrachloro-m-xylene	73		10 - 149			12/20/23 07:55	12/21/23 13:31	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-1

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

Client Sample ID: WT-12573440-121823-BB-001

Date Collected: 12/18/23 14:20

Date Received: 12/19/23 10:30

Lab Sample ID: 240-197173-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.050	U	0.050	mg/L		12/20/23 17:00	12/21/23 23:42	1
Nickel	0.59		0.010	mg/L		12/20/23 17:00	12/21/23 23:42	1
Lead	0.050	U	0.050	mg/L		12/20/23 17:00	12/21/23 23:42	1
Zinc	0.050	U	0.050	mg/L		12/20/23 17:00	12/21/23 23:42	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-1

Method: EPA 245.1 - Mercury (CVAA)

Client Sample ID: WT-12573440-121823-BB-001					Lab Sample ID: 240-197173-1				
Date Collected: 12/18/23 14:20					Matrix: Water				
Date Received: 12/19/23 10:30									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Mercury	0.00020	U	0.00020	mg/L		12/20/23 14:00	12/21/23 12:05	1	

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-1

General Chemistry

Client Sample ID: WT-12573440-121823-BB-001

Date Collected: 12/18/23 14:20

Date Received: 12/19/23 10:30

Lab Sample ID: 240-197173-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (1664B)	4.7	U	4.7	mg/L			12/21/23 12:03	1
Chromium, hexavalent (SM 3500-Cr B-2011)	0.010	U	0.010	mg/L			12/19/23 11:46	1
Total Suspended Solids (SM 2540D)	4.0	U	4.0	mg/L			12/20/23 11:10	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-1

GC Semi VOA

Prep Batch: 598214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-197173-1	WT-12573440-121823-BB-001	Total/NA	Water	608	
MB 240-598214/1-A	Method Blank	Total/NA	Water	608	
LCS 240-598214/2-A	Lab Control Sample	Total/NA	Water	608	
LCSD 240-598214/3-A	Lab Control Sample Dup	Total/NA	Water	608	

Analysis Batch: 598473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-197173-1	WT-12573440-121823-BB-001	Total/NA	Water	608.3	598214
MB 240-598214/1-A	Method Blank	Total/NA	Water	608.3	598214
LCS 240-598214/2-A	Lab Control Sample	Total/NA	Water	608.3	598214
LCSD 240-598214/3-A	Lab Control Sample Dup	Total/NA	Water	608.3	598214

Metals

Prep Batch: 598244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-197173-1	WT-12573440-121823-BB-001	Total Recoverable	Water	200.7	
MB 240-598244/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 240-598244/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Prep Batch: 598249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-197173-1	WT-12573440-121823-BB-001	Total/NA	Water	245.1	
MB 240-598249/1-A	Method Blank	Total/NA	Water	245.1	
LCS 240-598249/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 598468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-197173-1	WT-12573440-121823-BB-001	Total/NA	Water	245.1	598249
MB 240-598249/1-A	Method Blank	Total/NA	Water	245.1	598249
LCS 240-598249/2-A	Lab Control Sample	Total/NA	Water	245.1	598249

Analysis Batch: 598531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-197173-1	WT-12573440-121823-BB-001	Total Recoverable	Water	200.7 Rev 4.4	598244
MB 240-598244/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	598244
LCS 240-598244/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	598244

General Chemistry

Analysis Batch: 598115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-197173-1	WT-12573440-121823-BB-001	Total/NA	Water	3500-Cr B-2011	
MB 240-598115/9	Method Blank	Total/NA	Water	3500-Cr B-2011	
LCS 240-598115/10	Lab Control Sample	Total/NA	Water	3500-Cr B-2011	
240-197173-1 MS	WT-12573440-121823-BB-001	Total/NA	Water	3500-Cr B-2011	
240-197173-1 MSD	WT-12573440-121823-BB-001	Total/NA	Water	3500-Cr B-2011	

Analysis Batch: 598286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-197173-1	WT-12573440-121823-BB-001	Total/NA	Water	SM 2540D	
MB 240-598286/1	Method Blank	Total/NA	Water	SM 2540D	

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QC Association Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-1

General Chemistry (Continued)

Analysis Batch: 598286 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-598286/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 598459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-197173-1	WT-12573440-121823-BB-001	Total/NA	Water	1664B	
MB 240-598459/1	Method Blank	Total/NA	Water	1664B	
LCS 240-598459/2	Lab Control Sample	Total/NA	Water	1664B	

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-1

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

Lab Sample ID: MB 240-598214/1-A

Matrix: Water

Analysis Batch: 598473

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 598214

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	ug/L		12/20/23 07:55	12/21/23 13:16	1
Aroclor-1221	0.10	U	0.10	ug/L		12/20/23 07:55	12/21/23 13:16	1
Aroclor-1232	0.10	U	0.10	ug/L		12/20/23 07:55	12/21/23 13:16	1
Aroclor-1242	0.10	U	0.10	ug/L		12/20/23 07:55	12/21/23 13:16	1
Aroclor-1248	0.10	U	0.10	ug/L		12/20/23 07:55	12/21/23 13:16	1
Aroclor-1254	0.10	U	0.10	ug/L		12/20/23 07:55	12/21/23 13:16	1
Aroclor-1260	0.10	U	0.10	ug/L		12/20/23 07:55	12/21/23 13:16	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	91		10 - 174			12/20/23 07:55	12/21/23 13:16	1
Tetrachloro-m-xylene	77		10 - 149			12/20/23 07:55	12/21/23 13:16	1

Lab Sample ID: LCS 240-598214/2-A

Matrix: Water

Analysis Batch: 598473

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 598214

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	1.99		ug/L		80	50 - 140
Aroclor-1260	2.50	1.71		ug/L		68	8 - 140
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
DCB Decachlorobiphenyl	80		10 - 174				
Tetrachloro-m-xylene	81		10 - 149				

Lab Sample ID: LCSD 240-598214/3-A

Matrix: Water

Analysis Batch: 598473

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 598214

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aroclor-1016	2.50	1.92		ug/L		77	50 - 140	4	30
Aroclor-1260	2.50	1.78		ug/L		71	8 - 140	4	30
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
DCB Decachlorobiphenyl	86		10 - 174						
Tetrachloro-m-xylene	79		10 - 149						

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-598244/1-A

Matrix: Water

Analysis Batch: 598531

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 598244

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.050	U	0.050	mg/L		12/20/23 17:00	12/21/23 23:11	1
Nickel	0.010	U	0.010	mg/L		12/20/23 17:00	12/21/23 23:11	1
Lead	0.050	U	0.050	mg/L		12/20/23 17:00	12/21/23 23:11	1
Zinc	0.050	U	0.050	mg/L		12/20/23 17:00	12/21/23 23:11	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-1

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

Lab Sample ID: LCS 240-598244/2-A
Matrix: Water
Analysis Batch: 598531

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 598244

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	1.00	0.972		mg/L		97	85 - 115
Nickel	1.00	1.03		mg/L		103	85 - 115
Lead	1.00	0.974		mg/L		97	85 - 115
Zinc	1.00	1.05		mg/L		105	85 - 115

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-598249/1-A
Matrix: Water
Analysis Batch: 598468

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 598249

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	mg/L		12/20/23 14:00	12/21/23 11:50	1

Lab Sample ID: LCS 240-598249/2-A
Matrix: Water
Analysis Batch: 598468

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 598249

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00500	0.00486		mg/L		97	85 - 115

Method: 1664B - HEM and SGT-HEM

Lab Sample ID: MB 240-598459/1
Matrix: Water
Analysis Batch: 598459

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	mg/L			12/21/23 12:03	1

Lab Sample ID: LCS 240-598459/2
Matrix: Water
Analysis Batch: 598459

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	38.9		mg/L		97	78 - 114

Method: 3500-Cr B-2011 - Chromium, Hexavalent

Lab Sample ID: MB 240-598115/9
Matrix: Water
Analysis Batch: 598115

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	0.010	U	0.010	mg/L			12/19/23 10:12	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-1

Method: 3500-Cr B-2011 - Chromium, Hexavalent (Continued)

Lab Sample ID: LCS 240-598115/10

Matrix: Water

Analysis Batch: 598115

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium, hexavalent	0.250	0.264		mg/L		106	85 - 115

Lab Sample ID: 240-197173-1 MS

Matrix: Water

Analysis Batch: 598115

Client Sample ID: WT-12573440-121823-BB-001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium, hexavalent	0.010	U	0.250	0.254		mg/L		102	85 - 115

Lab Sample ID: 240-197173-1 MSD

Matrix: Water

Analysis Batch: 598115

Client Sample ID: WT-12573440-121823-BB-001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent	0.010	U	0.250	0.268		mg/L		107	85 - 115	5	20

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

Lab Sample ID: MB 240-598286/1

Matrix: Water

Analysis Batch: 598286

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	mg/L			12/20/23 11:10	1

Lab Sample ID: LCS 240-598286/2

Matrix: Water

Analysis Batch: 598286

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	54.0	40.0		mg/L		74	64 - 120

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-1

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

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCBP1 (10-174)	TCX1 (10-149)
240-197173-1	WT-12573440-121823-BB-001	83	73
LCS 240-598214/2-A	Lab Control Sample	80	81
LCSD 240-598214/3-A	Lab Control Sample Dup	86	79
MB 240-598214/1-A	Method Blank	91	77
Surrogate Legend			
DCBP = DCB Decachlorobiphenyl			
TCX = Tetrachloro-m-xylene			

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-1

Client Sample ID: WT-12573440-121823-BB-001

Lab Sample ID: 240-197173-1

Date Collected: 12/18/23 14:20

Matrix: Water

Date Received: 12/19/23 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	608			598214	GBS	EET CLE	12/20/23 07:55
Total/NA	Analysis	608.3		1	598473	RR	EET CLE	12/21/23 13:31
Total Recoverable	Prep	200.7			598244	BN	EET CLE	12/20/23 17:00
Total Recoverable	Analysis	200.7 Rev 4.4		1	598531	KLC	EET CLE	12/21/23 23:42
Total/NA	Prep	245.1			598249	BN	EET CLE	12/20/23 14:00
Total/NA	Analysis	245.1		1	598468	S4FJ	EET CLE	12/21/23 12:05
Total/NA	Analysis	1664B		1	598459	JMR	EET CLE	12/21/23 12:03
Total/NA	Analysis	3500-Cr B-2011		1	598115	BLW	EET CLE	12/19/23 11:46
Total/NA	Analysis	SM 2540D		1	598286	C5SV	EET CLE	12/20/23 11:10

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.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-1

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	07-31-24
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	T104704517-22-19	08-31-24
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-23

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

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4.4/4.8

Client Information		Sampler: <u>Byron Bannan</u>		Lab PM: <u>Heckler, Denise D</u>		Camer Tracking No(s):		COC No: <u>240-104106-31279.1</u>	
Client Contact: <u>Chris Meincke</u>		Phone: <u>503 713 8326</u>		E-Mail: <u>Denise.Heckler@et.eurofins.com</u>		State of Origin: <u>MI</u>		Page: <u>Page 1 of 1</u>	
Company: <u>GHD Services Inc.</u>		PWSID:		Analysis Requested		Job #:		Preservation Codes:	
Address: <u>26850 Haggerty Rd.</u>		Due Date Requested:		TAT Requested (days): <u>10 bus days</u>		Compliance Project: <u>Δ Yes Δ No</u>		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:	
City: <u>Farmington Hills</u>		PO #		Purchase Order Requested		Project #		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Y - Trizma Z - other (specify)	
State, Zip: <u>MI, 48331</u>		WO #		12573440		Project #		Special Instructions/Note:	
Phone: <u>612-524-6872(Tel)</u>		Email: <u>chris.meincke@ghd.com</u>		12573440-T37- RACER Eckles Rd		Site		Total Number of containers	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=water/solid, BT=Tissue, A=Air)	
WT- 12573440-121623-BB-001		12/18/23		1420		G		Water	
WT- -002		↓		1425		↓		Water	
W- -003		↓		1430		↓		Water	
FB- -004		↓		1435		↓		Water	
Possible Hazard Identification		Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological ☐		Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Relinquished by <u>Byron Bannan</u>		Date/Time: <u>12/18/23</u>		Company: <u>GHD</u>		Relinquished by		Return To Client ☐ Disposal By Lab ☐ Archive For ☐ Months	
Relinquished by		Date/Time		Company		Relinquished by		Special Instructions/QC Requirements:	
Relinquished by		Date/Time		Company		Relinquished by		Method of Shipment	
Custody Seals Intact: <u>Δ Yes Δ No</u>		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Received by <u>Rachel Hancock</u>		Date/Time: <u>12-19-23 1030</u>	
Company: <u>EEINC</u>		Company		Company		Company		Company	

Eurofins - Cleveland Sample Receipt Form/Narrative
Barberton Facility

Login # : _____

Client GHD Services

Site Name _____

Cooler unpacked by: _____

Cooler Received on 12-19-23

Opened on 12-19-23

FedEx: 1st Grd Exp UPS FAS Waypoint 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 # 21 (CF 10.2 °C) Observed Cooler Temp. 4.6 °C Corrected Cooler Temp. 4.8 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1

-Were the seals on the outside of the cooler(s) signed & dated?

-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?

-Were tamper/custody seals intact and uncompromised?

Yes No

Yes No NA

Yes No

Yes No NA

Yes No

Yes No

Yes No

Yes No

Yes No

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)?

Yes No

Yes No

Yes No

Yes No

13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC316719

Yes No

Yes No NA

Yes No

Yes No

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: _____

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>		<u>Preservation</u>	<u>Preservation</u>
			pH	Temp	<u>Added</u>	<u>Lot Number</u>
WT-12573440-121823-BB-001	240-197173-B-1	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____

ANALYTICAL REPORT

PREPARED FOR

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

Generated 1/12/2024 3:00:03 PM

JOB DESCRIPTION

12573440-T37Y23-01, RACER Eckles

JOB NUMBER

240-197173-2

Eurofins Cleveland

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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1/12/2024 3:00:03 PM

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

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Case Narrative

Client: GHD Services Inc.
Project: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-2

Job ID: 240-197173-2

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Job Narrative 240-197173-2

Receipt

The samples were received on 12/19/2023 10:30 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 4.8° C.

LCMS

Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was above the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty, and the reported value may have some high bias. However, analyst judgment was used to positively identify the analyte: WT-12573440-121823-BB-002 (240-197173-2).

Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte were below the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty, and the reported value may have some high bias. However, analyst judgment was used to positively identify the analyte: FB-12573440-121823-BB-004 (240-197173-4).

Method 537 (modified): The following sample was re-analyzed/re-extracted because the sample is field blank (FB) but has been detected more than RL: FB-12573440-121823-BB-004 (240-197173-4) The re-extraction confirmed. Therefore, the original data has been reported.

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

Organic Prep

Method 3535: The following sample in preparation batch 320-730375 was observed to have a thin layer of sediment present in the bottom of the bottle prior to extraction. FB-12573440-121823-BB-004 (240-197173-4)

Method 3535: Insufficient sample volume was available to perform a matrix spike duplicate (MSD) associated with preparation batch 320-730375.

Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-732227.

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

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-2

Qualifiers

LCMS

Qualifier	Qualifier Description
I	Value is EMPC (estimated maximum possible concentration).
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: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-197173-2	WT-12573440-121823-BB-002	Water	12/18/23 14:25	12/19/23 10:30
240-197173-3	W-12573440-121823-BB-003	Water	12/18/23 14:30	12/19/23 10:30
240-197173-4	FB-12573440-121823-BB-004	Water	12/18/23 14:35	12/19/23 10:30

Detection Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-2

Client Sample ID: WT-12573440-121823-BB-002

Lab Sample ID: 240-197173-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	12		4.9	2.3	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	2.0		2.0	0.48	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.1	J	2.0	0.57	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.29	J	2.0	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.3	J I	2.0	0.83	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.46	J	2.0	0.20	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.71	J I	2.0	0.56	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.3	I	2.0	0.53	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	1.1	J	2.0	0.96	ng/L	1		537 (modified)	Total/NA

Client Sample ID: W-12573440-121823-BB-003

Lab Sample ID: 240-197173-3

No Detections.

Client Sample ID: FB-12573440-121823-BB-004

Lab Sample ID: 240-197173-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	7.6		4.9	2.3	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	3.0		2.0	0.48	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.2		2.0	0.57	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.6	J	2.0	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	6.3		2.0	0.83	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.45	J	2.0	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.1		2.0	0.20	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.3	J	2.0	0.29	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	6.1	I	2.0	0.56	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	1.7	J I	2.0	0.19	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	97	I	2.0	0.53	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

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Method Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-2

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	EET SAC
3535	Solid-Phase Extraction (SPE)	SW846	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: WT-12573440-121823-BB-002

Date Collected: 12/18/23 14:25

Date Received: 12/19/23 10:30

Lab Sample ID: 240-197173-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	12		4.9	2.3	ng/L		12/28/23 12:23	12/31/23 08:03	1
Perfluoropentanoic acid (PFPeA)	2.0		2.0	0.48	ng/L		12/28/23 12:23	12/31/23 08:03	1
Perfluorohexanoic acid (PFHxA)	1.1	J	2.0	0.57	ng/L		12/28/23 12:23	12/31/23 08:03	1
Perfluoroheptanoic acid (PFHpA)	0.29	J	2.0	0.24	ng/L		12/28/23 12:23	12/31/23 08:03	1
Perfluorooctanoic acid (PFOA)	1.3	J I	2.0	0.83	ng/L		12/28/23 12:23	12/31/23 08:03	1
Perfluorononanoic acid (PFNA)	2.0	U	2.0	0.26	ng/L		12/28/23 12:23	12/31/23 08:03	1
Perfluorodecanoic acid (PFDA)	2.0	U	2.0	0.30	ng/L		12/28/23 12:23	12/31/23 08:03	1
Perfluoroundecanoic acid (PFUnA)	2.0	U	2.0	1.1	ng/L		12/28/23 12:23	12/31/23 08:03	1
Perfluorododecanoic acid (PFDoA)	2.0	U	2.0	0.54	ng/L		12/28/23 12:23	12/31/23 08:03	1
Perfluorotridecanoic acid (PFTriA)	2.0	U	2.0	1.3	ng/L		12/28/23 12:23	12/31/23 08:03	1
Perfluorotetradecanoic acid (PFTeA)	2.0	U	2.0	0.71	ng/L		12/28/23 12:23	12/31/23 08:03	1
Perfluorobutanesulfonic acid (PFBS)	0.46	J	2.0	0.20	ng/L		12/28/23 12:23	12/31/23 08:03	1
Perfluoropentanesulfonic acid (PFPeS)	2.0	U	2.0	0.29	ng/L		12/28/23 12:23	12/31/23 08:03	1
Perfluorohexanesulfonic acid (PFHxS)	0.71	J I	2.0	0.56	ng/L		12/28/23 12:23	12/31/23 08:03	1
Perfluoroheptanesulfonic acid (PFHpS)	2.0	U	2.0	0.19	ng/L		12/28/23 12:23	12/31/23 08:03	1
Perfluorooctanesulfonic acid (PFOS)	2.3	I	2.0	0.53	ng/L		12/28/23 12:23	12/31/23 08:03	1
Perfluorononanesulfonic acid (PFNS)	2.0	U	2.0	0.36	ng/L		12/28/23 12:23	12/31/23 08:03	1
Perfluorodecanesulfonic acid (PFDS)	2.0	U	2.0	0.31	ng/L		12/28/23 12:23	12/31/23 08:03	1
Perfluorooctanesulfonamide (FOSA)	1.1	J	2.0	0.96	ng/L		12/28/23 12:23	12/31/23 08:03	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.9	U	4.9	1.2	ng/L		12/28/23 12:23	12/31/23 08:03	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.9	U	4.9	1.3	ng/L		12/28/23 12:23	12/31/23 08:03	1
4:2 FTS	2.0	U	2.0	0.23	ng/L		12/28/23 12:23	12/31/23 08:03	1
6:2 FTS	4.9	U	4.9	2.4	ng/L		12/28/23 12:23	12/31/23 08:03	1
8:2 FTS	2.0	U	2.0	0.45	ng/L		12/28/23 12:23	12/31/23 08:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.0	U	2.0	0.39	ng/L		12/28/23 12:23	12/31/23 08:03	1
HFPO-DA (GenX)	3.9	U	3.9	1.5	ng/L		12/28/23 12:23	12/31/23 08:03	1
9CI-PF3ONS	2.0	U	2.0	0.23	ng/L		12/28/23 12:23	12/31/23 08:03	1
11CI-PF3OUdS	2.0	U	2.0	0.31	ng/L		12/28/23 12:23	12/31/23 08:03	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	103		25 - 150	12/28/23 12:23	12/31/23 08:03	1
13C5 PFPeA	109		25 - 150	12/28/23 12:23	12/31/23 08:03	1
13C2 PFHxA	95		25 - 150	12/28/23 12:23	12/31/23 08:03	1
13C4 PFHpA	104		25 - 150	12/28/23 12:23	12/31/23 08:03	1
13C4 PFOA	95		25 - 150	12/28/23 12:23	12/31/23 08:03	1
13C5 PFNA	88		25 - 150	12/28/23 12:23	12/31/23 08:03	1
13C2 PFDA	91		25 - 150	12/28/23 12:23	12/31/23 08:03	1
13C2 PFUnA	84		25 - 150	12/28/23 12:23	12/31/23 08:03	1
13C2 PFDoA	79		25 - 150	12/28/23 12:23	12/31/23 08:03	1
13C2 PFTeDA	67		25 - 150	12/28/23 12:23	12/31/23 08:03	1
13C3 PFBS	90		25 - 150	12/28/23 12:23	12/31/23 08:03	1
18O2 PFHxS	90		25 - 150	12/28/23 12:23	12/31/23 08:03	1
13C4 PFOS	82		25 - 150	12/28/23 12:23	12/31/23 08:03	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Client Sample ID: WT-12573440-121823-BB-002

