



Shell Chemical Appalachia LLC
300 Frankfort Rd
Monaca, PA 15061

August 15, 2024

Mr. Ryan Decker
Environmental Engineer, Clean Water Program
Pennsylvania Department of Environmental Protection
Southwest Regional Office
400 Waterfront Drive
Pittsburgh, PA 15222

**RE: Shell Chemical Appalachia LLC
Shell Polymers Monaca Site
Potter and Center Townships, Beaver County, PA
National Pollutant Discharge Elimination System (NPDES) Permit PA0002208
Post Construction Stormwater Sampling Report**

Dear Ryan,

Shell Chemical Appalachia LLC ("Shell"), located in Beaver County, Pennsylvania is submitting our post-construction stormwater sampling report.

This report satisfies Part C, Section IX End of Construction, Post-Startup Sampling and Analysis requirements of the NPDES permit.

If you have any questions regarding this information, please contact Kimberly Kaal at kimberly.kaal@shell.com or me at William.watson@shell.com.

Sincerely,

A handwritten signature in black ink, appearing to read "W. Watson".

William Watson
Operations Manager

CC: S. Bell, Water Quality Inspector

Our ref: 12561325

15 August 2024

Ms. Kimberly Kaal
Environmental Manager
Shell Chemical Appalachia, LLC
300 Frankfort Road
Monaca, Pennsylvania 15061

RE: Letter Report - Post-Construction Storm Water Sampling and Analyses – Shell Polymers Plant, Monaca, Pennsylvania

Dear Ms. Kaal:

1.0 Introduction

GHD Services Inc. (GHD) is pleased to provide this letter report to Shell Chemical Appalachia, LLC (Shell) for the Shell Polymers Plant in Monaca, Pennsylvania (Site). This letter report summarizes post-construction storm water sampling and analyses completed in 2024 in accordance with Shell's Authorization to Discharge Under the National Pollutant Discharge Elimination System (NPDES) Discharge Requirements for Industrial Wastewater Facilities, NPDES Permit No. PA0002208 (the Permit). "End of Construction" is defined in the Permit as the first day of the next month following the date on which the permitted industrial facilities are collectively placed in their normal operating mode and begin discharging effluent to waters of the Commonwealth.

The 2024 storm water samples represent storm water quality after construction activities were completed at the Site. The following sections present the sampling and analyses activities and analytical results.

2.0 Storm Water Sampling and Analyses

GHD collected storm water samples from the locations identified in Part A of the Permit as follows:

- Outfall 001
- Outfall 002
- Outfall 005
- Outfall 006
- Outfall 008

- Outfall 013
- Outfall 015
- Outfall 016
- Outfall 017
- Outfall 019
- Outfall 021
- Outfall 022
- IMP 101
- IMP 201

The sample locations are shown on Figure 1.

The storm water sampling was conducted in accordance with the Permit guidelines as follows:

1. Samples were collected from discharges resulting from a storm event greater than 0.1 inch in magnitude and that occurred at least 72 hours from the previously measurable (greater than 0.1-inch rainfall) storm event.
2. Grab samples were generally collected within the first 30 minutes of a discharge, unless it was not possible, in which case grab samples were collected as soon as possible after the first 30 minutes of a discharge.
3. Storm water samples were collected at times when comingling with non-stormwater discharges was not occurring, unless the Outfall location includes comingling storm water and non-storm water discharges.

In general, storm water samples were collected using a pre-cleaned unpreserved sample container submerged approximately 6-inches below the surface of the water. The water sample was then transferred to the appropriate laboratory provided sample containers, labelled and placed in a cooler on ice. The samples were hand delivered to Eurofins Environment Testing (Eurofins) in Pittsburgh, Pennsylvania. Chain of custody procedures were adhered to during the sampling and delivery.

Eurofins (NELAP certification number 02-00416) analysed the samples for the following parameters:

- Volatile Organic Compounds (VOCs) (GC/MS) 40CFR136A – Method EPA 624.1
- Semi-volatile Organic Compounds (SVOCs) (GC/MS) 40 CFR 761 – Method EPA 625.1
- Organochlorine Pesticides in Water 40CFR136A - Method EPA 608.3
- Polychlorinated Biphenyls (PCBs) (GC) 40CFR136A – Method EPA 608.3
- Anions, Ion Chromatography – Method EPA 300.0 R2.1
- Metals (ICP/MS) – Method EPA 200.8 Rev 5
- Mercury (CVAA) – Method EPA 245.1 Rev.
- Total Hardness (as CaCO₃) by calculation – Method SM 2340B

- Chromium, Hexavalent – Method 3500-Cr B-2011
- pH - SM Online, 2011 – Method 4500 H+ B-2000
- Sulfide, Total – Method 4500 S2 F-2011
- Total Organic Carbon/Persulfate - Ultrav – Method 5310 C-2014
- Methylene Blue Active Substant (MBAS) – Method 5540C - 2011
- HEM and SGT-HEM – Method EPA 1664B
- Nitrogen, Ammonia – Method EPA 350.1
- Nitrogen, Nitrate-Nitrite – Method EPA 353.2
- COD MCAWW – Method EPA 410.4
- Color, Colorimetric – Method SM 2120B
- Solids, Total Dissolved (TDS) – Method SM 2540C
- Solids, Total Suspended (TSS) – Method SM 2540D
- 5 Day BOD test – Method SM 5210B
- TKN TPhos 1993 R2/365.4 1974 – Method EPA 351.2
- Subcontract Fecal Coliform
- HEM and SGT-HEM (SPE) – Method EPA 1664B
- Preparation, Total Recoverable Metals – Method EPA 200.8
- Preparation, Mercury – Method EPA 245.1
- COD – Method EPA 410.4
- Liquid-Liquid Extraction (Separatory Funnel) – Method EPA 608
- Liquid-Liquid Extraction – Method EPA 625
- TKN/TPhos Prep Preparation, 1993 R2/365.4 1974 – Method EPA 351.2

3.0 Analytical Results

To evaluate storm water compliance and quality, the analytical results for each Outfall sample were compared to the Permit's Effluent Limitation Concentrations (milligrams per liter [mg/L]) where applicable for that Outfall, specifically:

- Daily Minimum
- Monthly Average
- Daily Maximum
- Instant Maximum

As shown in Tables 1A through 1N, the laboratory results did not exceed the Permit's Effluent Limitation Concentrations. The additional parameters analysed for the outfall samples are not shown on these tables.

The analysis results tables from the Permit are included in Attachment A. The laboratory analytical reports are included in Attachment B.

4.0 Closing

The analytical results for the post-construction storm water sampling and analyses were not reported at concentrations above the Permit's Effluent Limitation Concentrations.

Please contact me at (412) 518-6195 or at brenden.arbaugh@ghd.com if you have any questions or require additional information.

Regards,

Brenden Arbaugh
Project Manager

Copy to: Jason Schultz – Shell
Daniel P. Cusick- GHD

Tables

Table 1A
Analytical Results Summary
Outfall 001
Shell Polymers Plant
Monaca, Pennsylvania

Sample Location:					Outfall	001
Sample ID:						001
Sample Date:						4/17/2024
Parameters	Units	Effluent Limitation Concentrations			Instant. Maximum	Analytical Result
		Daily Minimum	Average Monthly	Daily Maximum		
Volatiles						
Benzene	mg/L	XXX	Report	Report	XXX	< 0.0010
Semi-Volatiles						
Hexachlorobenzene	mg/L	XXX	XXX	Report	XXX	< 0.00018
Hexachlorobutadiene	mg/L	XXX	XXX	Report	XXX	< 0.00018
Metals						
Aluminum	mg/L	XXX	Report	Report	XXX	0.85
Chromium VI (hexavalent) (dissolved)	mg/L	XXX	Report	Report	XXX	< 0.010
Copper	mg/L	XXX	Report	Report	XXX	0.011
Mercury	mg/L	XXX	XXX	Report	XXX	0.00029
General Chemistry						
Bromide	mg/L	XXX	Report	Report	XXX	< 0.200
Chloride	mg/L	XXX	Report	Report	XXX	140
Oil and grease (HEM), total	mg/L	XXX	15.0	XXX	30.0	< 4.9
pH, lab	s.u.	6.0	XXX	9.0	XXX	7.9 ! / 8.0 HF
Sulfate	mg/L	XXX	Report	Report	XXX	1520
Temperature, at time of pH analysis	Deg C	XXX	XXX	43.33	XXX	23.1 HF!
Total dissolved solids (TDS)	mg/L	XXX	Report	Report	XXX	2500

Footnotes:

< Not detected at the associated reporting limit.
Only parameters with Permit Effluent Limitation Concentrations are shown. Refer to Attachment B for a complete list of parameters and results.

! Laboratory is not accredited for this parameter.

HF Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Table 1B
Analytical Results Summary
Outfall 002
Shell Polymers Plant
Monaca, Pennsylvania

Sample Location:					Outfall	002
Sample ID:						002
Sample Date:						5/29/2024
Effluent Limitation Concentrations						
Parameters	Units	Daily Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Analytical Result
Metals						
Aluminum	mg/L	XXX	XXX	Report	XXX	0.91
Iron	mg/L	XXX	XXX	Report	XXX	0.74
Lead	mg/L	XXX	XXX	Report	XXX	0.003
Mercury	mg/L	XXX	XXX	Report	XXX	< 0.00020
Selenium	mg/L	XXX	XXX	Report	XXX	< 0.005
Thallium	mg/L	XXX	XXX	Report	XXX	< 0.001
Zinc	mg/L	XXX	XXX	Report	XXX	0.061
General Chemistry						
Chemical oxygen demand (COD)	mg/L	XXX	XXX	Report	XXX	< 10
Nitrite/Nitrate	mg/L	XXX	XXX	Report	XXX	0.15
pH, lab	s.u.	XXX	XXX	Report	XXX	7.7 ! / 8.1 HF
Phosphorus	mg/L	XXX	XXX	Report	XXX	0.041 J
Total suspended solids (TSS)	mg/L	XXX	XXX	Report	XXX	15

Footnotes:

< Not detected at the associated reporting limit.
Only parameters with Permit Effluent Limitation Concentrations are shown. Refer to Attachment B for a complete list of parameters and results.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

! Laboratory is not accredited for this parameter.

HF Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Table 1C
Analytical Results Summary
Outfall 005
Shell Polymers Plant
Monaca, Pennsylvania

Sample Location:					Outfall	005
Sample ID:						005
Sample Date:						5/10/2024
Parameters	Units	Effluent Limitation Concentrations				Analytical Result
		Daily Minimum	Average Monthly	Daily Maximum	Instant. Maximum	
Metals						
Arsenic	mg/L	XXX	Report	Report	XXX	0.00049 J
Cadmium	mg/L	XXX	0.2	0.5	XXX	0.0085
Chromium VI (hexavalent) (dissolved)	mg/L	XXX	0.2	0.5	XXX	< 0.0010
Lead	mg/L	XXX	0.2	0.5	XXX	0.0019
Mercury	mg/L	XXX	Report	Report	XXX	0.00028
Selenium	mg/L	XXX	0.2	0.5	XXX	0.0037 J
General Chemistry						
Nitrite/Nitrate	mg/L	XXX	Report	Report	XXX	0.92
pH, lab	s.u.	6.0	XXX	9.0	XXX	7.1 HF / 6.9 !
Total suspended solids (TSS)	mg/L	XXX	30.0	100.0	XXX	1.7

Footnotes:

< Not detected at the associated reporting limit.
Only parameters with Permit Effluent Limitation Concentrations are shown. Refer to Attachment B for a complete list of parameters and results.

! Laboratory is not accredited for this parameter.

HF Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Table 1D
Analytical Results Summary
Outfall 006
Shell Polymers Plant
Monaca, Pennsylvania

Sample Location:					Outfall	006
Sample ID:						006
Sample Date:						5/29/2024
Effluent Limitation Concentrations						
Parameters	Units	Daily Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Analytical Result
Metals						
Aluminum	mg/L	XXX	XXX	Report	XXX	0.48
Iron	mg/L	XXX	XXX	Report	XXX	0.55
Lead	mg/L	XXX	XXX	Report	XXX	0.0012
Mercury	mg/L	XXX	XXX	Report	XXX	< 0.00020
Selenium	mg/L	XXX	XXX	Report	XXX	< 0.005
Thallium	mg/L	XXX	XXX	Report	XXX	< 0.001
Zinc	mg/L	XXX	XXX	Report	XXX	0.024
General Chemistry						
Chemical oxygen demand (COD)	mg/L	XXX	XXX	Report	XXX	9.7 J
Nitrite/Nitrate	mg/L	XXX	XXX	Report	XXX	0.28
pH, lab	s.u.	XXX	XXX	Report	XXX	7.6 HF / 7.7 !
Phosphorus	mg/L	XXX	XXX	Report	XXX	< 0.10
Total suspended solids (TSS)	mg/L	XXX	XXX	Report	XXX	13

Footnotes:

< Not detected at the associated reporting limit.

Only parameters with Permit Effluent Limitation Concentrations are shown. Refer to Attachment B for a complete list of parameters and results.

! Laboratory is not accredited for this parameter.

HF Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Table 1E
Analytical Results Summary
Outfall 008
Shell Polymers Plant
Monaca, Pennsylvania

Sample Location:					Outfall	008
Sample ID:						008
Sample Date:						6/27/2024
Effluent Limitation Concentrations						
Parameters	Units	Daily Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Analytical Result
Metals						
Aluminum	mg/L	XXX	XXX	Report	XXX	0.54
Iron	mg/L	XXX	XXX	Report	XXX	0.71
Lead	mg/L	XXX	XXX	Report	XXX	0.0022
Mercury	mg/L	XXX	XXX	Report	XXX	< 0.00020
Selenium	mg/L	XXX	XXX	Report	XXX	0.00092 J
Thallium	mg/L	XXX	XXX	Report	XXX	< 0.001
Zinc	mg/L	XXX	XXX	Report	XXX	0.058
General Chemistry						
Chemical oxygen demand (COD)	mg/L	XXX	XXX	Report	XXX	< 10
Nitrite/Nitrate	mg/L	XXX	XXX	Report	XXX	0.23
pH, lab	s.u.	XXX	XXX	Report	XXX	8.5 ! / 8.7 HF
Phosphorus	mg/L	XXX	XXX	Report	XXX	0.16
Total suspended solids (TSS)	mg/L	XXX	XXX	Report	XXX	29

Footnotes:

< Not detected at the associated reporting limit.
Only parameters with Permit Effluent Limitation Concentrations are shown. Refer to Attachment B for a complete list of parameters and results.

! Laboratory is not accredited for this parameter.

HF Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
Sample was analyzed outside of hold time.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Table 1F
Analytical Results Summary
Outfall 013
Shell Polymers Plant
Monaca, Pennsylvania

Sample Location:						Outfall	013
Sample ID:							013
Sample Date:							5/29/2024
	Effluent Limitation Concentrations						
Parameters	Units	Daily Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Analytical Result	
Metals							
Aluminum	mg/L	XXX	XXX	Report	XXX	0.34	
Iron	mg/L	XXX	XXX	Report	XXX	0.44	
Lead	mg/L	XXX	XXX	Report	XXX	0.0016	
Mercury	mg/L	XXX	XXX	Report	XXX	< 0.00020	
Selenium	mg/L	XXX	XXX	Report	XXX	0.0015 J	
Thallium	mg/L	XXX	XXX	Report	XXX	< 0.001	
Zinc	mg/L	XXX	XXX	Report	XXX	0.052	
General Chemistry							
Chemical oxygen demand (COD)	mg/L	XXX	XXX	Report	XXX	< 10	
Nitrite/Nitrate	mg/L	XXX	XXX	Report	XXX	0.53	
pH, lab	s.u.	XXX	XXX	Report	XXX	8.0 HF Dup 8.0 !	
Phosphorus	mg/L	XXX	XXX	Report	XXX	0.041 J	
Total suspended solids (TSS)	mg/L	XXX	XXX	Report	XXX	12	

Footnotes:

< Not detected at the associated reporting limit.

Only parameters with Permit Effluent Limitation Concentrations are shown. Refer to Attachment B for a complete list of parameters and results.

! Laboratory is not accredited for this parameter.

HF Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Table 1G
Analytical Results Summary
Outfall 015
Shell Polymers Plant
Monaca, Pennsylvania

Sample Location:					Outfall	015
Sample ID:						015
Sample Date:						5/10/2024
Effluent Limitation Concentrations						
Parameters	Units	Daily Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Analytical Result
Metals						
Antimony	mg/L	XXX	XXX	Report	XXX	< 0.0020 *+
Arsenic	mg/L	XXX	XXX	Report	XXX	0.0073
Boron	mg/L	XXX	XXX	Report	XXX	1.6
Cadmium	mg/L	XXX	XXX	Report	XXX	0.0059
Iron	mg/L	XXX	XXX	Report	XXX	0.25
Lead	mg/L	XXX	XXX	Report	XXX	< 0.0010
Manganese	mg/L	XXX	XXX	Report	XXX	0.21
	mg/L	XXX	XXX	Report	XXX	0.00024
Nickel	mg/L	XXX	XXX	Report	XXX	0.053 B
Selenium	mg/L	XXX	XXX	Report	XXX	0.0063
Zinc	mg/L	XXX	XXX	Report	XXX	1.8
General Chemistry						
Oil and grease (HEM), total	mg/L	XXX	15.0	20.0	XXX	< 5.1
pH, lab	s.u.	6.0	XXX	9.0	XXX	8.3 ! / 8.1 HF
Total suspended solids (TSS)	mg/L	XXX	30.0	100.0	XXX	< 1.0

Footnotes:
< Not detected at the associated reporting limit.
Only parameters with Permit Effluent Limitation Concentrations are shown. Refer to Attachment B for a complete list of parameters and results.
! Laboratory is not accredited for this parameter.
*+ LCS and/or LCSD is outside acceptance limits, high biased.
B Analyte was found in the blank
HF Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Table 1H
Analytical Results Summary
Outfall 016
Shell Polymers Plant
Monaca, Pennsylvania

Sample Location:					Outfall	016
Sample ID:						016
Sample Date:						5/17/2024
Effluent Limitation Concentrations						
Parameters	Units	Daily Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Analytical Result
Metals						
Aluminum	mg/L	XXX	XXX	Report	XXX	9.5
Iron	mg/L	XXX	XXX	Report	XXX	21
Lead	mg/L	XXX	XXX	Report	XXX	0.034
Mercury	mg/L	XXX	XXX	Report	XXX	0.00028
Selenium	mg/L	XXX	XXX	Report	XXX	0.0067
Thallium	mg/L	XXX	XXX	Report	XXX	0.00026 J
Zinc	mg/L	XXX	XXX	Report	XXX	0.44
General Chemistry						
Chemical oxygen demand (COD)	mg/L	XXX	XXX	Report	XXX	< 10
Nitrite/Nitrate	mg/L	XXX	XXX	Report	XXX	0.69
pH, lab	s.u.	XXX	XXX	Report	XXX	8.0 HF / 8.1 !
Phosphorus	mg/L	XXX	XXX	Report	XXX	1.3
Total suspended solids (TSS)	mg/L	XXX	XXX	Report	XXX	1400

Footnotes:

< Not detected at the associated reporting limit.
Only parameters with Permit Effluent Limitation Concentrations are shown. Refer to Attachment B for a complete list of parameters and results.
! Laboratory is not accredited for this parameter.
HF Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Table 11
Analytical Results Summary
Outfall 017
Shell Polymers Plant
Monaca, Pennsylvania

Sample Location:						Outfall	017
Sample ID:							017
Sample Date:							5/28/2024
Effluent Limitation Concentrations							
Parameters	Units	Daily Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Analytical Result	
Metals							
Aluminum	mg/L	XXX	XXX	Report	XXX	4.5	
Iron	mg/L	XXX	XXX	Report	XXX	6.4	
Lead	mg/L	XXX	XXX	Report	XXX	0.0088	
Mercury	mg/L	XXX	XXX	Report	XXX	< 0.00020	
Selenium	mg/L	XXX	XXX	Report	XXX	0.001 J	
Thallium	mg/L	XXX	XXX	Report	XXX	< 0.001	
Zinc	mg/L	XXX	XXX	Report	XXX	0.11	
General Chemistry							
Chemical oxygen demand (COD)	mg/L	XXX	XXX	Report	XXX	15	
Nitrite/Nitrate	mg/L	XXX	XXX	Report	XXX	0.41	
pH, lab	s.u.	XXX	XXX	Report	XXX	7.8 HF / 7.9 !	
Phosphorus	mg/L	XXX	XXX	Report	XXX	0.26	
Total suspended solids (TSS)	mg/L	XXX	XXX	Report	XXX	79	

Footnotes:

< Not detected at the associated reporting limit.

Only parameters with Permit Effluent Limitation Concentrations are shown. Refer to Attachment B for a complete list of parameters and results.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

! Laboratory is not accredited for this parameter.

HF Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Table 1J
Analytical Results Summary
Outfall 019
Shell Polymers Plant
Monaca, Pennsylvania

Sample Location:					Outfall	019
Sample ID:						019
Sample Date:						5/28/2024
Effluent Limitation Concentrations						
Parameters	Units	Daily Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Analytical Result
Metals						
Aluminum	mg/L	XXX	XXX	Report	XXX	3.5
Iron	mg/L	XXX	XXX	Report	XXX	6.6
Lead	mg/L	XXX	XXX	Report	XXX	0.0043
Mercury	mg/L	XXX	XXX	Report	XXX	< 0.00020
Selenium	mg/L	XXX	XXX	Report	XXX	< 0.005
Thallium	mg/L	XXX	XXX	Report	XXX	< 0.001
Zinc	mg/L	XXX	XXX	Report	XXX	0.062
General Chemistry						
Chemical oxygen demand (COD)	mg/L	XXX	XXX	Report	XXX	13
Nitrite/Nitrate	mg/L	XXX	XXX	Report	XXX	< 0.10
pH, lab	s.u.	XXX	XXX	Report	XXX	7.6 ! / 7.5 HF
Phosphorus	mg/L	XXX	XXX	Report	XXX	0.23
Total suspended solids (TSS)	mg/L	XXX	XXX	Report	XXX	30

Footnotes:
< Not detected at the associated reporting limit.
Only parameters with Permit Effluent Limitation Concentrations are shown. Refer to Attachment B for a complete list of parameters and results.
! Laboratory is not accredited for this parameter.
HF Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Table 1K
Analytical Results Summary
Outfall 021
Shell Polymers Plant
Monaca, Pennsylvania

Sample Location:	Outfall					021
Sample ID:						021
Sample Date:						5/17/2024
	Effluent Limitation Concentrations					
Parameters	Units	Daily Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Analytical Result
Metals						
Aluminum	mg/L	XXX	XXX	Report	XXX	0.21
Iron	mg/L	XXX	XXX	Report	XXX	0.29
Lead	mg/L	XXX	XXX	Report	XXX	0.00058 J
Mercury	mg/L	XXX	XXX	Report	XXX	< 0.00020
Selenium	mg/L	XXX	XXX	Report	XXX	< 0.005
Thallium	mg/L	XXX	XXX	Report	XXX	< 0.001
Zinc	mg/L	XXX	XXX	Report	XXX	0.043
General Chemistry						
Chemical oxygen demand (COD)	mg/L	XXX	XXX	Report	XXX	< 10
Nitrite/Nitrate	mg/L	XXX	XXX	Report	XXX	0.15 FL
pH, lab	s.u.	XXX	XXX	Report	XXX	7.2 ! / 7.3 HF
Phosphorus	mg/L	XXX	XXX	Report	XXX	0.046 J
Total suspended solids (TSS)	mg/L	XXX	XXX	Report	XXX	8.6

Footnotes:

- < Not detected at the associated reporting limit.
- Only parameters with Permit Effluent Limitation Concentrations are shown. Refer to Attachment B for a complete list of parameters and results.
- J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
- ! Laboratory is not accredited for this parameter.
- FL MS and/or MSD recovery below control limits.
- HF Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Table 1L
Analytical Results Summary
Outfall 022
Shell Polymers Plant
Monaca, Pennsylvania

Sample Location:					Outfall	022
Sample ID:						022
Sample Date:						5/17/2024
Effluent Limitation Concentrations						
Parameters	Units	Daily Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Analytical Result
Metals						
Aluminum	mg/L	XXX	XXX	Report	XXX	0.19
Iron	mg/L	XXX	XXX	Report	XXX	0.33
Lead	mg/L	XXX	XXX	Report	XXX	< 0.001
Mercury	mg/L	XXX	XXX	Report	XXX	< 0.00020
Selenium	mg/L	XXX	XXX	Report	XXX	< 0.005
Thallium	mg/L	XXX	XXX	Report	XXX	< 0.001
Zinc	mg/L	XXX	XXX	Report	XXX	0.066
General Chemistry						
Chemical oxygen demand (COD)	mg/L	XXX	XXX	Report	XXX	33
Nitrite/Nitrate	mg/L	XXX	XXX	Report	XXX	0.47
pH, lab	s.u.	XXX	XXX	Report	XXX	7.4 HF / 7.5 !
Phosphorus	mg/L	XXX	XXX	Report	XXX	0.087 J
Total suspended solids (TSS)	mg/L	XXX	XXX	Report	XXX	15

Footnotes:

< Not detected at the associated reporting limit.
Only parameters with Permit Effluent Limitation Concentrations are shown. Refer to Attachment B for a complete list of parameters and results.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

! Laboratory is not accredited for this parameter.

HF Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Table 1M
Analytical Results Summary
Outfall 101
Shell Polymers Plant
Monaca, Pennsylvania

Sample Location:	Effluent Limitation Concentrations					Analytical Result
	Units	Daily Minimum	Average Monthly	Daily Maximum	Instant. Maximum	
Sample ID:						
Sample Date:						
Parameters						
Volatiles						
1,1,1-Trichloroethane	mg/L	XXX	0.021	0.054	0.067	< 0.0010
1,1,2,2-Tetrachloroethane	mg/L	XXX	0.021	0.054	0.067	< 0.0010
1,1,2-Trichloroethane	mg/L	XXX	0.021	0.054	0.067	< 0.0010
1,1-Dichloroethane	mg/L	XXX	0.022	0.059	0.073	< 0.0010
1,1-Dichloroethene	mg/L	XXX	0.016	0.025	0.031	< 0.0010
1,2-Dichloroethane	mg/L	XXX	0.068	0.211	0.263	< 0.0010
1,2-Dichloropropane	mg/L	XXX	0.153	0.230	0.287	< 0.0010
Acrylonitrile	mg/L	XXX	0.096	0.242	0.302	< 0.020
Benzene	mg/L	XXX	0.037	0.136	0.17	< 0.0010
Carbon tetrachloride	mg/L	XXX	0.018	0.038	0.047	< 0.0010
Chlorobenzene	mg/L	XXX	0.015	0.028	0.035	< 0.0010
Chloroethane	mg/L	XXX	0.104	0.268	0.335	< 0.0010
Chloroform (Trichloromethane)	mg/L	-	0.021	0.046	0.057	0.0022
Ethylbenzene	mg/L	XXX	0.032	0.108	0.135	< 0.0010
Methylene chloride	mg/L	XXX	0.040	0.089	0.111	< 0.0010
Tetrachloroethene	mg/L	XXX	0.022	0.056	0.07	< 0.0010
Toluene	mg/L	XXX	0.026	0.080	0.1	< 0.0010
trans-1,2-Dichloroethene	mg/L	XXX	0.021	0.054	0.067	< 0.0010
Trichloroethene	mg/L	XXX	0.021	0.054	0.067	< 0.0010
Vinyl chloride	mg/L	XXX	0.104	0.268	0.335	< 0.0010
Semi-Volatiles						
1,2,4-Trichlorobenzene	mg/L	XXX	0.068	0.140	0.175	< 0.00096
1,2-Dichlorobenzene	mg/L	XXX	0.077	0.163	0.203	< 0.00096
1,4-Dichlorobenzene	mg/L	XXX	0.015	0.028	0.035	< 0.00096
2,4-Dichlorophenol	mg/L	XXX	0.039	0.112	0.14	< 0.00018
2,4-Dimethylphenol	mg/L	XXX	0.018	0.036	0.045	< 0.00096
2,4-Dinitrophenol	mg/L	XXX	0.071	0.123	0.153	< 0.0096
2,4-Dinitrotoluene	mg/L	XXX	0.113	0.285	0.356	< 0.00096
2,6-Dinitrotoluene	mg/L	XXX	0.255	0.641	0.801	< 0.00096
2-Chlorophenol	mg/L	XXX	0.031	0.098	0.122	< 0.00096
2-Nitrophenol	mg/L	XXX	0.041	0.069	0.086	< 0.00096
4,6-Dinitro-2-methylphenol	mg/L	XXX	0.078	0.277	0.346	< 0.0048
4-Nitrophenol	mg/L	XXX	0.072	0.124	0.155	< 0.0048
Acenaphthene	mg/L	XXX	0.022	0.059	0.073	< 0.00018
Acenaphthylene	mg/L	XXX	0.022	0.059	0.073	0.000080 J
Anthracene	mg/L	XXX	0.022	0.059	0.073	< 0.00018
Benzo(a)anthracene	mg/L	XXX	0.022	0.059	0.073	< 0.00018
Benzo(a)pyrene	mg/L	XXX	0.023	0.061	0.076	< 0.00018
Benzo(b)fluoranthene	mg/L	XXX	0.023	0.061	0.076	< 0.00018
Benzo(k)fluoranthene	mg/L	XXX	0.022	0.059	0.073	< 0.00018
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	XXX	0.103	0.279	0.348	< 0.0096
Chrysene	mg/L	XXX	0.022	0.059	0.073	< 0.00018
Diethyl phthalate	mg/L	XXX	0.081	0.203	0.253	< 0.00096
Dimethyl phthalate	mg/L	XXX	0.019	0.047	0.058	< 0.00096
Di-n-butylphthalate (DBP)	mg/L	XXX	0.027	0.057	0.071	< 0.0096
Fluoranthene	mg/L	XXX	0.025	0.068	0.085	< 0.00018
Fluorene	mg/L	XXX	0.022	0.059	0.073	< 0.00018
Hexachlorobenzene	mg/L	XXX	0.015	0.028	0.035	< 0.00018
Hexachlorocyclopentadiene	mg/L	XXX	0.020	0.049	0.061	< 0.00018
Hexachloroethane	mg/L	XXX	0.021	0.054	0.067	< 0.00096
Naphthalene	mg/L	XXX	0.022	0.059	0.073	< 0.00018
Nitrobenzene	mg/L	XXX	0.027	0.068	0.085	< 0.0019
Phenanthrene	mg/L	XXX	0.022	0.059	0.073	< 0.00018
Phenol	mg/L	XXX	0.015	0.026	0.032	< 0.00096
Pyrene	mg/L	XXX	0.025	0.067	0.083	< 0.00018
General Chemistry						
Biochemical oxygen demand (BOD)	mg/L	XXX	27.0	72.0	90	< 2.0
Oil and grease (HEM), total	mg/L	XXX	Report	Report	XXX	< 4.9
pH, lab	s.u.	6.0	XXX	9.0	XXX	8.0 HF / 7.8 !
Total suspended solids (TSS)	mg/L	XXX	43.0	139.0	174	2.2

Footnotes:

- < Not detected at the associated reporting limit.
Only parameters with Permit Effluent Limitation Concentrations are shown. Refer to Attachment B for a complete list of parameters and results.
J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
! Laboratory is not accredited for this parameter.
HF Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

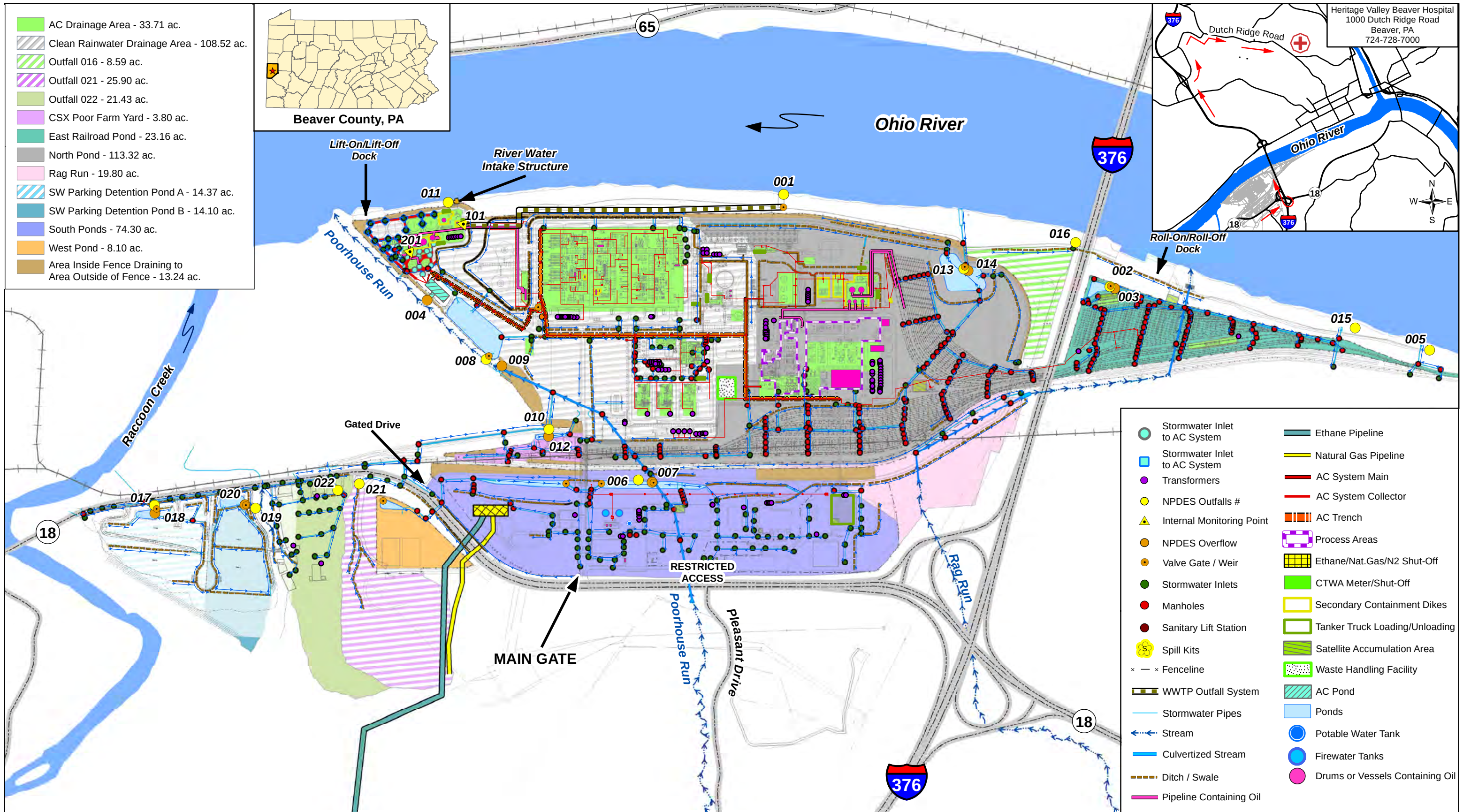
Table 1N
Analytical Results Summary
Outfall 201
Shell Polymers Plant
Monaca, Pennsylvania

Sample Location:	Outfall					201
Sample ID:						201
Sample Date:						4/17/2024
Parameters	Effluent Limitation Concentrations					Analytical Result
	Units	Daily Minimum	Average Monthly	Daily Maximum	Instant. Maximum	
General Chemistry						
pH, lab	s.u.	6.0	XXX	9.0	XXX	7.3 HF / 7.3 !