Date Collected: 12/18/23 14:25

Date Received: 12/19/23 10:30

Lab Sample ID: 240-197173-2

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	78		25 - 150	12/28/23 12:23	12/31/23 08:03	1
d3-NMeFOSAA	71		25 - 150	12/28/23 12:23	12/31/23 08:03	1
d5-NEtFOSAA	72		25 - 150	12/28/23 12:23	12/31/23 08:03	1
M2-6:2 FTS	75		25 - 150	12/28/23 12:23	12/31/23 08:03	1
M2-8:2 FTS	78		25 - 150	12/28/23 12:23	12/31/23 08:03	1
M2-4:2 FTS	88		25 - 150	12/28/23 12:23	12/31/23 08:03	1
13C3 HFPO-DA	91		25 - 150	12/28/23 12:23	12/31/23 08:03	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: W-12573440-121823-BB-003

Date Collected: 12/18/23 14:30

Date Received: 12/19/23 10:30

Lab Sample ID: 240-197173-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.6	U	4.6	2.2	ng/L		12/28/23 12:23	12/31/23 08:14	1
Perfluoropentanoic acid (PFPeA)	1.8	U	1.8	0.45	ng/L		12/28/23 12:23	12/31/23 08:14	1
Perfluorohexanoic acid (PFHxA)	1.8	U	1.8	0.53	ng/L		12/28/23 12:23	12/31/23 08:14	1
Perfluoroheptanoic acid (PFHpA)	1.8	U	1.8	0.23	ng/L		12/28/23 12:23	12/31/23 08:14	1
Perfluorooctanoic acid (PFOA)	1.8	U	1.8	0.78	ng/L		12/28/23 12:23	12/31/23 08:14	1
Perfluorononanoic acid (PFNA)	1.8	U	1.8	0.25	ng/L		12/28/23 12:23	12/31/23 08:14	1
Perfluorodecanoic acid (PFDA)	1.8	U	1.8	0.29	ng/L		12/28/23 12:23	12/31/23 08:14	1
Perfluoroundecanoic acid (PFUnA)	1.8	U	1.8	1.0	ng/L		12/28/23 12:23	12/31/23 08:14	1
Perfluorododecanoic acid (PFDoA)	1.8	U	1.8	0.51	ng/L		12/28/23 12:23	12/31/23 08:14	1
Perfluorotridecanoic acid (PFTriA)	1.8	U	1.8	1.2	ng/L		12/28/23 12:23	12/31/23 08:14	1
Perfluorotetradecanoic acid (PFTeA)	1.8	U	1.8	0.67	ng/L		12/28/23 12:23	12/31/23 08:14	1
Perfluorobutanesulfonic acid (PFBS)	1.8	U	1.8	0.18	ng/L		12/28/23 12:23	12/31/23 08:14	1
Perfluoropentanesulfonic acid (PFPeS)	1.8	U	1.8	0.28	ng/L		12/28/23 12:23	12/31/23 08:14	1
Perfluorohexanesulfonic acid (PFHxS)	1.8	U	1.8	0.52	ng/L		12/28/23 12:23	12/31/23 08:14	1
Perfluoroheptanesulfonic acid (PFHpS)	1.8	U	1.8	0.17	ng/L		12/28/23 12:23	12/31/23 08:14	1
Perfluorooctanesulfonic acid (PFOS)	1.8	U	1.8	0.50	ng/L		12/28/23 12:23	12/31/23 08:14	1
Perfluorononanesulfonic acid (PFNS)	1.8	U	1.8	0.34	ng/L		12/28/23 12:23	12/31/23 08:14	1
Perfluorodecanesulfonic acid (PFDS)	1.8	U	1.8	0.29	ng/L		12/28/23 12:23	12/31/23 08:14	1
Perfluorooctanesulfonamide (FOSA)	1.8	U	1.8	0.90	ng/L		12/28/23 12:23	12/31/23 08:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.6	U	4.6	1.1	ng/L		12/28/23 12:23	12/31/23 08:14	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.6	U	4.6	1.2	ng/L		12/28/23 12:23	12/31/23 08:14	1
4:2 FTS	1.8	U	1.8	0.22	ng/L		12/28/23 12:23	12/31/23 08:14	1
6:2 FTS	4.6	U	4.6	2.3	ng/L		12/28/23 12:23	12/31/23 08:14	1
8:2 FTS	1.8	U	1.8	0.42	ng/L		12/28/23 12:23	12/31/23 08:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.8	U	1.8	0.37	ng/L		12/28/23 12:23	12/31/23 08:14	1
HFPO-DA (GenX)	3.7	U	3.7	1.4	ng/L		12/28/23 12:23	12/31/23 08:14	1
9CI-PF3ONS	1.8	U	1.8	0.22	ng/L		12/28/23 12:23	12/31/23 08:14	1
11CI-PF3OUdS	1.8	U	1.8	0.29	ng/L		12/28/23 12:23	12/31/23 08:14	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	102		25 - 150	12/28/23 12:23	12/31/23 08:14	1
13C5 PFPeA	116		25 - 150	12/28/23 12:23	12/31/23 08:14	1
13C2 PFHxA	104		25 - 150	12/28/23 12:23	12/31/23 08:14	1
13C4 PFHpA	113		25 - 150	12/28/23 12:23	12/31/23 08:14	1
13C4 PFOA	101		25 - 150	12/28/23 12:23	12/31/23 08:14	1
13C5 PFNA	98		25 - 150	12/28/23 12:23	12/31/23 08:14	1
13C2 PFDA	101		25 - 150	12/28/23 12:23	12/31/23 08:14	1
13C2 PFUnA	98		25 - 150	12/28/23 12:23	12/31/23 08:14	1
13C2 PFDoA	88		25 - 150	12/28/23 12:23	12/31/23 08:14	1
13C2 PFTeDA	74		25 - 150	12/28/23 12:23	12/31/23 08:14	1
13C3 PFBS	105		25 - 150	12/28/23 12:23	12/31/23 08:14	1
18O2 PFHxS	100		25 - 150	12/28/23 12:23	12/31/23 08:14	1
13C4 PFOS	101		25 - 150	12/28/23 12:23	12/31/23 08:14	1
13C8 FOSA	90		25 - 150	12/28/23 12:23	12/31/23 08:14	1
d3-NMeFOSAA	81		25 - 150	12/28/23 12:23	12/31/23 08:14	1
d5-NEtFOSAA	79		25 - 150	12/28/23 12:23	12/31/23 08:14	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Client Sample ID: W-12573440-121823-BB-003

Date Collected: 12/18/23 14:30

Date Received: 12/19/23 10:30

Lab Sample ID: 240-197173-3

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	77		25 - 150	12/28/23 12:23	12/31/23 08:14	1
M2-8:2 FTS	93		25 - 150	12/28/23 12:23	12/31/23 08:14	1
M2-4:2 FTS	97		25 - 150	12/28/23 12:23	12/31/23 08:14	1
13C3 HFPO-DA	96		25 - 150	12/28/23 12:23	12/31/23 08:14	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: FB-12573440-121823-BB-004

Date Collected: 12/18/23 14:35

Date Received: 12/19/23 10:30

Lab Sample ID: 240-197173-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	7.6		4.9	2.3	ng/L		12/28/23 12:23	12/31/23 08:26	1
Perfluoropentanoic acid (PFPeA)	3.0		2.0	0.48	ng/L		12/28/23 12:23	12/31/23 08:26	1
Perfluorohexanoic acid (PFHxA)	3.2		2.0	0.57	ng/L		12/28/23 12:23	12/31/23 08:26	1
Perfluoroheptanoic acid (PFHpA)	1.6	J	2.0	0.24	ng/L		12/28/23 12:23	12/31/23 08:26	1
Perfluorooctanoic acid (PFOA)	6.3		2.0	0.83	ng/L		12/28/23 12:23	12/31/23 08:26	1
Perfluorononanoic acid (PFNA)	0.45	J	2.0	0.26	ng/L		12/28/23 12:23	12/31/23 08:26	1
Perfluorodecanoic acid (PFDA)	2.0	U	2.0	0.30	ng/L		12/28/23 12:23	12/31/23 08:26	1
Perfluoroundecanoic acid (PFUnA)	2.0	U	2.0	1.1	ng/L		12/28/23 12:23	12/31/23 08:26	1
Perfluorododecanoic acid (PFDoA)	2.0	U	2.0	0.54	ng/L		12/28/23 12:23	12/31/23 08:26	1
Perfluorotridecanoic acid (PFTriA)	2.0	U	2.0	1.3	ng/L		12/28/23 12:23	12/31/23 08:26	1
Perfluorotetradecanoic acid (PFTeA)	2.0	U	2.0	0.71	ng/L		12/28/23 12:23	12/31/23 08:26	1
Perfluorobutanesulfonic acid (PFBS)	2.1		2.0	0.20	ng/L		12/28/23 12:23	12/31/23 08:26	1
Perfluoropentanesulfonic acid (PFPeS)	1.3	J	2.0	0.29	ng/L		12/28/23 12:23	12/31/23 08:26	1
Perfluorohexanesulfonic acid (PFHxS)	6.1	I	2.0	0.56	ng/L		12/28/23 12:23	12/31/23 08:26	1
Perfluoroheptanesulfonic acid (PFHpS)	1.7	J I	2.0	0.19	ng/L		12/28/23 12:23	12/31/23 08:26	1
Perfluorooctanesulfonic acid (PFOS)	97	I	2.0	0.53	ng/L		12/28/23 12:23	12/31/23 08:26	1
Perfluorononanesulfonic acid (PFNS)	2.0	U	2.0	0.36	ng/L		12/28/23 12:23	12/31/23 08:26	1
Perfluorodecanesulfonic acid (PFDS)	2.0	U	2.0	0.31	ng/L		12/28/23 12:23	12/31/23 08:26	1
Perfluorooctanesulfonamide (FOSA)	2.0	U	2.0	0.96	ng/L		12/28/23 12:23	12/31/23 08:26	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.9	U	4.9	1.2	ng/L		12/28/23 12:23	12/31/23 08:26	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.9	U	4.9	1.3	ng/L		12/28/23 12:23	12/31/23 08:26	1
4:2 FTS	2.0	U	2.0	0.23	ng/L		12/28/23 12:23	12/31/23 08:26	1
6:2 FTS	4.9	U	4.9	2.4	ng/L		12/28/23 12:23	12/31/23 08:26	1
8:2 FTS	2.0	U	2.0	0.45	ng/L		12/28/23 12:23	12/31/23 08:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.0	U	2.0	0.39	ng/L		12/28/23 12:23	12/31/23 08:26	1
HFPO-DA (GenX)	3.9	U	3.9	1.5	ng/L		12/28/23 12:23	12/31/23 08:26	1
9CI-PF3ONS	2.0	U	2.0	0.23	ng/L		12/28/23 12:23	12/31/23 08:26	1
11CI-PF3OUdS	2.0	U	2.0	0.31	ng/L		12/28/23 12:23	12/31/23 08:26	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	84		25 - 150	12/28/23 12:23	12/31/23 08:26	1
13C5 PFPeA	98		25 - 150	12/28/23 12:23	12/31/23 08:26	1
13C2 PFHxA	101		25 - 150	12/28/23 12:23	12/31/23 08:26	1
13C4 PFHpA	111		25 - 150	12/28/23 12:23	12/31/23 08:26	1
13C4 PFOA	102		25 - 150	12/28/23 12:23	12/31/23 08:26	1
13C5 PFNA	97		25 - 150	12/28/23 12:23	12/31/23 08:26	1
13C2 PFDA	100		25 - 150	12/28/23 12:23	12/31/23 08:26	1
13C2 PFUnA	88		25 - 150	12/28/23 12:23	12/31/23 08:26	1
13C2 PFDoA	83		25 - 150	12/28/23 12:23	12/31/23 08:26	1
13C2 PFTeDA	68		25 - 150	12/28/23 12:23	12/31/23 08:26	1
13C3 PFBS	92		25 - 150	12/28/23 12:23	12/31/23 08:26	1
18O2 PFHxS	99		25 - 150	12/28/23 12:23	12/31/23 08:26	1
13C4 PFOS	87		25 - 150	12/28/23 12:23	12/31/23 08:26	1
13C8 FOSA	87		25 - 150	12/28/23 12:23	12/31/23 08:26	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Client Sample ID: FB-12573440-121823-BB-004

Date Collected: 12/18/23 14:35

Date Received: 12/19/23 10:30

Lab Sample ID: 240-197173-4

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d3-NMeFOSAA	76		25 - 150	12/28/23 12:23	12/31/23 08:26	1
d5-NEtFOSAA	80		25 - 150	12/28/23 12:23	12/31/23 08:26	1
M2-6:2 FTS	76		25 - 150	12/28/23 12:23	12/31/23 08:26	1
M2-8:2 FTS	85		25 - 150	12/28/23 12:23	12/31/23 08:26	1
M2-4:2 FTS	86		25 - 150	12/28/23 12:23	12/31/23 08:26	1
13C3 HFPO-DA	95		25 - 150	12/28/23 12:23	12/31/23 08:26	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-2

LCMS

Prep Batch: 730375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-197173-2	WT-12573440-121823-BB-002	Total/NA	Water	3535	
240-197173-3	W-12573440-121823-BB-003	Total/NA	Water	3535	
240-197173-4	FB-12573440-121823-BB-004	Total/NA	Water	3535	
MB 320-730375/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-730375/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-730375/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 730644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-197173-2	WT-12573440-121823-BB-002	Total/NA	Water	537 (modified)	730375
240-197173-3	W-12573440-121823-BB-003	Total/NA	Water	537 (modified)	730375
240-197173-4	FB-12573440-121823-BB-004	Total/NA	Water	537 (modified)	730375
MB 320-730375/1-A	Method Blank	Total/NA	Water	537 (modified)	730375
LCS 320-730375/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	730375
LCSD 320-730375/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	730375

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-730375/1-A

Matrix: Water

Analysis Batch: 730644

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 730375

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.0	U	5.0	2.4	ng/L		12/28/23 12:23	12/31/23 05:48	1
Perfluoropentanoic acid (PFPeA)	2.0	U	2.0	0.49	ng/L		12/28/23 12:23	12/31/23 05:48	1
Perfluorohexanoic acid (PFHxA)	2.0	U	2.0	0.58	ng/L		12/28/23 12:23	12/31/23 05:48	1
Perfluoroheptanoic acid (PFHpA)	2.0	U	2.0	0.25	ng/L		12/28/23 12:23	12/31/23 05:48	1
Perfluorooctanoic acid (PFOA)	2.0	U	2.0	0.85	ng/L		12/28/23 12:23	12/31/23 05:48	1
Perfluorononanoic acid (PFNA)	2.0	U	2.0	0.27	ng/L		12/28/23 12:23	12/31/23 05:48	1
Perfluorodecanoic acid (PFDA)	2.0	U	2.0	0.31	ng/L		12/28/23 12:23	12/31/23 05:48	1
Perfluoroundecanoic acid (PFUnA)	2.0	U	2.0	1.1	ng/L		12/28/23 12:23	12/31/23 05:48	1
Perfluorododecanoic acid (PFDoA)	2.0	U	2.0	0.55	ng/L		12/28/23 12:23	12/31/23 05:48	1
Perfluorotridecanoic acid (PFTriA)	2.0	U	2.0	1.3	ng/L		12/28/23 12:23	12/31/23 05:48	1
Perfluorotetradecanoic acid (PFTeA)	2.0	U	2.0	0.73	ng/L		12/28/23 12:23	12/31/23 05:48	1
Perfluorobutanesulfonic acid (PFBS)	2.0	U	2.0	0.20	ng/L		12/28/23 12:23	12/31/23 05:48	1
Perfluoropentanesulfonic acid (PFPeS)	2.0	U	2.0	0.30	ng/L		12/28/23 12:23	12/31/23 05:48	1
Perfluorohexanesulfonic acid (PFHxS)	2.0	U	2.0	0.57	ng/L		12/28/23 12:23	12/31/23 05:48	1
Perfluoroheptanesulfonic acid (PFHpS)	2.0	U	2.0	0.19	ng/L		12/28/23 12:23	12/31/23 05:48	1
Perfluorooctanesulfonic acid (PFOS)	2.0	U	2.0	0.54	ng/L		12/28/23 12:23	12/31/23 05:48	1
Perfluorononanesulfonic acid (PFNS)	2.0	U	2.0	0.37	ng/L		12/28/23 12:23	12/31/23 05:48	1
Perfluorodecanesulfonic acid (PFDS)	2.0	U	2.0	0.32	ng/L		12/28/23 12:23	12/31/23 05:48	1
Perfluorooctanesulfonamide (FOSA)	2.0	U	2.0	0.98	ng/L		12/28/23 12:23	12/31/23 05:48	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	5.0	U	5.0	1.2	ng/L		12/28/23 12:23	12/31/23 05:48	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.0	U	5.0	1.3	ng/L		12/28/23 12:23	12/31/23 05:48	1
4:2 FTS	2.0	U	2.0	0.24	ng/L		12/28/23 12:23	12/31/23 05:48	1
6:2 FTS	5.0	U	5.0	2.5	ng/L		12/28/23 12:23	12/31/23 05:48	1
8:2 FTS	2.0	U	2.0	0.46	ng/L		12/28/23 12:23	12/31/23 05:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.0	U	2.0	0.40	ng/L		12/28/23 12:23	12/31/23 05:48	1
HFPO-DA (GenX)	4.0	U	4.0	1.5	ng/L		12/28/23 12:23	12/31/23 05:48	1
9CI-PF3ONS	2.0	U	2.0	0.24	ng/L		12/28/23 12:23	12/31/23 05:48	1
11CI-PF3OUdS	2.0	U	2.0	0.32	ng/L		12/28/23 12:23	12/31/23 05:48	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	107		25 - 150	12/28/23 12:23	12/31/23 05:48	1
13C5 PFPeA	101		25 - 150	12/28/23 12:23	12/31/23 05:48	1
13C2 PFHxA	95		25 - 150	12/28/23 12:23	12/31/23 05:48	1
13C4 PFHpA	106		25 - 150	12/28/23 12:23	12/31/23 05:48	1
13C4 PFOA	100		25 - 150	12/28/23 12:23	12/31/23 05:48	1
13C5 PFNA	95		25 - 150	12/28/23 12:23	12/31/23 05:48	1
13C2 PFDA	88		25 - 150	12/28/23 12:23	12/31/23 05:48	1
13C2 PFUnA	88		25 - 150	12/28/23 12:23	12/31/23 05:48	1
13C2 PFDoA	99		25 - 150	12/28/23 12:23	12/31/23 05:48	1
13C2 PFTeDA	91		25 - 150	12/28/23 12:23	12/31/23 05:48	1
13C3 PFBS	99		25 - 150	12/28/23 12:23	12/31/23 05:48	1
18O2 PFHxS	101		25 - 150	12/28/23 12:23	12/31/23 05:48	1
13C4 PFOS	96		25 - 150	12/28/23 12:23	12/31/23 05:48	1
13C8 FOSA	92		25 - 150	12/28/23 12:23	12/31/23 05:48	1
d3-NMeFOSAA	75		25 - 150	12/28/23 12:23	12/31/23 05:48	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-730375/1-A

Matrix: Water

Analysis Batch: 730644

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 730375

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	79		25 - 150	12/28/23 12:23	12/31/23 05:48	1
M2-6:2 FTS	73		25 - 150	12/28/23 12:23	12/31/23 05:48	1
M2-8:2 FTS	74		25 - 150	12/28/23 12:23	12/31/23 05:48	1
M2-4:2 FTS	85		25 - 150	12/28/23 12:23	12/31/23 05:48	1
13C3 HFPO-DA	90		25 - 150	12/28/23 12:23	12/31/23 05:48	1

Lab Sample ID: LCS 320-730375/2-A

Matrix: Water

Analysis Batch: 730644

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 730375

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	39.5		ng/L		99	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	39.4		ng/L		99	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	37.2		ng/L		93	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	38.0		ng/L		95	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	39.3		ng/L		98	70 - 130
Perfluorononanoic acid (PFNA)	40.0	37.2		ng/L		93	75 - 135
Perfluorodecanoic acid (PFDA)	40.0	38.5		ng/L		96	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	38.5		ng/L		96	68 - 128
Perfluorododecanoic acid (PFDoA)	40.0	37.4		ng/L		93	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	34.3		ng/L		86	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	33.4		ng/L		84	70 - 130
Perfluorobutanesulfonic acid (PFBS)	35.5	35.2		ng/L		99	67 - 127
Perfluoropentanesulfonic acid (PFPeS)	37.6	37.3		ng/L		99	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	36.5	33.3		ng/L		91	59 - 119
Perfluoroheptanesulfonic acid (PFHpS)	38.2	36.9		ng/L		97	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.2	34.2		ng/L		92	70 - 130
Perfluorononanesulfonic acid (PFNS)	38.5	37.9		ng/L		99	75 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	35.0		ng/L		91	71 - 131
Perfluorooctanesulfonamide (FOSA)	40.0	38.7		ng/L		97	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	39.6		ng/L		99	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	38.2		ng/L		96	76 - 136
4:2 FTS	37.5	35.6		ng/L		95	79 - 139
6:2 FTS	38.1	38.3		ng/L		101	59 - 175
8:2 FTS	38.4	36.0		ng/L		94	75 - 135
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	39.5		ng/L		104	79 - 139
HFPO-DA (GenX)	40.0	37.4		ng/L		94	51 - 173
9CI-PF3ONS	37.4	37.3		ng/L		100	75 - 135

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-730375/2-A

Matrix: Water

Analysis Batch: 730644

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 730375

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11CI-PF3OUdS	37.8	36.5		ng/L		97	54 - 114
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
13C4 PFBA	104		25 - 150				
13C5 PFPeA	112		25 - 150				
13C2 PFHxA	105		25 - 150				
13C4 PFHpA	112		25 - 150				
13C4 PFOA	104		25 - 150				
13C5 PFNA	101		25 - 150				
13C2 PFDA	97		25 - 150				
13C2 PFUnA	101		25 - 150				
13C2 PFDoA	95		25 - 150				
13C2 PFTeDA	89		25 - 150				
13C3 PFBS	103		25 - 150				
18O2 PFHxS	101		25 - 150				
13C4 PFOS	99		25 - 150				
13C8 FOSA	95		25 - 150				
d3-NMeFOSAA	81		25 - 150				
d5-NEtFOSAA	82		25 - 150				
M2-6:2 FTS	73		25 - 150				
M2-8:2 FTS	80		25 - 150				
M2-4:2 FTS	85		25 - 150				
13C3 HFPO-DA	94		25 - 150				

Lab Sample ID: LCSD 320-730375/3-A

Matrix: Water

Analysis Batch: 730644

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 730375

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	40.0	37.1		ng/L		93	76 - 136	6	30
Perfluoropentanoic acid (PFPeA)	40.0	36.7		ng/L		92	71 - 131	7	30
Perfluorohexanoic acid (PFHxA)	40.0	37.0		ng/L		93	73 - 133	1	30
Perfluoroheptanoic acid (PFHpA)	40.0	39.6		ng/L		99	72 - 132	4	30
Perfluorooctanoic acid (PFOA)	40.0	38.8		ng/L		97	70 - 130	1	30
Perfluorononanoic acid (PFNA)	40.0	38.6		ng/L		96	75 - 135	4	30
Perfluorodecanoic acid (PFDA)	40.0	36.5		ng/L		91	76 - 136	5	30
Perfluoroundecanoic acid (PFUnA)	40.0	39.0		ng/L		97	68 - 128	1	30
Perfluorododecanoic acid (PFDoA)	40.0	41.3		ng/L		103	71 - 131	10	30
Perfluorotridecanoic acid (PFTriA)	40.0	39.1		ng/L		98	71 - 131	13	30
Perfluorotetradecanoic acid (PFTeA)	40.0	38.7		ng/L		97	70 - 130	15	30
Perfluorobutanesulfonic acid (PFBS)	35.5	34.9		ng/L		98	67 - 127	1	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	37.1		ng/L		99	66 - 126	1	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	33.4		ng/L		92	59 - 119	0	30

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-730375/3-A

Matrix: Water

Analysis Batch: 730644

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 730375

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoroheptanesulfonic acid (PFHpS)	38.2	37.4		ng/L		98	76 - 136	1	30
Perfluorooctanesulfonic acid (PFOS)	37.2	35.6		ng/L		96	70 - 130	4	30
Perfluorononanesulfonic acid (PFNS)	38.5	34.7		ng/L		90	75 - 135	9	30
Perfluorodecanesulfonic acid (PFDS)	38.6	32.7		ng/L		85	71 - 131	7	30
Perfluorooctanesulfonamide (FOSA)	40.0	39.6		ng/L		99	73 - 133	2	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	38.1		ng/L		95	76 - 136	4	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	38.2		ng/L		96	76 - 136	0	30
4:2 FTS	37.5	33.8		ng/L		90	79 - 139	5	30
6:2 FTS	38.1	39.5		ng/L		104	59 - 175	3	30
8:2 FTS	38.4	39.3		ng/L		102	75 - 135	9	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	42.3		ng/L		112	79 - 139	7	30
HFPO-DA (GenX)	40.0	36.6		ng/L		92	51 - 173	2	30
9CI-PF3ONS	37.4	38.0		ng/L		102	75 - 135	2	30
11CI-PF3OUdS	37.8	32.0		ng/L		85	54 - 114	13	30

Isotope Dilution	%Recovery	LCSD Qualifier	LCSD Limits
13C4 PFBA	104		25 - 150
13C5 PFPeA	111		25 - 150
13C2 PFHxA	102		25 - 150
13C4 PFHpA	105		25 - 150
13C4 PFOA	99		25 - 150
13C5 PFNA	93		25 - 150
13C2 PFDA	102		25 - 150
13C2 PFUnA	89		25 - 150
13C2 PFDoA	79		25 - 150
13C2 PFTeDA	69		25 - 150
13C3 PFBS	99		25 - 150
18O2 PFHxS	98		25 - 150
13C4 PFOS	92		25 - 150
13C8 FOSA	82		25 - 150
d3-NMeFOSAA	69		25 - 150
d5-NEtFOSAA	74		25 - 150
M2-6:2 FTS	73		25 - 150
M2-8:2 FTS	75		25 - 150
M2-4:2 FTS	83		25 - 150
13C3 HFPO-DA	93		25 - 150

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Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-2

Client Sample ID: WT-12573440-121823-BB-002

Lab Sample ID: 240-197173-2

Date Collected: 12/18/23 14:25

Matrix: Water

Date Received: 12/19/23 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			730375	C1A	EET SAC	12/28/23 12:23
Total/NA	Analysis	537 (modified)		1	730644	AP1	EET SAC	12/31/23 08:03

Client Sample ID: W-12573440-121823-BB-003

Lab Sample ID: 240-197173-3

Date Collected: 12/18/23 14:30

Matrix: Water

Date Received: 12/19/23 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			730375	C1A	EET SAC	12/28/23 12:23
Total/NA	Analysis	537 (modified)		1	730644	AP1	EET SAC	12/31/23 08:14

Client Sample ID: FB-12573440-121823-BB-004

Lab Sample ID: 240-197173-4

Date Collected: 12/18/23 14:35

Matrix: Water

Date Received: 12/19/23 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			730375	C1A	EET SAC	12/28/23 12:23
Total/NA	Analysis	537 (modified)		1	730644	AP1	EET SAC	12/31/23 08:26

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-2

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	02-20-24
ANAB	Dept. of Defense ELAP	L2468	01-20-24
ANAB	Dept. of Energy	L2468.01	01-20-24
ANAB	ISO/IEC 17025	L2468	01-20-24
Arizona	State	AZ0708	08-11-24
Arkansas DEQ	State	88-0691	05-18-24
California	State	2897	01-22-24
Colorado	State	CA00044	08-31-24
Florida	NELAP	E87570	06-30-24
Georgia	State	4040	01-29-24
Hawaii	State	<cert No.>	01-29-24
Illinois	NELAP	200060	03-17-24
Kansas	NELAP	E-10375	10-31-24
Louisiana (All)	NELAP	01944	06-30-24
Maine	State	CA00004	04-14-24
Michigan	State	9947	01-31-24
Nevada	State	CA00044	07-31-24
New Hampshire	NELAP	2997	04-18-24
New Jersey	NELAP	CA005	06-30-24
New York	NELAP	11666	04-01-24
Ohio	State	41252	01-29-24
Oregon	NELAP	4040	01-29-24
Texas	NELAP	T104704399-23-17	05-31-24
US Fish & Wildlife	US Federal Programs	58448	04-30-24
USDA	US Federal Programs	P330-18-00239	02-28-26
Utah	NELAP	CA000442023-16	02-29-24
Virginia	NELAP	460278	03-14-24
Washington	State	C581	05-05-24
West Virginia (DW)	State	9930C	12-31-23
Wisconsin	State	998204680	08-31-24
Wyoming	State Program	8TMS-L	01-28-19 *

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

Eurofins Cleveland

Client Information					
Sampler Bryan Bannan		Lab PM Heckler, Denise D		COC No 240-104106-31279.1	
Phone 503 713 8326		E-Mail Denise.Heckler@et.eurofinsus.com		Page Page 1 of 1	
Company GHD Services Inc.		PWSID		Job #	
Due Date Requested:					
TAT Requested (days): 10 bus days					
Compliance Project: Δ Yes Δ No					
PO #					
Purchase Order Requested					
WO #					
12573440					
Project #					
24005880					
SSOW#					
Site					
Sample Identification					
WT-12573440-121623-BB-001					
WT- -002					
W- -003					
FB- -004					
Sample Date					
12/18/23					
Sample Time					
1420					
1425					
1430					
1435					
Sample Type (C=Comp, G=grab)					
G					
Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)					
Water					
Water					
Water					
Water					
Field Filtered Sample (Yes or No)					
X					
Perform MS/MSD (Yes or No)					
X					
3500_CR_B - Chromium, Hexavalent					
N					
200_7_Hg, Cr, Pb, Ni, Zn					
N					
608_3_PCB_PREC - PCBs					
N					
2540D - TSS					
N					
1664A_MP - HEM					
S					
PFC_IDA - (MOD) PFAS, Standard List (28 Analytes)					
N					
Total Number of containers					
X					
Special Instructions/Note:					
240-197173 Chain of Custody					
Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - NaHSO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify) Other:					
Possible Hazard Identification ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological					
Deliverable Requested: I, II, III, IV, Other (specify)					
Empty Kit Relinquished by					
Relinquished by Bryan Bannan					
Date 12/18/23					
Company GHD					
Relinquished by					
Date/Time					
Company					
Relinquished by					
Date/Time					
Company					
Custody Seals Intact: Δ Yes Δ No					
Custody Seal No.: 12-19-23 1030					
Company EETNC					

Eurofins - Cleveland Sample Receipt Form/Narrative
Barberton Facility

Login # : _____

Client GHD Services

Site Name _____

Cooler unpacked by: _____

Cooler Received on 12-19-23

Opened on 12-19-23

FedEx: 1st Grd Exp UPS FAS Waypoint 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 # 21 (CF 10.2 °C) Observed Cooler Temp. 4.6 °C Corrected Cooler Temp. 4.8 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1

-Were the seals on the outside of the cooler(s) signed & dated?

-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?

-Were tamper/custody seals intact and uncompromised?

Yes No

Yes No NA

Yes No

Yes No NA

Yes No

Yes No

Yes No

Yes No

Yes No

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)?

Yes No

Yes No

Yes No

Yes No

13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC316719

Yes No

Yes No NA

Yes No

Yes No

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: _____

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u> <u>pH</u>	<u>Temp</u>	<u>Preservation</u> <u>Added</u>	<u>Preservation</u> <u>Lot Number</u>
WT-12573440-121823-BB-001	240-197173-B-1	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____

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



Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

180 S. Van Buren Avenue

Barborton. OH 44203

Phone: 330-497-9396 Fax: 330-497-0772

[illegible]

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 240-197173-2

Login Number: 197173

List Number: 2

Creator: Simmons, Jason C

List Source: Eurofins Sacramento

List Creation: 12/20/23 04:25 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.5c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y23-01, RACER Eckles

Job ID: 240-197173-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
240-197173-2	WT-12573440-121823-BB-002	103	109	95	104	95	88	91	84
240-197173-3	W-12573440-121823-BB-003	102	116	104	113	101	98	101	98
240-197173-4	FB-12573440-121823-BB-004	84	98	101	111	102	97	100	88
LCS 320-730375/2-A	Lab Control Sample	104	112	105	112	104	101	97	101
LCSD 320-730375/3-A	Lab Control Sample Dup	104	111	102	105	99	93	102	89
MB 320-730375/1-A	Method Blank	107	101	95	106	100	95	88	88

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
240-197173-2	WT-12573440-121823-BB-002	79	67	90	90	82	78	71	72
240-197173-3	W-12573440-121823-BB-003	88	74	105	100	101	90	81	79
240-197173-4	FB-12573440-121823-BB-004	83	68	92	99	87	87	76	80
LCS 320-730375/2-A	Lab Control Sample	95	89	103	101	99	95	81	82
LCSD 320-730375/3-A	Lab Control Sample Dup	79	69	99	98	92	82	69	74
MB 320-730375/1-A	Method Blank	99	91	99	101	96	92	75	79

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M262FTS (25-150)	M282FTS (25-150)	M242FTS (25-150)	HFPODA (25-150)				
240-197173-2	WT-12573440-121823-BB-002	75	78	88	91				
240-197173-3	W-12573440-121823-BB-003	77	93	97	96				
240-197173-4	FB-12573440-121823-BB-004	76	85	86	95				
LCS 320-730375/2-A	Lab Control Sample	73	80	85	94				
LCSD 320-730375/3-A	Lab Control Sample Dup	73	75	83	93				
MB 320-730375/1-A	Method Blank	73	74	85	90				

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
M242FTS = M2-4:2 FTS
HFPODA = 13C3 HFPO-DA

Eurofins Cleveland

Attachment 5

**Laboratory Analytical Reports for
January 11, 2024 Samples**

ANALYTICAL REPORT

PREPARED FOR

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

Generated 1/25/2024 7:37:15 AM

JOB DESCRIPTION

12573440-T37Y24-01, RACER Eckles

JOB NUMBER

240-198084-1

Eurofins Cleveland

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



Generated
1/25/2024 7:37:15 AM

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

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Case Narrative

Client: GHD Services Inc.
Project: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-1

Job ID: 240-198084-1

Eurofins Cleveland

Job Narrative 240-198084-1

Receipt

The samples were received on 1/12/2024 10:00 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 time was 3.5°C

PCBs

Method 608.3_PCB_PREC: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-600187.

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

Metals

Method 200.7: The following sample was diluted due to the nature of the sample matrix: WT-12573440-011124-BB-001 (240-198084-1). Elevated reporting limits (RLs) are provided.

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

General Chemistry

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

Eurofins Cleveland

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description

U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description

U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description

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)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-198084-1	WT-12573440-011124-BB-001	Water	01/11/24 12:50	01/12/24 10:00

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

Detection Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-1

Client Sample ID: WT-12573440-011124-BB-001

Lab Sample ID: 240-198084-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Nickel	0.022		0.010	mg/L	1		200.7 Rev 4.4	Total Recoverable

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.

Job ID: 240-198084-1

Project/Site: 12573440-T37Y24-01, RACER Eckles

Method	Method Description	Protocol	Laboratory
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
3500-Cr B-2011	Chromium, Hexavalent	SM	EET CLE
SM 2540D	Solids, Total Suspended (TSS)	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 Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-1

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

Client Sample ID: WT-12573440-011124-BB-001

Date Collected: 01/11/24 12:50

Date Received: 01/12/24 10:00

Lab Sample ID: 240-198084-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	ug/L		01/15/24 08:06	01/16/24 16:02	1
Aroclor-1221	0.097	U	0.097	ug/L		01/15/24 08:06	01/16/24 16:02	1
Aroclor-1232	0.097	U	0.097	ug/L		01/15/24 08:06	01/16/24 16:02	1
Aroclor-1242	0.097	U	0.097	ug/L		01/15/24 08:06	01/16/24 16:02	1
Aroclor-1248	0.097	U	0.097	ug/L		01/15/24 08:06	01/16/24 16:02	1
Aroclor-1254	0.097	U	0.097	ug/L		01/15/24 08:06	01/16/24 16:02	1
Aroclor-1260	0.097	U	0.097	ug/L		01/15/24 08:06	01/16/24 16:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	79		10 - 174			01/15/24 08:06	01/16/24 16:02	1
Tetrachloro-m-xylene	60		10 - 149			01/15/24 08:06	01/16/24 16:02	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-1

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

Client Sample ID: WT-12573440-011124-BB-001

Date Collected: 01/11/24 12:50

Date Received: 01/12/24 10:00

Lab Sample ID: 240-198084-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.050	U	0.050	mg/L		01/15/24 14:00	01/16/24 21:12	1
Nickel	0.022		0.010	mg/L		01/15/24 14:00	01/16/24 21:12	1
Lead	0.050	U	0.050	mg/L		01/15/24 14:00	01/16/24 21:12	1
Zinc	0.050	U	0.050	mg/L		01/15/24 14:00	01/16/24 21:12	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-1

Method: EPA 245.1 - Mercury (CVAA)

Client Sample ID: WT-12573440-011124-BB-001					Lab Sample ID: 240-198084-1				
Date Collected: 01/11/24 12:50					Matrix: Water				
Date Received: 01/12/24 10:00									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Mercury	0.00020	U	0.00020	mg/L		01/15/24 14:00	01/16/24 11:43	1	

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-1

General Chemistry

Client Sample ID: WT-12573440-011124-BB-001
Date Collected: 01/11/24 12:50
Date Received: 01/12/24 10:00

Lab Sample ID: 240-198084-1
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (1664B)	4.9	U	4.9	mg/L			01/24/24 13:00	1
Chromium, hexavalent (SM 3500-Cr B-2011)	0.010	U	0.010	mg/L			01/12/24 11:46	1
Total Suspended Solids (SM 2540D)	4.0	U	4.0	mg/L			01/17/24 09:23	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-1

GC Semi VOA

Prep Batch: 600187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-198084-1	WT-12573440-011124-BB-001	Total/NA	Water	608	
MB 240-600187/1-A	Method Blank	Total/NA	Water	608	
LCS 240-600187/2-A	Lab Control Sample	Total/NA	Water	608	

Analysis Batch: 600411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-198084-1	WT-12573440-011124-BB-001	Total/NA	Water	608.3	600187
MB 240-600187/1-A	Method Blank	Total/NA	Water	608.3	600187
LCS 240-600187/2-A	Lab Control Sample	Total/NA	Water	608.3	600187

Metals

Prep Batch: 600253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-198084-1	WT-12573440-011124-BB-001	Total Recoverable	Water	200.7	
MB 240-600253/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 240-600253/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
240-198084-1 MS	WT-12573440-011124-BB-001	Total Recoverable	Water	200.7	
240-198084-1 MSD	WT-12573440-011124-BB-001	Total Recoverable	Water	200.7	

Prep Batch: 600257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-198084-1	WT-12573440-011124-BB-001	Total/NA	Water	245.1	
MB 240-600257/1-A	Method Blank	Total/NA	Water	245.1	
LCS 240-600257/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 600414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-198084-1	WT-12573440-011124-BB-001	Total Recoverable	Water	200.7 Rev 4.4	600253
MB 240-600253/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	600253
LCS 240-600253/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	600253
240-198084-1 MS	WT-12573440-011124-BB-001	Total Recoverable	Water	200.7 Rev 4.4	600253
240-198084-1 MSD	WT-12573440-011124-BB-001	Total Recoverable	Water	200.7 Rev 4.4	600253

Analysis Batch: 600468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-198084-1	WT-12573440-011124-BB-001	Total/NA	Water	245.1	600257
MB 240-600257/1-A	Method Blank	Total/NA	Water	245.1	600257
LCS 240-600257/2-A	Lab Control Sample	Total/NA	Water	245.1	600257

General Chemistry

Analysis Batch: 600123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-198084-1	WT-12573440-011124-BB-001	Total/NA	Water	3500-Cr B-2011	
MB 240-600123/3	Method Blank	Total/NA	Water	3500-Cr B-2011	
LCS 240-600123/4	Lab Control Sample	Total/NA	Water	3500-Cr B-2011	
240-198084-1 MS	WT-12573440-011124-BB-001	Total/NA	Water	3500-Cr B-2011	
240-198084-1 MSD	WT-12573440-011124-BB-001	Total/NA	Water	3500-Cr B-2011	

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QC Association Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-1

General Chemistry

Analysis Batch: 600493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-198084-1	WT-12573440-011124-BB-001	Total/NA	Water	SM 2540D	
MB 240-600493/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 240-600493/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 601164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-198084-1	WT-12573440-011124-BB-001	Total/NA	Water	1664B	
MB 240-601164/1	Method Blank	Total/NA	Water	1664B	
LCS 240-601164/2	Lab Control Sample	Total/NA	Water	1664B	

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-1

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

Lab Sample ID: MB 240-600187/1-A

Matrix: Water

Analysis Batch: 600411

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 600187

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	ug/L		01/15/24 08:06	01/16/24 12:57	1
Aroclor-1221	0.10	U	0.10	ug/L		01/15/24 08:06	01/16/24 12:57	1
Aroclor-1232	0.10	U	0.10	ug/L		01/15/24 08:06	01/16/24 12:57	1
Aroclor-1242	0.10	U	0.10	ug/L		01/15/24 08:06	01/16/24 12:57	1
Aroclor-1248	0.10	U	0.10	ug/L		01/15/24 08:06	01/16/24 12:57	1
Aroclor-1254	0.10	U	0.10	ug/L		01/15/24 08:06	01/16/24 12:57	1
Aroclor-1260	0.10	U	0.10	ug/L		01/15/24 08:06	01/16/24 12:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	85		10 - 174	01/15/24 08:06	01/16/24 12:57	1
Tetrachloro-m-xylene	73		10 - 149	01/15/24 08:06	01/16/24 12:57	1

Lab Sample ID: LCS 240-600187/2-A

Matrix: Water

Analysis Batch: 600411

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 600187

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	2.02		ug/L		81	50 - 140
Aroclor-1260	2.50	1.72		ug/L		69	8 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	82		10 - 174
Tetrachloro-m-xylene	72		10 - 149

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-600253/1-A

Matrix: Water

Analysis Batch: 600414

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 600253

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.050	U	0.050	mg/L		01/15/24 14:00	01/16/24 21:04	1
Nickel	0.010	U	0.010	mg/L		01/15/24 14:00	01/16/24 21:04	1
Lead	0.050	U	0.050	mg/L		01/15/24 14:00	01/16/24 21:04	1
Zinc	0.050	U	0.050	mg/L		01/15/24 14:00	01/16/24 21:04	1