Footnotes:
Only parameters with Permit Effluent Limitation Concentrations are shown. Refer to Attachment B for a complete list of parameters and results.
! Laboratory is not accredited for this parameter.
HF Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
Sample was analyzed outside of hold time.

Figure 1

Outfall Locations

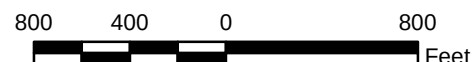


Environmental Resources
Management, Inc.

March 2022



Scale in Feet
1 inch = 800 feet



Notes:
1. See SPCC Plan/ FRP for contents, capacities, and sizes of tanks, vessels, drums, and totes.
2. Personnel badge readers present at each Muster Point, Emergency Central Control Bldg, and Administration Bldg.
3. CO2 fire suppression systems present at each gas turbine.
4. All main roads within the facility are 2-way traffic.
5. Facility is OSRO dependent - No response equipment on site.
6. All communications equipment housed in Emergency Central Control Bldg.

Date: March 11, 2022
Version: 9.0
Prepared by: Brian Sterner (ERM)
Checked by: _____
Approved by: _____

Facility Response Plan
Site Drainage Overview

Shell Polymers Monaca, PA

Sheet 1 of 1

Attachments

Attachment A

Analysis Results Tables

Outfall 001

ANALYSIS RESULTS TABLE POLLUTANT GROUP 1 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 001 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
BOD ₅ (mg/L)	3.4						1	0	2.0	SM 5210B
COD (mg/L)	59						1	0	10	MCAWW EPA 410.4
TOC (mg/L)	18						1	0	1.0	SM5310 C- 2014
TSS (mg/L)	5.7						1	0	0.50	SM 2540D
Ammonia-Nitrogen (mg/L)	ND						1	1	0.10	EPA 350.1
Temperature (Winter) (°F)		XXX		XXX		XXX		XXX	XXX	
Temperature (Summer) (°F)	23.1 HF !	XXX		XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B- 2000
pH – Minimum (S.U.)	8.0 HF	XXX	XXX	XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B- 2000
pH – Maximum (S.U.)		XXX	XXX	XXX		XXX		XXX	XXX	
Fecal Coliform (No./100 mL)	1	XXX		XXX		XXX	1	1	XXX	Colilert-18
Oil and Grease (mg/L)	ND						1	1	4.9	EPA 1664B
TRC (mg/L)		XXX		XXX		XXX				
Total Phosphorus (mg/L)	1.7						1	0	0.10	EPA TKN_TPhos
TKN (mg/L)	1.5						1	0	0.50	EPA TKN_TPhos
Nitrite + Nitrate-Nitrogen (mg/L)	6.6						1	0	0.20	EPA 353.2
Total Dissolved Solids (mg/L)	2500						1	0	20	SM 2540C
Color (Pt-Co Units)	40	XXX		XXX		XXX	1	0	5	SM 2120B
Bromide (mg/L)	ND						1	1	0.200	EPA 300.0 R2.1

Chloride (mg/L)	140						1	0	2.00	EPA 300.0 R2.1
Sulfate (mg/L)	1520						1	0	20.0	EPA 300.0 R2.1
Sulfide (mg/L)	1.9 J						1	0	3.0	SM 4500 S2 F- 2011
Surfactants (mg/L)										
Fluoride (mg/L)	0.431						1	0	0.200	EPA 300.0 R2.1
Total Hardness (mg/L)	380 !						1	0	3.3	SM 2340B

**ANALYSIS RESULTS TABLE
POLLUTANT GROUP 1 (PAGE 2 OF 2)**

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 001 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Perfluorooctanoic acid (PFOA) (ng/L)										
Perfluorooctanesulfonic acid (PFOS) (ng/L)										
Perfluorobutanesulfonic acid (PFBS) (ng/L)										
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ng/L)										

ANALYSIS RESULTS TABLE POLLUTANT GROUP 2

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 001 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 2 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aluminum, Total (µg/L)	850						1	0	30	EPA 200.8 Rev 5
Antimony, Total (µg/L)	ND						1	1	2.0	EPA 200.8 Rev 5
Arsenic, Total (µg/L)	1.3						1	0	1.0	EPA 200.8 Rev 5
Barium, Total (µg/L)	160						1	0	10	EPA 200.8 Rev 5
Beryllium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Boron, Total (µg/L)	120						1	0	80	EPA 200.8 Rev 5
Cadmium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Chromium, Total (µg/L)	1.8 J						1	0	2.0	EPA 200.8 Rev 5
Chromium, Hexavalent (µg/L)										
Cobalt, Total (µg/L)	1.4						1	0	0.5	EPA 200.8 Rev 5
Copper, Total (µg/L)	11						1	0	2.0	EPA 200.8 Rev 5
Cyanide, Total (µg/L)										
Iron, Total (µg/L)	1200						1	0	50	EPA 200.8 Rev 5
Iron, Dissolved (µg/L)										
Lead, Total (µg/L)	0.89 J						1	1	1.0	EPA 200.8 Rev 5
Manganese, Total (µg/L)	470						1	0	5.0	EPA 200.8 Rev 5

Mercury, Total (µg/L)	0.29						1	0	0.2	EPA 200.8 Rev 5
Molybdenum, Total (µg/L)	5.3						1	0	5.0	EPA 200.8 Rev 5
Nickel, Total (µg/L)	15						1	0	1.0	EPA 200.8 Rev 5
Phenols, Total (µg/L)	ND						1	1	9.6	40 CFR 761 EPA 625.1
Selenium, Total (µg/L)	2.5 J						1	0	5	EPA 200.8 Rev 5
Silver, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Thallium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Zinc, Total (µg/L)	11						1	0	15	EPA 200.8 Rev 5

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 001 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acrolein (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Acrylonitrile (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Benzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Bromoform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Carbon Tetrachloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorodibromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
2-Chloroethylvinyl Ether (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Chloroform (µg/L)	6.6						1	0	1.0	40 CFR 136A EPA 624.1
Dichlorobromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

1,2 Dichloropropane (µg/L)										40 CFR 136A EPA 624.1
1,3-Dichloropropylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,4-Dioxane (µg/L)	ND						1	1	200	40 CFR 136A EPA 624.1
Ethylbenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Methyl Bromide (µg/L)										
Methyl Chloride (µg/L)										
Methylene Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2,2-Tetrachloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Tetrachloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 2 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 001 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Toluene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Trans-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,1-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Trichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Vinyl Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 4

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 001 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 4 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
2-Chlorophenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
2,4-Dichlorophenol (µg/L)	ND						1	1	0.18	40 CFR 136A EPA 624.1
2,4-Dimethylphenol (µg/L)	ND						1	1	0.96	40 CFR 136A EPA 624.1
4,6-Dinitro-o-Cresol (µg/L)	ND						1	1	4.8	40 CFR 136A EPA 624.1
2,4-Dinitrophenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
2-Nitrophenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
4-Nitrophenol (µg/L)	ND						1	1	4.8	40 CFR 761 EPA 625.1
P-Chloro-m-Cresol (µg/L)										
Pentachlorophenol (µg/L)	ND						1	1	4.8	40 CFR 761 EPA 625.1
Phenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
2,4,6-Trichlorophenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 1 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 001 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acenaphthene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Acenaphthylene (µg/L)	0.12						1	0	0.18	40 CFR 761 EPA 625.1
Acrylamide (µg/L)	ND						1	1	2.8	40 CFR 761 EPA 625.1
Anthracene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Benzidine (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1
Benzo(a)Anthracene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Benzo(a)Pyrene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
3,4-Benzo-fluoranthene (µg/L)										
Benzo(ghi)Perylene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Benzo(k)Fluoranthene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Bis(2-Chloro-ethoxy)Methane (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Bis(2-Chloroethyl)Ether (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Bis(2-Chloro-isopropyl)Ether (µg/L)										
Bis(2-Ethylhexyl)Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
4-Bromophenyl Phenyl Ether (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

Butyl Benzyl Phthalate (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1
2-Chloronaphthalene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
4-Chlorophenyl Phenyl Ether (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Chrysene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 2 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site													
☒ Outfall / IMP Number 001 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)														
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used				
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value									
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)								
Dibenzo(a,h)Anthracene (µg/L)														
1,2-Dichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
1,3- Dichlorobenzene (µg/L)														
1,4- Dichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
3,3'-Dichlorobenzidine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
Diethyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
Dimethyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
Di-n-Butyl Phthalate (µg/L)	ND						1	1	9.6	40 CFR 761 EPA 625.1				
2,4-Dinitrotoluene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
2,6-Dinitrotoluene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				

Di-n-Octyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
1,2-Diphenylhydrazine (as <i>Azobenzene</i>) (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Fluoranthene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Fluorene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Hexachlorobenzene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Hexechlorobutadiene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Hexachlorocyclopentadiene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Hexachloroethane (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 3 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 001 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Indeno(1,2,3-cd)Pyrene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Isophorone (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Naphthalene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Nitrobenzene (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1
N-Nitroso-di-methylamine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
N-Nitroso-di-n-propylamine (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1

N-Nitroso-di-n-phenylamine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Phenanthrene (µg/L)	0.17 J						1	1	0.18	40 CFR 761 EPA 625.1
Pyrene (µg/L)	0.072 J						1	1	0.18	40 CFR 761 EPA 625.1
1,2,4-Trichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 001 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Gamma BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Delta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Chlordane (µg/L)	ND						1	1	0.012	40 CFR 136A EPA 608.3
4,4'-DDT (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDE (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDD (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Dieldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha- Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta-Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endosulfan Sulfate (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3

Endrin Aldehyde (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor Epoxide (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
PCB -1242 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB -1254 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 2 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site								
☒ Outfall / IMP Number 001 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
PCB-1221 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1232 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1248 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1260 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1016 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
Toxaphene (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3

Outfall 002

ANALYSIS RESULTS TABLE POLLUTANT GROUP 1 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 002 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
BOD ₅ (mg/L)	ND CN						1	1	2.0	SM 5210B
COD (mg/L)	ND						1	1	10	MCAWW EPA 410.4
TOC (mg/L)	2.1						1	0	1.0	SM5310 C-2014
TSS (mg/L)	15						1	0	0.50	SM 2540D
Ammonia-Nitrogen (mg/L)	ND						1	1	0.10	EPA 350.1
Temperature (Winter) (°F)		XXX		XXX		XXX		XXX	XXX	
Temperature (Summer) (°F)	21.0 HF !	XXX		XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B-2000
pH – Minimum (S.U.)	8.1 HF	XXX	XXX	XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B-2000
pH – Maximum (S.U.)		XXX	XXX	XXX		XXX		XXX	XXX	
Fecal Coliform (No./100 mL)	59	XXX		XXX		XXX	1	0	XXX	Colilert-18
Oil and Grease (mg/L)							1	1	5.3	EPA 1664B
TRC (mg/L)	ND	XXX		XXX		XXX	1	1	0.02-2.00	DR300-DOD-528
Total Phosphorus (mg/L)	0.041 J						1	0	0.10	EPA TKN_TPhos
TKN (mg/L)	0.13 J FH						1	0	0.50	EPA TKN_TPhose
Nitrite + Nitrate-Nitrogen (mg/L)	0.15						1	0	0.10	EPA 353.2
Total Dissolved Solids (mg/L)	170						1	0	10	SM 2540C
Color (Pt-Co Units)	5.0	XXX		XXX		XXX	1	0	5	SM 2120B
Bromide (mg/L)	ND						1	1	0.100	EPA 300.0 R2.1

Chloride (mg/L)	13.9						1	0	1.00	EPA 300.0 R2.1
Sulfate (mg/L)	67.4						1	0	0.100	EPA 300.0 R2.1
Sulfide (mg/L)	ND						1	1	3.0	SM 4500 S2 F- 2011
Surfactants (mg/L)	0.10						1	1	0.050	SM 5540C- 2011
Fluoride (mg/L)	0.433						1	0	0.100	EPA 300.0 R2.1
Total Hardness (mg/L)										

**ANALYSIS RESULTS TABLE
POLLUTANT GROUP 1 (PAGE 2 OF 2)**

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 002 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Perfluorooctanoic acid (PFOA) (ng/L)										
Perfluorooctanesulfonic acid (PFOS) (ng/L)										
Perfluorobutanesulfonic acid (PFBS) (ng/L)										
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ng/L)										

ANALYSIS RESULTS TABLE POLLUTANT GROUP 2

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 002 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 2 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aluminum, Total (µg/L)	910						1	0	50	EPA 200.8 Rev 5
Antimony, Total (µg/L)	0.59 J						1	0	2.0	EPA 200.8 Rev 5
Arsenic, Total (µg/L)	1.3 J						1	0	5.0	EPA 200.8 Rev 5
Barium, Total (µg/L)	100						1	0	5.0	EPA 200.8 Rev 5
Beryllium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Boron, Total (µg/L)	16 J						1	0	20	EPA 200.8 Rev 5
Cadmium, Total (µg/L)	0.26 J						1	0	1.0	EPA 200.8 Rev 5
Chromium, Total (µg/L)	1.3 J						1	1	5.0	EPA 200.8 Rev 5
Chromium, Hexavalent (µg/L)	ND						1	1	0.010	SM 3500-Cr B-2011
Cobalt, Total (µg/L)	0.44 J						1	0	1.0	EPA 200.8 Rev 5
Copper, Total (µg/L)	4.6						1	0	2.0	EPA 200.8 Rev 5
Cyanide, Total (µg/L)										
Iron, Total (µg/L)	740						1	0	100	EPA 200.8 Rev 5
Iron, Dissolved (µg/L)										
Lead, Total (µg/L)	3.0						1	0	1.0	EPA 200.8 Rev 5

Manganese, Total (µg/L)	15						1	0	5.0	EPA 200.8 Rev 5
Mercury, Total (µg/L)	ND						1	1	0.20	EPA 200.8 Rev 5
Molybdenum, Total (µg/L)	3.0 J						1	0	5.0	EPA 200.8 Rev 5
Nickel, Total (µg/L)	2.6						1	0	2.0	EPA 200.8 Rev 5
Phenols, Total (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Selenium, Total (µg/L)	ND						1	1	5.0	EPA 200.8 Rev 5
Silver, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Thallium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Zinc, Total (µg/L)	61						1	0	20	EPA 200.8 Rev 5

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 002 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acrolein (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Acrylonitrile (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Benzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Bromoform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Carbon Tetrachloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorodibromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
2-Chloroethylvinyl Ether (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Chloroform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Dichlorobromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

1,2 Dichloropropane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,3-Dichloropropylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,4-Dioxane (µg/L)	ND						1	1	200	40 CFR 136A EPA 624.1
Ethylbenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Methyl Bromide (µg/L)										
Methyl Chloride (µg/L)										
Methylene Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2,2-Tetrachloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Tetrachloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 2 OF 2)

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APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 002 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Toluene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Trans-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,1-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Trichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Vinyl Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 4

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 002 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 4 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
2-Chlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
2,4-Dichlorophenol (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
2,4-Dimethylphenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
4,6-Dinitro-o-Cresol (µg/L)	ND						1	1	5.2	40 CFR 761 EPA 625.1
2,4-Dinitrophenol (µg/L)	ND						1	1	10	40 CFR 761 EPA 625.1
2-Nitrophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
4-Nitrophenol (µg/L)	ND						1	1	5.2	40 CFR 761 EPA 625.1
P-Chloro-m-Cresol (µg/L)										
Pentachlorophenol (µg/L)	ND						1	1	5.2	40 CFR 761 EPA 625.1
Phenol (µg/L)	ND						1	1	1.0	140 CFR 761 EPA 625.1
2,4,6-Trichlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 1 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 002 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acenaphthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Acenaphthylene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Acrylamide (µg/L)	ND						1	1	52	40 CFR 761 EPA 625.1
Anthracene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzidine (µg/L)	ND						1	1	21	40 CFR 761 EPA 625.1
Benzo(a)Anthracene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzo(a)Pyrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
3,4-Benzo-fluoranthene (µg/L)										
Benzo(ghi)Perylene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzo(k)Fluoranthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Bis(2-Chloro-ethoxy)Methane (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Bis(2-Chloroethyl)Ether (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Bis(2-Chloro-isopropyl)Ether (µg/L)										
Bis(2-Ethylhexyl)Phthalate (µg/L)	ND						1	1	10	40 CFR 761 EPA 625.1
4-Bromophenyl Phenyl Ether (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

Butyl Benzyl Phthalate (µg/L)	ND						1	1	2.1	40 CFR 761 EPA 625.1
2-Chloronaphthalene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
4-Chlorophenyl Phenyl Ether (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Chrysene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 2 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site													
☒ Outfall / IMP Number 002 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)														
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used				
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value									
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)								
Dibenzo(a,h)Anthracene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1				
1,2-Dichlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
1,3- Dichlorobenzene (µg/L)														
1,4- Dichlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
3,3'-Dichlorobenzidine (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
Diethyl Phthalate (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
Dimethyl Phthalate (µg/L)	ND						1	1	2.1	40 CFR 761 EPA 625.1				
Di-n-Butyl Phthalate (µg/L)	0.59 J						1	0	10	40 CFR 761 EPA 625.1				
2,4-Dinitrotoluene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
2,6-Dinitrotoluene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				

Di-n-Octyl Phthalate (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
1,2-Diphenylhydrazine (as Azobenzene) (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Fluoranthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Fluorene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexachlorobenzene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexechlorobutadiene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexachlorocyclopentadiene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Hexachloroethane (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 3 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site													
☒ Outfall / IMP Number 002 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)														
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used				
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value									
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)								
Indeno(1,2,3-cd)Pyrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1				
Isophorone (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
Naphthalene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1				
Nitrobenzene (µg/L)	ND						1	1	2.1	40 CFR 761 EPA 625.1				
N-Nitroso-di-methylamine (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
N-Nitroso-di-n-propylamine (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1				

N-Nitroso-di-n-phenylamine (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Phenanthrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Pyrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
1,2,4-Trichlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 002 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aldrin (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Alpha BHC (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Beta BHC (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Gamma BHC (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Delta BHC (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Chlordane (µg/L)	ND						1	1	0.013	40 CFR 136A EPA 608.3
4,4'-DDT (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
4,4'-DDE (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
4,4'-DDD (µg/L)	0.00084 J						1	0	0.0013	40 CFR 136A EPA 608.3
Dieldrin (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Alpha- Endosulfan (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Beta-Endosulfan (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Endosulfan Sulfate (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Endrin (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3

Endrin Aldehyde (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Heptachlor (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Heptachlor Epoxide (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
PCB -1242 (µg/L)	ND						1	1	0.0098	40 CFR 136A EPA 608.3
PCB -1254 (µg/L)	ND						1	1	0.0098	40 CFR 136A EPA 608.3

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 2 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site								
☒ Outfall / IMP Number 002 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
PCB-1221 (µg/L)	ND						1	1	0.0098	40 CFR 136A EPA 608.3
PCB-1232 (µg/L)	ND						1	1	0.0098	40 CFR 136A EPA 608.3
PCB-1248 (µg/L)	ND						1	1	0.0098	40 CFR 136A EPA 608.3
PCB-1260 (µg/L)	ND						1	1	0.0098	40 CFR 136A EPA 608.3
PCB-1016 (µg/L)	ND						1	1	0.0098	40 CFR 136A EPA 608.3
Toxaphene (µg/L)	ND						1	1	0.098	40 CFR 136A EPA 608.3

Outfall 005

ANALYSIS RESULTS TABLE POLLUTANT GROUP 1 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 005 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
BOD ₅ (mg/L)	ND						1	1	2.0	SM 5210B
COD (mg/L)	ND						1	1	10	MCAWW EPA 410.4
TOC (mg/L)	1.8						1	0	1.0	SM5310 C-2014
TSS (mg/L)	1.7						1	0	0.50	SM 2540D
Ammonia-Nitrogen (mg/L)	ND						1	1	0.10	EPA 350.1
Temperature (Winter) (°F)		XXX		XXX		XXX		XXX	XXX	
Temperature (Summer) (°F)	21.6 HF !	XXX		XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B-2000
pH – Minimum (S.U.)	7.1 HF	XXX	XXX	XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B-2000
pH – Maximum (S.U.)		XXX	XXX	XXX		XXX		XXX	XXX	
Fecal Coliform (No./100 mL)	37	XXX		XXX		XXX	1	1	XXX	Colilert-18
Oil and Grease (mg/L)	ND						1	1	4.9	EPA 1664B
TRC (mg/L)	ND	XXX		XXX		XXX	1	1	20	DR300-DPD-528
Total Phosphorus (mg/L)	ND						1	1	0.10	EPA TKN_TPhos
TKN (mg/L)	ND						1	1	0.50	EPA TKN_TPhos
Nitrite + Nitrate-Nitrogen (mg/L)	0.92						1	0	0.10	EPA 353.2
Total Dissolved Solids (mg/L)	450						1	0	20	SM 2540C
Color (Pt-Co Units)	15	XXX		XXX		XXX	1	0	5	SM 2120B
Bromide (mg/L)	ND						1	1	0.100	EPA 300.0 R2.1

Chloride (mg/L)	73.3						1	0	1.00	EPA 300.0 R2.1
Sulfate (mg/L)	120						1	0	1.0	EPA 300.0 R2.1
Sulfide (mg/L)	2.1 J						1	0	1.3	SM 4500 S2 F- 2011
Surfactants (mg/L)	ND						1	1	50	SM 5540C - 2011
Fluoride (mg/L)	0.235						1	0	0.100	EPA 300.0 R2.1
Total Hardness (mg/L)	380 !						1	0	3.3	SM 2340B

**ANALYSIS RESULTS TABLE
POLLUTANT GROUP 1 (PAGE 2 OF 2)**

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 005 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Perfluorooctanoic acid (PFOA) (ng/L)										
Perfluorooctanesulfonic acid (PFOS) (ng/L)										
Perfluorobutanesulfonic acid (PFBS) (ng/L)										
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ng/L)										

ANALYSIS RESULTS TABLE POLLUTANT GROUP 2

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 005 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 2 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aluminum, Total (µg/L)	89						1	0	19	EPA 200.8 Rev 5
Antimony, Total (µg/L)	ND						1	1	0.18	EPA 200.8 Rev 5
Arsenic, Total (µg/L)	0.049 J						1	0	0.030	EPA 200.8 Rev 5
Barium, Total (µg/L)	0.054						1	0	0.19	EPA 200.8 Rev 5
Beryllium, Total (µg/L)	ND						1	1	0.025	EPA 200.8 Rev 5
Boron, Total (µg/L)	170						1	0	80	EPA 200.8 Rev 5
Cadmium, Total (µg/L)	0.85						1	0	0.034	EPA 200.8 Rev 5
Chromium, Total (µg/L)	ND						1	1	0.12	EPA 200.8 Rev 5
Chromium, Hexavalent (µg/L)	ND						1	1	0.60	SM 3500-Cr B-2011)
Cobalt, Total (µg/L)	0.21 J						1	0	0.10	EPA 200.8 Rev 5
Copper, Total (µg/L)	24						1	0	2.0	EPA 200.8 Rev 5
Cyanide, Total (µg/L)										
Iron, Total (µg/L)	120						1	0	50	EPA 200.8 Rev 5
Iron, Dissolved (µg/L)										
Lead, Total (µg/L)	0.19						1	1	1.0	EPA 200.8 Rev 5

Manganese, Total (µg/L)	15						1	0	5.0	EPA 200.8 Rev 5
Mercury, Total (µg/L)	0.28						1	0	0.2	EPA 200.8 Rev 5
Molybdenum, Total (µg/L)	1.5 J						1	0	0.70	EPA 200.8 Rev 5
Nickel, Total (µg/L)	69						1	0	1.0	EPA 200.8 Rev 5
Phenols, Total (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Selenium, Total (µg/L)	3.7 J						1	0	5	EPA 200.8 Rev 5
Silver, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Thallium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Zinc, Total (µg/L)	250						1	0	15	EPA 200.8 Rev 5

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 005 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acrolein (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Acrylonitrile (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Benzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Bromoform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Carbon Tetrachloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorodibromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
2-Chloroethylvinyl Ether (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Chloroform (µg/L)	6.6						1	0	1.0	40 CFR 136A EPA 624.1
Dichlorobromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

1,2 Dichloropropane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,3-Dichloropropylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,4-Dioxane (µg/L)	ND						1	1	200	40 CFR 136A EPA 624.1
Ethylbenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Methyl Bromide (µg/L)							1	1	1.0	40CFR136A EPA 624.1
Methyl Chloride (µg/L)	ND						1	1	1.0	40CFR136A EPA 624.1
Methylene Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2,2-Tetrachloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Tetrachloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 2 OF 2)

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APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 005 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Toluene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Trans-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,1-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Trichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Vinyl Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 4

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 005 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 4 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
2-Chlorophenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
2,4-Dichlorophenol (µg/L)	ND						1	1	0.18	40 CFR 136A EPA 624.1
2,4-Dimethylphenol (µg/L)	ND						1	1	0.96	40 CFR 136A EPA 624.1
4,6-Dinitro-o-Cresol (µg/L)	ND						1	1	4.8	40 CFR 136A EPA 624.1
2,4-Dinitrophenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
2-Nitrophenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
4-Nitrophenol (µg/L)	ND						1	1	4.8	40 CFR 761 EPA 625.1
P-Chloro-m-Cresol (µg/L)										
Pentachlorophenol (µg/L)	ND						1	1	4.8	40 CFR 761 EPA 625.1
Phenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
2,4,6-Trichlorophenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 1 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 005 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acenaphthene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Acenaphthylene (µg/L)	0.12						1	0	0.18	40 CFR 761 EPA 625.1
Acrylamide (µg/L)	ND						1	1	2.8	40 CFR 761 EPA 625.1
Anthracene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Benzidine (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1
Benzo(a)Anthracene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Benzo(a)Pyrene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
3,4-Benzo-fluoranthene (µg/L)	ND						1	1		40 CFR 761 EPA 625.1
Benzo(ghi)Perylene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Benzo(k)Fluoranthene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Bis(2-Chloro-ethoxy)Methane (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Bis(2-Chloroethyl)Ether (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Bis(2-Chloro-isopropyl)Ether (µg/L)										
Bis(2-Ethylhexyl)Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

4-Bromophenyl Phenyl Ether (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Butyl Benzyl Phthalate (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1
2-Chloronaphthalene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
4-Chlorophenyl Phenyl Ether (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Chrysene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 2 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site								
☒ Outfall / IMP Number 005 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Dibenzo(a,h)Anthracene (µg/L)										
1,2-Dichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
1,3- Dichlorobenzene (µg/L)										
1,4- Dichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
3,3'-Dichlorobenzidine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Diethyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Dimethyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Di-n-Butyl Phthalate (µg/L)	ND						1	1	9.6	40 CFR 761 EPA 625.1
2,4-Dinitrotoluene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

2,6-Dinitrotoluene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Di-n-Octyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
1,2-Diphenylhydrazine (as Azobenzene) (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Fluoranthene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Fluorene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Hexachlorobenzene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Hexechlorobutadiene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Hexachlorocyclopentadiene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Hexachloroethane (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 3 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site												
☒ Outfall / IMP Number 005 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)														
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used				
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value									
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)								
Indeno(1,2,3-cd)Pyrene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1				
Isophorone (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
Naphthalene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1				
Nitrobenzene (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1				

N-Nitroso-di-methylamine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
N-Nitroso-di-n-propylamine (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
N-Nitroso-di-n-phenylamine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Phenanthrene (µg/L)	ND						1	1	0.16	40 CFR 761 EPA 625.1
Pyrene (µg/L)	ND						1	1	0.056	40 CFR 761 EPA 625.1
1,2,4-Trichlorobenzene (µg/L)	ND						1	1	0.91	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 005 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Gamma BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Delta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Chlordane (µg/L)	ND						1	1	0.012	40 CFR 136A EPA 608.3
4,4'-DDT (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDE (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDD (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Dieldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha- Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta-Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endosulfan Sulfate (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3

Endrin Aldehyde (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor Epoxide (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
PCB -1242 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB -1254 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 2 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site								
☒ Outfall / IMP Number 005 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
PCB-1221 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1232 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1248 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1260 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1016 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
Toxaphene (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3

Outfall 006

ANALYSIS RESULTS TABLE POLLUTANT GROUP 1 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 006 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
BOD ₅ (mg/L)	2.1 CN						1	0	2.0	SM 5210B
COD (mg/L)	9.7 J						1	0	10	MCAWW EPA 410.4
TOC (mg/L)	4.0						1	0	1.0	SM5310 C- 2014
TSS (mg/L)	13						1	0	0.50	SM 2540D
Ammonia-Nitrogen (mg/L)	0.15						1	0	0.10	EPA 350.1
Temperature (Winter) (°F)		XXX		XXX		XXX		XXX	XXX	
Temperature (Summer) (°F)	21.1 HF !	XXX		XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B- 2000
pH – Minimum (S.U.)	7.6 HF	XXX	XXX	XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B- 2000
pH – Maximum (S.U.)		XXX	XXX	XXX		XXX		XXX	XXX	
Fecal Coliform (No./100 mL)	517	XXX		XXX		XXX	1	0	XXX	Colilert-18
Oil and Grease (mg/L)	ND						1	1	4.9	EPA 1664B
TRC (mg/L)	ND	XXX		XXX		XXX	1	1	0.02-2.00	DR300-DOD- 528
Total Phosphorus (mg/L)	ND						1	0	0.10	EPA TKN_TPhos
TKN (mg/L)	0.40 J						1	0	0.50	EPA TKN_TPhos
Nitrite + Nitrate-Nitrogen (mg/L)	0.28						1	0	0.10	EPA 353.2
Total Dissolved Solids (mg/L)	320						1	0	10	SM 2540C
Color (Pt-Co Units)	5.0	XXX		XXX		XXX	1	0	5	SM 2120B
Bromide (mg/L)	ND						1	1	0.100	EPA 300.0 R2.1