Lab Sample ID: LCS 240-600253/2-A

Matrix: Water

Analysis Batch: 600414

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 600253

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	1.00	0.943		mg/L		94	85 - 115
Nickel	1.00	0.983		mg/L		98	85 - 115
Lead	1.00	0.912		mg/L		91	85 - 115
Zinc	1.00	0.986		mg/L		99	85 - 115

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-1

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

Lab Sample ID: 240-198084-1 MS

Matrix: Water

Analysis Batch: 600414

Client Sample ID: WT-12573440-011124-BB-001

Prep Type: Total Recoverable

Prep Batch: 600253

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	0.050	U	1.00	0.935		mg/L		93	70 - 130
Nickel	0.022		1.00	1.01		mg/L		99	70 - 130
Lead	0.050	U	1.00	0.888		mg/L		89	70 - 130
Zinc	0.050	U	1.00	1.02		mg/L		102	70 - 130

Lab Sample ID: 240-198084-1 MSD

Matrix: Water

Analysis Batch: 600414

Client Sample ID: WT-12573440-011124-BB-001

Prep Type: Total Recoverable

Prep Batch: 600253

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium	0.050	U	1.00	0.937		mg/L		94	70 - 130	0	20
Nickel	0.022		1.00	1.01		mg/L		99	70 - 130	0	20
Lead	0.050	U	1.00	0.890		mg/L		89	70 - 130	0	20
Zinc	0.050	U	1.00	1.01		mg/L		101	70 - 130	0	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-600257/1-A

Matrix: Water

Analysis Batch: 600468

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 600257

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	mg/L		01/15/24 14:00	01/16/24 11:37	1

Lab Sample ID: LCS 240-600257/2-A

Matrix: Water

Analysis Batch: 600468

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 600257

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00500	0.00496		mg/L		99	85 - 115

Method: 1664B - HEM and SGT-HEM

Lab Sample ID: MB 240-601164/1

Matrix: Water

Analysis Batch: 601164

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	mg/L			01/24/24 13:00	1

Lab Sample ID: LCS 240-601164/2

Matrix: Water

Analysis Batch: 601164

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	38.1		mg/L		95	78 - 114

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-1

Method: 3500-Cr B-2011 - Chromium, Hexavalent

Lab Sample ID: MB 240-600123/3

Matrix: Water

Analysis Batch: 600123

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	0.010	U	0.010	mg/L			01/12/24 11:45	1

Lab Sample ID: LCS 240-600123/4

Matrix: Water

Analysis Batch: 600123

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium, hexavalent	0.250	0.238		mg/L		95	85 - 115

Lab Sample ID: 240-198084-1 MS

Matrix: Water

Analysis Batch: 600123

Client Sample ID: WT-12573440-011124-BB-001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium, hexavalent	0.010	U	0.250	0.232		mg/L		93	85 - 115

Lab Sample ID: 240-198084-1 MSD

Matrix: Water

Analysis Batch: 600123

Client Sample ID: WT-12573440-011124-BB-001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent	0.010	U	0.250	0.245		mg/L		98	85 - 115	6	20

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

Lab Sample ID: MB 240-600493/1

Matrix: Water

Analysis Batch: 600493

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	mg/L			01/17/24 09:23	1

Lab Sample ID: LCS 240-600493/2

Matrix: Water

Analysis Batch: 600493

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	60.1	47.0		mg/L		78	64 - 120

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Surrogate Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-1

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

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCBP2 (10-174)	TCX2 (10-149)
240-198084-1	WT-12573440-011124-BB-001	79	60
LCS 240-600187/2-A	Lab Control Sample	82	72
MB 240-600187/1-A	Method Blank	85	73
Surrogate Legend			
DCBP = DCB Decachlorobiphenyl			
TCX = Tetrachloro-m-xylene			

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-1

Client Sample ID: WT-12573440-011124-BB-001

Lab Sample ID: 240-198084-1

Date Collected: 01/11/24 12:50

Matrix: Water

Date Received: 01/12/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	608			600187	GBS	EET CLE	01/15/24 08:06
Total/NA	Analysis	608.3		1	600411	RR	EET CLE	01/16/24 16:02
Total Recoverable	Prep	200.7			600253	BN	EET CLE	01/15/24 14:00
Total Recoverable	Analysis	200.7 Rev 4.4		1	600414	RKT	EET CLE	01/16/24 21:12
Total/NA	Prep	245.1			600257	BN	EET CLE	01/15/24 14:00
Total/NA	Analysis	245.1		1	600468	GK	EET CLE	01/16/24 11:43
Total/NA	Analysis	1664B		1	601164	JMR	EET CLE	01/24/24 13:00
Total/NA	Analysis	3500-Cr B-2011		1	600123	VH6H	EET CLE	01/12/24 11:46
Total/NA	Analysis	SM 2540D		1	600493	MS	EET CLE	01/17/24 09:23

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.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-1

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	07-31-24
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-28-24
Kentucky (WW)	State	KY98016	12-30-24
Michigan	State	9135	02-27-24
Minnesota	NELAP	039-999-348	12-31-24
New Jersey	NELAP	OH001	07-01-24
New York	NELAP	10975	04-01-24
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	T104704517-22-19	08-31-24
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-24

Client Information		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:										
Chris Meincke Company: GHD Services Inc.		Bryon Bannan Phone: 503-713-8326	Heckler, Denise D E-Mail: Denise.Heckler@et.eurofinsus.com		240-104111-31279.1										
Address: 26850 Haggerty Rd. City: Farmington Hills State, Zip: MI, 48331 Phone: 612-524-6872(Tel) Email: chris.meincke@ghd.com Project Name: 12573440-T37- RACER Eckles Rd Site:		PWSID:													
Due Date Requested:		TAT Requested (days): 10 bus days	Analysis Requested												
Compliance Project: Δ Yes Δ No		Purchase Order Requested	Total Number of containers												
PO #:		WO #:	Preservation Codes:												
12573440		12573440	M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - NaHSO4 S - H2SO4 T - TSP Dodecahydrate U - Acetic Acid V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)												
SSOW#:		12573440-T37Y24-01	Other:												
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Swab, Soil, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	3500 CR_B - Chromium, Hexavalent	200.7 - Hg, Cr, Pb, Ni, Zn	608.3 PCB_PREC - PCBs	2540D - TSS	1664A NP - HEM	PFC_IDA - (MOD) PFAS, Standard List (28 Analytes)	Total Number of containers	Special Instructions/Note:
WT-12573440-011124-BB-001	1/11/24	12:50	G	Water	X	X	X	X	X	X	X	X	X	X	
WT-12573440-011124-BB-002	↓	12:53	↓	Water	X	X	X	X	X	X	X	X	X	X	
WB-12573440-011124-BB-003	↓	13:00	↓	Water	X	X	X	X	X	X	X	X	X	X	
FB-12573440-011124-BB-004	↓	13:05	↓	Water	X	X	X	X	X	X	X	X	X	X	
Barcode: 240-198084 Chain of Custody															
Possible Hazard Identification ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological															
Deliverable Requested: I, II, III, IV, Other (specify)															
Empty Kit Relinquished by:															
Relinquished by: Bryon Bannan															
Date/Time: 1/11/24															
Company: GHD															
Received by: AAKerson															
Date/Time: 1-12-24 1000															
Company: CENIC															
Custody Seal Intact: Δ Yes Δ No															
Custody Seal No.: Cooler Temperature(s) °C and Other Remarks:															

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Eurofins - Cleveland Sample Receipt Form/Narrative Barberton Facility				Login # : _____	
Client <u>GHD</u>		Site Name _____		Cooler unpacked by: <u>Alicia Allen</u>	
Cooler Received on <u>1-12-24</u>		Opened on <u>1-12-24</u>			
FedEx: 1 st Grd <u>Exp</u> UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____					
Receipt After-hours: Drop-off Date/Time _____				Storage Location _____	
Eurofins Cooler # <u>CC</u> Foam Box <u>Client Cooler</u> Box _____ Other _____					
Packing material used: <u>Bubble Wrap</u> Foam <u>Plastic Bag</u> None _____ Other _____					
COOLANT: <u>Wet Ice</u> Blue Ice Dry Ice Water None _____					
1. Cooler temperature upon receipt _____ ☐ See Multiple Cooler Form					
IR GUN # <u>21</u> (CF <u>+0.4</u> °C) Observed Cooler Temp. <u>3.1</u> °C Corrected Cooler Temp. <u>3.5</u> °C					
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u>					
-Were the seals on the outside of the cooler(s) signed & dated? <u>Yes</u> No NA					
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? <u>Yes</u> <u>No</u> NA					
-Were tamper/custody seals intact and uncompromised? <u>Yes</u> No NA					
3. Shippers' packing slip attached to the cooler(s)? <u>Yes</u> No					
4. Did custody papers accompany the sample(s)? <u>Yes</u> No					
5. Were the custody papers relinquished & signed in the appropriate place? <u>Yes</u> No					
6. Was/were the person(s) who collected the samples clearly identified on the COC? <u>Yes</u> No					
7. Did all bottles arrive in good condition (Unbroken)? <u>Yes</u> No					
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? <u>Yes</u> No					
9. For each sample, does the COC specify preservatives (<u>Y</u> /N), # of containers (<u>Y</u> /N), and sample type of grab/comp (<u>Y</u> /N)?					
10. Were correct bottle(s) used for the test(s) indicated? <u>Yes</u> No					
11. Sufficient quantity received to perform indicated analyses? <u>Yes</u> No					
12. Are these work share samples and all listed on the COC? <u>Yes</u> <u>No</u>					
If yes, Questions 13-17 have been checked at the originating laboratory.					
13. Were all preserved sample(s) at the correct pH upon receipt? <u>Yes</u> No NA pH Strip Lot# HC316719					
14. Were VOAs on the COC? <u>Yes</u> <u>No</u>					
15. Were air bubbles >6 mm in any VOA vials? <u>Yes</u> <u>No</u> <u>NA</u> Larger than this.					
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ <u>Yes</u> <u>No</u>					
17. Was a LL Hg or Me Hg trip blank present? <u>Yes</u> <u>No</u>					
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: _____		

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u> <u>pH</u>	<u>Temp</u>	<u>Preservation</u> <u>Added</u>	<u>Preservation</u> <u>Lot Number</u>
WT-12573440-011124-BB-001	240-198084-B-1	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 1/25/2024 7:38:18 AM

JOB DESCRIPTION

12573440-T37Y24-01, RACER Eckles

JOB NUMBER

240-198084-2

Eurofins Cleveland

Job Notes

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Authorization



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Authorized for release by
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(330)966-9477

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Case Narrative

Client: GHD Services Inc.
Project: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Job ID: 240-198084-2

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Job Narrative 240-198084-2

Receipt

The samples were received on 1/12/2024 10:00 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 3.5° C.

LCMS

Method 537 (modified): The continuing calibration verification (CCV) associated with batch 320-734859 recovered above the upper control limit for Perfluorooctanoic acid (PFOA). The samples associated with this CCV was non-detects for the affected analyte; therefore, the data have been reported. The associated samples are impacted: WT-12573440-011124-BB-002 (240-198084-2), FB-12573440-011124-BB-004 (240-198084-4) and (CCVIS 320-734859/6).

Method 537 (modified): The continuing calibration verification internal standard (CCVIS) associated with batch 320-734859 recovered above the upper control limit for isotope dilution analyte (IDA) 13C2 6:2 FTS. The associated target analyte, 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS), was within control limits in the CCV; therefore, the data is reported: WT-12573440-011124-BB-002 (240-198084-2), W-12573440-011124-BB-003 (240-198084-3), FB-12573440-011124-BB-004 (240-198084-4) and (CCVIS 320-734859/6).

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: W-12573440-011124-BB-003 (240-198084-3) and FB-12573440-011124-BB-004 (240-198084-4). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was below the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte: W-12573440-011124-BB-003 (240-198084-3).

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

Organic Prep

Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-734196.

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

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Qualifiers

LCMS

Qualifier	Qualifier Description
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
I	Value is EMPC (estimated maximum possible concentration).
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)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-198084-2	WT-12573440-011124-BB-002	Water	01/11/24 12:55	01/12/24 10:00
240-198084-3	W-12573440-011124-BB-003	Water	01/11/24 13:00	01/12/24 10:00
240-198084-4	FB-12573440-011124-BB-004	Water	01/11/24 13:05	01/12/24 10:00

Detection Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Client Sample ID: WT-12573440-011124-BB-002

Lab Sample ID: 240-198084-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonamide (FOSA)	1.2	J	2.0	0.98	ng/L	1		537 (modified)	Total/NA

Client Sample ID: W-12573440-011124-BB-003

Lab Sample ID: 240-198084-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	6.9		4.9	2.3	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	3.0		1.9	0.48	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.1		1.9	0.56	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.2	J	1.9	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.44	J	1.9	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.0		1.9	0.19	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.1	J	1.9	0.29	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.3	I	1.9	0.55	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	1.5	J I	1.9	0.18	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	92	I	1.9	0.52	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA) - RA	5.3		1.9	0.82	ng/L	1		537 (modified)	Total/NA

Client Sample ID: FB-12573440-011124-BB-004

Lab Sample ID: 240-198084-4

No Detections.

This Detection Summary does not include radiochemical test results.

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Method Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	EET SAC
3535	Solid-Phase Extraction (SPE)	SW846	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: WT-12573440-011124-BB-002

Date Collected: 01/11/24 12:55

Date Received: 01/12/24 10:00

Lab Sample ID: 240-198084-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.0	U	5.0	2.4	ng/L		01/17/24 12:22	01/20/24 09:11	1
Perfluoropentanoic acid (PFPeA)	2.0	U	2.0	0.49	ng/L		01/17/24 12:22	01/20/24 09:11	1
Perfluorohexanoic acid (PFHxA)	2.0	U	2.0	0.58	ng/L		01/17/24 12:22	01/20/24 09:11	1
Perfluoroheptanoic acid (PFHpA)	2.0	U	2.0	0.25	ng/L		01/17/24 12:22	01/20/24 09:11	1
Perfluorooctanoic acid (PFOA)	2.0	U	2.0	0.85	ng/L		01/17/24 12:22	01/20/24 09:11	1
Perfluorononanoic acid (PFNA)	2.0	U	2.0	0.27	ng/L		01/17/24 12:22	01/20/24 09:11	1
Perfluorodecanoic acid (PFDA)	2.0	U	2.0	0.31	ng/L		01/17/24 12:22	01/20/24 09:11	1
Perfluoroundecanoic acid (PFUnA)	2.0	U	2.0	1.1	ng/L		01/17/24 12:22	01/20/24 09:11	1
Perfluorododecanoic acid (PFDoA)	2.0	U	2.0	0.55	ng/L		01/17/24 12:22	01/20/24 09:11	1
Perfluorotridecanoic acid (PFTriA)	2.0	U	2.0	1.3	ng/L		01/17/24 12:22	01/20/24 09:11	1
Perfluorotetradecanoic acid (PFTeA)	2.0	U	2.0	0.73	ng/L		01/17/24 12:22	01/20/24 09:11	1
Perfluorobutanesulfonic acid (PFBS)	2.0	U	2.0	0.20	ng/L		01/17/24 12:22	01/20/24 09:11	1
Perfluoropentanesulfonic acid (PFPeS)	2.0	U	2.0	0.30	ng/L		01/17/24 12:22	01/20/24 09:11	1
Perfluorohexanesulfonic acid (PFHxS)	2.0	U	2.0	0.57	ng/L		01/17/24 12:22	01/20/24 09:11	1
Perfluoroheptanesulfonic acid (PFHpS)	2.0	U	2.0	0.19	ng/L		01/17/24 12:22	01/20/24 09:11	1
Perfluorooctanesulfonic acid (PFOS)	2.0	U	2.0	0.54	ng/L		01/17/24 12:22	01/20/24 09:11	1
Perfluorononanesulfonic acid (PFNS)	2.0	U	2.0	0.37	ng/L		01/17/24 12:22	01/20/24 09:11	1
Perfluorodecanesulfonic acid (PFDS)	2.0	U	2.0	0.32	ng/L		01/17/24 12:22	01/20/24 09:11	1
Perfluorooctanesulfonamide (FOSA)	1.2	J	2.0	0.98	ng/L		01/17/24 12:22	01/20/24 09:11	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	5.0	U	5.0	1.2	ng/L		01/17/24 12:22	01/20/24 09:11	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.0	U	5.0	1.3	ng/L		01/17/24 12:22	01/20/24 09:11	1
4:2 FTS	2.0	U	2.0	0.24	ng/L		01/17/24 12:22	01/20/24 09:11	1
6:2 FTS	5.0	U	5.0	2.5	ng/L		01/17/24 12:22	01/20/24 09:11	1
8:2 FTS	2.0	U	2.0	0.46	ng/L		01/17/24 12:22	01/20/24 09:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.0	U	2.0	0.40	ng/L		01/17/24 12:22	01/20/24 09:11	1
HFPO-DA (GenX)	4.0	U	4.0	1.5	ng/L		01/17/24 12:22	01/20/24 09:11	1
9CI-PF3ONS	2.0	U	2.0	0.24	ng/L		01/17/24 12:22	01/20/24 09:11	1
11CI-PF3OUdS	2.0	U	2.0	0.32	ng/L		01/17/24 12:22	01/20/24 09:11	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	95		25 - 150	01/17/24 12:22	01/20/24 09:11	1
13C5 PFPeA	87		25 - 150	01/17/24 12:22	01/20/24 09:11	1
13C2 PFHxA	118		25 - 150	01/17/24 12:22	01/20/24 09:11	1
13C4 PFHpA	120		25 - 150	01/17/24 12:22	01/20/24 09:11	1
13C4 PFOA	105		25 - 150	01/17/24 12:22	01/20/24 09:11	1
13C5 PFNA	100		25 - 150	01/17/24 12:22	01/20/24 09:11	1
13C2 PFDA	112		25 - 150	01/17/24 12:22	01/20/24 09:11	1
13C2 PFUnA	97		25 - 150	01/17/24 12:22	01/20/24 09:11	1
13C2 PFDoA	87		25 - 150	01/17/24 12:22	01/20/24 09:11	1
13C2 PFTeA	91		25 - 150	01/17/24 12:22	01/20/24 09:11	1
13C3 PFBS	101		25 - 150	01/17/24 12:22	01/20/24 09:11	1
18O2 PFHxS	96		25 - 150	01/17/24 12:22	01/20/24 09:11	1
13C4 PFOS	84		25 - 150	01/17/24 12:22	01/20/24 09:11	1
13C8 FOSA	101		25 - 150	01/17/24 12:22	01/20/24 09:11	1
d3-NMeFOSAA	98		25 - 150	01/17/24 12:22	01/20/24 09:11	1
d5-NEtFOSAA	96		25 - 150	01/17/24 12:22	01/20/24 09:11	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Client Sample ID: WT-12573440-011124-BB-002				Lab Sample ID: 240-198084-2		
Date Collected: 01/11/24 12:55				Matrix: Water		
Date Received: 01/12/24 10:00						
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	145		25 - 150	01/17/24 12:22	01/20/24 09:11	1
M2-8:2 FTS	108		25 - 150	01/17/24 12:22	01/20/24 09:11	1
M2-4:2 FTS	112		25 - 150	01/17/24 12:22	01/20/24 09:11	1
13C3 HFPO-DA	92		25 - 150	01/17/24 12:22	01/20/24 09:11	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: W-12573440-011124-BB-003

Date Collected: 01/11/24 13:00

Date Received: 01/12/24 10:00

Lab Sample ID: 240-198084-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	6.9		4.9	2.3	ng/L		01/17/24 12:22	01/20/24 09:22	1
Perfluoropentanoic acid (PFPeA)	3.0		1.9	0.48	ng/L		01/17/24 12:22	01/20/24 09:22	1
Perfluorohexanoic acid (PFHxA)	3.1		1.9	0.56	ng/L		01/17/24 12:22	01/20/24 09:22	1
Perfluoroheptanoic acid (PFHpA)	1.2 J		1.9	0.24	ng/L		01/17/24 12:22	01/20/24 09:22	1
Perfluorononanoic acid (PFNA)	0.44 J		1.9	0.26	ng/L		01/17/24 12:22	01/20/24 09:22	1
Perfluorodecanoic acid (PFDA)	1.9 U		1.9	0.30	ng/L		01/17/24 12:22	01/20/24 09:22	1
Perfluoroundecanoic acid (PFUnA)	1.9 U		1.9	1.1	ng/L		01/17/24 12:22	01/20/24 09:22	1
Perfluorododecanoic acid (PFDoA)	1.9 U		1.9	0.53	ng/L		01/17/24 12:22	01/20/24 09:22	1
Perfluorotridecanoic acid (PFTriA)	1.9 U		1.9	1.3	ng/L		01/17/24 12:22	01/20/24 09:22	1
Perfluorotetradecanoic acid (PFTeA)	1.9 U		1.9	0.71	ng/L		01/17/24 12:22	01/20/24 09:22	1
Perfluorobutanesulfonic acid (PFBS)	2.0		1.9	0.19	ng/L		01/17/24 12:22	01/20/24 09:22	1
Perfluoropentanesulfonic acid (PFPeS)	1.1 J		1.9	0.29	ng/L		01/17/24 12:22	01/20/24 09:22	1
Perfluorohexanesulfonic acid (PFHxS)	5.3 I		1.9	0.55	ng/L		01/17/24 12:22	01/20/24 09:22	1
Perfluoroheptanesulfonic acid (PFHpS)	1.5 J I		1.9	0.18	ng/L		01/17/24 12:22	01/20/24 09:22	1
Perfluorooctanesulfonic acid (PFOS)	92 I		1.9	0.52	ng/L		01/17/24 12:22	01/20/24 09:22	1
Perfluorononanesulfonic acid (PFNS)	1.9 U		1.9	0.36	ng/L		01/17/24 12:22	01/20/24 09:22	1
Perfluorodecanesulfonic acid (PFDS)	1.9 U		1.9	0.31	ng/L		01/17/24 12:22	01/20/24 09:22	1
Perfluorooctanesulfonamide (FOSA)	1.9 U		1.9	0.95	ng/L		01/17/24 12:22	01/20/24 09:22	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.9 U		4.9	1.2	ng/L		01/17/24 12:22	01/20/24 09:22	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.9 U		4.9	1.3	ng/L		01/17/24 12:22	01/20/24 09:22	1
4:2 FTS	1.9 U		1.9	0.23	ng/L		01/17/24 12:22	01/20/24 09:22	1
6:2 FTS	4.9 U		4.9	2.4	ng/L		01/17/24 12:22	01/20/24 09:22	1
8:2 FTS	1.9 U		1.9	0.45	ng/L		01/17/24 12:22	01/20/24 09:22	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.9 U		1.9	0.39	ng/L		01/17/24 12:22	01/20/24 09:22	1
HFPO-DA (GenX)	3.9 U		3.9	1.5	ng/L		01/17/24 12:22	01/20/24 09:22	1
9Cl-PF3ONS	1.9 U		1.9	0.23	ng/L		01/17/24 12:22	01/20/24 09:22	1
11Cl-PF3OUdS	1.9 U		1.9	0.31	ng/L		01/17/24 12:22	01/20/24 09:22	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	97		25 - 150	01/17/24 12:22	01/20/24 09:22	1
13C5 PFPeA	95		25 - 150	01/17/24 12:22	01/20/24 09:22	1
13C2 PFHxA	122		25 - 150	01/17/24 12:22	01/20/24 09:22	1
13C4 PFHpA	113		25 - 150	01/17/24 12:22	01/20/24 09:22	1
13C5 PFNA	109		25 - 150	01/17/24 12:22	01/20/24 09:22	1
13C2 PFDA	123		25 - 150	01/17/24 12:22	01/20/24 09:22	1
13C2 PFUnA	103		25 - 150	01/17/24 12:22	01/20/24 09:22	1
13C2 PFDoA	90		25 - 150	01/17/24 12:22	01/20/24 09:22	1
13C2 PFTeA	89		25 - 150	01/17/24 12:22	01/20/24 09:22	1
13C3 PFBS	112		25 - 150	01/17/24 12:22	01/20/24 09:22	1
18O2 PFHxS	97		25 - 150	01/17/24 12:22	01/20/24 09:22	1
13C4 PFOS	100		25 - 150	01/17/24 12:22	01/20/24 09:22	1
13C8 FOSA	105		25 - 150	01/17/24 12:22	01/20/24 09:22	1
d3-NMeFOSAA	96		25 - 150	01/17/24 12:22	01/20/24 09:22	1
d5-NEtFOSAA	94		25 - 150	01/17/24 12:22	01/20/24 09:22	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Client Sample ID: W-12573440-011124-BB-003				Lab Sample ID: 240-198084-3		
Date Collected: 01/11/24 13:00				Matrix: Water		
Date Received: 01/12/24 10:00						
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	159	*5+	25 - 150	01/17/24 12:22	01/20/24 09:22	1
M2-8:2 FTS	124		25 - 150	01/17/24 12:22	01/20/24 09:22	1
M2-4:2 FTS	126		25 - 150	01/17/24 12:22	01/20/24 09:22	1
13C3 HFPO-DA	110		25 - 150	01/17/24 12:22	01/20/24 09:22	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: FB-12573440-011124-BB-004

Date Collected: 01/11/24 13:05

Date Received: 01/12/24 10:00

Lab Sample ID: 240-198084-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.5	U	4.5	2.1	ng/L		01/17/24 12:22	01/20/24 09:33	1
Perfluoropentanoic acid (PFPeA)	1.8	U	1.8	0.44	ng/L		01/17/24 12:22	01/20/24 09:33	1
Perfluorohexanoic acid (PFHxA)	1.8	U	1.8	0.52	ng/L		01/17/24 12:22	01/20/24 09:33	1
Perfluoroheptanoic acid (PFHpA)	1.8	U	1.8	0.22	ng/L		01/17/24 12:22	01/20/24 09:33	1
Perfluorooctanoic acid (PFOA)	1.8	U	1.8	0.76	ng/L		01/17/24 12:22	01/20/24 09:33	1
Perfluorononanoic acid (PFNA)	1.8	U	1.8	0.24	ng/L		01/17/24 12:22	01/20/24 09:33	1
Perfluorodecanoic acid (PFDA)	1.8	U	1.8	0.28	ng/L		01/17/24 12:22	01/20/24 09:33	1
Perfluoroundecanoic acid (PFUnA)	1.8	U	1.8	0.98	ng/L		01/17/24 12:22	01/20/24 09:33	1
Perfluorododecanoic acid (PFDoA)	1.8	U	1.8	0.49	ng/L		01/17/24 12:22	01/20/24 09:33	1
Perfluorotridecanoic acid (PFTriA)	1.8	U	1.8	1.2	ng/L		01/17/24 12:22	01/20/24 09:33	1
Perfluorotetradecanoic acid (PFTeA)	1.8	U	1.8	0.65	ng/L		01/17/24 12:22	01/20/24 09:33	1
Perfluorobutanesulfonic acid (PFBS)	1.8	U	1.8	0.18	ng/L		01/17/24 12:22	01/20/24 09:33	1
Perfluoropentanesulfonic acid (PFPeS)	1.8	U	1.8	0.27	ng/L		01/17/24 12:22	01/20/24 09:33	1
Perfluorohexanesulfonic acid (PFHxS)	1.8	U	1.8	0.51	ng/L		01/17/24 12:22	01/20/24 09:33	1
Perfluoroheptanesulfonic acid (PFHpS)	1.8	U	1.8	0.17	ng/L		01/17/24 12:22	01/20/24 09:33	1
Perfluorooctanesulfonic acid (PFOS)	1.8	U	1.8	0.48	ng/L		01/17/24 12:22	01/20/24 09:33	1
Perfluorononanesulfonic acid (PFNS)	1.8	U	1.8	0.33	ng/L		01/17/24 12:22	01/20/24 09:33	1
Perfluorodecanesulfonic acid (PFDS)	1.8	U	1.8	0.29	ng/L		01/17/24 12:22	01/20/24 09:33	1
Perfluorooctanesulfonamide (FOSA)	1.8	U	1.8	0.88	ng/L		01/17/24 12:22	01/20/24 09:33	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.5	U	4.5	1.1	ng/L		01/17/24 12:22	01/20/24 09:33	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.5	U	4.5	1.2	ng/L		01/17/24 12:22	01/20/24 09:33	1
4:2 FTS	1.8	U	1.8	0.21	ng/L		01/17/24 12:22	01/20/24 09:33	1
6:2 FTS	4.5	U	4.5	2.2	ng/L		01/17/24 12:22	01/20/24 09:33	1
8:2 FTS	1.8	U	1.8	0.41	ng/L		01/17/24 12:22	01/20/24 09:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.8	U	1.8	0.36	ng/L		01/17/24 12:22	01/20/24 09:33	1
HFPO-DA (GenX)	3.6	U	3.6	1.3	ng/L		01/17/24 12:22	01/20/24 09:33	1
9CI-PF3ONS	1.8	U	1.8	0.21	ng/L		01/17/24 12:22	01/20/24 09:33	1
11CI-PF3OUdS	1.8	U	1.8	0.29	ng/L		01/17/24 12:22	01/20/24 09:33	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	100		25 - 150	01/17/24 12:22	01/20/24 09:33	1
13C5 PFPeA	91		25 - 150	01/17/24 12:22	01/20/24 09:33	1
13C2 PFHxA	126		25 - 150	01/17/24 12:22	01/20/24 09:33	1
13C4 PFHpA	114		25 - 150	01/17/24 12:22	01/20/24 09:33	1
13C4 PFOA	111		25 - 150	01/17/24 12:22	01/20/24 09:33	1
13C5 PFNA	105		25 - 150	01/17/24 12:22	01/20/24 09:33	1
13C2 PFDA	125		25 - 150	01/17/24 12:22	01/20/24 09:33	1
13C2 PFUnA	107		25 - 150	01/17/24 12:22	01/20/24 09:33	1
13C2 PFDoA	96		25 - 150	01/17/24 12:22	01/20/24 09:33	1
13C2 PFTeDA	93		25 - 150	01/17/24 12:22	01/20/24 09:33	1
13C3 PFBS	104		25 - 150	01/17/24 12:22	01/20/24 09:33	1
18O2 PFHxS	100		25 - 150	01/17/24 12:22	01/20/24 09:33	1
13C4 PFOS	91		25 - 150	01/17/24 12:22	01/20/24 09:33	1
13C8 FOSA	101		25 - 150	01/17/24 12:22	01/20/24 09:33	1
d3-NMeFOSAA	106		25 - 150	01/17/24 12:22	01/20/24 09:33	1
d5-NEtFOSAA	102		25 - 150	01/17/24 12:22	01/20/24 09:33	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Client Sample ID: FB-12573440-011124-BB-004				Lab Sample ID: 240-198084-4		
Date Collected: 01/11/24 13:05				Matrix: Water		
Date Received: 01/12/24 10:00						
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	152	*5+	25 - 150	01/17/24 12:22	01/20/24 09:33	1
M2-8:2 FTS	119		25 - 150	01/17/24 12:22	01/20/24 09:33	1
M2-4:2 FTS	119		25 - 150	01/17/24 12:22	01/20/24 09:33	1
13C3 HFPO-DA	103		25 - 150	01/17/24 12:22	01/20/24 09:33	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - RA

Client Sample ID: W-12573440-011124-BB-003							Lab Sample ID: 240-198084-3		
Date Collected: 01/11/24 13:00							Matrix: Water		
Date Received: 01/12/24 10:00									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	5.3		1.9	0.82	ng/L		01/17/24 12:22	01/22/24 17:55	1
Isotope Dilution	%Recovery	Qualifier	Limits						
13C4 PFOA	109		25 - 150						
							Prepared	Analyzed	Dil Fac
							01/17/24 12:22	01/22/24 17:55	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

LCMS

Prep Batch: 734196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-198084-2	WT-12573440-011124-BB-002	Total/NA	Water	3535	
240-198084-3 - RA	W-12573440-011124-BB-003	Total/NA	Water	3535	
240-198084-3	W-12573440-011124-BB-003	Total/NA	Water	3535	
240-198084-4	FB-12573440-011124-BB-004	Total/NA	Water	3535	
MB 320-734196/1-A	Method Blank	Total/NA	Water	3535	
MB 320-734196/1-A - RA	Method Blank	Total/NA	Water	3535	
LCS 320-734196/2-A	Lab Control Sample	Total/NA	Water	3535	
LCS 320-734196/2-A - RA	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-734196/3-A - RA	Lab Control Sample Dup	Total/NA	Water	3535	
LCSD 320-734196/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 734859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-198084-2	WT-12573440-011124-BB-002	Total/NA	Water	537 (modified)	734196
240-198084-3	W-12573440-011124-BB-003	Total/NA	Water	537 (modified)	734196
240-198084-4	FB-12573440-011124-BB-004	Total/NA	Water	537 (modified)	734196
MB 320-734196/1-A	Method Blank	Total/NA	Water	537 (modified)	734196
LCS 320-734196/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	734196
LCSD 320-734196/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	734196

Analysis Batch: 735270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-198084-3 - RA	W-12573440-011124-BB-003	Total/NA	Water	537 (modified)	734196
MB 320-734196/1-A - RA	Method Blank	Total/NA	Water	537 (modified)	734196
LCS 320-734196/2-A - RA	Lab Control Sample	Total/NA	Water	537 (modified)	734196
LCSD 320-734196/3-A - RA	Lab Control Sample Dup	Total/NA	Water	537 (modified)	734196

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-734196/1-A

Matrix: Water

Analysis Batch: 734859

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 734196

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.0	U	5.0	2.4	ng/L		01/17/24 12:22	01/20/24 06:55	1
Perfluoropentanoic acid (PFPeA)	2.0	U	2.0	0.49	ng/L		01/17/24 12:22	01/20/24 06:55	1
Perfluorohexanoic acid (PFHxA)	2.0	U	2.0	0.58	ng/L		01/17/24 12:22	01/20/24 06:55	1
Perfluoroheptanoic acid (PFHpA)	2.0	U	2.0	0.25	ng/L		01/17/24 12:22	01/20/24 06:55	1
Perfluorooctanoic acid (PFOA)	2.0	U	2.0	0.85	ng/L		01/17/24 12:22	01/20/24 06:55	1
Perfluorononanoic acid (PFNA)	2.0	U	2.0	0.27	ng/L		01/17/24 12:22	01/20/24 06:55	1
Perfluorodecanoic acid (PFDA)	2.0	U	2.0	0.31	ng/L		01/17/24 12:22	01/20/24 06:55	1
Perfluoroundecanoic acid (PFUnA)	2.0	U	2.0	1.1	ng/L		01/17/24 12:22	01/20/24 06:55	1
Perfluorododecanoic acid (PFDoA)	2.0	U	2.0	0.55	ng/L		01/17/24 12:22	01/20/24 06:55	1
Perfluorotridecanoic acid (PFTriA)	2.0	U	2.0	1.3	ng/L		01/17/24 12:22	01/20/24 06:55	1
Perfluorotetradecanoic acid (PFTeA)	2.0	U	2.0	0.73	ng/L		01/17/24 12:22	01/20/24 06:55	1
Perfluorobutanesulfonic acid (PFBS)	2.0	U	2.0	0.20	ng/L		01/17/24 12:22	01/20/24 06:55	1
Perfluoropentanesulfonic acid (PFPeS)	2.0	U	2.0	0.30	ng/L		01/17/24 12:22	01/20/24 06:55	1
Perfluorohexanesulfonic acid (PFHxS)	2.0	U	2.0	0.57	ng/L		01/17/24 12:22	01/20/24 06:55	1
Perfluoroheptanesulfonic acid (PFHpS)	2.0	U	2.0	0.19	ng/L		01/17/24 12:22	01/20/24 06:55	1
Perfluorooctanesulfonic acid (PFOS)	2.0	U	2.0	0.54	ng/L		01/17/24 12:22	01/20/24 06:55	1
Perfluorononanesulfonic acid (PFNS)	2.0	U	2.0	0.37	ng/L		01/17/24 12:22	01/20/24 06:55	1
Perfluorodecanesulfonic acid (PFDS)	2.0	U	2.0	0.32	ng/L		01/17/24 12:22	01/20/24 06:55	1
Perfluorooctanesulfonamide (FOSA)	2.0	U	2.0	0.98	ng/L		01/17/24 12:22	01/20/24 06:55	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	5.0	U	5.0	1.2	ng/L		01/17/24 12:22	01/20/24 06:55	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.0	U	5.0	1.3	ng/L		01/17/24 12:22	01/20/24 06:55	1
4:2 FTS	2.0	U	2.0	0.24	ng/L		01/17/24 12:22	01/20/24 06:55	1
6:2 FTS	5.0	U	5.0	2.5	ng/L		01/17/24 12:22	01/20/24 06:55	1
8:2 FTS	2.0	U	2.0	0.46	ng/L		01/17/24 12:22	01/20/24 06:55	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.0	U	2.0	0.40	ng/L		01/17/24 12:22	01/20/24 06:55	1
HFPO-DA (GenX)	4.0	U	4.0	1.5	ng/L		01/17/24 12:22	01/20/24 06:55	1
9CI-PF3ONS	2.0	U	2.0	0.24	ng/L		01/17/24 12:22	01/20/24 06:55	1
11CI-PF3OUdS	2.0	U	2.0	0.32	ng/L		01/17/24 12:22	01/20/24 06:55	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	103		25 - 150	01/17/24 12:22	01/20/24 06:55	1
13C5 PFPeA	90		25 - 150	01/17/24 12:22	01/20/24 06:55	1
13C2 PFHxA	123		25 - 150	01/17/24 12:22	01/20/24 06:55	1
13C4 PFHpA	117		25 - 150	01/17/24 12:22	01/20/24 06:55	1
13C4 PFOA	112		25 - 150	01/17/24 12:22	01/20/24 06:55	1
13C5 PFNA	108		25 - 150	01/17/24 12:22	01/20/24 06:55	1
13C2 PFDA	129		25 - 150	01/17/24 12:22	01/20/24 06:55	1
13C2 PFUnA	109		25 - 150	01/17/24 12:22	01/20/24 06:55	1
13C2 PFDoA	94		25 - 150	01/17/24 12:22	01/20/24 06:55	1
13C2 PFTeDA	98		25 - 150	01/17/24 12:22	01/20/24 06:55	1
13C3 PFBS	106		25 - 150	01/17/24 12:22	01/20/24 06:55	1
18O2 PFHxS	110		25 - 150	01/17/24 12:22	01/20/24 06:55	1
13C4 PFOS	96		25 - 150	01/17/24 12:22	01/20/24 06:55	1
13C8 FOSA	108		25 - 150	01/17/24 12:22	01/20/24 06:55	1
d3-NMeFOSAA	116		25 - 150	01/17/24 12:22	01/20/24 06:55	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-734196/1-A

Matrix: Water

Analysis Batch: 734859

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 734196

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	116		25 - 150	01/17/24 12:22	01/20/24 06:55	1
M2-6:2 FTS	150		25 - 150	01/17/24 12:22	01/20/24 06:55	1
M2-8:2 FTS	134		25 - 150	01/17/24 12:22	01/20/24 06:55	1
M2-4:2 FTS	134		25 - 150	01/17/24 12:22	01/20/24 06:55	1
13C3 HFPO-DA	101		25 - 150	01/17/24 12:22	01/20/24 06:55	1

Lab Sample ID: LCS 320-734196/2-A

Matrix: Water

Analysis Batch: 734859

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 734196

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	32.6		ng/L		81	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	38.3		ng/L		96	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	39.3		ng/L		98	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	36.5		ng/L		91	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	44.5		ng/L		111	70 - 130
Perfluorononanoic acid (PFNA)	40.0	42.1		ng/L		105	75 - 135
Perfluorodecanoic acid (PFDA)	40.0	34.5		ng/L		86	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	41.7		ng/L		104	68 - 128
Perfluorododecanoic acid (PFDoA)	40.0	36.9		ng/L		92	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	36.0		ng/L		90	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	34.3		ng/L		86	70 - 130
Perfluorobutanesulfonic acid (PFBS)	35.5	38.1		ng/L		107	67 - 127
Perfluoropentanesulfonic acid (PFPeS)	37.6	32.1		ng/L		85	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	36.5	32.6		ng/L		89	59 - 119
Perfluoroheptanesulfonic acid (PFHpS)	38.2	44.7		ng/L		117	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.2	39.1		ng/L		105	70 - 130
Perfluorononanesulfonic acid (PFNS)	38.5	37.9		ng/L		99	75 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	37.6		ng/L		97	71 - 131
Perfluorooctanesulfonamide (FOSA)	40.0	37.8		ng/L		95	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	38.8		ng/L		97	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	41.0		ng/L		103	76 - 136
4:2 FTS	37.5	37.2		ng/L		99	79 - 139
6:2 FTS	38.1	31.1		ng/L		82	59 - 175
8:2 FTS	38.4	40.7		ng/L		106	75 - 135
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	46.7		ng/L		123	79 - 139
HFPO-DA (GenX)	40.0	37.7		ng/L		94	51 - 173
9CI-PF3ONS	37.4	36.9		ng/L		99	75 - 135

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-734196/2-A

Matrix: Water

Analysis Batch: 734859

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 734196

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11CI-PF3OUdS	37.8	33.6		ng/L		89	54 - 114
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
13C4 PFBA	106		25 - 150				
13C5 PFPeA	95		25 - 150				
13C2 PFHxA	122		25 - 150				
13C4 PFHpA	127		25 - 150				
13C4 PFOA	104		25 - 150				
13C5 PFNA	114		25 - 150				
13C2 PFDA	128		25 - 150				
13C2 PFUnA	111		25 - 150				
13C2 PFDoA	100		25 - 150				
13C2 PFTeDA	100		25 - 150				
13C3 PFBS	109		25 - 150				
18O2 PFHxS	107		25 - 150				
13C4 PFOS	93		25 - 150				
13C8 FOSA	106		25 - 150				
d3-NMeFOSAA	108		25 - 150				
d5-NEtFOSAA	101		25 - 150				
M2-6:2 FTS	137		25 - 150				
M2-8:2 FTS	112		25 - 150				
M2-4:2 FTS	120		25 - 150				
13C3 HFPO-DA	102		25 - 150				

Lab Sample ID: LCSD 320-734196/3-A

Matrix: Water

Analysis Batch: 734859

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 734196

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	40.0	32.5		ng/L		81	76 - 136	0	30
Perfluoropentanoic acid (PFPeA)	40.0	38.9		ng/L		97	71 - 131	1	30
Perfluorohexanoic acid (PFHxA)	40.0	37.1		ng/L		93	73 - 133	6	30
Perfluoroheptanoic acid (PFHpA)	40.0	36.4		ng/L		91	72 - 132	0	30
Perfluorooctanoic acid (PFOA)	40.0	43.7		ng/L		109	70 - 130	2	30
Perfluorononanoic acid (PFNA)	40.0	40.2		ng/L		101	75 - 135	5	30
Perfluorodecanoic acid (PFDA)	40.0	38.8		ng/L		97	76 - 136	12	30
Perfluoroundecanoic acid (PFUnA)	40.0	43.1		ng/L		108	68 - 128	3	30
Perfluorododecanoic acid (PFDoA)	40.0	36.8		ng/L		92	71 - 131	0	30
Perfluorotridecanoic acid (PFTriA)	40.0	37.0		ng/L		92	71 - 131	3	30
Perfluorotetradecanoic acid (PFTeA)	40.0	34.3		ng/L		86	70 - 130	0	30
Perfluorobutanesulfonic acid (PFBS)	35.5	37.0		ng/L		104	67 - 127	3	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	32.6		ng/L		87	66 - 126	2	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	31.9		ng/L		87	59 - 119	2	30