Chloride (mg/L)	61.6						1	0	1.00	EPA 300.0 R2.1
Sulfate (mg/L)	101						1	0	1.00	EPA 300.0 R2.1
Sulfide (mg/L)	ND CN						1	1	3.0	SM 4500 S2 F-2011
Surfactants (mg/L)	0.16						1	1	0.050	SM 5540C-2011
Fluoride (mg/L)	0.0930 J						1	0	0.100	EPA 300.0 R2.1
Total Hardness (mg/L)										

**ANALYSIS RESULTS TABLE
POLLUTANT GROUP 1 (PAGE 2 OF 2)**

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 006 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Perfluorooctanoic acid (PFOA) (ng/L)										
Perfluorooctanesulfonic acid (PFOS) (ng/L)										
Perfluorobutanesulfonic acid (PFBS) (ng/L)										
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ng/L)										

ANALYSIS RESULTS TABLE POLLUTANT GROUP 2

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 006 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 2 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aluminum, Total (µg/L)	480						1	0	50	EPA 200.8 Rev 5
Antimony, Total (µg/L)	ND						1	1	2.0	EPA 200.8 Rev 5
Arsenic, Total (µg/L)	1.0 J						1	0	5.0	EPA 200.8 Rev 5
Barium, Total (µg/L)	33						1	0	5.0	EPA 200.8 Rev 5
Beryllium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Boron, Total (µg/L)	17 J						1	0	20	EPA 200.8 Rev 5
Cadmium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Chromium, Total (µg/L)	ND						1	1	5.0	EPA 200.8 Rev 5
Chromium, Hexavalent (µg/L)	ND						1	1	0.010	SM 3500-Cr B-2011
Cobalt, Total (µg/L)	0.52J						1	0	1.0	EPA 200.8 Rev 5
Copper, Total (µg/L)	3.4						1	0	2.0	EPA 200.8 Rev 5
Cyanide, Total (µg/L)										
Iron, Total (µg/L)	550						1	0	100	EPA 200.8 Rev 5
Iron, Dissolved (µg/L)										
Lead, Total (µg/L)	1.2						1	0	1.0	EPA 200.8 Rev 5

Manganese, Total (µg/L)	130						1	0	5.0	EPA 200.8 Rev 5
Mercury, Total (µg/L)	ND						1	1	0.20	EPA 200.8 Rev 5
Molybdenum, Total (µg/L)	1.6 J						1	0	5.0	EPA 200.8 Rev 5
Nickel, Total (µg/L)	1.9 J						1	0	2.0	EPA 200.8 Rev 5
Phenols, Total (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Selenium, Total (µg/L)	ND						1	1	5.0	EPA 200.8 Rev 5
Silver, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Thallium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Zinc, Total (µg/L)	24						1	0	20	EPA 200.8 Rev 5

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 006 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acrolein (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Acrylonitrile (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Benzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Bromoform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Carbon Tetrachloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorodibromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
2-Chloroethylvinyl Ether (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Chloroform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Dichlorobromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

1,2 Dichloropropane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,3-Dichloropropylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,4-Dioxane (µg/L)	ND						1	1	200	40 CFR 136A EPA 624.1
Ethylbenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Methyl Bromide (µg/L)										
Methyl Chloride (µg/L)										
Methylene Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2,2-Tetrachloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Tetrachloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 2 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 006 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Toluene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Trans-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,1-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Trichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Vinyl Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 4

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 006 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 4 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
2-Chlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
2,4-Dichlorophenol (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
2,4-Dimethylphenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
4,6-Dinitro-o-Cresol (µg/L)	ND						1	1	5.0	40 CFR 761 EPA 625.1
2,4-Dinitrophenol (µg/L)	ND						1	1	10	40 CFR 761 EPA 625.1
2-Nitrophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
4-Nitrophenol (µg/L)	ND						1	1	5.0	40 CFR 761 EPA 625.1
P-Chloro-m-Cresol (µg/L)										
Pentachlorophenol (µg/L)	ND						1	1	5.0	40 CFR 761 EPA 625.1
Phenol (µg/L)	ND						1	1	1.0	140 CFR 761 EPA 625.1
2,4,6-Trichlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 1 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 006 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acenaphthene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Acenaphthylene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Acrylamide (µg/L)	ND						1	1	50	40 CFR 761 EPA 625.1
Anthracene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzidine (µg/L)	ND						1	1	20	40 CFR 761 EPA 625.1
Benzo(a)Anthracene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Benzo(a)Pyrene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
3,4-Benzo-fluoranthene (µg/L)										
Benzo(ghi)Perylene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Benzo(k)Fluoranthene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Bis(2-Chloro-ethoxy)Methane (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Bis(2-Chloroethyl)Ether (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Bis(2-Chloro-isopropyl)Ether (µg/L)										
Bis(2-Ethylhexyl)Phthalate (µg/L)	ND						1	1	10	40 CFR 761 EPA 625.1
4-Bromophenyl Phenyl Ether (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

Butyl Benzyl Phthalate (µg/L)	ND						1	1	2.0	40 CFR 761 EPA 625.1
2-Chloronaphthalene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
4-Chlorophenyl Phenyl Ether (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Chrysene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 2 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site													
☒ Outfall / IMP Number 006 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)														
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used				
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value									
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)								
Dibenzo(a,h)Anthracene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1				
1,2-Dichlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
1,3- Dichlorobenzene (µg/L)														
1,4- Dichlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
3,3'-Dichlorobenzidine (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
Diethyl Phthalate (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
Dimethyl Phthalate (µg/L)	ND						1	1	2.0	40 CFR 761 EPA 625.1				
Di-n-Butyl Phthalate (µg/L)	5.2 J						1	1	10	40 CFR 761 EPA 625.1				
2,4-Dinitrotoluene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
2,6-Dinitrotoluene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				

Di-n-Octyl Phthalate (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
1,2-Diphenylhydrazine (as Azobenzene) (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Fluoranthene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Fluorene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Hexachlorobenzene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Hexechlorobutadiene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Hexachlorocyclopentadiene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Hexachloroethane (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 3 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 006 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Indeno(1,2,3-cd)Pyrene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Isophorone (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Naphthalene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Nitrobenzene (µg/L)	ND						1	1	2.0	40 CFR 761 EPA 625.1
N-Nitroso-di-methylamine (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
N-Nitroso-di-n-propylamine (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1

N-Nitroso-di-n-phenylamine (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Phenanthrene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Pyrene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
1,2,4-Trichlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 006 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aldrin (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Alpha BHC (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Beta BHC (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Gamma BHC (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Delta BHC (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Chlordane (µg/L)	ND						1	1	0.013	40 CFR 136A EPA 608.3
4,4'-DDT (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
4,4'-DDE (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
4,4'-DDD (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Dieldrin (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Alpha- Endosulfan (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Beta-Endosulfan (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Endosulfan Sulfate (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Endrin (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3

Endrin Aldehyde (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Heptachlor (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Heptachlor Epoxide (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
PCB -1242 (µg/L)	ND						1	1	0.0010	40 CFR 136A EPA 608.3
PCB -1254 (µg/L)	ND						1	1	0.0010	40 CFR 136A EPA 608.3

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 2 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site								
☒ Outfall / IMP Number 006 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
PCB-1221 (µg/L)	ND						1	1	0.0010	40 CFR 136A EPA 608.3
PCB-1232 (µg/L)	ND						1	1	0.0010	40 CFR 136A EPA 608.3
PCB-1248 (µg/L)	ND						1	1	0.0010	40 CFR 136A EPA 608.3
PCB-1260 (µg/L)	ND						1	1	0.0010	40 CFR 136A EPA 608.3
PCB-1016 (µg/L)	ND						1	1	0.0010	40 CFR 136A EPA 608.3
Toxaphene (µg/L)	ND						1	1	0.0010	40 CFR 136A EPA 608.3

Outfall 008

ANALYSIS RESULTS TABLE POLLUTANT GROUP 1 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 008 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
BOD ₅ (mg/L)	3.5 B CN						1	0	2.0	SM 5210B
COD (mg/L)	ND						1	1	10	MCAWW EPA 410.4
TOC (mg/L)	5.5						1	0	1.0	SM5310 C- 2014
TSS (mg/L)	29						1	0	0.50	SM 2540D
Ammonia-Nitrogen (mg/L)	ND						1	1	0.10	EPA 350.1
Temperature (Winter) (°F)		XXX		XXX		XXX		XXX	XXX	
Temperature (Summer) (°F)	20.2 HF !	XXX		XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B- 2000
pH – Minimum (S.U.)	8.7 HF	XXX	XXX	XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B- 2000
pH – Maximum (S.U.)		XXX	XXX	XXX		XXX		XXX	XXX	
Fecal Coliform (No./100 mL)	>2420	XXX		XXX		XXX	1	0	XXX	Colilert-18
Oil and Grease (mg/L)	ND						1	1	5.3	EPA 1664B
TRC (mg/L)	ND	XXX		XXX		XXX	1	1	0.02-2.00	DR300-DOD- 528
Total Phosphorus (mg/L)	0.16						1	0	0.10	EPA TKN_TPhos
TKN (mg/L)	0.87						1	0	0.50	EPA TKN_TPhose
Nitrite + Nitrate-Nitrogen (mg/L)	0.23						1	0	0.10	EPA 353.2
Total Dissolved Solids (mg/L)	240						1	0	10	SM 2540C
Color (Pt-Co Units)	10	XXX		XXX		XXX	1	0	5	SM 2120B
Bromide (mg/L)	ND						1	1	0.100	EPA 300.0 R2.1

Chloride (mg/L)	66.9						1	0	1.00	EPA 300.0 R2.1
Sulfate (mg/L)	97.4						1	0	0.100	EPA 300.0 R2.1
Sulfide (mg/L)	ND						1	1	3.0	SM 4500 S2 F- 2011
Surfactants (mg/L)	0.087						1	0	0.050	SM 5540C- 2011
Fluoride (mg/L)	0.130						1	0	0.100	EPA 300.0 R2.1
Total Hardness (mg/L)										

**ANALYSIS RESULTS TABLE
POLLUTANT GROUP 1 (PAGE 2 OF 2)**

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 008 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Perfluorooctanoic acid (PFOA) (ng/L)										
Perfluorooctanesulfonic acid (PFOS) (ng/L)										
Perfluorobutanesulfonic acid (PFBS) (ng/L)										
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ng/L)										

ANALYSIS RESULTS TABLE POLLUTANT GROUP 2

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 008 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 2 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aluminum, Total (µg/L)	540						1	0	50	EPA 200.8 Rev 5
Antimony, Total (µg/L)	ND						1	1	2.0	EPA 200.8 Rev 5
Arsenic, Total (µg/L)	2.6 J						1	0	5.0	EPA 200.8 Rev 5
Barium, Total (µg/L)	69						1	0	5.0	EPA 200.8 Rev 5
Beryllium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Boron, Total (µg/L)	27						1	0	20	EPA 200.8 Rev 5
Cadmium, Total (µg/L)	0.26 J						1	0	1.0	EPA 200.8 Rev 5
Chromium, Total (µg/L)	ND						1	1	5.0	EPA 200.8 Rev 5
Chromium, Hexavalent (µg/L)	ND						1	1	0.010	SM 3500-Cr B-2011
Cobalt, Total (µg/L)	0.65 J						1	0	1.0	EPA 200.8 Rev 5
Copper, Total (µg/L)	3.9						1	0	2.0	EPA 200.8 Rev 5
Cyanide, Total (µg/L)										
Iron, Total (µg/L)	710						1	0	100	EPA 200.8 Rev 5
Iron, Dissolved (µg/L)										
Lead, Total (µg/L)	2.2						1	0	1.0	EPA 200.8 Rev 5

Manganese, Total (µg/L)	67						1	0	5.0	EPA 200.8 Rev 5
Mercury, Total (µg/L)	ND						1	1	0.20	EPA 200.8 Rev 5
Molybdenum, Total (µg/L)	2.6 J						1	0	5.0	EPA 200.8 Rev 5
Nickel, Total (µg/L)	2.7						1	0	2.0	EPA 200.8 Rev 5
Phenols, Total (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Selenium, Total (µg/L)	0.92 J						1	0	5.0	EPA 200.8 Rev 5
Silver, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Thallium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Zinc, Total (µg/L)	58						1	0	20	EPA 200.8 Rev 5

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 008 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acrolein (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Acrylonitrile (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Benzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Bromoform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Carbon Tetrachloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorodibromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
2-Chloroethylvinyl Ether (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Chloroform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Dichlorobromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

1,2 Dichloropropane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,3-Dichloropropylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,4-Dioxane (µg/L)	ND						1	1	200	40 CFR 136A EPA 624.1
Ethylbenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Methyl Bromide (µg/L)										
Methyl Chloride (µg/L)										
Methylene Chloride (µg/L)	3.7						1	0	1.0	40 CFR 136A EPA 624.1
1,1,2,2-Tetrachloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Tetrachloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 2 OF 2)

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APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 008 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Toluene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Trans-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,1-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Trichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Vinyl Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 4

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 008 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 4 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
2-Chlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
2,4-Dichlorophenol (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
2,4-Dimethylphenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
4,6-Dinitro-o-Cresol (µg/L)	ND						1	1	5.2	40 CFR 761 EPA 625.1
2,4-Dinitrophenol (µg/L)	ND						1	1	10	40 CFR 761 EPA 625.1
2-Nitrophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
4-Nitrophenol (µg/L)	ND						1	1	5.2	40 CFR 761 EPA 625.1
P-Chloro-m-Cresol (µg/L)										
Pentachlorophenol (µg/L)	ND						1	1	5.2	40 CFR 761 EPA 625.1
Phenol (µg/L)	ND						1	1	1.0	140 CFR 761 EPA 625.1
2,4,6-Trichlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 1 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 008 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acenaphthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Acenaphthylene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Acrylamide (µg/L)	ND						1	1	52	40 CFR 761 EPA 625.1
Anthracene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzidine (µg/L)	ND						1	1	21	40 CFR 761 EPA 625.1
Benzo(a)Anthracene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzo(a)Pyrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
3,4-Benzo-fluoranthene (µg/L)										
Benzo(ghi)Perylene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzo(k)Fluoranthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Bis(2-Chloro-ethoxy)Methane (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Bis(2-Chloroethyl)Ether (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Bis(2-Chloro-isopropyl)Ether (µg/L)										
Bis(2-Ethylhexyl)Phthalate (µg/L)	ND						1	1	10	40 CFR 761 EPA 625.1
4-Bromophenyl Phenyl Ether (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

Butyl Benzyl Phthalate (µg/L)	ND						1	1	2.1	40 CFR 761 EPA 625.1
2-Chloronaphthalene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
4-Chlorophenyl Phenyl Ether (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Chrysene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 2 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site													
☒ Outfall / IMP Number 008 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)														
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used				
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value									
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)								
Dibenzo(a,h)Anthracene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1				
1,2-Dichlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
1,3- Dichlorobenzene (µg/L)														
1,4- Dichlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
3,3'-Dichlorobenzidine (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
Diethyl Phthalate (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
Dimethyl Phthalate (µg/L)	ND						1	1	2.1	40 CFR 761 EPA 625.1				
Di-n-Butyl Phthalate (µg/L)	ND						1	1	10	40 CFR 761 EPA 625.1				
2,4-Dinitrotoluene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
2,6-Dinitrotoluene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				

Di-n-Octyl Phthalate (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
1,2-Diphenylhydrazine (as <i>Azobenzene</i>) (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Fluoranthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Fluorene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexachlorobenzene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexechlorobutadiene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexachlorocyclopentadiene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Hexachloroethane (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 3 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 008 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Indeno(1,2,3-cd)Pyrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Isophorone (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Naphthalene (µg/L)	0.16 J						1	0	0.20	40 CFR 761 EPA 625.1
Nitrobenzene (µg/L)	ND						1	1	2.1	40 CFR 761 EPA 625.1
N-Nitroso-di-methylamine (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
N-Nitroso-di-n-propylamine (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1

N-Nitroso-di-n-phenylamine (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Phenanthrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Pyrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
1,2,4-Trichlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 008 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aldrin (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Alpha BHC (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Beta BHC (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Gamma BHC (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Delta BHC (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Chlordane (µg/L)	ND						1	1	0.013	40 CFR 136A EPA 608.3
4,4'-DDT (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
4,4'-DDE (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
4,4'-DDD (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Dieldrin (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Alpha- Endosulfan (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Beta-Endosulfan (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Endosulfan Sulfate (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Endrin (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3

Endrin Aldehyde (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Heptachlor (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Heptachlor Epoxide (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
PCB -1242 (µg/L)	ND						1	1	0.0010	40 CFR 136A EPA 608.3
PCB -1254 (µg/L)	ND						1	1	0.0010	40 CFR 136A EPA 608.3

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 2 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 008 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
PCB-1221 (µg/L)	ND						1	1	0.0010	40 CFR 136A EPA 608.3
PCB-1232 (µg/L)	ND						1	1	0.0010	40 CFR 136A EPA 608.3
PCB-1248 (µg/L)	ND						1	1	0.0010	40 CFR 136A EPA 608.3
PCB-1260 (µg/L)	ND						1	1	0.0010	40 CFR 136A EPA 608.3
PCB-1016 (µg/L)	ND						1	1	0.0010	40 CFR 136A EPA 608.3
Toxaphene (µg/L)	ND						1	1	0.10	40 CFR 136A EPA 608.3

Outfall 013

ANALYSIS RESULTS TABLE POLLUTANT GROUP 1 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 013 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
BOD ₅ (mg/L)	ND CN						1	1	2.0	SM 5210B
COD (mg/L)	ND						1	1	10	MCAWW EPA 410.4
TOC (mg/L)	1.9						1	0	1.0	SM5310 C- 2014
TSS (mg/L)	12						1	0	0.50	SM 2540D
Ammonia-Nitrogen (mg/L)	0.17						1	1	0.10	EPA 350.1
Temperature (Winter) (°F)		XXX		XXX		XXX		XXX	XXX	
Temperature (Summer) (°F)	21.0 HF !	XXX		XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B- 2000
pH – Minimum (S.U.)	8.0 HF	XXX	XXX	XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B- 2000
pH – Maximum (S.U.)		XXX	XXX	XXX		XXX		XXX	XXX	
Fecal Coliform (No./100 mL)	1986	XXX		XXX		XXX	1	0	XXX	Colilert-18
Oil and Grease (mg/L)	ND						1	1	5.0	EPA 1664B
TRC (mg/L)	ND	XXX		XXX		XXX	1	1	0.02-2.00	DR300-DOD- 528
Total Phosphorus (mg/L)	0. 41 J						1	0	0.10	EPA TKN_TPhos
TKN (mg/L)	0.042 J						1	0	0.50	EPA TKN_TPhos
Nitrite + Nitrate-Nitrogen (mg/L)	0.53						1	0	0.10	EPA 353.2
Total Dissolved Solids (mg/L)	470						1	0	10	SM 2540C
Color (Pt-Co Units)	5.0	XXX		XXX		XXX	1	0	5	SM 2120B
Bromide (mg/L)	ND						1	1	0.100	EPA 300.0 R2.1

Chloride (mg/L)	56.29						1	0	1.00	EPA 300.0 R2.1
Sulfate (mg/L)	163						1	0	1.00	EPA 300.0 R2.1
Sulfide (mg/L)	ND CN						1	1	3.0	SM 4500 S2 F- 2011
Surfactants (mg/L)	0.099						1	1	0.050	SM 5540C- 2011
Fluoride (mg/L)	0.285						1	0	0.100	EPA 300.0 R2.1
Total Hardness (mg/L)										

**ANALYSIS RESULTS TABLE
POLLUTANT GROUP 1 (PAGE 2 OF 2)**

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 013 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Perfluorooctanoic acid (PFOA) (ng/L)										
Perfluorooctanesulfonic acid (PFOS) (ng/L)										
Perfluorobutanesulfonic acid (PFBS) (ng/L)										
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ng/L)										

ANALYSIS RESULTS TABLE POLLUTANT GROUP 2

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 013 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 2 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aluminum, Total (µg/L)	340						1	0	50	EPA 200.8 Rev 5
Antimony, Total (µg/L)	0.60 J						1	0	2.0	EPA 200.8 Rev 5
Arsenic, Total (µg/L)	1.2 J						1	0	5.0	EPA 200.8 Rev 5
Barium, Total (µg/L)	47						1	0	5.0	EPA 200.8 Rev 5
Beryllium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Boron, Total (µg/L)	36						1	0	20	EPA 200.8 Rev 5
Cadmium, Total (µg/L)	0.41 J						1	0	1.0	EPA 200.8 Rev 5
Chromium, Total (µg/L)	ND						1	1	5.0	EPA 200.8 Rev 5
Chromium, Hexavalent (µg/L)	ND						1	1	0.010	SM 3500-Cr B-2011
Cobalt, Total (µg/L)	0.44 J						1	0	1.0	EPA 200.8 Rev 5
Copper, Total (µg/L)	3.1						1	0	2.0	EPA 200.8 Rev 5
Cyanide, Total (µg/L)										
Iron, Total (µg/L)	440						1	0	100	EPA 200.8 Rev 5
Iron, Dissolved (µg/L)										
Lead, Total (µg/L)	1.6						1	0	1.0	EPA 200.8 Rev 5

Manganese, Total (µg/L)	49						1	0	5.0	EPA 200.8 Rev 5
Mercury, Total (µg/L)	ND						1	1	0.20	EPA 200.8 Rev 5
Molybdenum, Total (µg/L)	3.0 J						1	0	5.0	EPA 200.8 Rev 5
Nickel, Total (µg/L)	2.7						1	0	2.0	EPA 200.8 Rev 5
Phenols, Total (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Selenium, Total (µg/L)	1.5 J						1	1	5.0	EPA 200.8 Rev 5
Silver, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Thallium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Zinc, Total (µg/L)	52						1	0	20	EPA 200.8 Rev 5

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 013 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acrolein (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Acrylonitrile (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Benzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Bromoform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Carbon Tetrachloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorodibromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
2-Chloroethylvinyl Ether (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Chloroform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Dichlorobromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

1,2 Dichloropropane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,3-Dichloropropylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,4-Dioxane (µg/L)	ND						1	1	200	40 CFR 136A EPA 624.1
Ethylbenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Methyl Bromide (µg/L)										
Methyl Chloride (µg/L)										
Methylene Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2,2-Tetrachloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Tetrachloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 2 OF 2)

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APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 013 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Toluene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Trans-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,1-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Trichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Vinyl Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 4

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 013 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 4 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
2-Chlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
2,4-Dichlorophenol (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
2,4-Dimethylphenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
4,6-Dinitro-o-Cresol (µg/L)	ND						1	1	5.2	40 CFR 761 EPA 625.1
2,4-Dinitrophenol (µg/L)	ND						1	1	10	40 CFR 761 EPA 625.1
2-Nitrophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
4-Nitrophenol (µg/L)	ND						1	1	5.2	40 CFR 761 EPA 625.1
P-Chloro-m-Cresol (µg/L)										
Pentachlorophenol (µg/L)	ND						1	1	5.2	40 CFR 761 EPA 625.1
Phenol (µg/L)	ND						1	1	1.0	140 CFR 761 EPA 625.1
2,4,6-Trichlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 1 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 013 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acenaphthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Acenaphthylene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Acrylamide (µg/L)	ND						1	1	52	40 CFR 761 EPA 625.1
Anthracene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzidine (µg/L)	ND						1	1	21	40 CFR 761 EPA 625.1
Benzo(a)Anthracene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzo(a)Pyrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
3,4-Benzo-fluoranthene (µg/L)										
Benzo(ghi)Perylene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzo(k)Fluoranthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Bis(2-Chloro-ethoxy)Methane (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Bis(2-Chloroethyl)Ether (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Bis(2-Chloro-isopropyl)Ether (µg/L)										
Bis(2-Ethylhexyl)Phthalate (µg/L)	ND						1	1	10	40 CFR 761 EPA 625.1
4-Bromophenyl Phenyl Ether (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

Butyl Benzyl Phthalate (µg/L)	ND						1	1	2.1	40 CFR 761 EPA 625.1
2-Chloronaphthalene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
4-Chlorophenyl Phenyl Ether (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Chrysene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 2 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site													
☒ Outfall / IMP Number 013 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)														
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used				
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value									
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)								
Dibenzo(a,h)Anthracene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1				
1,2-Dichlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
1,3- Dichlorobenzene (µg/L)														
1,4- Dichlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
3,3'-Dichlorobenzidine (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
Diethyl Phthalate (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
Dimethyl Phthalate (µg/L)	0.35 J						1	0	2.1	40 CFR 761 EPA 625.1				
Di-n-Butyl Phthalate (µg/L)	7.2 J						1	1	10	40 CFR 761 EPA 625.1				
2,4-Dinitrotoluene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
2,6-Dinitrotoluene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				

Di-n-Octyl Phthalate (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
1,2-Diphenylhydrazine (as Azobenzene) (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Fluoranthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Fluorene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexachlorobenzene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexechlorobutadiene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexachlorocyclopentadiene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Hexachloroethane (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 3 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 013 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Indeno(1,2,3-cd)Pyrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Isophorone (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Naphthalene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Nitrobenzene (µg/L)	ND						1	1	2.1	40 CFR 761 EPA 625.1
N-Nitroso-di-methylamine (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
N-Nitroso-di-n-propylamine (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1

N-Nitroso-di-n-phenylamine (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Phenanthrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Pyrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
1,2,4-Trichlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 013 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aldrin (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Alpha BHC (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Beta BHC (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Gamma BHC (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Delta BHC (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Chlordane (µg/L)	ND						1	1	0.013	40 CFR 136A EPA 608.3
4,4'-DDT (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
4,4'-DDE (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
4,4'-DDD (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Dieldrin (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Alpha- Endosulfan (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Beta-Endosulfan (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Endosulfan Sulfate (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Endrin (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3

Endrin Aldehyde (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Heptachlor (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
Heptachlor Epoxide (µg/L)	ND						1	1	0.0013	40 CFR 136A EPA 608.3
PCB -1242 (µg/L)	ND						1	1	0.0096	40 CFR 136A EPA 608.3
PCB -1254 (µg/L)	ND						1	1	0.0096	40 CFR 136A EPA 608.3

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 2 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site								
☒ Outfall / IMP Number 013 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
PCB-1221 (µg/L)	ND						1	1	0.0096	40 CFR 136A EPA 608.3
PCB-1232 (µg/L)	ND						1	1	0.0096	40 CFR 136A EPA 608.3
PCB-1248 (µg/L)	ND						1	1	0.0096	40 CFR 136A EPA 608.3
PCB-1260 (µg/L)	ND						1	1	0.0096	40 CFR 136A EPA 608.3
PCB-1016 (µg/L)	ND						1	1	0.0096	40 CFR 136A EPA 608.3
Toxaphene (µg/L)	ND						1	1	0.0096	40 CFR 136A EPA 608.3

Outfall 015

ANALYSIS RESULTS TABLE POLLUTANT GROUP 1 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 015 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
BOD ₅ (mg/L)	ND						1	1	2.0	SM 5210B
COD (mg/L)	ND						1	1	10	MCAWW EPA 410.4
TOC (mg/L)	1.5						1	0	1.0	SM5310 C-2014
TSS (mg/L)	ND						1	1	1.0	SM 2540D
Ammonia-Nitrogen (mg/L)	ND						1	1	0.10	EPA 350.1
Temperature (Winter) (°F)		XXX		XXX		XXX		XXX	XXX	
Temperature (Summer) (°F)	21.7 HF !	XXX		XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B-2000
pH – Minimum (S.U.)	8.1 HF	XXX	XXX	XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B-2000
pH – Maximum (S.U.)		XXX	XXX	XXX		XXX		XXX	XXX	
Fecal Coliform (No./100 mL)	104	XXX		XXX		XXX	1	1	XXX	Colilert-18
Oil and Grease (mg/L)	ND						1	1	4.4	EPA 1664B
TRC (mg/L)	ND	XXX		XXX		XXX	1	1	20	DR300-DPD-528
Total Phosphorus (mg/L)	0.12						1	1	0.040	EPA TKN_TPhos
TKN (mg/L)	0.71						1	1	0.12	EPA TKN_TPhos
Nitrite + Nitrate-Nitrogen (mg/L)	0.40						1	0	0.10	EPA 353.2
Total Dissolved Solids (mg/L)	610						1	0	10	SM 2540C
Color (Pt-Co Units)	5.0	XXX		XXX		XXX	1	0	5	SM 2120B
Bromide (mg/L)	ND						1	1	0.100	EPA 300.0 R2.1

Chloride (mg/L)	99.4						1	0	0.10	EPA 300.0 R2.1
Sulfate (mg/L)	192						1	0	1.0	EPA 300.0 R2.1
Sulfide (mg/L)	2.0 J						1	0	1.3	SM 4500 S2 F- 2011
Surfactants (mg/L)	ND						1	1	50	SM 5540C - 2011
Fluoride (mg/L)	0.244						1	0	0.100	EPA 300.0 R2.1
Total Hardness (mg/L)	380 !						1	0	3.3	SM 2340B

**ANALYSIS RESULTS TABLE
POLLUTANT GROUP 1 (PAGE 2 OF 2)**

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 015 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Perfluorooctanoic acid (PFOA) (ng/L)										
Perfluorooctanesulfonic acid (PFOS) (ng/L)										
Perfluorobutanesulfonic acid (PFBS) (ng/L)										
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ng/L)										

ANALYSIS RESULTS TABLE POLLUTANT GROUP 2

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 015 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 2 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aluminum, Total (µg/L)	190						1	0	19	EPA 200.8 Rev 5
Antimony, Total (µg/L)	ND						1	1	1.8	EPA 200.8 Rev 5
Arsenic, Total (µg/L)	7.3						1	0	0.30	EPA 200.8 Rev 5
Barium, Total (µg/L)	50						1	0	0.25	EPA 200.8 Rev 5
Beryllium, Total (µg/L)	ND						1	1	0.025	EPA 200.8 Rev 5
Boron, Total (µg/L)	1600						1	0	400	EPA 200.8 Rev 5
Cadmium, Total (µg/L)	5.9						1	0	0.34	EPA 200.8 Rev 5
Chromium, Total (µg/L)	ND						1	1	1.2	EPA 200.8 Rev 5
Chromium, Hexavalent (µg/L)	ND						1	1	6.0	SM 3500-Cr B-2011)
Cobalt, Total (µg/L)	0.53						1	0	0.50	EPA 200.8 Rev 5
Copper, Total (µg/L)	3.0						1	0	2.0	EPA 200.8 Rev 5
Cyanide, Total (µg/L)										
Iron, Total (µg/L)	250						1	0	50	EPA 200.8 Rev 5
Iron, Dissolved (µg/L)										
Lead, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5

Manganese, Total (µg/L)	210						1	0	5.0	EPA 200.8 Rev 5
Mercury, Total (µg/L)	0.24						1	0	0.2	EPA 200.8 Rev 5
Molybdenum, Total (µg/L)	14						1	0	0.70	EPA 200.8 Rev 5
Nickel, Total (µg/L)	53						1	0	1.0	EPA 200.8 Rev 5
Phenols, Total (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Selenium, Total (µg/L)	6.3						1	0	5	EPA 200.8 Rev 5
Silver, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Thallium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Zinc, Total (µg/L)	1800						1	0	15	EPA 200.8 Rev 5

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 015 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acrolein (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Acrylonitrile (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Benzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Bromoform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Carbon Tetrachloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorodibromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
2-Chloroethylvinyl Ether (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Chloroform (µg/L)	ND						1	0	1.0	40 CFR 136A EPA 624.1
Dichlorobromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

1,2 Dichloropropane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,3-Dichloropropylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,4-Dioxane (µg/L)	ND						1	1	200	40 CFR 136A EPA 624.1
Ethylbenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Methyl Bromide (µg/L)							1	1	1.0	40CFR136A EPA 624.1
Methyl Chloride (µg/L)	ND						1	1	1.0	40CFR136A EPA 624.1
Methylene Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2,2-Tetrachloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Tetrachloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 2 OF 2)

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APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 015 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Toluene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Trans-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,1-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Trichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Vinyl Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 4

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 015 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 4 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
2-Chlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
2,4-Dichlorophenol (µg/L)	ND						1	1	0.19	40 CFR 136A EPA 624.1
2,4-Dimethylphenol (µg/L)	ND						1	1	0.96	40 CFR 136A EPA 624.1
4,6-Dinitro-o-Cresol (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
2,4-Dinitrophenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
2-Nitrophenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
4-Nitrophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
P-Chloro-m-Cresol (µg/L)										
Pentachlorophenol (µg/L)	ND						1	1	4.8	40 CFR 761 EPA 625.1
Phenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
2,4,6-Trichlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 1 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 015 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acenaphthene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Acenaphthylene (µg/L)	ND						1	0	0.19	40 CFR 761 EPA 625.1
Acrylamide (µg/L)	ND						1	1	2.8	40 CFR 761 EPA 625.1
Anthracene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Benzidine (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1
Benzo(a)Anthracene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Benzo(a)Pyrene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
3,4-Benzo-fluoranthene (µg/L)	ND						1	1		40 CFR 761 EPA 625.1
Benzo(ghi)Perylene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Benzo(k)Fluoranthene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Bis(2-Chloro-ethoxy)Methane (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Bis(2-Chloroethyl)Ether (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Bis(2-Chloro-isopropyl)Ether (µg/L)										
Bis(2-Ethylhexyl)Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

4-Bromophenyl Phenyl Ether (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Butyl Benzyl Phthalate (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1
2-Chloronaphthalene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
4-Chlorophenyl Phenyl Ether (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Chrysene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 2 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site								
☒ Outfall / IMP Number 015 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Dibenzo(a,h)Anthracene (µg/L)										
1,2-Dichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
1,3- Dichlorobenzene (µg/L)										
1,4- Dichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
3,3'-Dichlorobenzidine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Diethyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Dimethyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Di-n-Butyl Phthalate (µg/L)	ND						1	1	9.6	40 CFR 761 EPA 625.1
2,4-Dinitrotoluene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

2,6-Dinitrotoluene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Di-n-Octyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
1,2-Diphenylhydrazine (as Azobenzene) (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Fluoranthene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Fluorene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Hexachlorobenzene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Hexechlorobutadiene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Hexachlorocyclopentadiene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Hexachloroethane (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 3 OF 3)

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APPLICANT NAME		Shell Polymers Monaca Site								
☒ Outfall / IMP Number 015 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Indeno(1,2,3-cd)Pyrene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Isophorone (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Naphthalene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Nitrobenzene (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1

N-Nitroso-di-methylamine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
N-Nitroso-di-n-propylamine (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
N-Nitroso-di-n-phenylamine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Phenanthrene (µg/L)	ND						1	1	0.16	40 CFR 761 EPA 625.1
Pyrene (µg/L)	ND						1	1	0.056	40 CFR 761 EPA 625.1
1,2,4-Trichlorobenzene (µg/L)	ND						1	1	0.91	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 015 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Gamma BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Delta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Chlordane (µg/L)	ND						1	1	0.012	40 CFR 136A EPA 608.3
4,4'-DDT (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDE (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDD (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Dieldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha- Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta-Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endosulfan Sulfate (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3

Endrin Aldehyde (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor Epoxide (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
PCB -1242 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB -1254 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 2 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site								
☒ Outfall / IMP Number 015 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
PCB-1221 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1232 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1248 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1260 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1016 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
Toxaphene (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3

Outfall 016

ANALYSIS RESULTS TABLE POLLUTANT GROUP 1 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 016 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
BOD ₅ (mg/L)	2.6						1	1	2.0	SM 5210B
COD (mg/L)	ND						1	1	10	MCAWW EPA 410.4
TOC (mg/L)	4.3						1	0	1.0	SM5310 C- 2014
TSS (mg/L)	1400						1	0	0.83	SM 2540D
Ammonia-Nitrogen (mg/L)	ND						1	1	0.088	EPA 350.1
Temperature (Winter) (°F)		XXX		XXX		XXX		XXX	XXX	
Temperature (Summer) (°F)	20.3 HF !	XXX		XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B- 2000
pH – Minimum (S.U.)	8.0 HF	XXX	XXX	XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B- 2000
pH – Maximum (S.U.)		XXX	XXX	XXX		XXX		XXX	XXX	
Fecal Coliform (No./100 mL)	308	XXX		XXX		XXX	1	1	XXX	Colilert-18
Oil and Grease (mg/L)	ND						1	1	4.2	EPA 1664B
TRC (mg/L)	ND	XXX		XXX		XXX	1	1	20	DR300-DPD- 528
Total Phosphorus (mg/L)	1.3						1	1	0.040	EPA TKN_TPhos
TKN (mg/L)	1.5						1	0	0.12	EPA TKN_TPhos
Nitrite + Nitrate-Nitrogen (mg/L)	0.69						1	0	0.065	EPA 353.2
Total Dissolved Solids (mg/L)	750						1	0	10	SM 2540C
Color (Pt-Co Units)	5.0	XXX		XXX		XXX	1	0	5	SM 2120B
Bromide (mg/L)	ND						1	1	0.100	EPA 300.0 R2.1

Chloride (mg/L)	162						1	0	5.0	EPA 300.0 R2.1
Sulfate (mg/L)	302						1	0	1.0	EPA 300.0 R2.1
Sulfide (mg/L)	ND						1	1	1.3	SM 4500 S2 F- 2011
Surfactants (mg/L)	0.075						1	0	0.050	SM 5540C - 2011
Fluoride (mg/L)	0.145						1	0	0.100	EPA 300.0 R2.1
Total Hardness (mg/L)	890 !						1	0	3.3	SM 2340B

**ANALYSIS RESULTS TABLE
POLLUTANT GROUP 1 (PAGE 2 OF 2)**

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 016 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Perfluorooctanoic acid (PFOA) (ng/L)										
Perfluorooctanesulfonic acid (PFOS) (ng/L)										
Perfluorobutanesulfonic acid (PFBS) (ng/L)										
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ng/L)										

ANALYSIS RESULTS TABLE POLLUTANT GROUP 2

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 016 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 2 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aluminum, Total (µg/L)	9500						1	0	50	EPA 200.8 Rev 5
Antimony, Total (µg/L)	1.3						1	0	0.57	EPA 200.8 Rev 5
Arsenic, Total (µg/L)	14						1	0	5.0	EPA 200.8 Rev 5
Barium, Total (µg/L)	32						1	0	5.0	EPA 200.8 Rev 5
Beryllium, Total (µg/L)	0.83						1	0	0.62	EPA 200.8 Rev 5
Boron, Total (µg/L)	33						1	0	20	EPA 200.8 Rev 5
Cadmium, Total (µg/L)	3.3						1	0	0.20	EPA 200.8 Rev 5
Chromium, Total (µg/L)	16						1	0	5.0	EPA 200.8 Rev 5
Chromium, Hexavalent (µg/L)	ND						1	1	6.0	SM 3500-Cr B-2011)
Cobalt, Total (µg/L)	8.9						1	0	0.19	EPA 200.8 Rev 5
Copper, Total (µg/L)	41						1	0	2.0	EPA 200.8 Rev 5
Cyanide, Total (µg/L)										
Iron, Total (µg/L)	21000						1	0	100	EPA 200.8 Rev 5
Iron, Dissolved (µg/L)										
Lead, Total (µg/L)	34						1	0	0.45	EPA 200.8 Rev 5

Manganese, Total (µg/L)	710						1	0	5.0	EPA 200.8 Rev 5
Mercury, Total (µg/L)	0.28 J						1	0	0.2	EPA 200.8 Rev 5
Molybdenum, Total (µg/L)	3.8 J						1	0	1.1	EPA 200.8 Rev 5
Nickel, Total (µg/L)	34						1	0	1.5	EPA 200.8 Rev 5
Phenols, Total (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Selenium, Total (µg/L)	6.7						1	0	5.0	EPA 200.8 Rev 5
Silver, Total (µg/L)	0.36 J						1	0	0.053	EPA 200.8 Rev 5
Thallium, Total (µg/L)	0.26 J						1	1	0.20	EPA 200.8 Rev 5
Zinc, Total (µg/L)	440						1	0	15	EPA 200.8 Rev 5

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 016 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acrolein (µg/L)	ND						1	1	16	40 CFR 136A EPA 624.1
Acrylonitrile (µg/L)	ND						1	1	16	40 CFR 136A EPA 624.1
Benzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Bromoform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Carbon Tetrachloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorodibromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
2-Chloroethylvinyl Ether (µg/L)	ND						1	1	16	40 CFR 136A EPA 624.1
Chloroform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Dichlorobromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

1,2 Dichloropropane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,3-Dichloropropylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,4-Dioxane (µg/L)	ND						1	1	200	40 CFR 136A EPA 624.1
Ethylbenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Methyl Bromide (µg/L)							1	1	1.0	40CFR136A EPA 624.1
Methyl Chloride (µg/L)	ND						1	1	1.0	40CFR136A EPA 624.1
Methylene Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2,2-Tetrachloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Tetrachloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 2 OF 2)

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APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 016 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Toluene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Trans-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,1-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Trichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Vinyl Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 4

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 016 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 4 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
2-Chlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
2,4-Dichlorophenol (µg/L)	ND						1	1	0.20	40 CFR 136A EPA 624.1
2,4-Dimethylphenol (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
4,6-Dinitro-o-Cresol (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
2,4-Dinitrophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
2-Nitrophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
4-Nitrophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
P-Chloro-m-Cresol (µg/L)										
Pentachlorophenol (µg/L)	ND						1	1	4.8	40 CFR 761 EPA 625.1
Phenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
2,4,6-Trichlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 1 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 016 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acenaphthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Acenaphthylene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Acrylamide (µg/L)	ND						1	1	2.8	40 CFR 761 EPA 625.1
Anthracene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzidine (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1
Benzo(a)Anthracene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzo(a)Pyrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
3,4-Benzo-fluoranthene (µg/L)	ND						1	1		40 CFR 761 EPA 625.1
Benzo(ghi)Perylene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzo(k)Fluoranthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Bis(2-Chloro-ethoxy)Methane (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Bis(2-Chloroethyl)Ether (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Bis(2-Chloro-isopropyl)Ether (µg/L)										
Bis(2-Ethylhexyl)Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

4-Bromophenyl Phenyl Ether (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Butyl Benzyl Phthalate (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1
2-Chloronaphthalene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
4-Chlorophenyl Phenyl Ether (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Chrysene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 2 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site								
☒ Outfall / IMP Number 016 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Dibenzo(a,h)Anthracene (µg/L)										
1,2-Dichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
1,3- Dichlorobenzene (µg/L)										
1,4- Dichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
3,3'-Dichlorobenzidine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Diethyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Dimethyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Di-n-Butyl Phthalate (µg/L)	ND						1	1	5.1	40 CFR 761 EPA 625.1
2,4-Dinitrotoluene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

2,6-Dinitrotoluene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Di-n-Octyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
1,2-Diphenylhydrazine (as Azobenzene) (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Fluoranthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Fluorene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexachlorobenzene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexechlorobutadiene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexachlorocyclopentadiene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Hexachloroethane (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 3 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site												
☒ Outfall / IMP Number 016 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)														
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used				
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value									
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)								
Indeno(1,2,3-cd)Pyrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1				
Isophorone (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
Naphthalene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1				
Nitrobenzene (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1				

N-Nitroso-di-methylamine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
N-Nitroso-di-n-propylamine (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
N-Nitroso-di-n-phenylamine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Phenanthrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Pyrene (µg/L)	ND						1	1	0.056	40 CFR 761 EPA 625.1
1,2,4-Trichlorobenzene (µg/L)	ND						1	1	0.91	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 016 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Gamma BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Delta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Chlordane (µg/L)	ND						1	1	0.012	40 CFR 136A EPA 608.3
4,4'-DDT (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDE (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDD (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Dieldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha- Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta-Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endosulfan Sulfate (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3

Endrin Aldehyde (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor Epoxide (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
PCB -1242 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB -1254 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 2 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site								
☒ Outfall / IMP Number 016 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
PCB-1221 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1232 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1248 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1260 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1016 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
Toxaphene (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3

Outfall 017

ANALYSIS RESULTS TABLE POLLUTANT GROUP 1 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 017 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
BOD ₅ (mg/L)	2.3						1	0	2.0	SM 5210B
COD (mg/L)	15						1	0	10	MCAWW EPA 410.4
TOC (mg/L)	4.4 FL						1	0	1.0	SM5310 C-2014
TSS (mg/L)	79						1	0	1.4	SM 2540D
Ammonia-Nitrogen (mg/L)	0.16 FL						1	0	0.10	EPA 350.1
Temperature (Winter) (°F)		XXX		XXX		XXX		XXX	XXX	
Temperature (Summer) (°F)	20.7 HF!	XXX		XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B-2000
pH – Minimum (S.U.)	7.8 HF	XXX	XXX	XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B-2000
pH – Maximum (S.U.)		XXX	XXX	XXX		XXX		XXX	XXX	
Fecal Coliform (No./100 mL)	> 2420	XXX		XXX		XXX	1	0	XXX	Colilert-18
Oil and Grease (mg/L)	ND						1	1	4.7	EPA 1664B
TRC (mg/L)	ND	XXX		XXX		XXX	1	1	0.02-2.00	DR300-DPD-528
Total Phosphorus (mg/L)	0.26						1	0	0.10	EPA TKN_TPhos
TKN (mg/L)	0.74						1	0	0.50	EPA TKN_TPhose
Nitrite + Nitrate-Nitrogen (mg/L)	0.41						1	0	0.10	EPA 353.2
Total Dissolved Solids (mg/L)	230						1	0	10	SM 2540C
Color (Pt-Co Units)	30	XXX		XXX		XXX	1	0	5	SM 2120B
Bromide (mg/L)	ND						1	1	0.100	EPA 300.0 R2.1

Chloride (mg/L)	18.0						1	0	1.00	EPA 300.0 R2.1
Sulfate (mg/L)	49.1						1	0	1.00	EPA 300.0 R2.1
Sulfide (mg/L)	ND						1	1	3.0	SM 4500 S2 F- 2011
Surfactants (mg/L)	0.11						1	0	0.050	5540C-2011
Fluoride (mg/L)	0.173						1	0	1.00	EPA 300.0 R2.1
Total Hardness (mg/L)							1	0	3.3	SM 2340B

**ANALYSIS RESULTS TABLE
POLLUTANT GROUP 1 (PAGE 2 OF 2)**

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 017 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Perfluorooctanoic acid (PFOA) (ng/L)										
Perfluorooctanesulfonic acid (PFOS) (ng/L)										
Perfluorobutanesulfonic acid (PFBS) (ng/L)										
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ng/L)										

ANALYSIS RESULTS TABLE POLLUTANT GROUP 2

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 017 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 2 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aluminum, Total (µg/L)	4500						1	0	50	EPA 200.8 Rev 5
Antimony, Total (µg/L)	1.0 J						1	0	2.0	EPA 200.8 Rev 5
Arsenic, Total (µg/L)	3.6 J						1	0	5.0	EPA 200.8 Rev 5
Barium, Total (µg/L)	87						1	0	5.0	EPA 200.8 Rev 5
Beryllium, Total (µg/L)	0.72 J						1	0	1.0	EPA 200.8 Rev 5
Boron, Total (µg/L)	27						1	0	20	EPA 200.8 Rev 5
Cadmium, Total (µg/L)	0.45 J						1	0	1.0	EPA 200.8 Rev 5
Chromium, Total (µg/L)	7.1						1	0	5.0	EPA 200.8 Rev 5
Chromium, Hexavalent (µg/L)	6.0 J						1	0	10	SM 3500-CR B-2011
Cobalt, Total (µg/L)	3.2						1	0	1.0	EPA 200.8 Rev 5
Copper, Total (µg/L)	13						1	0	2.0	EPA 200.8 Rev 5
Cyanide, Total (µg/L)										
Iron, Total (µg/L)	6400						1	0	100	EPA 200.8 Rev 5
Iron, Dissolved (µg/L)										
Lead, Total (µg/L)	8.8						1	0	1.0	EPA 200.8 Rev 5

Manganese, Total (µg/L)	240						1	0	5.0	EPA 200.8 Rev 5
Mercury, Total (µg/L)	ND						1	1	0.20	EPA 200.8 Rev 5
Molybdenum, Total (µg/L)	1.7 J						1	0	5.0	EPA 200.8 Rev 5
Nickel, Total (µg/L)	12						1	0	2.0	EPA 200.8 Rev 5
Phenols, Total (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Selenium, Total (µg/L)	1.0 J						1	0	5.0	EPA 200.8 Rev 5
Silver, Total (µg/L)	0.063 J						1	0	1.0	EPA 200.8 Rev 5
Thallium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Zinc, Total (µg/L)	110						1	0	20	EPA 200.8 Rev 5

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 017 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acrolein (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Acrylonitrile (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Benzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Bromoform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Carbon Tetrachloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorodibromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
2-Chloroethylvinyl Ether (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Chloroform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Dichlorobromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

1,2 Dichloropropane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,3-Dichloropropylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,4-Dioxane (µg/L)	ND						1	1	200	40 CFR 136A EPA 624.1
Ethylbenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Methyl Bromide (µg/L)										
Methyl Chloride (µg/L)										
Methylene Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2,2-Tetrachloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Tetrachloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 2 OF 2)

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APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 017 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Toluene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Trans-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,1-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Trichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Vinyl Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 4

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 017 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 4 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
2-Chlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
2,4-Dichlorophenol (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
2,4-Dimethylphenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
4,6-Dinitro-o-Cresol (µg/L)	ND						1	1	5.0	40 CFR 761 EPA 625.1
2,4-Dinitrophenol (µg/L)	ND						1	1	10	40 CFR 761 EPA 625.1
2-Nitrophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
4-Nitrophenol (µg/L)	ND						1	1	5.0	40 CFR 761 EPA 625.1
P-Chloro-m-Cresol (µg/L)										
Pentachlorophenol (µg/L)	ND						1	1	5.0	40 CFR 761 EPA 625.1
Phenol (µg/L)	ND						1	1	1.0	140 CFR 761 EPA 625.1
2,4,6-Trichlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 1 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 017 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acenaphthene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Acenaphthylene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Acrylamide (µg/L)	ND						1	1	5.0	40 CFR 761 EPA 625.1
Anthracene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Benzidine (µg/L)	ND						1	1	20	40 CFR 761 EPA 625.1
Benzo(a)Anthracene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Benzo(a)Pyrene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
3,4-Benzo-fluoranthene (µg/L)										
Benzo(ghi)Perylene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Benzo(k)Fluoranthene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Bis(2-Chloro-ethoxy)Methane (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Bis(2-Chloroethyl)Ether (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Bis(2-Chloro-isopropyl)Ether (µg/L)										
Bis(2-Ethylhexyl)Phthalate (µg/L)	ND						1	1	10	40 CFR 761 EPA 625.1
4-Bromophenyl Phenyl Ether (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

Butyl Benzyl Phthalate (µg/L)	ND						1	1	2.0	40 CFR 761 EPA 625.1
2-Chloronaphthalene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
4-Chlorophenyl Phenyl Ether (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Chrysene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 2 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site													
☒ Outfall / IMP Number 017 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)														
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used				
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value									
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)								
Dibenzo(a,h)Anthracene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1				
1,2-Dichlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
1,3- Dichlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
1,4- Dichlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
3,3'-Dichlorobenzidine (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
Diethyl Phthalate (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
Dimethyl Phthalate (µg/L)	ND						1	1	2.0	40 CFR 761 EPA 625.1				
Di-n-Butyl Phthalate (µg/L)	ND						1	1	10	40 CFR 761 EPA 625.1				
2,4-Dinitrotoluene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
2,6-Dinitrotoluene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				

Di-n-Octyl Phthalate (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
1,2-Diphenylhydrazine (as Azobenzene) (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Fluoranthene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Fluorene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Hexachlorobenzene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Hexechlorobutadiene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Hexachlorocyclopentadiene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Hexachloroethane (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 3 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site													
☒ Outfall / IMP Number 017 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)														
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used				
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value									
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)								
Indeno(1,2,3-cd)Pyrene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1				
Isophorone (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
Naphthalene (µg/L)	0.13 J						1	0	0.19	40 CFR 761 EPA 625.1				
Nitrobenzene (µg/L)	ND						1	1	2.0	40 CFR 761 EPA 625.1				
N-Nitroso-di-methylamine (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
N-Nitroso-di-n-propylamine (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1				

N-Nitroso-di-n-phenylamine (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Phenanthrene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
Pyrene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
1,2,4-Trichlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 017 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Gamma BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Delta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Chlordane (µg/L)	ND						1	1	0.012	40 CFR 136A EPA 608.3
4,4'-DDT (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDE (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDD (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Dieldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha- Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta-Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endosulfan Sulfate (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3

Endrin Aldehyde (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor Epoxide (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
PCB -1242 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB -1254 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 2 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site								
☒ Outfall / IMP Number 017 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
PCB-1221 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1232 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1248 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1260 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1016 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
Toxaphene (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3

Outfall 019

ANALYSIS RESULTS TABLE POLLUTANT GROUP 1 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 019 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
BOD ₅ (mg/L)	2.2 cn						1	0	2.0	SM 5210B
COD (mg/L)	13						1	0	10	MCAWW EPA 410.4
TOC (mg/L)	2.8						1	0	1.0	SM5310 C-2014
TSS (mg/L)	30						1	0	0.50	SM 2540D
Ammonia-Nitrogen (mg/L)	ND						1	1	0.10	EPA 350.1
Temperature (Winter) (°F)		XXX		XXX		XXX		XXX	XXX	
Temperature (Summer) (°F)	20.5 HF !	XXX		XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B-2000
pH – Minimum (S.U.)	7.5 HF	XXX	XXX	XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B-2000
pH – Maximum (S.U.)		XXX	XXX	XXX		XXX		XXX	XXX	
Fecal Coliform (No./100 mL)	2420	XXX		XXX		XXX	1	0	XXX	Colilert-18
Oil and Grease (mg/L)	4.9						1	0	4.9	EPA 1664B
TRC (mg/L)	ND	XXX		XXX		XXX	1	1	0.02-2.00	DR300-DPD-528
Total Phosphorus (mg/L)	0.23						1	0	0.10	EPA TKN_TPhos
TKN (mg/L)	0.66						1	0	0.50	EPA TKN_TPhose
Nitrite + Nitrate-Nitrogen (mg/L)	ND						1	1	0.10	EPA 353.2
Total Dissolved Solids (mg/L)	310						1	0	10	SM 2540C
Color (Pt-Co Units)	15	XXX		XXX		XXX	1	0	5	SM 2120B
Bromide (mg/L)	ND						1	1	0.100	EPA 300.0 R2.1

Chloride (mg/L)	66.2						1	0	1.00	EPA 300.0 R2.1
Sulfate (mg/L)	38.1						1	0	1.00	EPA 300.0 R2.1
Sulfide (mg/L)	ND						1	1	3.0	SM 4500 S2 F- 2011
Surfactants (mg/L)	0.093						1	0	0.050	SM 5540C- 2011
Fluoride (mg/L)	0.118						1	0	0.100	EPA 300.0 R2.1
Total Hardness (mg/L)										

**ANALYSIS RESULTS TABLE
POLLUTANT GROUP 1 (PAGE 2 OF 2)**

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 019 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Perfluorooctanoic acid (PFOA) (ng/L)										
Perfluorooctanesulfonic acid (PFOS) (ng/L)										
Perfluorobutanesulfonic acid (PFBS) (ng/L)										
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ng/L)										

ANALYSIS RESULTS TABLE POLLUTANT GROUP 2

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 019 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 2 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aluminum, Total (µg/L)	3500						1	0	50	EPA 200.8 Rev 5
Antimony, Total (µg/L)	ND						1	1	2.0	EPA 200.8 Rev 5
Arsenic, Total (µg/L)	4.2 J						1	0	5.0	EPA 200.8 Rev 5
Barium, Total (µg/L)	110						1	0	5.0	EPA 200.8 Rev 5
Beryllium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Boron, Total (µg/L)	18 J						1	0	20	EPA 200.8 Rev 5
Cadmium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Chromium, Total (µg/L)	5.5						1	0	5.0	EPA 200.8 Rev 5
Chromium, Hexavalent (µg/L)	ND						1	1	10	SM 3500-Cr B-2011
Cobalt, Total (µg/L)	3.1						1	0	1.0	EPA 200.8 Rev 5
Copper, Total (µg/L)	7.5						1	0	2.0	EPA 200.8 Rev 5
Cyanide, Total (µg/L)										
Iron, Total (µg/L)	6600						1	0	100	EPA 200.8 Rev 5
Iron, Dissolved (µg/L)										
Lead, Total (µg/L)	4.3						1	0	1.0	EPA 200.8 Rev 5

Manganese, Total (µg/L)	560						1	0	5.0	EPA 200.8 Rev 5
Mercury, Total (µg/L)	ND						1	1	0.20	EPA 200.8 Rev 5
Molybdenum, Total (µg/L)	1.1 J						1	0	5.0	EPA 200.8 Rev 5
Nickel, Total (µg/L)	11						1	0	2.0	EPA 200.8 Rev 5
Phenols, Total (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Selenium, Total (µg/L)	ND						1	1	5.0	EPA 200.8 Rev 5
Silver, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Thallium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Zinc, Total (µg/L)	62						1	0	20	EPA 200.8 Rev 5

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 019 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acrolein (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Acrylonitrile (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Benzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Bromoform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Carbon Tetrachloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorodibromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
2-Chloroethylvinyl Ether (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Chloroform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Dichlorobromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

1,2 Dichloropropane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,3-Dichloropropylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,4-Dioxane (µg/L)	ND						1	1	200	40 CFR 136A EPA 624.1
Ethylbenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Methyl Bromide (µg/L)										
Methyl Chloride (µg/L)										
Methylene Chloride (µg/L)	3.7						1	0	1.0	40 CFR 136A EPA 624.1
1,1,2,2-Tetrachloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Tetrachloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 2 OF 2)

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APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 019 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Toluene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Trans-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,1-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Trichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Vinyl Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 4

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 019 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 4 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
2-Chlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
2,4-Dichlorophenol (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
2,4-Dimethylphenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
4,6-Dinitro-o-Cresol (µg/L)	ND						1	1	5.2	40 CFR 761 EPA 625.1
2,4-Dinitrophenol (µg/L)	ND						1	1	10	40 CFR 761 EPA 625.1
2-Nitrophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
4-Nitrophenol (µg/L)	ND						1	1	5.2	40 CFR 761 EPA 625.1
P-Chloro-m-Cresol (µg/L)										
Pentachlorophenol (µg/L)	ND						1	1	5.2	40 CFR 761 EPA 625.1
Phenol (µg/L)	ND						1	1	1.0	140 CFR 761 EPA 625.1
2,4,6-Trichlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 1 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 019 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acenaphthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Acenaphthylene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Acrylamide (µg/L)	ND						1	1	52	40 CFR 761 EPA 625.1
Anthracene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzidine (µg/L)	ND						1	1	21	40 CFR 761 EPA 625.1
Benzo(a)Anthracene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzo(a)Pyrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
3,4-Benzo-fluoranthene (µg/L)										
Benzo(ghi)Perylene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzo(k)Fluoranthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Bis(2-Chloro-ethoxy)Methane (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Bis(2-Chloroethyl)Ether (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Bis(2-Chloro-isopropyl)Ether (µg/L)										
Bis(2-Ethylhexyl)Phthalate (µg/L)	ND						1	1	10	40 CFR 761 EPA 625.1
4-Bromophenyl Phenyl Ether (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

Butyl Benzyl Phthalate (µg/L)	ND						1	1	2.1	40 CFR 761 EPA 625.1
2-Chloronaphthalene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
4-Chlorophenyl Phenyl Ether (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Chrysene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 2 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site													
☒ Outfall / IMP Number 019 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)														
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used				
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value									
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)								
Dibenzo(a,h)Anthracene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1				
1,2-Dichlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
1,3- Dichlorobenzene (µg/L)														
1,4- Dichlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
3,3'-Dichlorobenzidine (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
Diethyl Phthalate (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
Dimethyl Phthalate (µg/L)	ND						1	1	2.1	40 CFR 761 EPA 625.1				
Di-n-Butyl Phthalate (µg/L)	ND						1	1	10	40 CFR 761 EPA 625.1				
2,4-Dinitrotoluene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
2,6-Dinitrotoluene (µg/L)	dND						1	1	1.0	40 CFR 761 EPA 625.1				

Di-n-Octyl Phthalate (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
1,2-Diphenylhydrazine (as <i>Azobenzene</i>) (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Fluoranthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Fluorene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexachlorobenzene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexechlorobutadiene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexachlorocyclopentadiene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Hexachloroethane (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 3 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site													
☒ Outfall / IMP Number 019 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)														
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used				
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value									
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)								
Indeno(1,2,3-cd)Pyrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1				
Isophorone (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
Naphthalene (µg/L)	0.25						1	0	0.20	40 CFR 761 EPA 625.1				
Nitrobenzene (µg/L)	ND						1	1	2.1	40 CFR 761 EPA 625.1				
N-Nitroso-di-methylamine (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1				
N-Nitroso-di-n-propylamine (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1				

N-Nitroso-di-n-phenylamine (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Phenanthrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Pyrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
1,2,4-Trichlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 019 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Gamma BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Delta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Chlordane (µg/L)	ND						1	1	0.012	40 CFR 136A EPA 608.3
4,4'-DDT (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDE (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDD (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Dieldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha- Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta-Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endosulfan Sulfate (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3

Endrin Aldehyde (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor Epoxide (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
PCB -1242 (µg/L)	ND						1	1	0.0094	40 CFR 136A EPA 608.3
PCB -1254 (µg/L)	ND						1	1	0.0094	40 CFR 136A EPA 608.3

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 2 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 019 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
PCB-1221 (µg/L)	ND						1	1	0.0094	40 CFR 136A EPA 608.3
PCB-1232 (µg/L)	ND						1	1	0.0094	40 CFR 136A EPA 608.3
PCB-1248 (µg/L)	ND						1	1	0.0094	40 CFR 136A EPA 608.3
PCB-1260 (µg/L)	ND						1	1	0.0094	40 CFR 136A EPA 608.3
PCB-1016 (µg/L)	ND						1	1	0.0094	40 CFR 136A EPA 608.3
Toxaphene (µg/L)	ND						1	1	0.0094	40 CFR 136A EPA 608.3

Outfall 021

ANALYSIS RESULTS TABLE POLLUTANT GROUP 1 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 021 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
BOD ₅ (mg/L)	ND						1	1	2.0	SM 5210B
COD (mg/L)	ND						1	1	10	MCAWW EPA 410.4
TOC (mg/L)	1.8						1	0	1.0	SM5310 C-2014
TSS (mg/L)	8.6						1	0	1.0	SM 2540D
Ammonia-Nitrogen (mg/L)	ND						1	1	0.10	EPA 350.1
Temperature (Winter) (°F)		XXX		XXX		XXX		XXX	XXX	
Temperature (Summer) (°F)	20.3 HF !	XXX		XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B-2000
pH – Minimum (S.U.)	7.3 HF	XXX	XXX	XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B-2000
pH – Maximum (S.U.)		XXX	XXX	XXX		XXX		XXX	XXX	
Fecal Coliform (No./100 mL)	308	XXX		XXX		XXX	1	1	XXX	Colilert-18
Oil and Grease (mg/L)	ND						1	1	4.9	EPA 1664B
TRC (mg/L)	ND	XXX		XXX		XXX	1	1	20	DR300-DPD-528
Total Phosphorus (mg/L)	0.046 J						1	1	0.040	EPA TKN_TPhos
TKN (mg/L)	0.17						1	1	0.12	EPA TKN_TPhos
Nitrite + Nitrate-Nitrogen (mg/L)	0.15 FL						1	0	0.065	EPA 353.2
Total Dissolved Solids (mg/L)	340						1	0	10	SM 2540C
Color (Pt-Co Units)	10	XXX		XXX		XXX	1	0	5	SM 2120B
Bromide (mg/L)	ND						1	1	0.100	EPA 300.0 R2.1