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-734196/3-A

Matrix: Water

Analysis Batch: 734859

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 734196

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoroheptanesulfonic acid (PFHpS)	38.2	46.1		ng/L		121	76 - 136	3	30
Perfluorooctanesulfonic acid (PFOS)	37.2	38.3		ng/L		103	70 - 130	2	30
Perfluorononanesulfonic acid (PFNS)	38.5	39.8		ng/L		103	75 - 135	5	30
Perfluorodecanesulfonic acid (PFDS)	38.6	35.5		ng/L		92	71 - 131	6	30
Perfluorooctanesulfonamide (FOSA)	40.0	37.3		ng/L		93	73 - 133	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	40.0		ng/L		100	76 - 136	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	36.9		ng/L		92	76 - 136	11	30
4:2 FTS	37.5	36.9		ng/L		98	79 - 139	1	30
6:2 FTS	38.1	27.9		ng/L		73	59 - 175	11	30
8:2 FTS	38.4	39.5		ng/L		103	75 - 135	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	48.1		ng/L		127	79 - 139	3	30
HFPO-DA (GenX)	40.0	39.0		ng/L		97	51 - 173	3	30
9CI-PF3ONS	37.4	38.0		ng/L		102	75 - 135	3	30
11CI-PF3OUdS	37.8	34.9		ng/L		92	54 - 114	4	30

Isotope Dilution	%Recovery	LCSD Qualifier	LCSD Limits
13C4 PFBA	99		25 - 150
13C5 PFPeA	90		25 - 150
13C2 PFHxA	123		25 - 150
13C4 PFHpA	125		25 - 150
13C4 PFOA	103		25 - 150
13C5 PFNA	107		25 - 150
13C2 PFDA	111		25 - 150
13C2 PFUnA	101		25 - 150
13C2 PFDoA	95		25 - 150
13C2 PFTeDA	95		25 - 150
13C3 PFBS	100		25 - 150
18O2 PFHxS	100		25 - 150
13C4 PFOS	88		25 - 150
13C8 FOSA	98		25 - 150
d3-NMeFOSAA	101		25 - 150
d5-NEtFOSAA	101		25 - 150
M2-6:2 FTS	131		25 - 150
M2-8:2 FTS	105		25 - 150
M2-4:2 FTS	116		25 - 150
13C3 HFPO-DA	93		25 - 150

Eurofins Cleveland

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Method: 537 (modified) - Fluorinated Alkyl Substances - RA

Lab Sample ID: MB 320-734196/1-A

Matrix: Water

Analysis Batch: 735270

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 734196

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA) - RA	2.0	U	2.0	0.85	ng/L		01/17/24 12:22	01/22/24 16:25	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFOA - RA	108		25 - 150				01/17/24 12:22	01/22/24 16:25	1

Lab Sample ID: LCS 320-734196/2-A

Matrix: Water

Analysis Batch: 735270

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 734196

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanoic acid (PFOA) - RA	40.0	42.2		ng/L		105	70 - 130
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
13C4 PFOA - RA	109		25 - 150				

Lab Sample ID: LCSD 320-734196/3-A

Matrix: Water

Analysis Batch: 735270

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 734196

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorooctanoic acid (PFOA) - RA	40.0	42.0		ng/L		105	70 - 130	0	30
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits						
13C4 PFOA - RA	107		25 - 150						

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Client Sample ID: WT-12573440-011124-BB-002

Lab Sample ID: 240-198084-2

Date Collected: 01/11/24 12:55

Matrix: Water

Date Received: 01/12/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			734196	M1G	EET SAC	01/17/24 12:22
Total/NA	Analysis	537 (modified)		1	734859	C1P	EET SAC	01/20/24 09:11

Client Sample ID: W-12573440-011124-BB-003

Lab Sample ID: 240-198084-3

Date Collected: 01/11/24 13:00

Matrix: Water

Date Received: 01/12/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			734196	M1G	EET SAC	01/17/24 12:22
Total/NA	Analysis	537 (modified)		1	734859	C1P	EET SAC	01/20/24 09:22
Total/NA	Prep	3535	RA		734196	M1G	EET SAC	01/17/24 12:22
Total/NA	Analysis	537 (modified)	RA	1	735270	C1P	EET SAC	01/22/24 17:55

Client Sample ID: FB-12573440-011124-BB-004

Lab Sample ID: 240-198084-4

Date Collected: 01/11/24 13:05

Matrix: Water

Date Received: 01/12/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			734196	M1G	EET SAC	01/17/24 12:22
Total/NA	Analysis	537 (modified)		1	734859	C1P	EET SAC	01/20/24 09:33

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	02-20-24
ANAB	Dept. of Defense ELAP	L2468	01-20-24 *
ANAB	Dept. of Energy	L2468.01	01-20-24 *
ANAB	ISO/IEC 17025	L2468	01-20-24 *
Arizona	State	AZ0708	08-11-24
Arkansas DEQ	State	88-0691	05-18-24
California	State	2897	01-22-24
Colorado	State	CA00044	08-31-24
Florida	NELAP	E87570	06-30-24
Georgia	State	4040	01-29-24
Hawaii	State	<cert No.>	01-29-24
Illinois	NELAP	200060	03-17-24
Kansas	NELAP	E-10375	10-31-24
Louisiana (All)	NELAP	01944	06-30-24
Maine	State	CA00004	04-14-24
Michigan	State	9947	01-31-24
Nevada	State	CA00044	07-31-24
New Hampshire	NELAP	2997	04-18-24
New Jersey	NELAP	CA005	06-30-24
New York	NELAP	11666	04-01-24
Ohio	State	41252	01-29-24
Oregon	NELAP	4040	01-29-24
Texas	NELAP	T104704399-23-17	05-31-24
US Fish & Wildlife	US Federal Programs	58448	04-30-24
USDA	US Federal Programs	P330-18-00239	02-28-26
Utah	NELAP	CA000442023-16	02-29-24
Virginia	NELAP	460278	03-14-24
Washington	State	C581	05-05-24
West Virginia (DW)	State	9930C	01-31-25
Wisconsin	State	998204680	08-31-24
Wyoming	State Program	8TMS-L	01-28-19 *

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

Eurofins Cleveland

[illegible]

Eurofins – Cleveland Sample Receipt Form/Narrative				Login # : _____	
Barberton Facility					
Client <u>GHD</u>		Site Name _____		Cooler unpacked by: <u>Alicia Allen</u>	
Cooler Received on <u>1-12-24</u>		Opened on <u>1-12-24</u>			
FedEx: 1 st Grd ☒ Exp ☐ UPS ☐ FAS ☐ Waypoint ☐ Client Drop Off ☐ Eurofins Courier ☐ Other ☐					
Receipt After-hours: Drop-off Date/Time _____				Storage Location _____	
Eurofins Cooler # <u>CC</u>		Foam Box ☐ Client Cooler ☐ Box ☐ Other ☐			
Packing material used: <u>Bubble Wrap</u>		Foam ☐ Plastic Bag ☐ None ☐ Other ☐			
COOLANT: <u>Wet Ice</u>		Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐			
1. Cooler temperature upon receipt _____		☐ See Multiple Cooler Form			
IR GUN # <u>21</u>		(CF <u>+0.4</u> °C)		Observed Cooler Temp. <u>3.1</u> °C Corrected Cooler Temp. <u>3.5</u> °C	
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u>		☒ Yes ☐ No		Tests that are not checked for pH by Receiving: VOAs Oil and Grease TOC	
-Were the seals on the outside of the cooler(s) signed & dated?		☒ Yes ☐ No ☐ NA			
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?		☐ Yes ☒ No ☐ NA			
-Were tamper/custody seals intact and uncompromised?		☒ Yes ☐ No ☐ NA			
3. Shippers' packing slip attached to the cooler(s)?		☒ Yes ☐ No			
4. Did custody papers accompany the sample(s)?		☒ Yes ☐ No			
5. Were the custody papers relinquished & signed in the appropriate place?		☒ Yes ☐ No			
6. Was/were the person(s) who collected the samples clearly identified on the COC?		☒ Yes ☐ No			
7. Did all bottles arrive in good condition (Unbroken)?		☒ Yes ☐ No			
8. Could all bottle labels (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)?		☒ Yes ☐ No			
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# HC316719	
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			
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: _____			

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Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u> <u>pH</u>	<u>Temp</u>	<u>Preservation</u> <u>Added</u>	<u>Preservation</u> <u>Lot Number</u>
WT-12573440-011124-BB-001	240-198084-B-1	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____



Environment Testing

[illegible]

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 240-198084-2

Login Number: 198084

List Number: 2

Creator: Simmons, Jason C

List Source: Eurofins Sacramento

List Creation: 01/13/24 03:03 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.2c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
240-198084-2	WT-12573440-011124-BB-002	95	87	118	120	105	100	112	97
240-198084-3	W-12573440-011124-BB-003	97	95	122	113		109	123	103
240-198084-3 - RA	W-12573440-011124-BB-003					109			
240-198084-4	FB-12573440-011124-BB-004	100	91	126	114	111	105	125	107
LCS 320-734196/2-A	Lab Control Sample	106	95	122	127	104	114	128	111
LCS 320-734196/2-A - RA	Lab Control Sample					109			
LCSD 320-734196/3-A	Lab Control Sample Dup	99	90	123	125	103	107	111	101
LCSD 320-734196/3-A - RA	Lab Control Sample Dup					107			
MB 320-734196/1-A	Method Blank	103	90	123	117	112	108	129	109
MB 320-734196/1-A - RA	Method Blank					108			

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
240-198084-2	WT-12573440-011124-BB-002	87	91	101	96	84	101	98	96
240-198084-3	W-12573440-011124-BB-003	90	89	112	97	100	105	96	94
240-198084-3 - RA	W-12573440-011124-BB-003								
240-198084-4	FB-12573440-011124-BB-004	96	93	104	100	91	101	106	102
LCS 320-734196/2-A	Lab Control Sample	100	100	109	107	93	106	108	101
LCS 320-734196/2-A - RA	Lab Control Sample								
LCSD 320-734196/3-A	Lab Control Sample Dup	95	95	100	100	88	98	101	101
LCSD 320-734196/3-A - RA	Lab Control Sample Dup								
MB 320-734196/1-A	Method Blank	94	98	106	110	96	108	116	116
MB 320-734196/1-A - RA	Method Blank								

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M262FTS (25-150)	M282FTS (25-150)	M242FTS (25-150)	HFPODA (25-150)
240-198084-2	WT-12573440-011124-BB-002	145	108	112	92
240-198084-3	W-12573440-011124-BB-003	159 *5+	124	126	110
240-198084-3 - RA	W-12573440-011124-BB-003				
240-198084-4	FB-12573440-011124-BB-004	152 *5+	119	119	103
LCS 320-734196/2-A	Lab Control Sample	137	112	120	102
LCS 320-734196/2-A - RA	Lab Control Sample				
LCSD 320-734196/3-A	Lab Control Sample Dup	131	105	116	93
LCSD 320-734196/3-A - RA	Lab Control Sample Dup				
MB 320-734196/1-A	Method Blank	150	134	134	101
MB 320-734196/1-A - RA	Method Blank				

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS

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Isotope Dilution Summary

Client: GHD Services Inc.

Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-198084-2

PFHxS = 18O2 PFHxS

PFOS = 13C4 PFOS

PFOSA = 13C8 FOSA

d3NMFOS = d3-NMeFOSAA

d5NEFOS = d5-NEtFOSAA

M262FTS = M2-6:2 FTS

M282FTS = M2-8:2 FTS

M242FTS = M2-4:2 FTS

HFPODA = 13C3 HFPO-DA

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Attachment 6

**Laboratory Analytical Reports for
February 8, 2024 Samples**

ANALYTICAL REPORT

PREPARED FOR

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

Generated 2/22/2024 9:11:50 AM

JOB DESCRIPTION

12573440-T37Y24-01, RACER Eckles

JOB NUMBER

240-199243-1

Eurofins Cleveland

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



Generated
2/22/2024 9:11:50 AM

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

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Case Narrative

Client: GHD Services Inc.
Project: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-1

Job ID: 240-199243-1

Eurofins Cleveland

Job Narrative 240-199243-1

Receipt

The samples were received on 2/9/2024 10:15 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 time was 1.4°C.

PCBs

Method 608.3_PCB_PREC: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: WT-12573440-020824-CM-001 (240-199243-1), (LCS 240-603164/2-A) and (MB 240-603164/1-A).

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

Metals

Method 200.7 - Total Recoverable: The continuing calibration verification (CCV) associated with batch 240-602935 recovered above the upper control limit for zinc. The samples associated with this CCV were below the reporting limit for the affected analytes; therefore, the data have been reported. The associated sample is impacted: WT-12573440-020824-CM-001 (240-199243-1).

Method 200.7 - Total Recoverable: Some requested practical quantitation limits (PQLs) fall below the laboratory's verified standard quantitation limit: WT-12573440-020824-CM-001 (240-199243-1). The continuing calibration blanks and method blanks may not support the lower PQL.

Method 245.1: The method blank for preparation batch 240-602789 contained mercury above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

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

General Chemistry

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

Eurofins Cleveland

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-1

Qualifiers

GC Semi VOA

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

Metals

Qualifier	Qualifier Description
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
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: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-199243-1	WT-12573440-020824-CM-001	Water	02/08/24 11:15	02/09/24 10:15

- 1
- 2
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- 4
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- 10
- 11
- 12
- 13
- 14

Detection Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-1

Client Sample ID: WT-12573440-020824-CM-001

Lab Sample ID: 240-199243-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Nickel	0.15		0.010	mg/L	1		200.7 Rev 4.4	Total Recoverable

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-1

Method	Method Description	Protocol	Laboratory
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
3500-Cr B-2011	Chromium, Hexavalent	SM	EET CLE
SM 2540D	Solids, Total Suspended (TSS)	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 Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-1

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

Client Sample ID: WT-12573440-020824-CM-001

Date Collected: 02/08/24 11:15

Date Received: 02/09/24 10:15

Lab Sample ID: 240-199243-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	ug/L		02/15/24 09:19	02/20/24 11:10	1
Aroclor-1221	0.096	U	0.096	ug/L		02/15/24 09:19	02/20/24 11:10	1
Aroclor-1232	0.096	U	0.096	ug/L		02/15/24 09:19	02/20/24 11:10	1
Aroclor-1242	0.096	U	0.096	ug/L		02/15/24 09:19	02/20/24 11:10	1
Aroclor-1248	0.096	U	0.096	ug/L		02/15/24 09:19	02/20/24 11:10	1
Aroclor-1254	0.096	U	0.096	ug/L		02/15/24 09:19	02/20/24 11:10	1
Aroclor-1260	0.096	U	0.096	ug/L		02/15/24 09:19	02/20/24 11:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	61		10 - 174			02/15/24 09:19	02/20/24 11:10	1
Tetrachloro-m-xylene	63		10 - 149			02/15/24 09:19	02/20/24 11:10	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-1

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

Client Sample ID: WT-12573440-020824-CM-001

Date Collected: 02/08/24 11:15

Date Received: 02/09/24 10:15

Lab Sample ID: 240-199243-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.050	U	0.050	mg/L		02/12/24 14:00	02/13/24 23:30	1
Nickel	0.15		0.010	mg/L		02/12/24 14:00	02/13/24 23:30	1
Lead	0.050	U	0.050	mg/L		02/12/24 14:00	02/13/24 23:30	1
Zinc	0.050	U ^+	0.050	mg/L		02/12/24 14:00	02/13/24 23:30	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-1

Method: EPA 245.1 - Mercury (CVAA)

Client Sample ID: WT-12573440-020824-CM-001					Lab Sample ID: 240-199243-1				
Date Collected: 02/08/24 11:15					Matrix: Water				
Date Received: 02/09/24 10:15									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Mercury	0.00020	U	0.00020	mg/L		02/12/24 14:00	02/13/24 11:21	1	

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-1

General Chemistry

Client Sample ID: WT-12573440-020824-CM-001
Date Collected: 02/08/24 11:15
Date Received: 02/09/24 10:15

Lab Sample ID: 240-199243-1
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (1664B)	4.5	U	4.5	mg/L			02/20/24 12:40	1
Chromium, hexavalent (SM 3500-Cr B-2011)	0.010	U	0.010	mg/L			02/09/24 08:44	1
Total Suspended Solids (SM 2540D)	8.0	U	8.0	mg/L			02/15/24 11:23	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-1

GC Semi VOA

Prep Batch: 603164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-199243-1	WT-12573440-020824-CM-001	Total/NA	Water	608	
MB 240-603164/1-A	Method Blank	Total/NA	Water	608	
LCS 240-603164/2-A	Lab Control Sample	Total/NA	Water	608	

Analysis Batch: 603630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-199243-1	WT-12573440-020824-CM-001	Total/NA	Water	608.3	603164
MB 240-603164/1-A	Method Blank	Total/NA	Water	608.3	603164
LCS 240-603164/2-A	Lab Control Sample	Total/NA	Water	608.3	603164

Metals

Prep Batch: 602783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-199243-1	WT-12573440-020824-CM-001	Total Recoverable	Water	200.7	
MB 240-602783/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 240-602783/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Prep Batch: 602789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-199243-1	WT-12573440-020824-CM-001	Total/NA	Water	245.1	
MB 240-602789/1-A	Method Blank	Total/NA	Water	245.1	
LCS 240-602789/24-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 602935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-199243-1	WT-12573440-020824-CM-001	Total Recoverable	Water	200.7 Rev 4.4	602783
MB 240-602783/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	602783
LCS 240-602783/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	602783

Analysis Batch: 602951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-199243-1	WT-12573440-020824-CM-001	Total/NA	Water	245.1	602789
MB 240-602789/1-A	Method Blank	Total/NA	Water	245.1	602789
LCS 240-602789/24-A	Lab Control Sample	Total/NA	Water	245.1	602789

General Chemistry

Analysis Batch: 602547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-199243-1	WT-12573440-020824-CM-001	Total/NA	Water	3500-Cr B-2011	
MB 240-602547/3	Method Blank	Total/NA	Water	3500-Cr B-2011	
LCS 240-602547/4	Lab Control Sample	Total/NA	Water	3500-Cr B-2011	

Analysis Batch: 603208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-199243-1	WT-12573440-020824-CM-001	Total/NA	Water	SM 2540D	
MB 240-603208/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 240-603208/2	Lab Control Sample	Total/NA	Water	SM 2540D	
240-199243-1 DU	WT-12573440-020824-CM-001	Total/NA	Water	SM 2540D	

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QC Association Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-1

General Chemistry

Analysis Batch: 603675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-199243-1	WT-12573440-020824-CM-001	Total/NA	Water	1664B	
MB 240-603675/1	Method Blank	Total/NA	Water	1664B	
LCS 240-603675/2	Lab Control Sample	Total/NA	Water	1664B	

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

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-1

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

Lab Sample ID: MB 240-603164/1-A

Matrix: Water

Analysis Batch: 603630

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 603164

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	ug/L		02/15/24 09:19	02/20/24 13:17	1
Aroclor-1221	0.10	U	0.10	ug/L		02/15/24 09:19	02/20/24 13:17	1
Aroclor-1232	0.10	U	0.10	ug/L		02/15/24 09:19	02/20/24 13:17	1
Aroclor-1242	0.10	U	0.10	ug/L		02/15/24 09:19	02/20/24 13:17	1
Aroclor-1248	0.10	U	0.10	ug/L		02/15/24 09:19	02/20/24 13:17	1
Aroclor-1254	0.10	U	0.10	ug/L		02/15/24 09:19	02/20/24 13:17	1
Aroclor-1260	0.10	U	0.10	ug/L		02/15/24 09:19	02/20/24 13:17	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	74		10 - 174			02/15/24 09:19	02/20/24 13:17	1
Tetrachloro-m-xylene	63		10 - 149			02/15/24 09:19	02/20/24 13:17	1

Lab Sample ID: LCS 240-603164/2-A

Matrix: Water

Analysis Batch: 603630

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 603164

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	1.63		ug/L		65	50 - 140
Aroclor-1260	2.50	1.51		ug/L		60	8 - 140
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
DCB Decachlorobiphenyl	65		10 - 174				
Tetrachloro-m-xylene	57		10 - 149				

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-602783/1-A

Matrix: Water

Analysis Batch: 602935

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 602783

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.050	U	0.050	mg/L		02/12/24 14:00	02/14/24 07:33	1
Nickel	0.010	U	0.010	mg/L		02/12/24 14:00	02/14/24 07:33	1
Lead	0.050	U	0.050	mg/L		02/12/24 14:00	02/14/24 07:33	1
Zinc	0.050	U	0.050	mg/L		02/12/24 14:00	02/14/24 07:33	1

Lab Sample ID: LCS 240-602783/2-A

Matrix: Water

Analysis Batch: 602935

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 602783

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	1.00	0.922		mg/L		92	85 - 115
Nickel	1.00	0.994		mg/L		99	85 - 115
Lead	1.00	0.942		mg/L		94	85 - 115
Zinc	1.00	1.02		mg/L		102	85 - 115

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-602789/1-A
Matrix: Water
Analysis Batch: 602951

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 602789

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000306		0.00020	mg/L		02/12/24 14:00	02/13/24 10:48	1