Chloride (mg/L)	61.8						1	0	1.0	EPA 300.0 R2.1
Sulfate (mg/L)	69.0						1	0	1.0	EPA 300.0 R2.1
Sulfide (mg/L)	ND						1	0	1.3	SM 4500 S2 F- 2011
Surfactants (mg/L)	ND						1	1	0.050	SM 5540C - 2011
Fluoride (mg/L)	0.247						1	0	0.100	EPA 300.0 R2.1
Total Hardness (mg/L)	190 !						1	0	3.3	SM 2340B

**ANALYSIS RESULTS TABLE
POLLUTANT GROUP 1 (PAGE 2 OF 2)**

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 021 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Perfluorooctanoic acid (PFOA) (ng/L)										
Perfluorooctanesulfonic acid (PFOS) (ng/L)										
Perfluorobutanesulfonic acid (PFBS) (ng/L)										
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ng/L)										

ANALYSIS RESULTS TABLE POLLUTANT GROUP 2

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 021 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 2 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aluminum, Total (µg/L)	210						1	0	50	EPA 200.8 Rev 5
Antimony, Total (µg/L)	ND						1	1	2.0	EPA 200.8 Rev 5
Arsenic, Total (µg/L)	ND						1	1	5.0	EPA 200.8 Rev 5
Barium, Total (µg/L)	79						1	0	5.0	EPA 200.8 Rev 5
Beryllium, Total (µg/L)	ND						1	1	0.025	EPA 200.8 Rev 5
Boron, Total (µg/L)	38						1	0	20	EPA 200.8 Rev 5
Cadmium, Total (µg/L)	1.6						1	0	1.0	EPA 200.8 Rev 5
Chromium, Total (µg/L)	ND						1	1	5.0	EPA 200.8 Rev 5
Chromium, Hexavalent (µg/L)	ND						1	1	1.0	SM 3500-Cr B-2011)
Cobalt, Total (µg/L)	0.20						1	0	0.19	EPA 200.8 Rev 5
Copper, Total (µg/L)	ND						1	0	2.0	EPA 200.8 Rev 5
Cyanide, Total (µg/L)										
Iron, Total (µg/L)	290						1	0	100	EPA 200.8 Rev 5
Iron, Dissolved (µg/L)										
Lead, Total (µg/L)	0.58						1	0	0.45	EPA 200.8 Rev 5

Manganese, Total (µg/L)	29						1	0	5.0	EPA 200.8 Rev 5
Mercury, Total (µg/L)	ND						1	1	0.2	EPA 200.8 Rev 5
Molybdenum, Total (µg/L)	ND						1	1	5.0	EPA 200.8 Rev 5
Nickel, Total (µg/L)	ND						1	1	2.0	EPA 200.8 Rev 5
Phenols, Total (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Selenium, Total (µg/L)	ND						1	0	5.0	EPA 200.8 Rev 5
Silver, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Thallium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Zinc, Total (µg/L)	43						1	0	15	EPA 200.8 Rev 5

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 021 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acrolein (µg/L)	ND						1	1	16	40 CFR 136A EPA 624.1
Acrylonitrile (µg/L)	ND						1	1	16	40 CFR 136A EPA 624.1
Benzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Bromoform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Carbon Tetrachloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorodibromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
2-Chloroethylvinyl Ether (µg/L)	ND						1	1	16	40 CFR 136A EPA 624.1
Chloroform (µg/L)	ND						1	0	1.0	40 CFR 136A EPA 624.1
Dichlorobromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

1,2 Dichloropropane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,3-Dichloropropylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,4-Dioxane (µg/L)	ND						1	1	200	40 CFR 136A EPA 624.1
Ethylbenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Methyl Bromide (µg/L)							1	1	1.0	40CFR136A EPA 624.1
Methyl Chloride (µg/L)	ND						1	1	1.0	40CFR136A EPA 624.1
Methylene Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2,2-Tetrachloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Tetrachloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 2 OF 2)

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APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 021 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Toluene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Trans-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,1-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Trichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Vinyl Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 4

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 021 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 4 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
2-Chlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
2,4-Dichlorophenol (µg/L)	ND						1	1	0.20	40 CFR 136A EPA 624.1
2,4-Dimethylphenol (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
4,6-Dinitro-o-Cresol (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
2,4-Dinitrophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
2-Nitrophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
4-Nitrophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
P-Chloro-m-Cresol (µg/L)										
Pentachlorophenol (µg/L)	ND						1	1	4.8	40 CFR 761 EPA 625.1
Phenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
2,4,6-Trichlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 1 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 021 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acenaphthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Acenaphthylene (µg/L)	ND						1	0	0.20	40 CFR 761 EPA 625.1
Acrylamide (µg/L)	ND						1	1	2.8	40 CFR 761 EPA 625.1
Anthracene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzidine (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1
Benzo(a)Anthracene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzo(a)Pyrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
3,4-Benzo-fluoranthene (µg/L)	ND						1	1		40 CFR 761 EPA 625.1
Benzo(ghi)Perylene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzo(k)Fluoranthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Bis(2-Chloro-ethoxy)Methane (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Bis(2-Chloroethyl)Ether (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Bis(2-Chloro-isopropyl)Ether (µg/L)										
Bis(2-Ethylhexyl)Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

4-Bromophenyl Phenyl Ether (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Butyl Benzyl Phthalate (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1
2-Chloronaphthalene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
4-Chlorophenyl Phenyl Ether (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Chrysene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 2 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site								
☒ Outfall / IMP Number 021 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Dibenzo(a,h)Anthracene (µg/L)										
1,2-Dichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
1,3- Dichlorobenzene (µg/L)										
1,4- Dichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
3,3'-Dichlorobenzidine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Diethyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Dimethyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Di-n-Butyl Phthalate (µg/L)	8.4						1	1	5.1	40 CFR 761 EPA 625.1
2,4-Dinitrotoluene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

2,6-Dinitrotoluene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Di-n-Octyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
1,2-Diphenylhydrazine (as Azobenzene) (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Fluoranthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Fluorene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexachlorobenzene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexechlorobutadiene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexachlorocyclopentadiene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Hexachloroethane (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 3 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site												
☒ Outfall / IMP Number 021 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)														
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used				
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value									
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)								
Indeno(1,2,3-cd)Pyrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1				
Isophorone (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
Naphthalene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1				
Nitrobenzene (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1				

N-Nitroso-di-methylamine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
N-Nitroso-di-n-propylamine (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
N-Nitroso-di-n-phenylamine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Phenanthrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Pyrene (µg/L)	ND						1	1	0.056	40 CFR 761 EPA 625.1
1,2,4-Trichlorobenzene (µg/L)	ND						1	1	0.91	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 021 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Gamma BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Delta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Chlordane (µg/L)	ND						1	1	0.012	40 CFR 136A EPA 608.3
4,4'-DDT (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDE (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDD (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Dieldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha- Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta-Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endosulfan Sulfate (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3

Endrin Aldehyde (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor Epoxide (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
PCB -1242 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB -1254 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 2 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site								
☒ Outfall / IMP Number 021 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
PCB-1221 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1232 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1248 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1260 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1016 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
Toxaphene (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3

Outfall 022

ANALYSIS RESULTS TABLE POLLUTANT GROUP 1 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 022 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
BOD ₅ (mg/L)	5.4						1	1	2.0	SM 5210B
COD (mg/L)	33						1	0	10	MCAWW EPA 410.4
TOC (mg/L)	28						1	0	1.0	SM5310 C-2014
TSS (mg/L)	15						1	0	0.83	SM 2540D
Ammonia-Nitrogen (mg/L)	0.12						1	0	0.10	EPA 350.1
Temperature (Winter) (°F)		XXX		XXX		XXX		XXX	XXX	
Temperature (Summer) (°F)	20.3 HF !	XXX		XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B-2000
pH – Minimum (S.U.)	7.4 HF	XXX	XXX	XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B-2000
pH – Maximum (S.U.)		XXX	XXX	XXX		XXX		XXX	XXX	
Fecal Coliform (No./100 mL)	308	XXX		XXX		XXX	1	1	XXX	Colilert-18
Oil and Grease (mg/L)	ND						1	1	5.0	EPA 1664B
TRC (mg/L)	ND	XXX		XXX		XXX	1	1	20	DR300-DPD-528
Total Phosphorus (mg/L)	0.087 J						1	1	0.040	EPA TKN_TPhos
TKN (mg/L)	0.73						1	0	0.12	EPA TKN_TPhos
Nitrite + Nitrate-Nitrogen (mg/L)	0.47						1	0	0.065	EPA 353.2
Total Dissolved Solids (mg/L)	630						1	0	10	SM 2540C
Color (Pt-Co Units)	40	XXX		XXX		XXX	1	0	5	SM 2120B
Bromide (mg/L)	ND						1	1	0.100	EPA 300.0 R2.1

Chloride (mg/L)	316						1	0	5.0	EPA 300.0 R2.1
Sulfate (mg/L)	36.4						1	0	1.0	EPA 300.0 R2.1
Sulfide (mg/L)	ND						1	1	1.3	SM 4500 S2 F- 2011
Surfactants (mg/L)	0.65						1	0	0.050	SM 5540C - 2011
Fluoride (mg/L)	0.402						1	0	0.100	EPA 300.0 R2.1
Total Hardness (mg/L)	74 !						1	0	3.3	SM 2340B

**ANALYSIS RESULTS TABLE
POLLUTANT GROUP 1 (PAGE 2 OF 2)**

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 022 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Perfluorooctanoic acid (PFOA) (ng/L)										
Perfluorooctanesulfonic acid (PFOS) (ng/L)										
Perfluorobutanesulfonic acid (PFBS) (ng/L)										
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ng/L)										

ANALYSIS RESULTS TABLE POLLUTANT GROUP 2

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 022 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 2 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aluminum, Total (µg/L)	190						1	0	50	EPA 200.8 Rev 5
Antimony, Total (µg/L)	ND						1	1	2.0	EPA 200.8 Rev 5
Arsenic, Total (µg/L)	ND						1	1	5.0	EPA 200.8 Rev 5
Barium, Total (µg/L)	32						1	0	5.0	EPA 200.8 Rev 5
Beryllium, Total (µg/L)	ND						1	1	0.62	EPA 200.8 Rev 5
Boron, Total (µg/L)	38						1	0	20	EPA 200.8 Rev 5
Cadmium, Total (µg/L)	0.54						1	0	0.20	EPA 200.8 Rev 5
Chromium, Total (µg/L)	26						1	0	5.0	EPA 200.8 Rev 5
Chromium, Hexavalent (µg/L)	ND						1	1	1.0	SM 3500-Cr B-2011)
Cobalt, Total (µg/L)	ND						1	1	0.19	EPA 200.8 Rev 5
Copper, Total (µg/L)	3.6						1	0	2.0	EPA 200.8 Rev 5
Cyanide, Total (µg/L)										
Iron, Total (µg/L)	330						1	0	100	EPA 200.8 Rev 5
Iron, Dissolved (µg/L)										
Lead, Total (µg/L)	ND						1	0	0.45	EPA 200.8 Rev 5

Manganese, Total (µg/L)	22						1	0	5.0	EPA 200.8 Rev 5
Mercury, Total (µg/L)	ND						1	1	0.2	EPA 200.8 Rev 5
Molybdenum, Total (µg/L)	9.1						1	0	5.0	EPA 200.8 Rev 5
Nickel, Total (µg/L)	1.6 J						1	1	1.5	EPA 200.8 Rev 5
Phenols, Total (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
Selenium, Total (µg/L)	ND						1	0	5.0	EPA 200.8 Rev 5
Silver, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Thallium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Zinc, Total (µg/L)	66						1	0	15	EPA 200.8 Rev 5

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 022 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acrolein (µg/L)	ND						1	1	16	40 CFR 136A EPA 624.1
Acrylonitrile (µg/L)	ND						1	1	16	40 CFR 136A EPA 624.1
Benzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Bromoform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Carbon Tetrachloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorodibromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
2-Chloroethylvinyl Ether (µg/L)	ND						1	1	16	40 CFR 136A EPA 624.1
Chloroform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Dichlorobromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

1,2 Dichloropropane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,3-Dichloropropylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,4-Dioxane (µg/L)	ND						1	1	200	40 CFR 136A EPA 624.1
Ethylbenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Methyl Bromide (µg/L)							1	1	1.0	40CFR136A EPA 624.1
Methyl Chloride (µg/L)	ND						1	1	1.0	40CFR136A EPA 624.1
Methylene Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2,2-Tetrachloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Tetrachloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 2 OF 2)

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APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 022 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Toluene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Trans-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,1-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Trichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Vinyl Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 4

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 022 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 4 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
2-Chlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
2,4-Dichlorophenol (µg/L)	ND						1	1	0.20	40 CFR 136A EPA 624.1
2,4-Dimethylphenol (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
4,6-Dinitro-o-Cresol (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
2,4-Dinitrophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
2-Nitrophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
4-Nitrophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
P-Chloro-m-Cresol (µg/L)										
Pentachlorophenol (µg/L)	ND						1	1	4.8	40 CFR 761 EPA 625.1
Phenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1
2,4,6-Trichlorophenol (µg/L)	ND						1	1	1.0	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 1 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 022 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acenaphthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Acenaphthylene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Acrylamide (µg/L)	ND						1	1	2.8	40 CFR 761 EPA 625.1
Anthracene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzidine (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1
Benzo(a)Anthracene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzo(a)Pyrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
3,4-Benzo-fluoranthene (µg/L)	ND						1	1		40 CFR 761 EPA 625.1
Benzo(ghi)Perylene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Benzo(k)Fluoranthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Bis(2-Chloro-ethoxy)Methane (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Bis(2-Chloroethyl)Ether (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Bis(2-Chloro-isopropyl)Ether (µg/L)										
Bis(2-Ethylhexyl)Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

4-Bromophenyl Phenyl Ether (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Butyl Benzyl Phthalate (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1
2-Chloronaphthalene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1
4-Chlorophenyl Phenyl Ether (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Chrysene (µg/L)	ND						1	1	0.19	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 2 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site								
☒ Outfall / IMP Number 022 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Dibenzo(a,h)Anthracene (µg/L)										
1,2-Dichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
1,3- Dichlorobenzene (µg/L)										
1,4- Dichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
3,3'-Dichlorobenzidine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Diethyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Dimethyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Di-n-Butyl Phthalate (µg/L)	ND						1	1	5.1	40 CFR 761 EPA 625.1
2,4-Dinitrotoluene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

2,6-Dinitrotoluene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Di-n-Octyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
1,2-Diphenylhydrazine (as Azobenzene) (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Fluoranthene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Fluorene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexachlorobenzene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexechlorobutadiene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Hexachlorocyclopentadiene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Hexachloroethane (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 3 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site								
☒ Outfall / IMP Number 022 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Indeno(1,2,3-cd)Pyrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Isophorone (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Naphthalene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Nitrobenzene (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1

N-Nitroso-di-methylamine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
N-Nitroso-di-n-propylamine (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
N-Nitroso-di-n-phenylamine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Phenanthrene (µg/L)	ND						1	1	0.20	40 CFR 761 EPA 625.1
Pyrene (µg/L)	ND						1	1	0.056	40 CFR 761 EPA 625.1
1,2,4-Trichlorobenzene (µg/L)	ND						1	1	0.91	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 022 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Gamma BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Delta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Chlordane (µg/L)	ND						1	1	0.012	40 CFR 136A EPA 608.3
4,4'-DDT (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDE (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDD (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Dieldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha- Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta-Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endosulfan Sulfate (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3

Endrin Aldehyde (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor Epoxide (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
PCB -1242 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB -1254 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 2 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site								
☒ Outfall / IMP Number 022 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
PCB-1221 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1232 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1248 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1260 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1016 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
Toxaphene (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3

Outfall 101

ANALYSIS RESULTS TABLE POLLUTANT GROUP 1 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 101 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
BOD ₅ (mg/L)	3.4						1	0	2.0	SM 5210B
COD (mg/L)	59						1	0	10	MCAWW EPA 410.4
TOC (mg/L)	13						1	0	1.0	SM5310 C-2014
TSS (mg/L)	2.2						1	0	1.5	SM 2540DEPA 350.1
Ammonia-Nitrogen (mg/L)	ND						1	1	0.1	EPA 350.1
Temperature (Winter) (°F)		XXX		XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B-2000
Temperature (Summer) (°F)		XXX		XXX		XXX		XXX	XXX	
pH – Minimum (S.U.)	8.0 HF	XXX	XXX	XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B-2000
pH – Maximum (S.U.)		XXX	XXX	XXX		XXX		XXX	XXX	
Fecal Coliform (No./100 mL)	2	XXX		XXX		XXX	1	0	XXX	Colilert-18
Oil and Grease (mg/L)	ND						1	1	4.9	EPA 1664B
TRC (mg/L)	ND	XXX		XXX		XXX	1	1	0.02-2.00	DR300-DOD-528
Total Phosphorus (mg/L)	0.52						1	0	0.10	EPA TKN_TPhos
TKN (mg/L)	0.51						1	0	0.50	EPA TKN_TPhos
Nitrite + Nitrate-Nitrogen (mg/L)	6.3						1	0	0.20	EPA 353.2
Total Dissolved Solids (mg/L)	3000						1	0	40	SM 2540C
Color (Pt-Co Units)	45	XXX		XXX		XXX	1	0	5	SM 2120B
Bromide (mg/L)	ND						1	1	0.200	EPA 300.0 R2.1

Chloride (mg/L)	23.2						1	0	2.00	EPA 300.0 R2.1
Sulfate (mg/L)	2010						1	0	20.0	EPA 300.0 R2.1
Sulfide (mg/L)	1.9 J						1	0	3.0	SM 4500 S2 F- 2011
Surfactants (mg/L)	0.087						1	1	0.050	SM 5540C- 2011
Fluoride (mg/L)	0.120 J						1	0	0.100	EPA 300.0 R2.1
Total Hardness (mg/L)	78 !						1	0	3.3	SM 2340B

**ANALYSIS RESULTS TABLE
POLLUTANT GROUP 1 (PAGE 2 OF 2)**

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 101 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Perfluorooctanoic acid (PFOA) (ng/L)										
Perfluorooctanesulfonic acid (PFOS) (ng/L)										
Perfluorobutanesulfonic acid (PFBS) (ng/L)										
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ng/L)										

ANALYSIS RESULTS TABLE POLLUTANT GROUP 2

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 101 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 2 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aluminum, Total (µg/L)	80						1	0	30	EPA 200.8 Rev 5
Antimony, Total (µg/L)	ND						1	1	2.0	EPA 200.8 Rev 5
Arsenic, Total (µg/L)	0.39 J						1	0	1.0	EPA 200.8 Rev 5
Barium, Total (µg/L)	35						1	0	10	EPA 200.8 Rev 5
Beryllium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Boron, Total (µg/L)	ND						1	1	80	EPA 200.8 Rev 5
Cadmium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Chromium, Total (µg/L)	2.3						1	0	2.0	EPA 200.8 Rev 5
Chromium, Hexavalent (µg/L)										
Cobalt, Total (µg/L)	0.27 J						1	0	0.5	EPA 200.8 Rev 5
Copper, Total (µg/L)	1.8 J						1	0	2.0	EPA 200.8 Rev 5
Cyanide, Total (µg/L)										
Iron, Total (µg/L)	110						1	0	50	EPA 200.8 Rev 5
Iron, Dissolved (µg/L)										
Lead, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Manganese, Total (µg/L)	180						1	0	5.0	EPA 200.8 Rev 5

Mercury, Total (µg/L)	0.23						1	0	0.13	EPA 200.8 Rev 5
Molybdenum, Total (µg/L)	4.0						1	0	5.0	EPA 200.8 Rev 5
Nickel, Total (µg/L)	6.8						1	0	1.0	EPA 200.8 Rev 5
Phenols, Total (µg/L)	ND						1	1	9.6	40 CFR 761 EPA 625.1
Selenium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Silver, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Thallium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Zinc, Total (µg/L)	420						1	0	15	EPA 200.8 Rev 5

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 101 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acrolein (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Acrylonitrile (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Benzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Bromoform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Carbon Tetrachloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorodibromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
2-Chloroethylvinyl Ether (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Chloroform (µg/L)	2.2						1	0	1.0	40CFR136A EPA 624.1
Dichlorobromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

1,2 Dichloropropane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,3-Dichloropropylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,4-Dioxane (µg/L)	ND						1	1	200	40 CFR 136A EPA 624.1
Ethylbenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Methyl Bromide (µg/L)										
Methyl Chloride (µg/L)										
Methylene Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2,2-Tetrachloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Tetrachloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 2 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 101 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Toluene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Trans-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,1-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Trichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Vinyl Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 4

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 101 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 4 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
2-Chlorophenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
2,4-Dichlorophenol (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
2,4-Dimethylphenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
4,6-Dinitro-o-Cresol (µg/L)	ND						1	1	4.8	40 CFR 761 EPA 625.1
2,4-Dinitrophenol (µg/L)	ND						1	1	9.6	40 CFR 761 EPA 625.1
2-Nitrophenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
4-Nitrophenol (µg/L)	ND						1	1	4.8	40 CFR 761 EPA 625.1
P-Chloro-m-Cresol (µg/L)										
Pentachlorophenol (µg/L)	ND						1	1	4.8	40 CFR 761 EPA 625.1
Phenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
2,4,6-Trichlorophenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 1 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number <u>101</u> (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acenaphthene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Acenaphthylene (µg/L)	0.080 J						1	0	0.18	40 CFR 761 EPA 625.1
Acrylamide (µg/L)	ND						1	1	4.8	40 CFR 761 EPA 625.1
Anthracene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Benzidine (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Benzo(a)Anthracene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Benzo(a)Pyrene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
3,4-Benzo-fluoranthene (µg/L)										
Benzo(ghi)Perylene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Benzo(k)Fluoranthene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Bis(2-Chloro-ethoxy)Methane (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Bis(2-Chloroethyl)Ether (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Bis(2-Chloro-isopropyl)Ether (µg/L)										
Bis(2-Ethylhexyl)Phthalate (µg/L)	ND						1	1	9.6	40 CFR 761 EPA 625.1
4-Bromophenyl Phenyl Ether (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

Butyl Benzyl Phthalate (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1
2-Chloronaphthalene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
4-Chlorophenyl Phenyl Ether (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Chrysene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 2 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site													
☒ Outfall / IMP Number <u>101</u> (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)														
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used				
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value									
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)								
Dibenzo(a,h)Anthracene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1				
1,2-Dichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
1,3- Dichlorobenzene (µg/L)														
1,4- Dichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
3,3'-Dichlorobenzidine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
Diethyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
Dimethyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
Di-n-Butyl Phthalate (µg/L)	ND						1	1	9.6	40 CFR 761 EPA 625.1				
2,4-Dinitrotoluene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
2,6-Dinitrotoluene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				

Di-n-Octyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
1,2-Diphenylhydrazine (as <i>Azobenzene</i>) (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Fluoranthene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Fluorene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Hexachlorobenzene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Hexechlorobutadiene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Hexachlorocyclopentadiene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Hexachloroethane (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 3 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number <u>101</u> (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Indeno(1,2,3-cd)Pyrene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Isophorone (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Naphthalene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Nitrobenzene (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1
N-Nitroso-di-methylamine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
N-Nitroso-di-n-propylamine (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1

N-Nitroso-di-n-phenylamine (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Phenanthrene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Pyrene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
1,2,4-Trichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 101 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Gamma BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Delta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Chlordane (µg/L)	ND						1	1	0.012	40 CFR 136A EPA 608.3
4,4'-DDT (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDE (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDD (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Dieldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha- Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta-Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endosulfan Sulfate (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3

Endrin Aldehyde (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor Epoxide (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
PCB -1242 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB -1254 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 2 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 101 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
PCB-1221 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1232 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1248 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1260 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1016 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
Toxaphene (µg/L)	ND						1	1	0.095	40 CFR 136A EPA 608.3

Outfall 201

ANALYSIS RESULTS TABLE POLLUTANT GROUP 1 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 201 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
BOD ₅ (mg/L)	3.9						1	0	2.0	SM 5210B
COD (mg/L)	76						1	0	10	MCAWW EPA 410.4
TOC (mg/L)	28 FL						1	0	1.0	SM5310 C-2014
TSS (mg/L)	20						1	0	1.5	SM 2540D
Ammonia-Nitrogen (mg/L)	ND						1	1	0.10	EPA 350.1
Temperature (Winter) (°F)		XXX		XXX		XXX		XXX	XXX	
Temperature (Summer) (°F)	22.8 HF!	XXX		XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B-2000
pH – Minimum (S.U.)	7.3 HF	XXX	XXX	XXX		XXX	1	XXX	XXX	SM-Online 4500 H+ B-2000
pH – Maximum (S.U.)		XXX	XXX	XXX		XXX		XXX	XXX	
Fecal Coliform (No./100 mL)	<1	XXX		XXX		XXX	1	0	XXX	Colilert-18
Oil and Grease (mg/L)	ND						1	1	4.9	EPA 1664B
TRC (mg/L)	ND	XXX		XXX		XXX	1	1	0.20-2.00	DR300-DOD-528
Total Phosphorus (mg/L)	3.7						1	0	0.10	EPA TKN_TPhos
TKN (mg/L)	3.0						1	0	0.12	EPA TKN_TPhose
Nitrite + Nitrate-Nitrogen (mg/L)	6.9						1	0	0.20	EPA 353.2
Total Dissolved Solids (mg/L)	1700						1	0	10	SM 2540C
Color (Pt-Co Units)	30	XXX		XXX		XXX	1	0	5	SM 2120B
Bromide (mg/L)	ND						1	1	0.100	EPA 300.0 R2.1

Chloride (mg/L)	314						1	0	10.0	EPA 300.0 R2.1
Sulfate (mg/L)	792						1	0	10.0	EPA 300.0 R2.1
Sulfide (mg/L)	1.6 J						1	0	3.0	SM 4500 S2 F- 2011
Surfactants (mg/L)	0.12						1	0		SM 5540C- 2011
Fluoride (mg/L)	792						1	0	0.100	EPA 300.0 R2.1
Total Hardness (mg/L)	790 !						1	0	3.3	SM 2340B

**ANALYSIS RESULTS TABLE
POLLUTANT GROUP 1 (PAGE 2 OF 2)**

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 201 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Perfluorooctanoic acid (PFOA) (ng/L)										
Perfluorooctanesulfonic acid (PFOS) (ng/L)										
Perfluorobutanesulfonic acid (PFBS) (ng/L)										
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ng/L)										

ANALYSIS RESULTS TABLE POLLUTANT GROUP 2

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 201 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 2 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aluminum, Total (µg/L)	4100						1	0	30	EPA 200.8 Rev 5
Antimony, Total (µg/L)	1.9 J						1	0	2.0	EPA 200.8 Rev 5
Arsenic, Total (µg/L)	2.9						1	0	1.0	EPA 200.8 Rev 5
Barium, Total (µg/L)	0.41						1	0	10	EPA 200.8 Rev 5
Beryllium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Boron, Total (µg/L)	220						1	0	80	EPA 200.8 Rev 5
Cadmium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Chromium, Total (µg/L)	4.7						1	0	2.0	EPA 200.8 Rev 5
Chromium, Hexavalent (µg/L)										
Cobalt, Total (µg/L)	2.6						1	0	0.5	EPA 200.8 Rev 5
Copper, Total (µg/L)	42						1	0	2.0	EPA 200.8 Rev 5
Cyanide, Total (µg/L)										
Iron, Total (µg/L)	4200						1	0	50	EPA 200.8 Rev 5
Iron, Dissolved (µg/L)										
Lead, Total (µg/L)	3.9						1	1	1.0	EPA 200.8 Rev 5
Manganese, Total (µg/L)	420						1	0	5.0	EPA 200.8 Rev 5

Mercury, Total (µg/L)	0.23						1	0	0.13	EPA 200.8 Rev 5
Molybdenum, Total (µg/L)	7.8						1	0	5.0	EPA 200.8 Rev 5
Nickel, Total (µg/L)	292						1	0	1.0	EPA 200.8 Rev 5
Phenols, Total (µg/L)	2.9						1	0	9.6	40 CFR 761 EPA 625.1
Selenium, Total (µg/L)	0.29 J						1	0	1.0	EPA 200.8 Rev 5
Silver, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Thallium, Total (µg/L)	ND						1	1	1.0	EPA 200.8 Rev 5
Zinc, Total (µg/L)	160						1	0	15	EPA 200.8 Rev 5

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 201 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acrolein (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Acrylonitrile (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Benzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Bromoform (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Carbon Tetrachloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorobenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chlorodibromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Chloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
2-Chloroethylvinyl Ether (µg/L)	ND						1	1	20	40 CFR 136A EPA 624.1
Chloroform (µg/L)	11						1	0	1.0	40 CFR 136A EPA 624.1
Dichlorobromomethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Dichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

1,2 Dichloropropane (µg/L)	ND									40 CFR 136A EPA 624.1
1,3-Dichloropropylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,4-Dioxane (µg/L)	ND						1	1	200	40 CFR 136A EPA 624.1
Ethylbenzene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Methyl Bromide (µg/L)										
Methyl Chloride (µg/L)										
Methylene Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2,2-Tetrachloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Tetrachloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 3 (PAGE 2 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 201 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Toluene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,2-Trans-Dichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,1-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
1,1,2-Trichloroethane (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Trichloroethylene (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1
Vinyl Chloride (µg/L)	ND						1	1	1.0	40 CFR 136A EPA 624.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 4

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 201 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 4 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
2-Chlorophenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
2,4-Dichlorophenol (µg/L)	ND						1	1	0.18	40 CFR 136A EPA 624.1
2,4-Dimethylphenol (µg/L)	ND						1	1	0.96	40 CFR 136A EPA 624.1
4,6-Dinitro-o-Cresol (µg/L)	ND						1	1	4.8	40 CFR 136A EPA 624.1
2,4-Dinitrophenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
2-Nitrophenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
4-Nitrophenol (µg/L)	ND						1	1	4.8	40 CFR 761 EPA 625.1
P-Chloro-m-Cresol (µg/L)										
Pentachlorophenol (µg/L)	ND						1	1	4.8	40 CFR 761 EPA 625.1
Phenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
2,4,6-Trichlorophenol (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 1 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 201 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acenaphthene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Acenaphthylene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Acrylamide (µg/L)	ND						1	1	2.8	40 CFR 761 EPA 625.1
Anthracene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Benzidine (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1
Benzo(a)Anthracene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Benzo(a)Pyrene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
3,4-Benzo-fluoranthene (µg/L)										
Benzo(ghi)Perylene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Benzo(k)Fluoranthene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Bis(2-Chloro-ethoxy)Methane (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Bis(2-Chloroethyl)Ether (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Bis(2-Chloro-isopropyl)Ether (µg/L)										
Bis(2-Ethylhexyl)Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
4-Bromophenyl Phenyl Ether (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

Butyl Benzyl Phthalate (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1
2-Chloronaphthalene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
4-Chlorophenyl Phenyl Ether (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Chrysene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 2 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site													
☒ Outfall / IMP Number <u>201</u> (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)														
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used				
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value									
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)								
Dibenzo(a,h)Anthracene (µg/L)														
1,2-Dichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
1,3- Dichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
1,4- Dichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
3,3'-Dichlorobenzidine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
Diethyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
Dimethyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
Di-n-Butyl Phthalate (µg/L)	ND						1	1	9.6	40 CFR 761 EPA 625.1				
2,4-Dinitrotoluene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
2,6-Dinitrotoluene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				

Di-n-Octyl Phthalate (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
1,2-Diphenylhydrazine (as <i>Azobenzene</i>) (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Fluoranthene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Fluorene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Hexachlorobenzene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Hexechlorobutadiene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Hexachlorocyclopentadiene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Hexachloroethane (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 5 (PAGE 3 OF 3)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site													
☒ Outfall / IMP Number 201 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)														
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used				
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value									
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)								
Indeno(1,2,3-cd)Pyrene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1				
Isophorone (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
Naphthalene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1				
Nitrobenzene (µg/L)	ND						1	1	1.9	40 CFR 761 EPA 625.1				
N-Nitroso-di-methylamine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1				
N-Nitroso-di-n-propylamine (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1				

N-Nitroso-di-n-phenylamine (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1
Phenanthrene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
Pyrene (µg/L)	ND						1	1	0.18	40 CFR 761 EPA 625.1
1,2,4-Trichlorobenzene (µg/L)	ND						1	1	0.96	40 CFR 761 EPA 625.1

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME	Shell Polymers Monaca Site									
☒ Outfall / IMP Number 201 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non- Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Gamma BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Delta BHC (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Chlordane (µg/L)	ND						1	1	0.012	40 CFR 136A EPA 608.3
4,4'-DDT (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDE (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
4,4'-DDD (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Dieldrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Alpha- Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Beta-Endosulfan (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endosulfan Sulfate (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Endrin (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3

Endrin Aldehyde (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
Heptachlor Epoxide (µg/L)	ND						1	1	0.0012	40 CFR 136A EPA 608.3
PCB -1242 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB -1254 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3

ANALYSIS RESULTS TABLE POLLUTANT GROUP 6 (PAGE 2 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME		Shell Polymers Monaca Site								
☒ Outfall / IMP Number 201 (Show location of sampling point on Line Drawing) ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing) ☐ Intake Sampling Results (Specify Source: _____) ☐ Background (Upstream) Sampling Results (Specify Location: _____) ☐ New Discharge (Basis for Information: _____)										
POLLUTANT GROUP 6 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
PCB-1221 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1232 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1248 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1260 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
PCB-1016 (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3
Toxaphene (µg/L)	ND						1	1	0.0095	40 CFR 136A EPA 608.3

Attachment B

Laboratory Analytical Reports



ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Angela Bown
GHD Services Inc.
2055 Niagara Falls Boulevard
Niagara Falls, New York 14304

Generated 5/1/2024 4:32:05 PM

JOB DESCRIPTION

GHD Shell Monaca

JOB NUMBER

180-172533-1

Eurofins Pittsburgh

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.

PA Lab ID: 02-00416

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 Pittsburgh Project Manager.

Authorization



Authorized for release by
Jill Colussy, Project Manager I
Jill.Colussy@et.eurofinsus.com
(412)963-2444

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Case Narrative

Client: GHD Services Inc.
Project: GHD Shell Monaca

Job ID: 180-172533-1

Job ID: 180-172533-1

Eurofins Pittsburgh

Job Narrative 180-172533-1

Receipt

The samples were received on 4/17/2024 1:50 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.8° C, 2.2° C, 2.3° C and 2.4° C.

A TRIP BLANK was submitted for analysis with these samples; however, it was not listed on the Chain of Custody (COC). This sample was logged in for Volatiles analysis.

GC/MS VOA

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

GC/MS Semi VOA

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

IC

Due to the concentration of target compounds detected and/or matrix, the samples were analyzed at a dilution. Elevated reporting limits (RLs) are provided.

Pesticides

Sample 201 (180-172533-1), 001 (180-172533-3) and the method blank for batch 180-465699 had surrogate Decachlorobiphenyl recover below the control limits on one column. The recovery was within acceptance limits on the other column, indicating that the extraction process was in control.

The continuing calibration verification (CCV) associated with 180-466544 recovered high and outside the control limits for several analytes on one column. Results are confirmed on both columns and hits are reported from the passing column. The associated sample is: (CCVIS 180-466544/6).

PCBs

Sample 201 (180-172533-1) had surrogate Decachlorobiphenyl recover above the control limits on one column. Evidence of matrix interference was present; therefore, all data was reported.

Metals

The continuing calibration verification (CCV) associated with batch 180-466272 recovered above the upper control limit for Selenium. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

General Chemistry

Sample 201 (180-172533-1) did not reach a stable weight following 3 cycles of heating, cooling, and desiccation for TDS. The cycle 3 weight was used to calculate the Total Dissolved Solids (TDS) for the sample result.

The samples were analyzed at a dilution for Nitrate Nitrite. Elevated reporting limits (RLs) are provided.

Eurofins Pittsburgh

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
!	Laboratory is not accredited for this parameter.
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
!	Laboratory is not accredited for this parameter.
FL	MS and/or MSD recovery below control limits.
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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)

Eurofins Pittsburgh

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Laboratory: Eurofins Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	02-00416	04-30-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
4500 H+ B-2000		Water	Temperature
SM 2120B		Water	pH at time of analysis
SM 2340B		Water	Hardness as calcium carbonate

Sample Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-172533-1	201	Water	04/17/24 09:41	04/17/24 13:50
180-172533-2	101	Water	04/17/24 09:54	04/17/24 13:50
180-172533-3	001	Water	04/17/24 10:16	04/17/24 13:50
180-172533-4	TRIP BLANK	Water	04/17/24 00:00	04/17/24 13:50

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

Method Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Method	Method Description	Protocol	Laboratory
EPA 624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	EET PIT
EPA 625.1	Semivolatile Organic Compounds (GC/MS)	40 CFR 761	EET PIT
EPA 608.3	Organochlorine Pesticides in Water	40CFR136A	EET PIT
EPA 608.3	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	EET PIT
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	EET PIT
EPA 200.8 Rev 5	Metals (ICP/MS)	EPA	EET PIT
EPA 245.1 Rev.	Mercury (CVAA)	EPA	EET PIT
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET PIT
3500-Cr B-2011	Chromium, Hexavalent	SM	EET PIT
4500 H+ B-2000	pH - SM Online, 2011	SM-Online	EET PIT
4500 S2 F-2011	Sulfide, Total	SM	EET PIT
5310 C-2014	Total Organic Carbon/Persulfate - Ultrav	SM	EET PIT
5540C - 2011	Methylene Blue Active Substant (MBAS)	SM	EET PIT
EPA 1664B	HEM and SGT-HEM	EPA	EET PIT
EPA 350.1	Nitrogen, Ammonia	EPA	EET PIT
EPA 353.2	Nitrogen, Nitrate-Nitrite	EPA	EET PIT
EPA 410.4	COD	MCAWW	EET PIT
SM 2120B	Color, Colorimetric	SM	EET PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET PIT
SM 2540D	Solids, Total Suspended (TSS)	SM	EET PIT
SM 5210B	5 Day BOD test	SM	EET PIT
TKN_TPhos	EPA 351.2 1993 R2/365.4 1974	EPA	EET PIT
Subcontract	Fecal Coliform	None	Warrendale
1664B	HEM and SGT-HEM (SPE)	1664B	EET PIT
200.8	Preparation, Total Recoverable Metals	EPA	EET PIT
245.1	Preparation, Mercury	EPA	EET PIT
410.4	COD	EPA	EET PIT
608	Liquid-Liquid Extraction (Separatory Funnel)	EPA	EET PIT
625	Liquid-Liquid Extraction	EPA	EET PIT
TKN/TPhos Prep	Preparation, 351.2 1993 R2/365.4 1974	EPA	EET PIT

Protocol References:

1664B = EPA-821-98-002

40 CFR 761 = Toxic Substances Control Act (TSCA)

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

EPA = US Environmental Protection Agency

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

None = None

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

SM-Online = Standard Methods Online

Laboratory References:

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Warrendale = Microbac - Warrendale, PA, 100 Marshall Drive, Warrendale, PA 15086, TEL (724)772-0610

Eurofins Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: 201

Lab Sample ID: 180-172533-1

Date Collected: 04/17/24 09:41

Matrix: Water

Date Received: 04/17/24 13:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 624.1		1	5 mL	5 mL	465701	04/18/24 16:07	J1T	EET PIT
		Instrument ID: CHHP5								
Total/NA	Prep	625			260 mL	250 uL	466199	04/23/24 13:08	BJT	EET PIT
Total/NA	Analysis	EPA 625.1		1	1 mL	1 mL	466887	04/30/24 12:30	VVP	EET PIT
		Instrument ID: CH71								
Total/NA	Prep	608			1050 mL	1.0 mL	465699	04/18/24 06:48	PJB	EET PIT
Total/NA	Analysis	EPA 608.3		1			466544	04/26/24 14:05	SMW	EET PIT
		Instrument ID: CHGC17								
Total/NA	Prep	608			1050 mL	1.0 mL	465699	04/18/24 06:48	PJB	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 mL	1 mL	465834	04/19/24 06:54	JMO	EET PIT
		Instrument ID: CHGC20								
Total/NA	Analysis	EPA 300.0 R2.1		1			465742	04/19/24 00:50	M1D	EET PIT
		Instrument ID: INTEGRION								
Total/NA	Analysis	EPA 300.0 R2.1		10			465742	04/19/24 01:08	M1D	EET PIT
		Instrument ID: INTEGRION								
Total Recoverable	Prep	200.8			25 mL	25 mL	465879	04/20/24 07:25	SJM	EET PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5		1			466272	04/23/24 16:38	S1Z	EET PIT
		Instrument ID: DORY								
Total/NA	Prep	245.1			25 mL	25 mL	466442	04/25/24 08:53	RJR	EET PIT
Total/NA	Analysis	EPA 245.1 Rev.		1			466639	04/26/24 10:03	RJR	EET PIT
		Instrument ID: HGY								
Total Recoverable	Analysis	SM 2340B		1			467030	05/01/24 07:40	RJR	EET PIT
		Instrument ID: NOEQUIP								
Dissolved	Analysis	3500-Cr B-2011		1	4 mL	4 mL	465782	04/17/24 15:50	EJH	EET PIT
		Instrument ID: RAPID-T								
Total/NA	Analysis	4500 H+ B-2000		1			466240	04/23/24 17:34	EJH	EET PIT
		Instrument ID: OZ								
Total/NA	Analysis	4500 S2 F-2011		1	50 mL	50 mL	466374	04/24/24 17:01	BAB	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	5310 C-2014		1	40 mL	40 mL	466193	04/22/24 17:09	LWM	EET PIT
		Instrument ID: SAM								
Total/NA	Analysis	5540C - 2011		1	100 mL	100 mL	466241	04/18/24 16:57	EJH	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Prep	1664B			1030 mL	1000 mL	465712	04/18/24 07:33	A1K	EET PIT
Total/NA	Analysis	EPA 1664B		1			465721	04/18/24 08:14	A1K	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	EPA 350.1		1			465776	04/18/24 12:38	SNR	EET PIT
		Instrument ID: BLUE-ASTORIA								
Total/NA	Analysis	EPA 353.2		2			465847	04/19/24 07:25	RSK	EET PIT
		Instrument ID: ASTORIA2								
Total/NA	Prep	410.4			1 mL	1 mL	465764	04/18/24 12:10	ELS	EET PIT
Total/NA	Analysis	EPA 410.4		1	1 mL	1 mL	465904	04/18/24 15:13	ELS	EET PIT
		Instrument ID: GENESYS10S								

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Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: 201

Lab Sample ID: 180-172533-1

Date Collected: 04/17/24 09:41

Matrix: Water

Date Received: 04/17/24 13:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2120B		1	50 mL	50 mL	465681	04/17/24 19:34	EJH	EET PIT
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	465805	04/18/24 15:15	LWM	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2540D		1	340 mL	1000 mL	465735	04/18/24 08:47	CMC	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 5210B		1	300 mL	300 mL	466098	04/18/24 14:50	ELS	EET PIT
		Instrument ID: BOD2								
Total/NA	Prep	TKN/TPhos Prep			25 mL	25 mL	465696	04/18/24 06:38	RSK	EET PIT
Total/NA	Analysis	TKN_TPhos		1			465876	04/19/24 07:57	RSK	EET PIT
		Instrument ID: ASTORIA1								

Client Sample ID: 101

Lab Sample ID: 180-172533-2

Date Collected: 04/17/24 09:54

Matrix: Water

Date Received: 04/17/24 13:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 624.1		1	5 mL	5 mL	465701	04/18/24 16:30	J1T	EET PIT
		Instrument ID: CHHP5								
Total/NA	Prep	625			260 mL	250 uL	466199	04/23/24 13:08	BJT	EET PIT
Total/NA	Analysis	EPA 625.1		1	1 mL	1 mL	466887	04/30/24 12:51	VVP	EET PIT
		Instrument ID: CH71								
Total/NA	Prep	608			1050 mL	1.0 mL	465699	04/18/24 06:48	PJB	EET PIT
Total/NA	Analysis	EPA 608.3		1			466544	04/26/24 14:22	SMW	EET PIT
		Instrument ID: CHGC17								
Total/NA	Prep	608			1050 mL	1.0 mL	465699	04/18/24 06:48	PJB	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 mL	1 mL	465834	04/19/24 07:13	JMO	EET PIT
		Instrument ID: CHGC20								
Total/NA	Analysis	EPA 300.0 R2.1		2			465742	04/19/24 01:27	M1D	EET PIT
		Instrument ID: INTEGRION								
Total/NA	Analysis	EPA 300.0 R2.1		20			465742	04/19/24 01:45	M1D	EET PIT
		Instrument ID: INTEGRION								
Total Recoverable	Prep	200.8			25 mL	25 mL	465879	04/20/24 07:25	SJM	EET PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5		1			466272	04/23/24 16:41	S1Z	EET PIT
		Instrument ID: DORY								
Total/NA	Prep	245.1			25 mL	25 mL	466442	04/25/24 08:53	RJR	EET PIT
Total/NA	Analysis	EPA 245.1 Rev.		1			466639	04/26/24 10:04	RJR	EET PIT
		Instrument ID: HGY								
Total Recoverable	Analysis	SM 2340B		1			467030	05/01/24 07:40	RJR	EET PIT
		Instrument ID: NOEQUIP								
Dissolved	Analysis	3500-Cr B-2011		1	4 mL	4 mL	465782	04/17/24 15:47	EJH	EET PIT
		Instrument ID: RAPID-T								
Total/NA	Analysis	4500 H+ B-2000		1			466240	04/23/24 17:58	EJH	EET PIT
		Instrument ID: OZ								
Total/NA	Analysis	4500 S2 F-2011		1	50 mL	50 mL	466374	04/24/24 17:08	BAB	EET PIT
		Instrument ID: NOEQUIP								

Eurofins Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: 101

Date Collected: 04/17/24 09:54

Date Received: 04/17/24 13:50

Lab Sample ID: 180-172533-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5310 C-2014		1	40 mL	40 mL	466193	04/22/24 17:56	LWM	EET PIT
Total/NA	Analysis	5540C - 2011		1	100 mL	100 mL	466241	04/18/24 17:00	EJH	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Prep	1664B			1020 mL	1000 mL	465712	04/18/24 07:33	A1K	EET PIT
Total/NA	Analysis	EPA 1664B		1			465721	04/18/24 08:14	A1K	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	EPA 350.1		1			465776	04/18/24 12:28	SNR	EET PIT
		Instrument ID: BLUE-ASTORIA								
Total/NA	Analysis	EPA 353.2		2			465847	04/19/24 07:27	RSK	EET PIT
		Instrument ID: ASTORIA2								
Total/NA	Prep	410.4			1 mL	1 mL	465764	04/18/24 12:10	ELS	EET PIT
Total/NA	Analysis	EPA 410.4		1	1 mL	1 mL	465904	04/18/24 15:15	ELS	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Analysis	SM 2120B		1	50 mL	50 mL	465681	04/17/24 19:36	EJH	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	465921	04/19/24 14:29	LWM	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	465735	04/18/24 08:47	CMC	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 5210B		1	300 mL	300 mL	466098	04/18/24 14:50	ELS	EET PIT
		Instrument ID: BOD2								
Total/NA	Prep	TKN/TPhos Prep			25 mL	25 mL	465696	04/18/24 06:38	RSK	EET PIT
Total/NA	Analysis	TKN_TPhos		1			465876	04/19/24 07:59	RSK	EET PIT
		Instrument ID: ASTORIA1								

Client Sample ID: 001

Date Collected: 04/17/24 10:16

Date Received: 04/17/24 13:50

Lab Sample ID: 180-172533-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 624.1		1	5 mL	5 mL	465701	04/18/24 16:54	J1T	EET PIT
		Instrument ID: CHHP5								
Total/NA	Prep	625			260 mL	250 uL	466199	04/23/24 13:08	BJT	EET PIT
Total/NA	Analysis	EPA 625.1		1	1 mL	1 mL	466887	04/30/24 13:13	VVP	EET PIT
		Instrument ID: CH71								
Total/NA	Prep	608			1050 mL	1.0 mL	465699	04/18/24 06:48	PJB	EET PIT
Total/NA	Analysis	EPA 608.3		1			466544	04/26/24 14:39	SMW	EET PIT
		Instrument ID: CHGC17								
Total/NA	Prep	608			1050 mL	1.0 mL	465699	04/18/24 06:48	PJB	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 mL	1 mL	465834	04/19/24 07:30	JMO	EET PIT
		Instrument ID: CHGC20								
Total/NA	Analysis	EPA 300.0 R2.1		2			465742	04/19/24 04:32	M1D	EET PIT
		Instrument ID: INTEGRION								
Total/NA	Analysis	EPA 300.0 R2.1		20			465742	04/19/24 04:50	M1D	EET PIT
		Instrument ID: INTEGRION								

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Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: 001

Lab Sample ID: 180-172533-3

Date Collected: 04/17/24 10:16

Matrix: Water

Date Received: 04/17/24 13:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			25 mL	25 mL	465879	04/20/24 07:25	SJM	EET PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5		1			466272	04/23/24 16:55	S1Z	EET PIT
		Instrument ID: DORY								
Total/NA	Prep	245.1			25 mL	25 mL	466442	04/25/24 08:53	RJR	EET PIT
Total/NA	Analysis	EPA 245.1 Rev.		1			466639	04/26/24 10:08	RJR	EET PIT
		Instrument ID: HGY								
Total Recoverable	Analysis	SM 2340B		1			467030	05/01/24 07:40	RJR	EET PIT
		Instrument ID: NOEQUIP								
Dissolved	Analysis	3500-Cr B-2011		1	4 mL	4 mL	465782	04/17/24 15:52	EJH	EET PIT
		Instrument ID: RAPID-T								
Total/NA	Analysis	4500 H+ B-2000		1			466240	04/23/24 18:35	EJH	EET PIT
		Instrument ID: OZ								
Total/NA	Analysis	4500 S2 F-2011		1	50 mL	50 mL	466374	04/24/24 17:10	BAB	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	5310 C-2014		1	40 mL	40 mL	466193	04/22/24 21:09	LWM	EET PIT
		Instrument ID: SAM								
Total/NA	Analysis	5540C - 2011		1	100 mL	100 mL	466241	04/18/24 17:01	EJH	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Prep	1664B			1020 mL	1000 mL	465712	04/18/24 07:33	A1K	EET PIT
Total/NA	Analysis	EPA 1664B		1			465721	04/18/24 08:14	A1K	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	EPA 350.1		1			465776	04/18/24 12:30	SNR	EET PIT
		Instrument ID: BLUE-ASTORIA								
Total/NA	Analysis	EPA 353.2		2			465847	04/19/24 07:28	RSK	EET PIT
		Instrument ID: ASTORIA2								
Total/NA	Prep	410.4			1 mL	1 mL	465764	04/18/24 12:10	ELS	EET PIT
Total/NA	Analysis	EPA 410.4		1	1 mL	1 mL	465904	04/18/24 15:16	ELS	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Analysis	SM 2120B		1	50 mL	50 mL	465681	04/17/24 19:37	EJH	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	465921	04/19/24 14:29	LWM	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	465735	04/18/24 08:47	CMC	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 5210B		1	300 mL	300 mL	466098	04/18/24 14:50	ELS	EET PIT
		Instrument ID: BOD2								
Total/NA	Prep	TKN/TPhos Prep			25 mL	25 mL	465696	04/18/24 06:38	RSK	EET PIT
Total/NA	Analysis	TKN_TPhos		1			465876	04/19/24 08:00	RSK	EET PIT
		Instrument ID: ASTORIA1								

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Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 180-172533-4

Date Collected: 04/17/24 00:00

Matrix: Water

Date Received: 04/17/24 13:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 624.1		1	5 mL	5 mL	465701	04/18/24 11:47	J1T	EET PIT
Instrument ID: CHHP5										

Laboratory References:

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Warrendale = Microbac - Warrendale, PA, 100 Marshall Drive, Warrendale, PA 15086, TEL (724)772-0610

Analyst References:

Lab: EET PIT

Batch Type: Prep

A1K = Agnes Komlos
BJT = Bill Trout
ELS = Edwin Shireman
PJB = Peter Bellocchio
RJR = Ron Rosenbaum
RSK = Robert Kurtz
SJM = Shannon Mueller

Batch Type: Analysis

A1K = Agnes Komlos
BAB = Brooke Batyi
CMC = Candace California
EJH = Everett Hinchberger
ELS = Edwin Shireman
J1T = Jianwu Tang
JMO = John Oravec
LWM = Leslie McIntire
M1D = Maureen Donlin
RJR = Ron Rosenbaum
RSK = Robert Kurtz
S1Z = Sage Ziviello
SMW = Shelby Walters
SNR = Sabra Richart
VVP = Vincent Piccolino

Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: 201

Lab Sample ID: 180-172533-1

Date Collected: 04/17/24 09:41

Matrix: Water

Date Received: 04/17/24 13:50

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			04/18/24 16:07	1
Acrylonitrile	ND		0.020	0.0078	mg/L			04/18/24 16:07	1
Benzene	ND		0.0010	0.00060	mg/L			04/18/24 16:07	1
Bromoform	ND		0.0010	0.00098	mg/L			04/18/24 16:07	1
Bromomethane	ND		0.0010	0.00089	mg/L			04/18/24 16:07	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			04/18/24 16:07	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			04/18/24 16:07	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			04/18/24 16:07	1
Chloroethane	ND		0.0010	0.00090	mg/L			04/18/24 16:07	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			04/18/24 16:07	1
Chloroform	0.011		0.0010	0.00060	mg/L			04/18/24 16:07	1
Chloromethane	ND		0.0010	0.00090	mg/L			04/18/24 16:07	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			04/18/24 16:07	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			04/18/24 16:07	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			04/18/24 16:07	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			04/18/24 16:07	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			04/18/24 16:07	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			04/18/24 16:07	1
1,4-Dioxane	ND		0.20	0.043	mg/L			04/18/24 16:07	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			04/18/24 16:07	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			04/18/24 16:07	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			04/18/24 16:07	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			04/18/24 16:07	1
Toluene	ND		0.0010	0.00046	mg/L			04/18/24 16:07	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			04/18/24 16:07	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			04/18/24 16:07	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			04/18/24 16:07	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			04/18/24 16:07	1
Trichloroethene	ND		0.0010	0.00069	mg/L			04/18/24 16:07	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			04/18/24 16:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		47 - 122		04/18/24 16:07	1
Dibromofluoromethane (Surr)	111		52 - 138		04/18/24 16:07	1
1,2-Dichloroethane-d4 (Surr)	107		24 - 145		04/18/24 16:07	1
Toluene-d8 (Surr)	94		65 - 143		04/18/24 16:07	1

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.00096	0.00023	mg/L		04/23/24 13:08	04/30/24 12:30	1
1,2-Dichlorobenzene	ND		0.00096	0.00020	mg/L		04/23/24 13:08	04/30/24 12:30	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.00096	0.00019	mg/L		04/23/24 13:08	04/30/24 12:30	1
1,3-Dinitrobenzene	ND		0.00096	0.00044	mg/L		04/23/24 13:08	04/30/24 12:30	1
1,4-Dichlorobenzene	ND		0.00096	0.00023	mg/L		04/23/24 13:08	04/30/24 12:30	1
2,2'-oxybis[1-chloropropane]	ND		0.00018	0.000056	mg/L		04/23/24 13:08	04/30/24 12:30	1
2,4,6-Trichlorophenol	ND		0.00096	0.00022	mg/L		04/23/24 13:08	04/30/24 12:30	1
2,4-Dichlorophenol	ND		0.00018	0.000049	mg/L		04/23/24 13:08	04/30/24 12:30	1
2,4-Dimethylphenol	ND		0.00096	0.00056	mg/L		04/23/24 13:08	04/30/24 12:30	1
2,4-Dinitrophenol	ND		0.0096	0.0031	mg/L		04/23/24 13:08	04/30/24 12:30	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: 201

Lab Sample ID: 180-172533-1

Date Collected: 04/17/24 09:41

Matrix: Water

Date Received: 04/17/24 13:50

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		0.00096	0.00034	mg/L		04/23/24 13:08	04/30/24 12:30	1
2,6-Dinitrotoluene	ND		0.00096	0.00017	mg/L		04/23/24 13:08	04/30/24 12:30	1
2-Chloronaphthalene	ND		0.00018	0.000057	mg/L		04/23/24 13:08	04/30/24 12:30	1
2-Chlorophenol	ND		0.00096	0.00022	mg/L		04/23/24 13:08	04/30/24 12:30	1
2-Nitrophenol	ND		0.00096	0.00019	mg/L		04/23/24 13:08	04/30/24 12:30	1
3,3'-Dichlorobenzidine	ND		0.00096	0.00056	mg/L		04/23/24 13:08	04/30/24 12:30	1
4,6-Dinitro-2-methylphenol	ND		0.0048	0.0014	mg/L		04/23/24 13:08	04/30/24 12:30	1
4-Bromophenyl phenyl ether	ND		0.00096	0.00031	mg/L		04/23/24 13:08	04/30/24 12:30	1
4-Chloro-3-methylphenol	ND		0.00096	0.00042	mg/L		04/23/24 13:08	04/30/24 12:30	1
4-Chlorophenyl phenyl ether	ND		0.00096	0.00021	mg/L		04/23/24 13:08	04/30/24 12:30	1
4-Nitrophenol	ND		0.0048	0.00090	mg/L		04/23/24 13:08	04/30/24 12:30	1
Acenaphthene	ND		0.00018	0.000063	mg/L		04/23/24 13:08	04/30/24 12:30	1
Acenaphthylene	ND		0.00018	0.000063	mg/L		04/23/24 13:08	04/30/24 12:30	1
Acrylamide	ND		0.048	0.020	mg/L		04/23/24 13:08	04/30/24 12:30	1
Anthracene	ND		0.00018	0.000047	mg/L		04/23/24 13:08	04/30/24 12:30	1
Benzidine	ND		0.019	0.0088	mg/L		04/23/24 13:08	04/30/24 12:30	1
Benzo[a]anthracene	ND		0.00018	0.000072	mg/L		04/23/24 13:08	04/30/24 12:30	1
Benzo[a]pyrene	ND		0.00018	0.000051	mg/L		04/23/24 13:08	04/30/24 12:30	1
Benzo[b]fluoranthene	ND		0.00018	0.000093	mg/L		04/23/24 13:08	04/30/24 12:30	1
Benzo[g,h,i]perylene	ND		0.00018	0.000066	mg/L		04/23/24 13:08	04/30/24 12:30	1
Benzo[k]fluoranthene	ND		0.00018	0.000085	mg/L		04/23/24 13:08	04/30/24 12:30	1
Bis(2-chloroethoxy)methane	ND		0.00096	0.00015	mg/L		04/23/24 13:08	04/30/24 12:30	1
Bis(2-chloroethyl)ether	ND		0.00018	0.000038	mg/L		04/23/24 13:08	04/30/24 12:30	1
Bis(2-ethylhexyl) phthalate	ND		0.0096	0.0060	mg/L		04/23/24 13:08	04/30/24 12:30	1
Butyl benzyl phthalate	ND		0.0019	0.00090	mg/L		04/23/24 13:08	04/30/24 12:30	1
Chrysene	ND		0.00018	0.000078	mg/L		04/23/24 13:08	04/30/24 12:30	1
Dibenz(a,h)anthracene	ND		0.00018	0.000069	mg/L		04/23/24 13:08	04/30/24 12:30	1
Diethyl phthalate	ND		0.00096	0.00055	mg/L		04/23/24 13:08	04/30/24 12:30	1
Dimethyl phthalate	ND		0.00096	0.00019	mg/L		04/23/24 13:08	04/30/24 12:30	1
Di-n-butyl phthalate	ND		0.0096	0.0047	mg/L		04/23/24 13:08	04/30/24 12:30	1
Di-n-octyl phthalate	ND		0.00096	0.00066	mg/L		04/23/24 13:08	04/30/24 12:30	1
Fluoranthene	ND		0.00018	0.000058	mg/L		04/23/24 13:08	04/30/24 12:30	1
Fluorene	ND		0.00018	0.000066	mg/L		04/23/24 13:08	04/30/24 12:30	1
Hexachlorobenzene	ND		0.00018	0.000054	mg/L		04/23/24 13:08	04/30/24 12:30	1
Hexachlorobutadiene	ND		0.00018	0.000066	mg/L		04/23/24 13:08	04/30/24 12:30	1
Hexachlorocyclopentadiene	ND		0.00096	0.00048	mg/L		04/23/24 13:08	04/30/24 12:30	1
Hexachloroethane	ND		0.00096	0.00013	mg/L		04/23/24 13:08	04/30/24 12:30	1
Indeno[1,2,3-cd]pyrene	ND		0.00018	0.000082	mg/L		04/23/24 13:08	04/30/24 12:30	1
Isophorone	ND		0.00096	0.00018	mg/L		04/23/24 13:08	04/30/24 12:30	1
Naphthalene	ND		0.00018	0.000057	mg/L		04/23/24 13:08	04/30/24 12:30	1
Nitrobenzene	ND		0.0019	0.00048	mg/L		04/23/24 13:08	04/30/24 12:30	1
N-Nitrosodimethylamine	ND		0.00096	0.00025	mg/L		04/23/24 13:08	04/30/24 12:30	1
N-Nitrosodi-n-propylamine	ND		0.00018	0.000068	mg/L		04/23/24 13:08	04/30/24 12:30	1
N-Nitrosodiphenylamine	ND		0.00096	0.00011	mg/L		04/23/24 13:08	04/30/24 12:30	1
Pentachlorophenol	ND		0.0048	0.00081	mg/L		04/23/24 13:08	04/30/24 12:30	1
Phenanthrene	ND		0.00018	0.00015	mg/L		04/23/24 13:08	04/30/24 12:30	1
Phenol	ND		0.00096	0.00047	mg/L		04/23/24 13:08	04/30/24 12:30	1
Pyrene	ND		0.00018	0.000052	mg/L		04/23/24 13:08	04/30/24 12:30	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: 201

Lab Sample ID: 180-172533-1

Date Collected: 04/17/24 09:41

Matrix: Water

Date Received: 04/17/24 13:50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	79		42 - 115	04/23/24 13:08	04/30/24 12:30	1
2-Fluorobiphenyl	75		47 - 107	04/23/24 13:08	04/30/24 12:30	1
2-Fluorophenol (Surr)	76		54 - 109	04/23/24 13:08	04/30/24 12:30	1
Nitrobenzene-d5 (Surr)	93		47 - 110	04/23/24 13:08	04/30/24 12:30	1
Phenol-d5 (Surr)	98		37 - 110	04/23/24 13:08	04/30/24 12:30	1
Terphenyl-d14 (Surr)	83		32 - 115	04/23/24 13:08	04/30/24 12:30	1