Lab Sample ID: LCS 240-602789/24-A
Matrix: Water
Analysis Batch: 602951

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 602789

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00500	0.00471		mg/L		94	85 - 115

Method: 1664B - HEM and SGT-HEM

Lab Sample ID: MB 240-603675/1
Matrix: Water
Analysis Batch: 603675

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	5.0	U	5.0	mg/L			02/20/24 12:40	1

Lab Sample ID: LCS 240-603675/2
Matrix: Water
Analysis Batch: 603675

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HEM	40.0	36.2		mg/L		91	78 - 114

Method: 3500-Cr B-2011 - Chromium, Hexavalent

Lab Sample ID: MB 240-602547/3
Matrix: Water
Analysis Batch: 602547

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	0.010	U	0.010	mg/L			02/09/24 08:44	1

Lab Sample ID: LCS 240-602547/4
Matrix: Water
Analysis Batch: 602547

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium, hexavalent	0.250	0.255		mg/L		102	85 - 115

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

Lab Sample ID: MB 240-603208/1
Matrix: Water
Analysis Batch: 603208

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	mg/L			02/15/24 11:23	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-1

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

Lab Sample ID: LCS 240-603208/2
Matrix: Water
Analysis Batch: 603208

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	60.1	56.0		mg/L		93	64 - 120

Lab Sample ID: 240-199243-1 DU
Matrix: Water
Analysis Batch: 603208

Client Sample ID: WT-12573440-020824-CM-001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	8.0	U	8.0	U	mg/L		NC	10

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-1

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

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCBP1 (10-174)	TCX1 (10-149)
240-199243-1	WT-12573440-020824-CM-001	61	63
LCS 240-603164/2-A	Lab Control Sample	65	57
MB 240-603164/1-A	Method Blank	74	63
Surrogate Legend			
DCBP = DCB Decachlorobiphenyl			
TCX = Tetrachloro-m-xylene			

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-1

Client Sample ID: WT-12573440-020824-CM-001

Lab Sample ID: 240-199243-1

Date Collected: 02/08/24 11:15

Matrix: Water

Date Received: 02/09/24 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	608			603164	LK2	EET CLE	02/15/24 09:19
Total/NA	Analysis	608.3		1	603630	LSH	EET CLE	02/20/24 11:10
Total Recoverable	Prep	200.7			602783	BN	EET CLE	02/12/24 14:00
Total Recoverable	Analysis	200.7 Rev 4.4		1	602935	RKT	EET CLE	02/13/24 23:30
Total/NA	Prep	245.1			602789	BN	EET CLE	02/12/24 14:00
Total/NA	Analysis	245.1		1	602951	TQ6W	EET CLE	02/13/24 11:21
Total/NA	Analysis	1664B		1	603675	JMR	EET CLE	02/20/24 12:40
Total/NA	Analysis	3500-Cr B-2011		1	602547	MS	EET CLE	02/09/24 08:44
Total/NA	Analysis	SM 2540D		1	603208	C5SV	EET CLE	02/15/24 11:23

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.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-1

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	07-31-24
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-28-24
Kentucky (WW)	State	KY98016	12-30-24
Michigan	State	9135	02-27-24
Minnesota	NELAP	039-999-348	12-31-24
New Jersey	NELAP	OH001	07-01-24
New York	NELAP	10975	04-01-24
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	T104704517-22-19	08-31-24
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-24

Phone: 330-497-9396 Fax: 330-497-0772

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Chain of Custody Record

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[illegible]

Eurofins – Cleveland Sample Receipt Form/Narrative				Login # _____	
Barberton Facility					
Client <u>GHD</u>		Site Name _____		Cooler unpacked by: <u>Rachelle Haidet</u>	
Cooler Received on <u>2 9 24</u>		Opened on <u>2 9 24</u>			
FedEx 1 st Grd <u>Exp</u>		UPS FAS Waypoint		Client Drop Off Eurofins Courier Other _____	
Receipt After-hours Drop-off Date/Time _____				Storage Location _____	
Eurofins Cooler # <u>EC</u>		Foam Box _____		Client Cooler Box _____ Other _____	
Packing material used: <u>Bubble Wrap</u>		Foam <u>Plastic Bag</u>		None Other _____	
COOLANT: <u>Wet Ice</u>		Blue Ice _____		Dry Ice _____ Water _____ None _____	
1 Cooler temperature upon receipt _____		☐ See Multiple Cooler Form			
IR GUN # <u>21</u>		(CF <u>-0.4</u> °C)		Observed Cooler Temp. <u>1.8</u> °C Corrected Cooler Temp <u>1.4</u> °C	
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u>		☒ Yes ☐ No		Tests that are not checked for pH by Receiving VOAs Oil and Grease TOC	
-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 preservative <u>(Y/N)</u> , # of containers <u>(Y/N)</u> , and sample type of grab/comp <u>(Y/N)</u> ?					
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# HC316719	
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			
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 _____			



Temperature readings _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u> <u>pH</u>	<u>Temp</u>	<u>Preservation</u> <u>Added</u>	<u>Preservation</u> <u>Lot Number</u>
WT-12572440 - 020824-CM-001	240-199243-B-1	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____

ANALYTICAL REPORT

PREPARED FOR

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

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JOB DESCRIPTION

12573440-T37Y24-01, RACER Eckles

JOB NUMBER

240-199243-2

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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
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(330)966-9477

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Case Narrative

Client: GHD Services Inc.
Project: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-2

Job ID: 240-199243-2

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Job Narrative 240-199243-2

Receipt

The samples were received on 2/9/2024 10:15 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 1.4° C.

LCMS

Method 537 (modified): The following analyte recovered outside control limits for the LCS associated with preparation batch 320-741573 and analytical batch 320-744654: Perfluorotridecanoic acid (PFTrIA). This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte: W-12573440-020824-CM-003 (240-199243-3).

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.

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-2

Qualifiers

LCMS

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
I	Value is EMPC (estimated maximum possible concentration).
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: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-199243-2	WT-12573440-020824-CM-002	Water	02/08/24 10:45	02/09/24 10:15
240-199243-3	W-12573440-020824-CM-003	Water	02/08/24 10:35	02/09/24 10:15
240-199243-4	FB-12573440-020824-CM-004	Water	02/08/24 10:30	02/09/24 10:15

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

Detection Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-2

Client Sample ID: WT-12573440-020824-CM-002

Lab Sample ID: 240-199243-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonamide (FOSA)	1.6	J	1.8	0.88	ng/L	1		537 (modified)	Total/NA

Client Sample ID: W-12573440-020824-CM-003

Lab Sample ID: 240-199243-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	8.9		4.5	2.2	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	3.1		1.8	0.44	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	2.2		1.8	0.52	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.6	J I	1.8	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	5.2		1.8	0.76	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.50	J I	1.8	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.8		1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.2	J	1.8	0.27	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.1	I	1.8	0.51	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	1.1	J I	1.8	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	78	I	1.8	0.49	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	2.1		1.8	0.88	ng/L	1		537 (modified)	Total/NA

Client Sample ID: FB-12573440-020824-CM-004

Lab Sample ID: 240-199243-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	0.85	J	1.9	0.52	ng/L	1		537 (modified)	Total/NA
8:2 FTS	0.83	J	1.9	0.44	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

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Method Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-2

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	EET SAC
3535	Solid-Phase Extraction (SPE)	SW846	EET SAC

Protocol References:

EPA = US Environmental Protection Agency
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: WT-12573440-020824-CM-002

Date Collected: 02/08/24 10:45

Date Received: 02/09/24 10:15

Lab Sample ID: 240-199243-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.5	U	4.5	2.2	ng/L		02/20/24 12:43	03/06/24 02:01	1
Perfluoropentanoic acid (PFPeA)	1.8	U	1.8	0.44	ng/L		02/20/24 12:43	03/06/24 02:01	1
Perfluorohexanoic acid (PFHxA)	1.8	U	1.8	0.52	ng/L		02/20/24 12:43	03/06/24 02:01	1
Perfluoroheptanoic acid (PFHpA)	1.8	U	1.8	0.22	ng/L		02/20/24 12:43	03/06/24 02:01	1
Perfluorooctanoic acid (PFOA)	1.8	U	1.8	0.76	ng/L		02/20/24 12:43	03/06/24 02:01	1
Perfluorononanoic acid (PFNA)	1.8	U	1.8	0.24	ng/L		02/20/24 12:43	03/06/24 02:01	1
Perfluorodecanoic acid (PFDA)	1.8	U	1.8	0.28	ng/L		02/20/24 12:43	03/06/24 02:01	1
Perfluoroundecanoic acid (PFUnA)	1.8	U	1.8	0.99	ng/L		02/20/24 12:43	03/06/24 02:01	1
Perfluorododecanoic acid (PFDoA)	1.8	U	1.8	0.49	ng/L		02/20/24 12:43	03/06/24 02:01	1
Perfluorotridecanoic acid (PFTriA)	1.8	U *	1.8	1.2	ng/L		02/20/24 12:43	03/06/24 02:01	1
Perfluorotetradecanoic acid (PFTeA)	1.8	U	1.8	0.66	ng/L		02/20/24 12:43	03/06/24 02:01	1
Perfluorobutanesulfonic acid (PFBS)	1.8	U	1.8	0.18	ng/L		02/20/24 12:43	03/06/24 02:01	1
Perfluoropentanesulfonic acid (PFPeS)	1.8	U	1.8	0.27	ng/L		02/20/24 12:43	03/06/24 02:01	1
Perfluorohexanesulfonic acid (PFHxS)	1.8	U	1.8	0.51	ng/L		02/20/24 12:43	03/06/24 02:01	1
Perfluoroheptanesulfonic acid (PFHpS)	1.8	U	1.8	0.17	ng/L		02/20/24 12:43	03/06/24 02:01	1
Perfluorooctanesulfonic acid (PFOS)	1.8	U	1.8	0.49	ng/L		02/20/24 12:43	03/06/24 02:01	1
Perfluorononanesulfonic acid (PFNS)	1.8	U	1.8	0.33	ng/L		02/20/24 12:43	03/06/24 02:01	1
Perfluorodecanesulfonic acid (PFDS)	1.8	U	1.8	0.29	ng/L		02/20/24 12:43	03/06/24 02:01	1
Perfluorooctanesulfonamide (FOSA)	1.6	J	1.8	0.88	ng/L		02/20/24 12:43	03/06/24 02:01	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.5	U	4.5	1.1	ng/L		02/20/24 12:43	03/06/24 02:01	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.5	U	4.5	1.2	ng/L		02/20/24 12:43	03/06/24 02:01	1
4:2 FTS	1.8	U	1.8	0.22	ng/L		02/20/24 12:43	03/06/24 02:01	1
6:2 FTS	4.5	U	4.5	2.2	ng/L		02/20/24 12:43	03/06/24 02:01	1
8:2 FTS	1.8	U	1.8	0.41	ng/L		02/20/24 12:43	03/06/24 02:01	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.8	U	1.8	0.36	ng/L		02/20/24 12:43	03/06/24 02:01	1
HFPO-DA (GenX)	3.6	U	3.6	1.3	ng/L		02/20/24 12:43	03/06/24 02:01	1
9CI-PF3ONS	1.8	U	1.8	0.22	ng/L		02/20/24 12:43	03/06/24 02:01	1
11CI-PF3OUdS	1.8	U	1.8	0.29	ng/L		02/20/24 12:43	03/06/24 02:01	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	110		25 - 150	02/20/24 12:43	03/06/24 02:01	1
13C5 PFPeA	113		25 - 150	02/20/24 12:43	03/06/24 02:01	1
13C2 PFHxA	117		25 - 150	02/20/24 12:43	03/06/24 02:01	1
13C4 PFHpA	113		25 - 150	02/20/24 12:43	03/06/24 02:01	1
13C4 PFOA	111		25 - 150	02/20/24 12:43	03/06/24 02:01	1
13C5 PFNA	108		25 - 150	02/20/24 12:43	03/06/24 02:01	1
13C2 PFDA	121		25 - 150	02/20/24 12:43	03/06/24 02:01	1
13C2 PFUnA	114		25 - 150	02/20/24 12:43	03/06/24 02:01	1
13C2 PFDoA	107		25 - 150	02/20/24 12:43	03/06/24 02:01	1
13C2 PFTeDA	97		25 - 150	02/20/24 12:43	03/06/24 02:01	1
13C3 PFBS	107		25 - 150	02/20/24 12:43	03/06/24 02:01	1
18O2 PFHxS	111		25 - 150	02/20/24 12:43	03/06/24 02:01	1
13C4 PFOS	115		25 - 150	02/20/24 12:43	03/06/24 02:01	1
13C8 FOSA	125		25 - 150	02/20/24 12:43	03/06/24 02:01	1
d3-NMeFOSAA	107		25 - 150	02/20/24 12:43	03/06/24 02:01	1
d5-NEtFOSAA	116		25 - 150	02/20/24 12:43	03/06/24 02:01	1

Eurofins Cleveland

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Client Sample ID: WT-12573440-020824-CM-002

Date Collected: 02/08/24 10:45

Date Received: 02/09/24 10:15

Lab Sample ID: 240-199243-2

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	92		25 - 150	02/20/24 12:43	03/06/24 02:01	1
M2-8:2 FTS	96		25 - 150	02/20/24 12:43	03/06/24 02:01	1
M2-4:2 FTS	86		25 - 150	02/20/24 12:43	03/06/24 02:01	1
13C3 HFPO-DA	110		25 - 150	02/20/24 12:43	03/06/24 02:01	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: W-12573440-020824-CM-003

Date Collected: 02/08/24 10:35

Date Received: 02/09/24 10:15

Lab Sample ID: 240-199243-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	8.9		4.5	2.2	ng/L		02/20/24 12:43	03/06/24 02:11	1
Perfluoropentanoic acid (PFPeA)	3.1		1.8	0.44	ng/L		02/20/24 12:43	03/06/24 02:11	1
Perfluorohexanoic acid (PFHxA)	2.2		1.8	0.52	ng/L		02/20/24 12:43	03/06/24 02:11	1
Perfluoroheptanoic acid (PFHpA)	1.6	J I	1.8	0.22	ng/L		02/20/24 12:43	03/06/24 02:11	1
Perfluorooctanoic acid (PFOA)	5.2		1.8	0.76	ng/L		02/20/24 12:43	03/06/24 02:11	1
Perfluorononanoic acid (PFNA)	0.50	J I	1.8	0.24	ng/L		02/20/24 12:43	03/06/24 02:11	1
Perfluorodecanoic acid (PFDA)	1.8	U	1.8	0.28	ng/L		02/20/24 12:43	03/06/24 02:11	1
Perfluoroundecanoic acid (PFUnA)	1.8	U	1.8	0.99	ng/L		02/20/24 12:43	03/06/24 02:11	1
Perfluorododecanoic acid (PFDoA)	1.8	U	1.8	0.49	ng/L		02/20/24 12:43	03/06/24 02:11	1
Perfluorotridecanoic acid (PFTriA)	1.8	U *	1.8	1.2	ng/L		02/20/24 12:43	03/06/24 02:11	1
Perfluorotetradecanoic acid (PFTeA)	1.8	U	1.8	0.66	ng/L		02/20/24 12:43	03/06/24 02:11	1
Perfluorobutanesulfonic acid (PFBS)	1.8		1.8	0.18	ng/L		02/20/24 12:43	03/06/24 02:11	1
Perfluoropentanesulfonic acid (PFPeS)	1.2	J	1.8	0.27	ng/L		02/20/24 12:43	03/06/24 02:11	1
Perfluorohexanesulfonic acid (PFHxS)	5.1	I	1.8	0.51	ng/L		02/20/24 12:43	03/06/24 02:11	1
Perfluoroheptanesulfonic acid (PFHpS)	1.1	J I	1.8	0.17	ng/L		02/20/24 12:43	03/06/24 02:11	1
Perfluorooctanesulfonic acid (PFOS)	78	I	1.8	0.49	ng/L		02/20/24 12:43	03/06/24 02:11	1
Perfluorononanesulfonic acid (PFNS)	1.8	U	1.8	0.33	ng/L		02/20/24 12:43	03/06/24 02:11	1
Perfluorodecanesulfonic acid (PFDS)	1.8	U	1.8	0.29	ng/L		02/20/24 12:43	03/06/24 02:11	1
Perfluorooctanesulfonamide (FOSA)	2.1		1.8	0.88	ng/L		02/20/24 12:43	03/06/24 02:11	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.5	U	4.5	1.1	ng/L		02/20/24 12:43	03/06/24 02:11	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.5	U	4.5	1.2	ng/L		02/20/24 12:43	03/06/24 02:11	1
4:2 FTS	1.8	U	1.8	0.22	ng/L		02/20/24 12:43	03/06/24 02:11	1
6:2 FTS	4.5	U	4.5	2.2	ng/L		02/20/24 12:43	03/06/24 02:11	1
8:2 FTS	1.8	U	1.8	0.41	ng/L		02/20/24 12:43	03/06/24 02:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.8	U	1.8	0.36	ng/L		02/20/24 12:43	03/06/24 02:11	1
HFPO-DA (GenX)	3.6	U	3.6	1.3	ng/L		02/20/24 12:43	03/06/24 02:11	1
9CI-PF3ONS	1.8	U	1.8	0.22	ng/L		02/20/24 12:43	03/06/24 02:11	1
11CI-PF3OUdS	1.8	U	1.8	0.29	ng/L		02/20/24 12:43	03/06/24 02:11	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	81		25 - 150	02/20/24 12:43	03/06/24 02:11	1
13C5 PFPeA	100		25 - 150	02/20/24 12:43	03/06/24 02:11	1
13C2 PFHxA	107		25 - 150	02/20/24 12:43	03/06/24 02:11	1
13C4 PFHpA	100		25 - 150	02/20/24 12:43	03/06/24 02:11	1
13C4 PFOA	112		25 - 150	02/20/24 12:43	03/06/24 02:11	1
13C5 PFNA	103		25 - 150	02/20/24 12:43	03/06/24 02:11	1
13C2 PFDA	104		25 - 150	02/20/24 12:43	03/06/24 02:11	1
13C2 PFUnA	94		25 - 150	02/20/24 12:43	03/06/24 02:11	1
13C2 PFDoA	84		25 - 150	02/20/24 12:43	03/06/24 02:11	1
13C2 PFTeDA	74		25 - 150	02/20/24 12:43	03/06/24 02:11	1
13C3 PFBS	96		25 - 150	02/20/24 12:43	03/06/24 02:11	1
18O2 PFHxS	96		25 - 150	02/20/24 12:43	03/06/24 02:11	1
13C4 PFOS	108		25 - 150	02/20/24 12:43	03/06/24 02:11	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Client Sample ID: W-12573440-020824-CM-003

Date Collected: 02/08/24 10:35

Date Received: 02/09/24 10:15

Lab Sample ID: 240-199243-3

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	100		25 - 150	02/20/24 12:43	03/06/24 02:11	1
d3-NMeFOSAA	85		25 - 150	02/20/24 12:43	03/06/24 02:11	1
d5-NEtFOSAA	91		25 - 150	02/20/24 12:43	03/06/24 02:11	1
M2-6:2 FTS	117		25 - 150	02/20/24 12:43	03/06/24 02:11	1
M2-8:2 FTS	97		25 - 150	02/20/24 12:43	03/06/24 02:11	1
M2-4:2 FTS	98		25 - 150	02/20/24 12:43	03/06/24 02:11	1
13C3 HFPO-DA	95		25 - 150	02/20/24 12:43	03/06/24 02:11	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: FB-12573440-020824-CM-004