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000012	0.00000034	mg/L		04/18/24 06:48	04/26/24 14:05	1
alpha-BHC	ND		0.0000012	0.00000023	mg/L		04/18/24 06:48	04/26/24 14:05	1
beta-BHC	ND		0.0000012	0.00000035	mg/L		04/18/24 06:48	04/26/24 14:05	1
gamma-BHC (Lindane)	ND		0.0000012	0.00000028	mg/L		04/18/24 06:48	04/26/24 14:05	1
delta-BHC	ND		0.0000012	0.00000061	mg/L		04/18/24 06:48	04/26/24 14:05	1
Chlordane (technical)	ND		0.000012	0.0000069	mg/L		04/18/24 06:48	04/26/24 14:05	1
4,4'-DDD	ND		0.0000012	0.00000051	mg/L		04/18/24 06:48	04/26/24 14:05	1
4,4'-DDE	ND		0.0000012	0.00000028	mg/L		04/18/24 06:48	04/26/24 14:05	1
4,4'-DDT	ND		0.0000012	0.00000066	mg/L		04/18/24 06:48	04/26/24 14:05	1
Dieldrin	ND		0.0000012	0.00000026	mg/L		04/18/24 06:48	04/26/24 14:05	1
Endosulfan I	ND		0.0000012	0.00000065	mg/L		04/18/24 06:48	04/26/24 14:05	1
Endosulfan II	ND		0.0000012	0.00000030	mg/L		04/18/24 06:48	04/26/24 14:05	1
Endosulfan sulfate	ND		0.0000012	0.00000061	mg/L		04/18/24 06:48	04/26/24 14:05	1
Endrin	ND		0.0000012	0.00000022	mg/L		04/18/24 06:48	04/26/24 14:05	1
Endrin aldehyde	ND		0.0000012	0.00000049	mg/L		04/18/24 06:48	04/26/24 14:05	1
Heptachlor	ND		0.0000012	0.00000043	mg/L		04/18/24 06:48	04/26/24 14:05	1
Heptachlor epoxide	ND		0.0000012	0.00000032	mg/L		04/18/24 06:48	04/26/24 14:05	1
Toxaphene	ND		0.000095	0.000047	mg/L		04/18/24 06:48	04/26/24 14:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	83		20 - 138				04/18/24 06:48	04/26/24 14:05	1
Tetrachloro-m-xylene (Surr)	93		20 - 138				04/18/24 06:48	04/26/24 14:05	1
DCB Decachlorobiphenyl (Surr)	42	S1-	43 - 143				04/18/24 06:48	04/26/24 14:05	1
DCB Decachlorobiphenyl (Surr)	111		43 - 143				04/18/24 06:48	04/26/24 14:05	1

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.0000095	0.0000045	mg/L		04/18/24 06:48	04/19/24 06:54	1
PCB-1221	ND		0.0000095	0.0000054	mg/L		04/18/24 06:48	04/19/24 06:54	1
PCB-1232	ND		0.0000095	0.0000050	mg/L		04/18/24 06:48	04/19/24 06:54	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: 201

Lab Sample ID: 180-172533-1

Date Collected: 04/17/24 09:41

Matrix: Water

Date Received: 04/17/24 13:50

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1242	ND		0.0000095	0.0000087	mg/L		04/18/24 06:48	04/19/24 06:54	1
PCB-1248	ND		0.0000095	0.0000028	mg/L		04/18/24 06:48	04/19/24 06:54	1
PCB-1254	ND		0.0000095	0.0000091	mg/L		04/18/24 06:48	04/19/24 06:54	1
PCB-1260	ND		0.0000095	0.0000037	mg/L		04/18/24 06:48	04/19/24 06:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	124		20 - 138	04/18/24 06:48	04/19/24 06:54	1
Tetrachloro-m-xylene (Surr)	107		20 - 138	04/18/24 06:48	04/19/24 06:54	1
DCB Decachlorobiphenyl (Surr)	154	S1+	43 - 143	04/18/24 06:48	04/19/24 06:54	1
DCB Decachlorobiphenyl (Surr)	101		43 - 143	04/18/24 06:48	04/19/24 06:54	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			04/19/24 00:50	1
Chloride	314		10.0	7.12	mg/L			04/19/24 01:08	10
Fluoride	0.787		0.100	0.0260	mg/L			04/19/24 00:50	1
Sulfate	792		10.0	7.56	mg/L			04/19/24 01:08	10

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	4.1		0.030	0.019	mg/L		04/20/24 07:25	04/23/24 16:38	1
Antimony	0.0019	J	0.0020	0.0018	mg/L		04/20/24 07:25	04/23/24 16:38	1
Arsenic	0.0029		0.0010	0.00030	mg/L		04/20/24 07:25	04/23/24 16:38	1
Barium	0.41		0.010	0.0019	mg/L		04/20/24 07:25	04/23/24 16:38	1
Beryllium	ND		0.0010	0.00025	mg/L		04/20/24 07:25	04/23/24 16:38	1
Boron	0.22		0.080	0.063	mg/L		04/20/24 07:25	04/23/24 16:38	1
Cadmium	ND		0.0010	0.00034	mg/L		04/20/24 07:25	04/23/24 16:38	1
Calcium	230		0.50	0.18	mg/L		04/20/24 07:25	04/23/24 16:38	1
Chromium	0.0047		0.0020	0.0012	mg/L		04/20/24 07:25	04/23/24 16:38	1
Cobalt	0.0026		0.00050	0.00010	mg/L		04/20/24 07:25	04/23/24 16:38	1
Copper	0.042		0.0020	0.0016	mg/L		04/20/24 07:25	04/23/24 16:38	1
Iron	4.2		0.050	0.041	mg/L		04/20/24 07:25	04/23/24 16:38	1
Lead	0.0039		0.0010	0.00061	mg/L		04/20/24 07:25	04/23/24 16:38	1
Magnesium	54		0.50	0.070	mg/L		04/20/24 07:25	04/23/24 16:38	1
Manganese	0.42		0.0050	0.0022	mg/L		04/20/24 07:25	04/23/24 16:38	1
Molybdenum	0.0078		0.0050	0.00070	mg/L		04/20/24 07:25	04/23/24 16:38	1
Nickel	0.029		0.0010	0.00039	mg/L		04/20/24 07:25	04/23/24 16:38	1
Selenium	0.0029	J	0.0050	0.0012	mg/L		04/20/24 07:25	04/23/24 16:38	1
Silver	ND		0.0010	0.00079	mg/L		04/20/24 07:25	04/23/24 16:38	1
Thallium	ND		0.0010	0.00069	mg/L		04/20/24 07:25	04/23/24 16:38	1
Zinc	0.16		0.015	0.0091	mg/L		04/20/24 07:25	04/23/24 16:38	1

Method: EPA 245.1 Rev. - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00023		0.00020	0.00013	mg/L		04/25/24 08:53	04/26/24 10:03	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	790	!	3.3	0.52	mg/L			05/01/24 07:40	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: 201

Lab Sample ID: 180-172533-1

Date Collected: 04/17/24 09:41

Matrix: Water

Date Received: 04/17/24 13:50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM-Online 4500 H+ B-2000)	7.3	HF	0.1	0.1	SU			04/23/24 17:34	1
Temperature (SM-Online 4500 H+ B-2000)	22.8	HF !	0.1	0.1	Degrees C			04/23/24 17:34	1
Sulfide (SM 4500 S2 F-2011)	1.6	J	3.0	1.3	mg/L			04/24/24 17:01	1
Total Organic Carbon - Quad (SM 5310 C-2014)	28	FL	1.0	0.51	mg/L			04/22/24 17:09	1
Methylene Blue Active Substances (SM 5540C - 2011)	0.12		0.050	0.049	mg/L LAS MW 340			04/18/24 16:57	1
HEM (Oil & Grease) (EPA 1664B)	ND		4.9	4.2	mg/L		04/18/24 07:33	04/18/24 08:14	1
Ammonia (EPA 350.1)	ND		0.10	0.088	mg/L			04/18/24 12:38	1
Nitrate Nitrite as N (EPA 353.2)	6.9		0.20	0.13	mg/L			04/19/24 07:25	2
Chemical Oxygen Demand (MCAWW EPA 410.4)	76		10	9.1	mg/L		04/18/24 12:10	04/18/24 15:13	1
Color, Apparent (SM 2120B)	50		5.0	5.0	Color Units			04/17/24 19:34	1
Color, True (SM 2120B)	30		5.0	5.0	Color Units			04/17/24 19:34	1
pH at time of analysis (SM 2120B)	7.3	!	0.10	0.10	SU			04/17/24 19:34	1
Total Dissolved Solids (SM 2540C)	1700		10	10	mg/L			04/18/24 15:15	1
Total Suspended Solids (SM 2540D)	20		1.5	1.5	mg/L			04/18/24 08:47	1
Biochemical Oxygen Demand (SM 5210B)	3.9		2.0	2.0	mg/L			04/18/24 14:50	1
Nitrogen, Kjeldahl (EPA TKN_TPhos)	3.0		0.50	0.12	mg/L as N		04/18/24 06:38	04/19/24 07:57	1
Phosphorus, Total (EPA TKN_TPhos)	3.7		0.10	0.040	mg/L as P		04/18/24 06:38	04/19/24 07:57	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SM 3500-Cr B-2011)	ND		0.010	0.0060	mg/L			04/17/24 15:50	1

Client Sample ID: 101

Lab Sample ID: 180-172533-2

Date Collected: 04/17/24 09:54

Matrix: Water

Date Received: 04/17/24 13:50

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			04/18/24 16:30	1
Acrylonitrile	ND		0.020	0.0078	mg/L			04/18/24 16:30	1
Benzene	ND		0.0010	0.00060	mg/L			04/18/24 16:30	1
Bromoform	ND		0.0010	0.00098	mg/L			04/18/24 16:30	1
Bromomethane	ND		0.0010	0.00089	mg/L			04/18/24 16:30	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			04/18/24 16:30	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			04/18/24 16:30	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			04/18/24 16:30	1
Chloroethane	ND		0.0010	0.00090	mg/L			04/18/24 16:30	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			04/18/24 16:30	1
Chloroform	0.0022		0.0010	0.00060	mg/L			04/18/24 16:30	1
Chloromethane	ND		0.0010	0.00090	mg/L			04/18/24 16:30	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			04/18/24 16:30	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			04/18/24 16:30	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			04/18/24 16:30	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			04/18/24 16:30	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: 101

Lab Sample ID: 180-172533-2

Date Collected: 04/17/24 09:54

Matrix: Water

Date Received: 04/17/24 13:50

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			04/18/24 16:30	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			04/18/24 16:30	1
1,4-Dioxane	ND		0.20	0.043	mg/L			04/18/24 16:30	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			04/18/24 16:30	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			04/18/24 16:30	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			04/18/24 16:30	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			04/18/24 16:30	1
Toluene	ND		0.0010	0.00046	mg/L			04/18/24 16:30	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			04/18/24 16:30	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			04/18/24 16:30	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			04/18/24 16:30	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			04/18/24 16:30	1
Trichloroethene	ND		0.0010	0.00069	mg/L			04/18/24 16:30	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			04/18/24 16:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		47 - 122		04/18/24 16:30	1
Dibromofluoromethane (Surr)	109		52 - 138		04/18/24 16:30	1
1,2-Dichloroethane-d4 (Surr)	115		24 - 145		04/18/24 16:30	1
Toluene-d8 (Surr)	87		65 - 143		04/18/24 16:30	1

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.00096	0.00023	mg/L		04/23/24 13:08	04/30/24 12:51	1
1,2-Dichlorobenzene	ND		0.00096	0.00020	mg/L		04/23/24 13:08	04/30/24 12:51	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.00096	0.00019	mg/L		04/23/24 13:08	04/30/24 12:51	1
1,3-Dinitrobenzene	ND		0.00096	0.00044	mg/L		04/23/24 13:08	04/30/24 12:51	1
1,4-Dichlorobenzene	ND		0.00096	0.00023	mg/L		04/23/24 13:08	04/30/24 12:51	1
2,2'-oxybis[1-chloropropane]	ND		0.00018	0.000056	mg/L		04/23/24 13:08	04/30/24 12:51	1
2,4,6-Trichlorophenol	ND		0.00096	0.00022	mg/L		04/23/24 13:08	04/30/24 12:51	1
2,4-Dichlorophenol	ND		0.00018	0.000049	mg/L		04/23/24 13:08	04/30/24 12:51	1
2,4-Dimethylphenol	ND		0.00096	0.00056	mg/L		04/23/24 13:08	04/30/24 12:51	1
2,4-Dinitrophenol	ND		0.0096	0.0031	mg/L		04/23/24 13:08	04/30/24 12:51	1
2,4-Dinitrotoluene	ND		0.00096	0.00034	mg/L		04/23/24 13:08	04/30/24 12:51	1
2,6-Dinitrotoluene	ND		0.00096	0.00017	mg/L		04/23/24 13:08	04/30/24 12:51	1
2-Chloronaphthalene	ND		0.00018	0.000057	mg/L		04/23/24 13:08	04/30/24 12:51	1
2-Chlorophenol	ND		0.00096	0.00022	mg/L		04/23/24 13:08	04/30/24 12:51	1
2-Nitrophenol	ND		0.00096	0.00019	mg/L		04/23/24 13:08	04/30/24 12:51	1
3,3'-Dichlorobenzidine	ND		0.00096	0.00056	mg/L		04/23/24 13:08	04/30/24 12:51	1
4,6-Dinitro-2-methylphenol	ND		0.0048	0.0014	mg/L		04/23/24 13:08	04/30/24 12:51	1
4-Bromophenyl phenyl ether	ND		0.00096	0.00031	mg/L		04/23/24 13:08	04/30/24 12:51	1
4-Chloro-3-methylphenol	ND		0.00096	0.00042	mg/L		04/23/24 13:08	04/30/24 12:51	1
4-Chlorophenyl phenyl ether	ND		0.00096	0.00021	mg/L		04/23/24 13:08	04/30/24 12:51	1
4-Nitrophenol	ND		0.0048	0.00090	mg/L		04/23/24 13:08	04/30/24 12:51	1
Acenaphthene	ND		0.00018	0.000063	mg/L		04/23/24 13:08	04/30/24 12:51	1
Acenaphthylene	0.000080	J	0.00018	0.000063	mg/L		04/23/24 13:08	04/30/24 12:51	1
Acrylamide	ND		0.048	0.020	mg/L		04/23/24 13:08	04/30/24 12:51	1
Anthracene	ND		0.00018	0.000047	mg/L		04/23/24 13:08	04/30/24 12:51	1
Benzidine	ND		0.019	0.0088	mg/L		04/23/24 13:08	04/30/24 12:51	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: 101

Lab Sample ID: 180-172533-2

Date Collected: 04/17/24 09:54

Matrix: Water

Date Received: 04/17/24 13:50

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.00018	0.000072	mg/L		04/23/24 13:08	04/30/24 12:51	1
Benzo[a]pyrene	ND		0.00018	0.000051	mg/L		04/23/24 13:08	04/30/24 12:51	1
Benzo[b]fluoranthene	ND		0.00018	0.000093	mg/L		04/23/24 13:08	04/30/24 12:51	1
Benzo[g,h,i]perylene	ND		0.00018	0.000066	mg/L		04/23/24 13:08	04/30/24 12:51	1
Benzo[k]fluoranthene	ND		0.00018	0.000085	mg/L		04/23/24 13:08	04/30/24 12:51	1
Bis(2-chloroethoxy)methane	ND		0.00096	0.00015	mg/L		04/23/24 13:08	04/30/24 12:51	1
Bis(2-chloroethyl)ether	ND		0.00018	0.000038	mg/L		04/23/24 13:08	04/30/24 12:51	1
Bis(2-ethylhexyl) phthalate	ND		0.0096	0.0060	mg/L		04/23/24 13:08	04/30/24 12:51	1
Butyl benzyl phthalate	ND		0.0019	0.00090	mg/L		04/23/24 13:08	04/30/24 12:51	1
Chrysene	ND		0.00018	0.000078	mg/L		04/23/24 13:08	04/30/24 12:51	1
Dibenz(a,h)anthracene	ND		0.00018	0.000069	mg/L		04/23/24 13:08	04/30/24 12:51	1
Diethyl phthalate	ND		0.00096	0.00055	mg/L		04/23/24 13:08	04/30/24 12:51	1
Dimethyl phthalate	ND		0.00096	0.00019	mg/L		04/23/24 13:08	04/30/24 12:51	1
Di-n-butyl phthalate	ND		0.0096	0.0047	mg/L		04/23/24 13:08	04/30/24 12:51	1
Di-n-octyl phthalate	ND		0.00096	0.00066	mg/L		04/23/24 13:08	04/30/24 12:51	1
Fluoranthene	ND		0.00018	0.000058	mg/L		04/23/24 13:08	04/30/24 12:51	1
Fluorene	ND		0.00018	0.000066	mg/L		04/23/24 13:08	04/30/24 12:51	1
Hexachlorobenzene	ND		0.00018	0.000054	mg/L		04/23/24 13:08	04/30/24 12:51	1
Hexachlorobutadiene	ND		0.00018	0.000066	mg/L		04/23/24 13:08	04/30/24 12:51	1
Hexachlorocyclopentadiene	ND		0.00096	0.00048	mg/L		04/23/24 13:08	04/30/24 12:51	1
Hexachloroethane	ND		0.00096	0.00013	mg/L		04/23/24 13:08	04/30/24 12:51	1
Indeno[1,2,3-cd]pyrene	ND		0.00018	0.000082	mg/L		04/23/24 13:08	04/30/24 12:51	1
Isophorone	ND		0.00096	0.00018	mg/L		04/23/24 13:08	04/30/24 12:51	1
Naphthalene	ND		0.00018	0.000057	mg/L		04/23/24 13:08	04/30/24 12:51	1
Nitrobenzene	ND		0.0019	0.00048	mg/L		04/23/24 13:08	04/30/24 12:51	1
N-Nitrosodimethylamine	ND		0.00096	0.00025	mg/L		04/23/24 13:08	04/30/24 12:51	1
N-Nitrosodi-n-propylamine	ND		0.00018	0.000068	mg/L		04/23/24 13:08	04/30/24 12:51	1
N-Nitrosodiphenylamine	ND		0.00096	0.00011	mg/L		04/23/24 13:08	04/30/24 12:51	1
Pentachlorophenol	ND		0.0048	0.00081	mg/L		04/23/24 13:08	04/30/24 12:51	1
Phenanthrene	ND		0.00018	0.00015	mg/L		04/23/24 13:08	04/30/24 12:51	1
Phenol	ND		0.00096	0.00047	mg/L		04/23/24 13:08	04/30/24 12:51	1
Pyrene	ND		0.00018	0.000052	mg/L		04/23/24 13:08	04/30/24 12:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	83		42 - 115	04/23/24 13:08	04/30/24 12:51	1
2-Fluorobiphenyl	76		47 - 107	04/23/24 13:08	04/30/24 12:51	1
2-Fluorophenol (Surr)	88		54 - 109	04/23/24 13:08	04/30/24 12:51	1
Nitrobenzene-d5 (Surr)	92		47 - 110	04/23/24 13:08	04/30/24 12:51	1
Phenol-d5 (Surr)	94		37 - 110	04/23/24 13:08	04/30/24 12:51	1
Terphenyl-d14 (Surr)	83		32 - 115	04/23/24 13:08	04/30/24 12:51	1

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000012	0.0000003	mg/L		04/18/24 06:48	04/26/24 14:22	1
alpha-BHC	ND		0.0000012	0.0000002	mg/L		04/18/24 06:48	04/26/24 14:22	1
beta-BHC	ND		0.0000012	0.0000003	mg/L		04/18/24 06:48	04/26/24 14:22	1
gamma-BHC (Lindane)	ND		0.0000012	0.0000002	mg/L		04/18/24 06:48	04/26/24 14:22	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: 101

Lab Sample ID: 180-172533-2

Date Collected: 04/17/24 09:54

Matrix: Water

Date Received: 04/17/24 13:50

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	ND		0.0000012	0.0000006	mg/L		04/18/24 06:48	04/26/24 14:22	1
				1					
Chlordane (technical)	ND		0.000012	0.0000069	mg/L		04/18/24 06:48	04/26/24 14:22	1
4,4'-DDD	ND		0.0000012	0.0000005	mg/L		04/18/24 06:48	04/26/24 14:22	1
				1					
4,4'-DDE	ND		0.0000012	0.0000002	mg/L		04/18/24 06:48	04/26/24 14:22	1
				8					
4,4'-DDT	ND		0.0000012	0.0000006	mg/L		04/18/24 06:48	04/26/24 14:22	1
				6					
Dieldrin	ND		0.0000012	0.0000002	mg/L		04/18/24 06:48	04/26/24 14:22	1
				6					
Endosulfan I	ND		0.0000012	0.0000006	mg/L		04/18/24 06:48	04/26/24 14:22	1
				5					
Endosulfan II	ND		0.0000012	0.0000003	mg/L		04/18/24 06:48	04/26/24 14:22	1
				0					
Endosulfan sulfate	ND		0.0000012	0.0000006	mg/L		04/18/24 06:48	04/26/24 14:22	1
				1					
Endrin	ND		0.0000012	0.0000002	mg/L		04/18/24 06:48	04/26/24 14:22	1
				2					
Endrin aldehyde	ND		0.0000012	0.0000004	mg/L		04/18/24 06:48	04/26/24 14:22	1
				9					
Heptachlor	ND		0.0000012	0.0000004	mg/L		04/18/24 06:48	04/26/24 14:22	1
				3					
Heptachlor epoxide	ND		0.0000012	0.0000003	mg/L		04/18/24 06:48	04/26/24 14:22	1
				2					
Toxaphene	ND		0.000095	0.000047	mg/L		04/18/24 06:48	04/26/24 14:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	61		20 - 138				04/18/24 06:48	04/26/24 14:22	1
Tetrachloro-m-xylene (Surr)	101		20 - 138				04/18/24 06:48	04/26/24 14:22	1
DCB Decachlorobiphenyl (Surr)	43		43 - 143				04/18/24 06:48	04/26/24 14:22	1
DCB Decachlorobiphenyl (Surr)	108		43 - 143				04/18/24 06:48	04/26/24 14:22	1

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.0000095	0.0000045	mg/L		04/18/24 06:48	04/19/24 07:13	1
PCB-1221	ND		0.0000095	0.0000054	mg/L		04/18/24 06:48	04/19/24 07:13	1
PCB-1232	ND		0.0000095	0.0000050	mg/L		04/18/24 06:48	04/19/24 07:13	1
PCB-1242	ND		0.0000095	0.0000087	mg/L		04/18/24 06:48	04/19/24 07:13	1
PCB-1248	ND		0.0000095	0.0000028	mg/L		04/18/24 06:48	04/19/24 07:13	1
PCB-1254	ND		0.0000095	0.0000091	mg/L		04/18/24 06:48	04/19/24 07:13	1
PCB-1260	ND		0.0000095	0.0000037	mg/L		04/18/24 06:48	04/19/24 07:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	85		20 - 138				04/18/24 06:48	04/19/24 07:13	1
Tetrachloro-m-xylene (Surr)	101		20 - 138				04/18/24 06:48	04/19/24 07:13	1
DCB Decachlorobiphenyl (Surr)	121		43 - 143				04/18/24 06:48	04/19/24 07:13	1
DCB Decachlorobiphenyl (Surr)	102		43 - 143				04/18/24 06:48	04/19/24 07:13	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.200	0.106	mg/L			04/19/24 01:27	2
Chloride	23.2		2.00	1.42	mg/L			04/19/24 01:27	2

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: 101

Lab Sample ID: 180-172533-2

Date Collected: 04/17/24 09:54

Matrix: Water

Date Received: 04/17/24 13:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.120	J	0.200	0.0520	mg/L			04/19/24 01:27	2
Sulfate	2010		20.0	15.1	mg/L			04/19/24 01:45	20

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.080		0.030	0.019	mg/L		04/20/24 07:25	04/23/24 16:41	1
Antimony	ND		0.0020	0.0018	mg/L		04/20/24 07:25	04/23/24 16:41	1
Arsenic	0.00039	J	0.0010	0.00030	mg/L		04/20/24 07:25	04/23/24 16:41	1
Barium	0.035		0.010	0.0019	mg/L		04/20/24 07:25	04/23/24 16:41	1
Beryllium	ND		0.0010	0.00025	mg/L		04/20/24 07:25	04/23/24 16:41	1
Boron	ND		0.080	0.063	mg/L		04/20/24 07:25	04/23/24 16:41	1
Cadmium	ND		0.0010	0.00034	mg/L		04/20/24 07:25	04/23/24 16:41	1
Calcium	23		0.50	0.18	mg/L		04/20/24 07:25	04/23/24 16:41	1
Chromium	0.0023		0.0020	0.0012	mg/L		04/20/24 07:25	04/23/24 16:41	1
Cobalt	0.00027	J	0.00050	0.00010	mg/L		04/20/24 07:25	04/23/24 16:41	1
Copper	0.0018	J	0.0020	0.0016	mg/L		04/20/24 07:25	04/23/24 16:41	1
Iron	0.11		0.050	0.041	mg/L		04/20/24 07:25	04/23/24 16:41	1
Lead	ND		0.0010	0.00061	mg/L		04/20/24 07:25	04/23/24 16:41	1
Magnesium	5.1		0.50	0.070	mg/L		04/20/24 07:25	04/23/24 16:41	1
Manganese	0.18		0.0050	0.0022	mg/L		04/20/24 07:25	04/23/24 16:41	1
Molybdenum	0.0040	J	0.0050	0.00070	mg/L		04/20/24 07:25	04/23/24 16:41	1
Nickel	0.0068		0.0010	0.00039	mg/L		04/20/24 07:25	04/23/24 16:41	1
Selenium	ND		0.0050	0.0012	mg/L		04/20/24 07:25	04/23/24 16:41	1
Silver	ND		0.0010	0.00079	mg/L		04/20/24 07:25	04/23/24 16:41	1
Thallium	ND		0.0010	0.00069	mg/L		04/20/24 07:25	04/23/24 16:41	1
Zinc	0.042		0.015	0.0091	mg/L		04/20/24 07:25	04/23/24 16:41	1

Method: EPA 245.1 Rev. - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00023		0.00020	0.00013	mg/L		04/25/24 08:53	04/26/24 10:04	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	78	!	3.3	0.52	mg/L			05/01/24 07:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM-Online 4500 H+ B-2000)	8.0	HF	0.1	0.1	SU			04/23/24 17:58	1
Temperature (SM-Online 4500 H+ B-2000)	23.0	HF !	0.1	0.1	Degrees C			04/23/24 17:58	1
Sulfide (SM 4500 S2 F-2011)	1.9	J	3.0	1.3	mg/L			04/24/24 17:08	1
Total Organic Carbon - Quad (SM 5310 C-2014)	13		1.0	0.51	mg/L			04/22/24 17:56	1
Methylene Blue Active Substances (SM 5540C - 2011)	0.087		0.050	0.049	mg/l LAS MW 340			04/18/24 17:00	1
HEM (Oil & Grease) (EPA 1664B)	ND		4.9	4.2	mg/L		04/18/24 07:33	04/18/24 08:14	1
Ammonia (EPA 350.1)	ND		0.10	0.088	mg/L			04/18/24 12:28	1
Nitrate Nitrite as N (EPA 353.2)	6.3		0.20	0.13	mg/L			04/19/24 07:27	2
Chemical Oxygen Demand (MCAWW EPA 410.4)	44		10	9.1	mg/L		04/18/24 12:10	04/18/24 15:15	1
Color, Apparent (SM 2120B)	50		5.0	5.0	Color Units			04/17/24 19:36	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: 101

Lab Sample ID: 180-172533-2

Date Collected: 04/17/24 09:54

Matrix: Water

Date Received: 04/17/24 13:50

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Color, True (SM 2120B)	45		5.0	5.0	Color Units			04/17/24 19:36	1
pH at time of analysis (SM 2120B)	7.8	!	0.10	0.10	SU			04/17/24 19:36	1
Total Dissolved Solids (SM 2540C)	3000		40	40	mg/L			04/19/24 14:29	1
Total Suspended Solids (SM 2540D)	2.2		0.50	0.50	mg/L			04/18/24 08:47	1
Biochemical Oxygen Demand (SM 5210B)	ND		2.0	2.0	mg/L			04/18/24 14:50	1
Nitrogen, Kjeldahl (EPA TKN_TPhos)	0.51		0.50	0.12	mg/L as N		04/18/24 06:38	04/19/24 07:59	1
Phosphorus, Total (EPA TKN_TPhos)	0.52		0.10	0.040	mg/L as P		04/18/24 06:38	04/19/24 07:59	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SM 3500-Cr B-2011)	ND		0.010	0.0060	mg/L			04/17/24 15:47	1

Client Sample ID: 001

Lab Sample ID: 180-172533-3

Date Collected: 04/17/24 10:16

Matrix: Water

Date Received: 04/17/24 13:50

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			04/18/24 16:54	1
Acrylonitrile	ND		0.020	0.0078	mg/L			04/18/24 16:54	1
Benzene	ND		0.0010	0.00060	mg/L			04/18/24 16:54	1
Bromoform	ND		0.0010	0.00098	mg/L			04/18/24 16:54	1
Bromomethane	ND		0.0010	0.00089	mg/L			04/18/24 16:54	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			04/18/24 16:54	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			04/18/24 16:54	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			04/18/24 16:54	1
Chloroethane	ND		0.0010	0.00090	mg/L			04/18/24 16:54	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			04/18/24 16:54	1
Chloroform	0.0066		0.0010	0.00060	mg/L			04/18/24 16:54	1
Chloromethane	ND		0.0010	0.00090	mg/L			04/18/24 16:54	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			04/18/24 16:54	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			04/18/24 16:54	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			04/18/24 16:54	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			04/18/24 16:54	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			04/18/24 16:54	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			04/18/24 16:54	1
1,4-Dioxane	ND		0.20	0.043	mg/L			04/18/24 16:54	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			04/18/24 16:54	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			04/18/24 16:54	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			04/18/24 16:54	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			04/18/24 16:54	1
Toluene	ND		0.0010	0.00046	mg/L			04/18/24 16:54	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			04/18/24 16:54	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			04/18/24 16:54	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			04/18/24 16:54	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			04/18/24 16:54	1
Trichloroethene	ND		0.0010	0.00069	mg/L			04/18/24 16:54	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: 001

Lab Sample ID: 180-172533-3

Date Collected: 04/17/24 10:16

Matrix: Water

Date Received: 04/17/24 13:50

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.0010	0.00041	mg/L			04/18/24 16:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		47 - 122					04/18/24 16:54	1
Dibromofluoromethane (Surr)	112		52 - 138					04/18/24 16:54	1
1,2-Dichloroethane-d4 (Surr)	111		24 - 145					04/18/24 16:54	1
Toluene-d8 (Surr)	90		65 - 143					04/18/24 16:54	1

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.00096	0.00023	mg/L		04/23/24 13:08	04/30/24 13:13	1
1,2-Dichlorobenzene	ND		0.00096	0.00020	mg/L		04/23/24 13:08	04/30/24 13:13	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.00096	0.00019	mg/L		04/23/24 13:08	04/30/24 13:13	1
1,3-Dinitrobenzene	ND		0.00096	0.00044	mg/L		04/23/24 13:08	04/30/24 13:13	1
1,4-Dichlorobenzene	ND		0.00096	0.00023	mg/L		04/23/24 13:08	04/30/24 13:13	1
2,2'-oxybis[1-chloropropane]	ND		0.00018	0.000056	mg/L		04/23/24 13:08	04/30/24 13:13	1
2,4,6-Trichlorophenol	ND		0.00096	0.00022	mg/L		04/23/24 13:08	04/30/24 13:13	1
2,4-Dichlorophenol	ND		0.00018	0.000049	mg/L		04/23/24 13:08	04/30/24 13:13	1
2,4-Dimethylphenol	ND		0.00096	0.00056	mg/L		04/23/24 13:08	04/30/24 13:13	1
2,4-Dinitrophenol	ND		0.0096	0.0031	mg/L		04/23/24 13:08	04/30/24 13:13	1
2,4-Dinitrotoluene	ND		0.00096	0.00034	mg/L		04/23/24 13:08	04/30/24 13:13	1
2,6-Dinitrotoluene	ND		0.00096	0.00017	mg/L		04/23/24 13:08	04/30/24 13:13	1
2-Chloronaphthalene	ND		0.00018	0.000057	mg/L		04/23/24 13:08	04/30/24 13:13	1
2-Chlorophenol	ND		0.00096	0.00022	mg/L		04/23/24 13:08	04/30/24 13:13	1
2-Nitrophenol	ND		0.00096	0.00019	mg/L		04/23/24 13:08	04/30/24 13:13	1
3,3'-Dichlorobenzidine	ND		0.00096	0.00056	mg/L		04/23/24 13:08	04/30/24 13:13	1
4,6-Dinitro-2-methylphenol	ND		0.0048	0.0014	mg/L		04/23/24 13:08	04/30/24 13:13	1
4-Bromophenyl phenyl ether	ND		0.00096	0.00031	mg/L		04/23/24 13:08	04/30/24 13:13	1
4-Chloro-3-methylphenol	ND		0.00096	0.00042	mg/L		04/23/24 13:08	04/30/24 13:13	1
4-Chlorophenyl phenyl ether	ND		0.00096	0.00021	mg/L		04/23/24 13:08	04/30/24 13:13	1
4-Nitrophenol	ND		0.0048	0.00090	mg/L		04/23/24 13:08	04/30/24 13:13	1
Acenaphthene	ND		0.00018	0.000063	mg/L		04/23/24 13:08	04/30/24 13:13	1
Acenaphthylene	0.00012	J	0.00018	0.000063	mg/L		04/23/24 13:08	04/30/24 13:13	1
Acrylamide	ND		0.048	0.020	mg/L		04/23/24 13:08	04/30/24 13:13	1
Anthracene	ND		0.00018	0.000047	mg/L		04/23/24 13:08	04/30/24 13:13	1
Benzidine	ND		0.019	0.0088	mg/L		04/23/24 13:08	04/30/24 13:13	1
Benzo[a]anthracene	ND		0.00018	0.000072	mg/L		04/23/24 13:08	04/30/24 13:13	1
Benzo[a]pyrene	ND		0.00018	0.000051	mg/L		04/23/24 13:08	04/30/24 13:13	1
Benzo[b]fluoranthene	ND		0.00018	0.000093	mg/L		04/23/24 13:08	04/30/24 13:13	1
Benzo[g,h,i]perylene	ND		0.00018	0.000066	mg/L		04/23/24 13:08	04/30/24 13:13	1
Benzo[k]fluoranthene	ND		0.00018	0.000085	mg/L		04/23/24 13:08	04/30/24 13:13	1
Bis(2-chloroethoxy)methane	ND		0.00096	0.00015	mg/L		04/23/24 13:08	04/30/24 13:13	1
Bis(2-chloroethyl)ether	ND		0.00018	0.000038	mg/L		04/23/24 13:08	04/30/24 13:13	1
Bis(2-ethylhexyl) phthalate	ND		0.0096	0.0060	mg/L		04/23/24 13:08	04/30/24 13:13	1
Butyl benzyl phthalate	ND		0.0019	0.00090	mg/L		04/23/24 13:08	04/30/24 13:13	1
Chrysene	ND		0.00018	0.000078	mg/L		04/23/24 13:08	04/30/24 13:13	1
Dibenz(a,h)anthracene	ND		0.00018	0.000069	mg/L		04/23/24 13:08	04/30/24 13:13	1
Diethyl phthalate	ND		0.00096	0.00055	mg/L		04/23/24 13:08	04/30/24 13:13	1
Dimethyl phthalate	ND		0.00096	0.00019	mg/L		04/23/24 13:08	04/30/24 13:13	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: 001