Date Collected: 02/08/24 10:30

Date Received: 02/09/24 10:15

Lab Sample ID: 240-199243-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.8	U	4.8	2.3	ng/L		02/20/24 12:43	03/06/24 02:21	1
Perfluoropentanoic acid (PFPeA)	1.9	U	1.9	0.47	ng/L		02/20/24 12:43	03/06/24 02:21	1
Perfluorohexanoic acid (PFHxA)	1.9	U	1.9	0.56	ng/L		02/20/24 12:43	03/06/24 02:21	1
Perfluoroheptanoic acid (PFHpA)	1.9	U	1.9	0.24	ng/L		02/20/24 12:43	03/06/24 02:21	1
Perfluorooctanoic acid (PFOA)	1.9	U	1.9	0.82	ng/L		02/20/24 12:43	03/06/24 02:21	1
Perfluorononanoic acid (PFNA)	1.9	U	1.9	0.26	ng/L		02/20/24 12:43	03/06/24 02:21	1
Perfluorodecanoic acid (PFDA)	1.9	U	1.9	0.30	ng/L		02/20/24 12:43	03/06/24 02:21	1
Perfluoroundecanoic acid (PFUnA)	1.9	U	1.9	1.1	ng/L		02/20/24 12:43	03/06/24 02:21	1
Perfluorododecanoic acid (PFDoA)	1.9	U	1.9	0.53	ng/L		02/20/24 12:43	03/06/24 02:21	1
Perfluorotridecanoic acid (PFTriA)	1.9	U *	1.9	1.3	ng/L		02/20/24 12:43	03/06/24 02:21	1
Perfluorotetradecanoic acid (PFTeA)	1.9	U	1.9	0.71	ng/L		02/20/24 12:43	03/06/24 02:21	1
Perfluorobutanesulfonic acid (PFBS)	1.9	U	1.9	0.19	ng/L		02/20/24 12:43	03/06/24 02:21	1
Perfluoropentanesulfonic acid (PFPeS)	1.9	U	1.9	0.29	ng/L		02/20/24 12:43	03/06/24 02:21	1
Perfluorohexanesulfonic acid (PFHxS)	1.9	U	1.9	0.55	ng/L		02/20/24 12:43	03/06/24 02:21	1
Perfluoroheptanesulfonic acid (PFHpS)	1.9	U	1.9	0.18	ng/L		02/20/24 12:43	03/06/24 02:21	1
Perfluorooctanesulfonic acid (PFOS)	0.85	J	1.9	0.52	ng/L		02/20/24 12:43	03/06/24 02:21	1
Perfluorononanesulfonic acid (PFNS)	1.9	U	1.9	0.36	ng/L		02/20/24 12:43	03/06/24 02:21	1
Perfluorodecanesulfonic acid (PFDS)	1.9	U	1.9	0.31	ng/L		02/20/24 12:43	03/06/24 02:21	1
Perfluorooctanesulfonamide (FOSA)	1.9	U	1.9	0.95	ng/L		02/20/24 12:43	03/06/24 02:21	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.8	U	4.8	1.2	ng/L		02/20/24 12:43	03/06/24 02:21	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.8	U	4.8	1.3	ng/L		02/20/24 12:43	03/06/24 02:21	1
4:2 FTS	1.9	U	1.9	0.23	ng/L		02/20/24 12:43	03/06/24 02:21	1
6:2 FTS	4.8	U	4.8	2.4	ng/L		02/20/24 12:43	03/06/24 02:21	1
8:2 FTS	0.83	J	1.9	0.44	ng/L		02/20/24 12:43	03/06/24 02:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.9	U	1.9	0.39	ng/L		02/20/24 12:43	03/06/24 02:21	1
HFPO-DA (GenX)	3.9	U	3.9	1.5	ng/L		02/20/24 12:43	03/06/24 02:21	1
9CI-PF3ONS	1.9	U	1.9	0.23	ng/L		02/20/24 12:43	03/06/24 02:21	1
11CI-PF3OUdS	1.9	U	1.9	0.31	ng/L		02/20/24 12:43	03/06/24 02:21	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	107		25 - 150	02/20/24 12:43	03/06/24 02:21	1
13C5 PFPeA	108		25 - 150	02/20/24 12:43	03/06/24 02:21	1
13C2 PFHxA	101		25 - 150	02/20/24 12:43	03/06/24 02:21	1
13C4 PFHpA	108		25 - 150	02/20/24 12:43	03/06/24 02:21	1
13C4 PFOA	113		25 - 150	02/20/24 12:43	03/06/24 02:21	1
13C5 PFNA	108		25 - 150	02/20/24 12:43	03/06/24 02:21	1
13C2 PFDA	114		25 - 150	02/20/24 12:43	03/06/24 02:21	1
13C2 PFUnA	106		25 - 150	02/20/24 12:43	03/06/24 02:21	1
13C2 PFDoA	96		25 - 150	02/20/24 12:43	03/06/24 02:21	1
13C2 PFTeDA	90		25 - 150	02/20/24 12:43	03/06/24 02:21	1
13C3 PFBS	102		25 - 150	02/20/24 12:43	03/06/24 02:21	1
18O2 PFHxS	111		25 - 150	02/20/24 12:43	03/06/24 02:21	1
13C4 PFOS	108		25 - 150	02/20/24 12:43	03/06/24 02:21	1
13C8 FOSA	98		25 - 150	02/20/24 12:43	03/06/24 02:21	1
d3-NMeFOSAA	99		25 - 150	02/20/24 12:43	03/06/24 02:21	1
d5-NEtFOSAA	100		25 - 150	02/20/24 12:43	03/06/24 02:21	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Client Sample ID: FB-12573440-020824-CM-004

Date Collected: 02/08/24 10:30

Date Received: 02/09/24 10:15

Lab Sample ID: 240-199243-4

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	87		25 - 150	02/20/24 12:43	03/06/24 02:21	1
M2-8:2 FTS	98		25 - 150	02/20/24 12:43	03/06/24 02:21	1
M2-4:2 FTS	82		25 - 150	02/20/24 12:43	03/06/24 02:21	1
13C3 HFPO-DA	104		25 - 150	02/20/24 12:43	03/06/24 02:21	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-2

LCMS

Prep Batch: 741573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-199243-2	WT-12573440-020824-CM-002	Total/NA	Water	3535	
240-199243-3	W-12573440-020824-CM-003	Total/NA	Water	3535	
240-199243-4	FB-12573440-020824-CM-004	Total/NA	Water	3535	
MB 320-741573/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-741573/2-A	Lab Control Sample	Total/NA	Water	3535	

Analysis Batch: 744654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-199243-2	WT-12573440-020824-CM-002	Total/NA	Water	537 (modified)	741573
240-199243-3	W-12573440-020824-CM-003	Total/NA	Water	537 (modified)	741573
240-199243-4	FB-12573440-020824-CM-004	Total/NA	Water	537 (modified)	741573
MB 320-741573/1-A	Method Blank	Total/NA	Water	537 (modified)	741573
LCS 320-741573/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	741573

QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-741573/1-A

Matrix: Water

Analysis Batch: 744654

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 741573

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.0	U	5.0	2.4	ng/L		02/20/24 12:43	03/05/24 23:08	1
Perfluoropentanoic acid (PFPeA)	2.0	U	2.0	0.49	ng/L		02/20/24 12:43	03/05/24 23:08	1
Perfluorohexanoic acid (PFHxA)	2.0	U	2.0	0.58	ng/L		02/20/24 12:43	03/05/24 23:08	1
Perfluoroheptanoic acid (PFHpA)	2.0	U	2.0	0.25	ng/L		02/20/24 12:43	03/05/24 23:08	1
Perfluorooctanoic acid (PFOA)	2.0	U	2.0	0.85	ng/L		02/20/24 12:43	03/05/24 23:08	1
Perfluorononanoic acid (PFNA)	2.0	U	2.0	0.27	ng/L		02/20/24 12:43	03/05/24 23:08	1
Perfluorodecanoic acid (PFDA)	2.0	U	2.0	0.31	ng/L		02/20/24 12:43	03/05/24 23:08	1
Perfluoroundecanoic acid (PFUnA)	2.0	U	2.0	1.1	ng/L		02/20/24 12:43	03/05/24 23:08	1
Perfluorododecanoic acid (PFDoA)	2.0	U	2.0	0.55	ng/L		02/20/24 12:43	03/05/24 23:08	1
Perfluorotridecanoic acid (PFTriA)	2.0	U	2.0	1.3	ng/L		02/20/24 12:43	03/05/24 23:08	1
Perfluorotetradecanoic acid (PFTeA)	2.0	U	2.0	0.73	ng/L		02/20/24 12:43	03/05/24 23:08	1
Perfluorobutanesulfonic acid (PFBS)	2.0	U	2.0	0.20	ng/L		02/20/24 12:43	03/05/24 23:08	1
Perfluoropentanesulfonic acid (PFPeS)	2.0	U	2.0	0.30	ng/L		02/20/24 12:43	03/05/24 23:08	1
Perfluorohexanesulfonic acid (PFHxS)	2.0	U	2.0	0.57	ng/L		02/20/24 12:43	03/05/24 23:08	1
Perfluoroheptanesulfonic acid (PFHpS)	2.0	U	2.0	0.19	ng/L		02/20/24 12:43	03/05/24 23:08	1
Perfluorooctanesulfonic acid (PFOS)	2.0	U	2.0	0.54	ng/L		02/20/24 12:43	03/05/24 23:08	1
Perfluorononanesulfonic acid (PFNS)	2.0	U	2.0	0.37	ng/L		02/20/24 12:43	03/05/24 23:08	1
Perfluorodecanesulfonic acid (PFDS)	2.0	U	2.0	0.32	ng/L		02/20/24 12:43	03/05/24 23:08	1
Perfluorooctanesulfonamide (FOSA)	2.0	U	2.0	0.98	ng/L		02/20/24 12:43	03/05/24 23:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	5.0	U	5.0	1.2	ng/L		02/20/24 12:43	03/05/24 23:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.0	U	5.0	1.3	ng/L		02/20/24 12:43	03/05/24 23:08	1
4:2 FTS	2.0	U	2.0	0.24	ng/L		02/20/24 12:43	03/05/24 23:08	1
6:2 FTS	5.0	U	5.0	2.5	ng/L		02/20/24 12:43	03/05/24 23:08	1
8:2 FTS	2.0	U	2.0	0.46	ng/L		02/20/24 12:43	03/05/24 23:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.0	U	2.0	0.40	ng/L		02/20/24 12:43	03/05/24 23:08	1
HFPO-DA (GenX)	4.0	U	4.0	1.5	ng/L		02/20/24 12:43	03/05/24 23:08	1
9CI-PF3ONS	2.0	U	2.0	0.24	ng/L		02/20/24 12:43	03/05/24 23:08	1
11CI-PF3OUdS	2.0	U	2.0	0.32	ng/L		02/20/24 12:43	03/05/24 23:08	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	104		25 - 150	02/20/24 12:43	03/05/24 23:08	1
13C5 PFPeA	108		25 - 150	02/20/24 12:43	03/05/24 23:08	1
13C2 PFHxA	106		25 - 150	02/20/24 12:43	03/05/24 23:08	1
13C4 PFHpA	105		25 - 150	02/20/24 12:43	03/05/24 23:08	1
13C4 PFOA	105		25 - 150	02/20/24 12:43	03/05/24 23:08	1
13C5 PFNA	97		25 - 150	02/20/24 12:43	03/05/24 23:08	1
13C2 PFDA	104		25 - 150	02/20/24 12:43	03/05/24 23:08	1
13C2 PFUnA	97		25 - 150	02/20/24 12:43	03/05/24 23:08	1
13C2 PFDoA	94		25 - 150	02/20/24 12:43	03/05/24 23:08	1
13C2 PFTeDA	96		25 - 150	02/20/24 12:43	03/05/24 23:08	1
13C3 PFBS	87		25 - 150	02/20/24 12:43	03/05/24 23:08	1
18O2 PFHxS	87		25 - 150	02/20/24 12:43	03/05/24 23:08	1
13C4 PFOS	92		25 - 150	02/20/24 12:43	03/05/24 23:08	1
13C8 FOSA	92		25 - 150	02/20/24 12:43	03/05/24 23:08	1
d3-NMeFOSAA	99		25 - 150	02/20/24 12:43	03/05/24 23:08	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-741573/1-A

Matrix: Water

Analysis Batch: 744654

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 741573

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	100		25 - 150	02/20/24 12:43	03/05/24 23:08	1
M2-6:2 FTS	80		25 - 150	02/20/24 12:43	03/05/24 23:08	1
M2-8:2 FTS	90		25 - 150	02/20/24 12:43	03/05/24 23:08	1
M2-4:2 FTS	77		25 - 150	02/20/24 12:43	03/05/24 23:08	1
13C3 HFPO-DA	98		25 - 150	02/20/24 12:43	03/05/24 23:08	1

Lab Sample ID: LCS 320-741573/2-A

Matrix: Water

Analysis Batch: 744654

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 741573

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	36.8		ng/L		92	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	36.7		ng/L		92	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	34.1		ng/L		85	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	35.4		ng/L		89	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	35.4		ng/L		88	70 - 130
Perfluorononanoic acid (PFNA)	40.0	36.2		ng/L		90	75 - 135
Perfluorodecanoic acid (PFDA)	40.0	36.4		ng/L		91	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	38.2		ng/L		95	68 - 128
Perfluorododecanoic acid (PFDoA)	40.0	33.6		ng/L		84	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	28.2	*-	ng/L		70	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	36.1		ng/L		90	70 - 130
Perfluorobutanesulfonic acid (PFBS)	35.5	31.5		ng/L		89	67 - 127
Perfluoropentanesulfonic acid (PFPeS)	37.6	32.9		ng/L		88	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	36.5	31.0		ng/L		85	59 - 119
Perfluoroheptanesulfonic acid (PFHpS)	38.2	39.3		ng/L		103	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.2	32.7		ng/L		88	70 - 130
Perfluorononanesulfonic acid (PFNS)	38.5	35.5		ng/L		92	75 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	33.1		ng/L		86	71 - 131
Perfluorooctanesulfonamide (FOSA)	40.0	37.4		ng/L		94	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	40.7		ng/L		102	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	37.4		ng/L		94	76 - 136
4:2 FTS	37.5	31.4		ng/L		84	79 - 139
6:2 FTS	38.1	31.4		ng/L		82	59 - 175
8:2 FTS	38.4	35.3		ng/L		92	75 - 135
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	44.3		ng/L		117	79 - 139
HFPO-DA (GenX)	40.0	35.4		ng/L		89	51 - 173
9CI-PF3ONS	37.4	32.5		ng/L		87	75 - 135

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-741573/2-A

Matrix: Water

Analysis Batch: 744654

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 741573

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11CI-PF3OUdS	37.8	30.6		ng/L		81	54 - 114

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	100		25 - 150
13C5 PFPeA	104		25 - 150
13C2 PFHxA	104		25 - 150
13C4 PFHpA	101		25 - 150
13C4 PFOA	100		25 - 150
13C5 PFNA	96		25 - 150
13C2 PFDA	101		25 - 150
13C2 PFUnA	85		25 - 150
13C2 PFDoA	93		25 - 150
13C2 PFTeDA	73		25 - 150
13C3 PFBS	91		25 - 150
18O2 PFHxS	89		25 - 150
13C4 PFOS	86		25 - 150
13C8 FOSA	85		25 - 150
d3-NMeFOSAA	89		25 - 150
d5-NEtFOSAA	95		25 - 150
M2-6:2 FTS	85		25 - 150
M2-8:2 FTS	89		25 - 150
M2-4:2 FTS	82		25 - 150
13C3 HFPO-DA	100		25 - 150

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-2

Client Sample ID: WT-12573440-020824-CM-002

Lab Sample ID: 240-199243-2

Date Collected: 02/08/24 10:45

Matrix: Water

Date Received: 02/09/24 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			741573	JS	EET SAC	02/20/24 12:43
Total/NA	Analysis	537 (modified)		1	744654	S1C	EET SAC	03/06/24 02:01

Client Sample ID: W-12573440-020824-CM-003

Lab Sample ID: 240-199243-3

Date Collected: 02/08/24 10:35

Matrix: Water

Date Received: 02/09/24 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			741573	JS	EET SAC	02/20/24 12:43
Total/NA	Analysis	537 (modified)		1	744654	S1C	EET SAC	03/06/24 02:11

Client Sample ID: FB-12573440-020824-CM-004

Lab Sample ID: 240-199243-4

Date Collected: 02/08/24 10:30

Matrix: Water

Date Received: 02/09/24 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			741573	JS	EET SAC	02/20/24 12:43
Total/NA	Analysis	537 (modified)		1	744654	S1C	EET SAC	03/06/24 02:21

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-2

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	02-20-27
ANAB	Dept. of Defense ELAP	L2468	01-20-27
ANAB	Dept. of Energy	L2468.01	01-20-27
ANAB	ISO/IEC 17025	L2468	01-20-27
Arizona	State	AZ0708	08-11-24
Arkansas DEQ	State	88-0691	05-18-24
California	State	2897	01-31-26
Colorado	State	CA00044	08-31-24
Florida	NELAP	E87570	06-30-24
Georgia	State	4040	01-29-25
Hawaii	State	Eurofins Sacramento	01-29-25
Illinois	NELAP	200060	03-17-24
Kansas	NELAP	E-10375	10-31-24
Louisiana	NELAP	01944	06-30-24
Louisiana (All)	NELAP	01944	06-30-24
Maine	State	CA00004	04-14-24
Michigan	State	9947	01-29-25
Nevada	State	CA00044	07-31-24
New Hampshire	NELAP	2997	04-18-24
New Jersey	NELAP	CA005	06-30-24
New York	NELAP	11666	04-01-24
Ohio	State	41252	01-29-25
Oregon	NELAP	4040	01-29-25
Texas	NELAP	T104704399-23-17	05-31-24
US Fish & Wildlife	US Federal Programs	58448	04-30-24
USDA	US Federal Programs	P330-18-00239	02-28-26
Utah	NELAP	CA000442023-16	02-29-24 *
Virginia	NELAP	460278	03-14-24
Washington	State	C581	05-05-24
West Virginia (DW)	State	9930C	01-31-25
Wisconsin	State	998204680	08-31-24
Wyoming	State Program	8TMS-L	01-28-19 *

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

Eurofins Cleveland

Phone: 330-497-9396 Fax: 330-497-0772

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Chain of Custody Record

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[illegible]

Eurofins - Cleveland Sample Receipt Form/Narrative Login # _____
Barberton Facility

Client GHP Site Name _____ Cooler unpacked by: Rachelle Haidet
Cooler Received on 2924 Opened on 2924
FedEx 1st Grd Exp UPS FAS Waypoint 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 # 21 (CF-0.4°C) Observed Cooler Temp. 1.8 °C Corrected Cooler Temp 1.4 °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
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? ☐ Yes ☒ No
-Were tamper/custody seals intact and uncompromised? ☐ Yes ☒ No
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 preservative (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)? ☐ Yes ☒ No
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

Tests that are not checked for pH by Receiving
VOAs
Oil and Grease
TOC

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 pH Strip Lot# HC316719
14 Were VOAs on the COC? ☐ Yes ☒ No
15 Were air bubbles >6 mm in any VOA vials? ☒ Larger than this ☐ Yes ☒ No
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

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 _____

Temperature readings

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container pH</u>	<u>Preservation Temp</u>	<u>Preservation Added</u>	<u>Preservation Lot Number</u>
WT-12572440 - 020824-CM-001	240-199243-B-1	Plastic 500ml - with Nitric Acid	<2			



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1000 Valley Branch, (West)
Berborton OH 44703

Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

Environment Testing

Client Information (Sub Contract Lab) Client Contact: _____ Shipping/Receiving: _____ Company: Eurofins Environment Testing Northern Ca Address: 880 Riverside Parkway, _____ City: West Sacramento State, Zip: CA, 95605 Phone: 916-373-5600(Tel) 916-372-1059(Fax) Email: _____ Project Name: 12573440-T37Y24-01, RACER Eckles Site: _____				Sampler: _____ Heckler, Denise D Lab PM: _____ E-Mail: _____ Denise.Heckler@et.eurofins.com State of Origin: Michigan Carrier Tracking No(s): 240-180436.1 Page 1 of 1 Job #: 240-199243-1	
Due Date Requested: 2/22/2024 TAT Requested (days): _____ PO #: _____ WO #: _____ Project #: 24005880 SSOW#: _____				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 Other: _____ M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify) _____	
Analysis Requested				Total Number of containers: _____	
Sample Identification - Client ID (Lab ID)				Special Instructions/Note: _____	
WT-12573440 - 020824-CM-002 (240-199243-2)	Sample Date: 2/8/24	Sample Time: 10:45 Eastern	Sample Type (C=comp, G=grab):	Matrix (Water, Spill, Q-waste, etc):	Field Filtered Sample (Yes or No):
WT-12573440 - 020824-CM-003 (240-199243-3)	Sample Date: 2/8/24	Sample Time: 10:35 Eastern	Sample Type (C=comp, G=grab):	Matrix (Water, Spill, Q-waste, etc):	Field Filtered Sample (Yes or No):
FB-12573440 - 020824-CM-004 (240-199243-4)	Sample Date: 2/8/24	Sample Time: 10:30 Eastern	Sample Type (C=comp, G=grab):	Matrix (Water, Spill, Q-waste, etc):	Field Filtered Sample (Yes or No):
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northern Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northern Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northern Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northern Central, LLC				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months Special Instructions/QC Requirements: _____	
Possible Hazard Identification Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) _____ Primary Deliverable Rank: 2				Date: _____ Date/Time: _____ Date/Time: _____ Date/Time: _____	
Empty Kit Relinquished by: _____ Relinquished by: _____ Relinquished by: _____ Relinquished by: _____				Date/Time: _____ Date/Time: _____ Date/Time: _____ Date/Time: _____	
Custody Seals Intact: _____ A Yes A No				Cooler Temperature(s) °C and Other Remarks: _____	

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 240-199243-2

Login Number: 199243

List Number: 2

Creator: Simmons, Jason C

List Source: Eurofins Sacramento

List Creation: 02/10/24 01:07 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.7c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: GHD Services Inc.
Project/Site: 12573440-T37Y24-01, RACER Eckles

Job ID: 240-199243-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
240-199243-2	WT-12573440-020824-CM-002	110	113	117	113	111	108	121	114
240-199243-3	W-12573440-020824-CM-003	81	100	107	100	112	103	104	94
240-199243-4	FB-12573440-020824-CM-004	107	108	101	108	113	108	114	106
LCS 320-741573/2-A	Lab Control Sample	100	104	104	101	100	96	101	85
MB 320-741573/1-A	Method Blank	104	108	106	105	105	97	104	97

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
240-199243-2	WT-12573440-020824-CM-002	107	97	107	111	115	125	107	116
240-199243-3	W-12573440-020824-CM-003	84	74	96	96	108	100	85	91
240-199243-4	FB-12573440-020824-CM-004	96	90	102	111	108	98	99	100
LCS 320-741573/2-A	Lab Control Sample	93	73	91	89	86	85	89	95
MB 320-741573/1-A	Method Blank	94	96	87	87	92	92	99	100

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M262FTS (25-150)	M282FTS (25-150)	M242FTS (25-150)	HFPODA (25-150)
240-199243-2	WT-12573440-020824-CM-002	92	96	86	110
240-199243-3	W-12573440-020824-CM-003	117	97	98	95
240-199243-4	FB-12573440-020824-CM-004	87	98	82	104
LCS 320-741573/2-A	Lab Control Sample	85	89	82	100
MB 320-741573/1-A	Method Blank	80	90	77	98

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
M242FTS = M2-4:2 FTS
HFPODA = 13C3 HFPO-DA

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