Lab Sample ID: 180-172533-3

Date Collected: 04/17/24 10:16

Matrix: Water

Date Received: 04/17/24 13:50

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		0.0096	0.0047	mg/L		04/23/24 13:08	04/30/24 13:13	1
Di-n-octyl phthalate	ND		0.00096	0.00066	mg/L		04/23/24 13:08	04/30/24 13:13	1
Fluoranthene	ND		0.00018	0.000058	mg/L		04/23/24 13:08	04/30/24 13:13	1
Fluorene	ND		0.00018	0.000066	mg/L		04/23/24 13:08	04/30/24 13:13	1
Hexachlorobenzene	ND		0.00018	0.000054	mg/L		04/23/24 13:08	04/30/24 13:13	1
Hexachlorobutadiene	ND		0.00018	0.000066	mg/L		04/23/24 13:08	04/30/24 13:13	1
Hexachlorocyclopentadiene	ND		0.00096	0.00048	mg/L		04/23/24 13:08	04/30/24 13:13	1
Hexachloroethane	ND		0.00096	0.00013	mg/L		04/23/24 13:08	04/30/24 13:13	1
Indeno[1,2,3-cd]pyrene	ND		0.00018	0.000082	mg/L		04/23/24 13:08	04/30/24 13:13	1
Isophorone	ND		0.00096	0.00018	mg/L		04/23/24 13:08	04/30/24 13:13	1
Naphthalene	ND		0.00018	0.000057	mg/L		04/23/24 13:08	04/30/24 13:13	1
Nitrobenzene	ND		0.0019	0.00048	mg/L		04/23/24 13:08	04/30/24 13:13	1
N-Nitrosodimethylamine	ND		0.00096	0.00025	mg/L		04/23/24 13:08	04/30/24 13:13	1
N-Nitrosodi-n-propylamine	ND		0.00018	0.000068	mg/L		04/23/24 13:08	04/30/24 13:13	1
N-Nitrosodiphenylamine	ND		0.00096	0.00011	mg/L		04/23/24 13:08	04/30/24 13:13	1
Pentachlorophenol	ND		0.0048	0.00081	mg/L		04/23/24 13:08	04/30/24 13:13	1
Phenanthrene	0.00017	J	0.00018	0.00015	mg/L		04/23/24 13:08	04/30/24 13:13	1
Phenol	ND		0.00096	0.00047	mg/L		04/23/24 13:08	04/30/24 13:13	1
Pyrene	0.000072	J	0.00018	0.000052	mg/L		04/23/24 13:08	04/30/24 13:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	73		42 - 115	04/23/24 13:08	04/30/24 13:13	1
2-Fluorobiphenyl	69		47 - 107	04/23/24 13:08	04/30/24 13:13	1
2-Fluorophenol (Surr)	84		54 - 109	04/23/24 13:08	04/30/24 13:13	1
Nitrobenzene-d5 (Surr)	86		47 - 110	04/23/24 13:08	04/30/24 13:13	1
Phenol-d5 (Surr)	90		37 - 110	04/23/24 13:08	04/30/24 13:13	1
Terphenyl-d14 (Surr)	84		32 - 115	04/23/24 13:08	04/30/24 13:13	1

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000012	0.0000003	mg/L		04/18/24 06:48	04/26/24 14:39	1
				4					
alpha-BHC	ND		0.0000012	0.0000002	mg/L		04/18/24 06:48	04/26/24 14:39	1
				3					
beta-BHC	ND		0.0000012	0.0000003	mg/L		04/18/24 06:48	04/26/24 14:39	1
				5					
gamma-BHC (Lindane)	ND		0.0000012	0.0000002	mg/L		04/18/24 06:48	04/26/24 14:39	1
				8					
delta-BHC	ND		0.0000012	0.0000006	mg/L		04/18/24 06:48	04/26/24 14:39	1
				1					
Chlordane (technical)	ND		0.000012	0.0000069	mg/L		04/18/24 06:48	04/26/24 14:39	1
4,4'-DDD	ND		0.0000012	0.0000005	mg/L		04/18/24 06:48	04/26/24 14:39	1
				1					
4,4'-DDE	ND		0.0000012	0.0000002	mg/L		04/18/24 06:48	04/26/24 14:39	1
				8					
4,4'-DDT	ND		0.0000012	0.0000006	mg/L		04/18/24 06:48	04/26/24 14:39	1
				6					
Dieldrin	ND		0.0000012	0.0000002	mg/L		04/18/24 06:48	04/26/24 14:39	1
				6					
Endosulfan I	ND		0.0000012	0.0000006	mg/L		04/18/24 06:48	04/26/24 14:39	1
				5					
Endosulfan II	ND	J	0.0000010	0.0000003	mg/L		04/18/24 06:48	04/26/24 14:39	1
				0					

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: 001

Lab Sample ID: 180-172533-3

Date Collected: 04/17/24 10:16

Matrix: Water

Date Received: 04/17/24 13:50

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan sulfate	ND		0.0000012	0.0000006	mg/L		04/18/24 06:48	04/26/24 14:39	1
Endrin	ND		0.0000012	0.0000002	mg/L		04/18/24 06:48	04/26/24 14:39	1
Endrin aldehyde	ND		0.0000012	0.0000004	mg/L		04/18/24 06:48	04/26/24 14:39	1
Heptachlor	ND		0.0000012	0.0000004	mg/L		04/18/24 06:48	04/26/24 14:39	1
Heptachlor epoxide	ND		0.0000012	0.0000003	mg/L		04/18/24 06:48	04/26/24 14:39	1
Toxaphene	ND		0.0000095	0.0000047	mg/L		04/18/24 06:48	04/26/24 14:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	84		20 - 138	04/18/24 06:48	04/26/24 14:39	1
Tetrachloro-m-xylene (Surr)	75		20 - 138	04/18/24 06:48	04/26/24 14:39	1
DCB Decachlorobiphenyl (Surr)	32	S1-	43 - 143	04/18/24 06:48	04/26/24 14:39	1
DCB Decachlorobiphenyl (Surr)	108		43 - 143	04/18/24 06:48	04/26/24 14:39	1

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.0000095	0.0000045	mg/L		04/18/24 06:48	04/19/24 07:30	1
PCB-1221	ND		0.0000095	0.0000054	mg/L		04/18/24 06:48	04/19/24 07:30	1
PCB-1232	ND		0.0000095	0.0000050	mg/L		04/18/24 06:48	04/19/24 07:30	1
PCB-1242	ND		0.0000095	0.0000087	mg/L		04/18/24 06:48	04/19/24 07:30	1
PCB-1248	ND		0.0000095	0.0000028	mg/L		04/18/24 06:48	04/19/24 07:30	1
PCB-1254	ND		0.0000095	0.0000091	mg/L		04/18/24 06:48	04/19/24 07:30	1
PCB-1260	ND		0.0000095	0.0000037	mg/L		04/18/24 06:48	04/19/24 07:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	94		20 - 138	04/18/24 06:48	04/19/24 07:30	1
Tetrachloro-m-xylene (Surr)	99		20 - 138	04/18/24 06:48	04/19/24 07:30	1
DCB Decachlorobiphenyl (Surr)	130		43 - 143	04/18/24 06:48	04/19/24 07:30	1
DCB Decachlorobiphenyl (Surr)	88		43 - 143	04/18/24 06:48	04/19/24 07:30	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.200	0.106	mg/L			04/19/24 04:32	2
Chloride	140		2.00	1.42	mg/L			04/19/24 04:32	2
Fluoride	0.431		0.200	0.0520	mg/L			04/19/24 04:32	2
Sulfate	1520		20.0	15.1	mg/L			04/19/24 04:50	20

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.85		0.030	0.019	mg/L		04/20/24 07:25	04/23/24 16:55	1
Antimony	ND		0.0020	0.0018	mg/L		04/20/24 07:25	04/23/24 16:55	1
Arsenic	0.0013		0.0010	0.00030	mg/L		04/20/24 07:25	04/23/24 16:55	1
Barium	0.16		0.010	0.0019	mg/L		04/20/24 07:25	04/23/24 16:55	1
Beryllium	ND		0.0010	0.00025	mg/L		04/20/24 07:25	04/23/24 16:55	1
Boron	0.12		0.080	0.063	mg/L		04/20/24 07:25	04/23/24 16:55	1
Cadmium	ND		0.0010	0.00034	mg/L		04/20/24 07:25	04/23/24 16:55	1
Calcium	110		0.50	0.18	mg/L		04/20/24 07:25	04/23/24 16:55	1
Chromium	0.0018	J	0.0020	0.0012	mg/L		04/20/24 07:25	04/23/24 16:55	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: 001

Lab Sample ID: 180-172533-3

Date Collected: 04/17/24 10:16

Matrix: Water

Date Received: 04/17/24 13:50

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.0014		0.00050	0.00010	mg/L		04/20/24 07:25	04/23/24 16:55	1
Copper	0.011		0.0020	0.0016	mg/L		04/20/24 07:25	04/23/24 16:55	1
Iron	1.2		0.050	0.041	mg/L		04/20/24 07:25	04/23/24 16:55	1
Lead	0.00089	J	0.0010	0.00061	mg/L		04/20/24 07:25	04/23/24 16:55	1
Magnesium	26		0.50	0.070	mg/L		04/20/24 07:25	04/23/24 16:55	1
Manganese	0.47		0.0050	0.0022	mg/L		04/20/24 07:25	04/23/24 16:55	1
Molybdenum	0.0053		0.0050	0.00070	mg/L		04/20/24 07:25	04/23/24 16:55	1
Nickel	0.015		0.0010	0.00039	mg/L		04/20/24 07:25	04/23/24 16:55	1
Selenium	0.0025	J ^+	0.0050	0.0012	mg/L		04/20/24 07:25	04/23/24 16:55	1
Silver	ND		0.0010	0.00079	mg/L		04/20/24 07:25	04/23/24 16:55	1
Thallium	ND		0.0010	0.00069	mg/L		04/20/24 07:25	04/23/24 16:55	1
Zinc	0.11		0.015	0.0091	mg/L		04/20/24 07:25	04/23/24 16:55	1

Method: EPA 245.1 Rev. - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00029		0.00020	0.00013	mg/L		04/25/24 08:53	04/26/24 10:08	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	380	!	3.3	0.52	mg/L			05/01/24 07:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM-Online 4500 H+ B-2000)	8.0	HF	0.1	0.1	SU			04/23/24 18:35	1
Temperature (SM-Online 4500 H+ B-2000)	23.1	HF !	0.1	0.1	Degrees C			04/23/24 18:35	1
Sulfide (SM 4500 S2 F-2011)	1.9	J	3.0	1.3	mg/L			04/24/24 17:10	1
Total Organic Carbon - Quad (SM 5310 C-2014)	18		1.0	0.51	mg/L			04/22/24 21:09	1
Methylene Blue Active Substances (SM 5540C - 2011)	0.087		0.050	0.049	mg/l LAS MW 340			04/18/24 17:01	1
HEM (Oil & Grease) (EPA 1664B)	ND		4.9	4.2	mg/L		04/18/24 07:33	04/18/24 08:14	1
Ammonia (EPA 350.1)	ND		0.10	0.088	mg/L			04/18/24 12:30	1
Nitrate Nitrite as N (EPA 353.2)	6.6		0.20	0.13	mg/L			04/19/24 07:28	2
Chemical Oxygen Demand (MCAWW EPA 410.4)	59		10	9.1	mg/L		04/18/24 12:10	04/18/24 15:16	1
Color, Apparent (SM 2120B)	50		5.0	5.0	Color Units			04/17/24 19:37	1
Color, True (SM 2120B)	40		5.0	5.0	Color Units			04/17/24 19:37	1
pH at time of analysis (SM 2120B)	7.9	!	0.10	0.10	SU			04/17/24 19:37	1
Total Dissolved Solids (SM 2540C)	2500		20	20	mg/L			04/19/24 14:29	1
Total Suspended Solids (SM 2540D)	5.7		0.50	0.50	mg/L			04/18/24 08:47	1
Biochemical Oxygen Demand (SM 5210B)	3.4		2.0	2.0	mg/L			04/18/24 14:50	1
Nitrogen, Kjeldahl (EPA TKN_TPhos)	1.5		0.50	0.12	mg/L as N		04/18/24 06:38	04/19/24 08:00	1
Phosphorus, Total (EPA TKN_TPhos)	1.7		0.10	0.040	mg/L as P		04/18/24 06:38	04/19/24 08:00	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SM 3500-Cr B-2011)	ND		0.010	0.0060	mg/L			04/17/24 15:52	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 180-172533-4

Date Collected: 04/17/24 00:00

Matrix: Water

Date Received: 04/17/24 13:50

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			04/18/24 11:47	1
Acrylonitrile	ND		0.020	0.0078	mg/L			04/18/24 11:47	1
Benzene	ND		0.0010	0.00060	mg/L			04/18/24 11:47	1
Bromoform	ND		0.0010	0.00098	mg/L			04/18/24 11:47	1
Bromomethane	ND		0.0010	0.00089	mg/L			04/18/24 11:47	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			04/18/24 11:47	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			04/18/24 11:47	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			04/18/24 11:47	1
Chloroethane	ND		0.0010	0.00090	mg/L			04/18/24 11:47	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			04/18/24 11:47	1
Chloroform	ND		0.0010	0.00060	mg/L			04/18/24 11:47	1
Chloromethane	ND		0.0010	0.00090	mg/L			04/18/24 11:47	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			04/18/24 11:47	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			04/18/24 11:47	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			04/18/24 11:47	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			04/18/24 11:47	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			04/18/24 11:47	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			04/18/24 11:47	1
1,4-Dioxane	ND		0.20	0.043	mg/L			04/18/24 11:47	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			04/18/24 11:47	1
Methylene Chloride	0.0012		0.0010	0.00089	mg/L			04/18/24 11:47	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			04/18/24 11:47	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			04/18/24 11:47	1
Toluene	ND		0.0010	0.00046	mg/L			04/18/24 11:47	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			04/18/24 11:47	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			04/18/24 11:47	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			04/18/24 11:47	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			04/18/24 11:47	1
Trichloroethene	ND		0.0010	0.00069	mg/L			04/18/24 11:47	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			04/18/24 11:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		47 - 122		04/18/24 11:47	1
Dibromofluoromethane (Surr)	112		52 - 138		04/18/24 11:47	1
1,2-Dichloroethane-d4 (Surr)	108		24 - 145		04/18/24 11:47	1
Toluene-d8 (Surr)	94		65 - 143		04/18/24 11:47	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

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

Lab Sample ID: MB 180-465701/7

Matrix: Water

Analysis Batch: 465701

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			04/18/24 11:01	1
Acrylonitrile	ND		0.020	0.0078	mg/L			04/18/24 11:01	1
Benzene	ND		0.0010	0.00060	mg/L			04/18/24 11:01	1
Bromoform	ND		0.0010	0.00098	mg/L			04/18/24 11:01	1
Bromomethane	ND		0.0010	0.00089	mg/L			04/18/24 11:01	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			04/18/24 11:01	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			04/18/24 11:01	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			04/18/24 11:01	1
Chloroethane	ND		0.0010	0.00090	mg/L			04/18/24 11:01	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			04/18/24 11:01	1
Chloroform	ND		0.0010	0.00060	mg/L			04/18/24 11:01	1
Chloromethane	ND		0.0010	0.00090	mg/L			04/18/24 11:01	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			04/18/24 11:01	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			04/18/24 11:01	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			04/18/24 11:01	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			04/18/24 11:01	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			04/18/24 11:01	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			04/18/24 11:01	1
1,4-Dioxane	ND		0.20	0.043	mg/L			04/18/24 11:01	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			04/18/24 11:01	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			04/18/24 11:01	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			04/18/24 11:01	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			04/18/24 11:01	1
Toluene	ND		0.0010	0.00046	mg/L			04/18/24 11:01	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			04/18/24 11:01	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			04/18/24 11:01	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			04/18/24 11:01	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			04/18/24 11:01	1
Trichloroethene	ND		0.0010	0.00069	mg/L			04/18/24 11:01	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			04/18/24 11:01	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		47 - 122		04/18/24 11:01	1
Dibromofluoromethane (Surr)	109		52 - 138		04/18/24 11:01	1
1,2-Dichloroethane-d4 (Surr)	109		24 - 145		04/18/24 11:01	1
Toluene-d8 (Surr)	93		65 - 143		04/18/24 11:01	1

Lab Sample ID: LCS 180-465701/4

Matrix: Water

Analysis Batch: 465701

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acrolein	0.0300	0.0292		mg/L		97	60 - 140
Acrylonitrile	0.100	0.0850		mg/L		85	60 - 140
Benzene	0.0100	0.00963		mg/L		96	65 - 135
Bromoform	0.0100	0.0123		mg/L		123	70 - 130
Bromomethane	0.0100	0.00952		mg/L		95	15 - 170
Carbon tetrachloride	0.0100	0.0110		mg/L		110	70 - 130

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

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

Lab Sample ID: LCS 180-465701/4

Matrix: Water

Analysis Batch: 465701

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorobenzene	0.0100	0.00986		mg/L		99	65 - 135
Chlorodibromomethane	0.0100	0.0102		mg/L		102	70 - 135
Chloroethane	0.0100	0.00859		mg/L		86	40 - 160
2-Chloroethyl vinyl ether	0.0200	0.0192		mg/L		96	10 - 170
Chloroform	0.0100	0.0111		mg/L		111	70 - 135
Chloromethane	0.0100	0.00530		mg/L		53	10 - 170
cis-1,3-Dichloropropene	0.0100	0.00914		mg/L		91	25 - 170
Dichlorobromomethane	0.0100	0.0103		mg/L		103	65 - 135
1,1-Dichloroethane	0.0100	0.00822		mg/L		82	70 - 130
1,2-Dichloroethane	0.0100	0.00842		mg/L		84	70 - 130
1,1-Dichloroethene	0.0100	0.0107		mg/L		107	50 - 150
1,2-Dichloropropane	0.0100	0.00832		mg/L		83	35 - 165
1,4-Dioxane	0.200	0.215		mg/L		108	10 - 152
Ethylbenzene	0.0100	0.0101		mg/L		101	60 - 140
Methylene Chloride	0.0100	0.0107		mg/L		107	60 - 140
1,1,2,2-Tetrachloroethane	0.0100	0.0110		mg/L		110	60 - 140
Tetrachloroethene	0.0100	0.0109		mg/L		109	70 - 130
Toluene	0.0100	0.00993		mg/L		99	70 - 130
trans-1,2-Dichloroethene	0.0100	0.00993		mg/L		99	70 - 130
trans-1,3-Dichloropropene	0.0100	0.0104		mg/L		104	50 - 150
1,1,1-Trichloroethane	0.0100	0.0114		mg/L		114	70 - 130
1,1,2-Trichloroethane	0.0100	0.0109		mg/L		109	70 - 130
Trichloroethene	0.0100	0.00984		mg/L		98	65 - 135
Vinyl chloride	0.0100	0.00746		mg/L		75	10 - 170

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		47 - 122
Dibromofluoromethane (Surr)	95		52 - 138
1,2-Dichloroethane-d4 (Surr)	96		24 - 145
Toluene-d8 (Surr)	103		65 - 143

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 180-466199/1-A

Matrix: Water

Analysis Batch: 466887

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 466199

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.0010	0.00024	mg/L		04/23/24 13:08	04/30/24 11:25	1
1,2-Dichlorobenzene	ND		0.0010	0.00021	mg/L		04/23/24 13:08	04/30/24 11:25	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.0010	0.00020	mg/L		04/23/24 13:08	04/30/24 11:25	1
1,3-Dinitrobenzene	ND		0.0010	0.00046	mg/L		04/23/24 13:08	04/30/24 11:25	1
1,4-Dichlorobenzene	ND		0.0010	0.00024	mg/L		04/23/24 13:08	04/30/24 11:25	1
2,2'-oxybis[1-chloropropane]	ND		0.00019	0.000058	mg/L		04/23/24 13:08	04/30/24 11:25	1
2,4,6-Trichlorophenol	ND		0.0010	0.00022	mg/L		04/23/24 13:08	04/30/24 11:25	1
2,4-Dichlorophenol	ND		0.00019	0.000051	mg/L		04/23/24 13:08	04/30/24 11:25	1
2,4-Dimethylphenol	ND		0.0010	0.00059	mg/L		04/23/24 13:08	04/30/24 11:25	1
2,4-Dinitrophenol	ND		0.010	0.0033	mg/L		04/23/24 13:08	04/30/24 11:25	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-466199/1-A

Matrix: Water

Analysis Batch: 466887

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 466199

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		0.0010	0.00035	mg/L		04/23/24 13:08	04/30/24 11:25	1
2,6-Dinitrotoluene	ND		0.0010	0.00017	mg/L		04/23/24 13:08	04/30/24 11:25	1
2-Chloronaphthalene	ND		0.00019	0.000059	mg/L		04/23/24 13:08	04/30/24 11:25	1
2-Chlorophenol	ND		0.0010	0.00023	mg/L		04/23/24 13:08	04/30/24 11:25	1
2-Nitrophenol	ND		0.0010	0.00019	mg/L		04/23/24 13:08	04/30/24 11:25	1
3,3'-Dichlorobenzidine	ND		0.0010	0.00058	mg/L		04/23/24 13:08	04/30/24 11:25	1
4,6-Dinitro-2-methylphenol	ND		0.0050	0.0015	mg/L		04/23/24 13:08	04/30/24 11:25	1
4-Bromophenyl phenyl ether	ND		0.0010	0.00032	mg/L		04/23/24 13:08	04/30/24 11:25	1
4-Chloro-3-methylphenol	ND		0.0010	0.00044	mg/L		04/23/24 13:08	04/30/24 11:25	1
4-Chlorophenyl phenyl ether	ND		0.0010	0.00022	mg/L		04/23/24 13:08	04/30/24 11:25	1
4-Nitrophenol	ND		0.0050	0.00094	mg/L		04/23/24 13:08	04/30/24 11:25	1
Acenaphthene	ND		0.00019	0.000065	mg/L		04/23/24 13:08	04/30/24 11:25	1
Acenaphthylene	ND		0.00019	0.000065	mg/L		04/23/24 13:08	04/30/24 11:25	1
Acrylamide	ND		0.050	0.021	mg/L		04/23/24 13:08	04/30/24 11:25	1
Anthracene	ND		0.00019	0.000049	mg/L		04/23/24 13:08	04/30/24 11:25	1
Benzidine	ND		0.020	0.0091	mg/L		04/23/24 13:08	04/30/24 11:25	1
Benzo[a]anthracene	ND		0.00019	0.000075	mg/L		04/23/24 13:08	04/30/24 11:25	1
Benzo[a]pyrene	ND		0.00019	0.000053	mg/L		04/23/24 13:08	04/30/24 11:25	1
Benzo[b]fluoranthene	ND		0.00019	0.000097	mg/L		04/23/24 13:08	04/30/24 11:25	1
Benzo[g,h,i]perylene	ND		0.00019	0.000069	mg/L		04/23/24 13:08	04/30/24 11:25	1
Benzo[k]fluoranthene	ND		0.00019	0.000088	mg/L		04/23/24 13:08	04/30/24 11:25	1
Bis(2-chloroethoxy)methane	ND		0.0010	0.00015	mg/L		04/23/24 13:08	04/30/24 11:25	1
Bis(2-chloroethyl)ether	ND		0.00019	0.000040	mg/L		04/23/24 13:08	04/30/24 11:25	1
Bis(2-ethylhexyl) phthalate	ND		0.010	0.0062	mg/L		04/23/24 13:08	04/30/24 11:25	1
Butyl benzyl phthalate	ND		0.0020	0.00094	mg/L		04/23/24 13:08	04/30/24 11:25	1
Chrysene	ND		0.00019	0.000081	mg/L		04/23/24 13:08	04/30/24 11:25	1
Dibenz(a,h)anthracene	ND		0.00019	0.000072	mg/L		04/23/24 13:08	04/30/24 11:25	1
Diethyl phthalate	ND		0.0010	0.00057	mg/L		04/23/24 13:08	04/30/24 11:25	1
Dimethyl phthalate	ND		0.0010	0.00020	mg/L		04/23/24 13:08	04/30/24 11:25	1
Di-n-butyl phthalate	ND		0.010	0.0049	mg/L		04/23/24 13:08	04/30/24 11:25	1
Di-n-octyl phthalate	ND		0.0010	0.00069	mg/L		04/23/24 13:08	04/30/24 11:25	1
Fluoranthene	ND		0.00019	0.000060	mg/L		04/23/24 13:08	04/30/24 11:25	1
Fluorene	ND		0.00019	0.000069	mg/L		04/23/24 13:08	04/30/24 11:25	1
Hexachlorobenzene	ND		0.00019	0.000056	mg/L		04/23/24 13:08	04/30/24 11:25	1
Hexachlorobutadiene	ND		0.00019	0.000069	mg/L		04/23/24 13:08	04/30/24 11:25	1
Hexachlorocyclopentadiene	ND		0.0010	0.00050	mg/L		04/23/24 13:08	04/30/24 11:25	1
Hexachloroethane	ND		0.0010	0.00013	mg/L		04/23/24 13:08	04/30/24 11:25	1
Indeno[1,2,3-cd]pyrene	ND		0.00019	0.000085	mg/L		04/23/24 13:08	04/30/24 11:25	1
Isophorone	ND		0.0010	0.00019	mg/L		04/23/24 13:08	04/30/24 11:25	1
Naphthalene	ND		0.00019	0.000059	mg/L		04/23/24 13:08	04/30/24 11:25	1
Nitrobenzene	ND		0.0020	0.00050	mg/L		04/23/24 13:08	04/30/24 11:25	1
N-Nitrosodimethylamine	ND		0.0010	0.00026	mg/L		04/23/24 13:08	04/30/24 11:25	1
N-Nitrosodi-n-propylamine	ND		0.00019	0.000071	mg/L		04/23/24 13:08	04/30/24 11:25	1
N-Nitrosodiphenylamine	ND		0.0010	0.00012	mg/L		04/23/24 13:08	04/30/24 11:25	1
Pentachlorophenol	ND		0.0050	0.00085	mg/L		04/23/24 13:08	04/30/24 11:25	1
Phenanthrene	ND		0.00019	0.00016	mg/L		04/23/24 13:08	04/30/24 11:25	1
Phenol	ND		0.0010	0.00049	mg/L		04/23/24 13:08	04/30/24 11:25	1
Pyrene	ND		0.00019	0.000054	mg/L		04/23/24 13:08	04/30/24 11:25	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-466199/1-A

Matrix: Water

Analysis Batch: 466887

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 466199

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	71		42 - 115	04/23/24 13:08	04/30/24 11:25	1
2-Fluorobiphenyl	84		47 - 107	04/23/24 13:08	04/30/24 11:25	1
2-Fluorophenol (Surr)	98		54 - 109	04/23/24 13:08	04/30/24 11:25	1
Nitrobenzene-d5 (Surr)	97		47 - 110	04/23/24 13:08	04/30/24 11:25	1
Phenol-d5 (Surr)	102		37 - 110	04/23/24 13:08	04/30/24 11:25	1
Terphenyl-d14 (Surr)	88		32 - 115	04/23/24 13:08	04/30/24 11:25	1

Lab Sample ID: LCS 180-466199/2-A

Matrix: Water

Analysis Batch: 466779

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 466199

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	0.0100	0.00703		mg/L		70	52 - 142
1,2-Dichlorobenzene	0.0100	0.00746		mg/L		75	50 - 100
1,2-Diphenylhydrazine(as Azobenzene)	0.0100	0.00757		mg/L		76	40 - 116
1,3-Dinitrobenzene	0.0100	0.00780		mg/L		78	54 - 100
1,4-Dichlorobenzene	0.0100	0.00753		mg/L		75	57 - 100
2,2'-oxybis[1-chloropropane]	0.0100	0.00783		mg/L		78	36 - 150
2,4,6-Trichlorophenol	0.0100	0.00761		mg/L		76	37 - 144
2,4-Dichlorophenol	0.0100	0.00756		mg/L		76	39 - 135
2,4-Dimethylphenol	0.0100	0.00670		mg/L		67	32 - 120
2,4-Dinitrophenol	0.0200	0.0128		mg/L		64	10 - 150
2,4-Dinitrotoluene	0.0100	0.00809		mg/L		81	39 - 139
2,6-Dinitrotoluene	0.0100	0.00792		mg/L		79	50 - 150
2-Chloronaphthalene	0.0100	0.00703		mg/L		70	60 - 120
2-Chlorophenol	0.0100	0.00797		mg/L		80	23 - 134
2-Nitrophenol	0.0100	0.00796		mg/L		80	57 - 150
3,3'-Dichlorobenzidine	0.0100	0.00715		mg/L		71	44 - 150
4,6-Dinitro-2-methylphenol	0.0200	0.0140		mg/L		70	43 - 150
4-Bromophenyl phenyl ether	0.0100	0.00702		mg/L		70	53 - 127
4-Chloro-3-methylphenol	0.0100	0.00827		mg/L		83	54 - 147
4-Chlorophenyl phenyl ether	0.0100	0.00707		mg/L		71	25 - 150
4-Nitrophenol	0.0200	0.0155		mg/L		77	10 - 132
Acenaphthene	0.0100	0.00705		mg/L		71	47 - 145
Acenaphthylene	0.0100	0.00762		mg/L		76	33 - 145
Anthracene	0.0100	0.00732		mg/L		73	27 - 133
Benzidine	0.0100	ND		mg/L		49	5 - 100
Benzo[a]anthracene	0.0100	0.00738		mg/L		74	33 - 143
Benzo[a]pyrene	0.0100	0.00728		mg/L		73	17 - 150
Benzo[b]fluoranthene	0.0100	0.00620		mg/L		62	24 - 150
Benzo[g,h,i]perylene	0.0100	0.00685		mg/L		69	10 - 150
Benzo[k]fluoranthene	0.0100	0.00669		mg/L		67	11 - 150
Bis(2-chloroethoxy)methane	0.0100	0.00733		mg/L		73	33 - 150
Bis(2-chloroethyl)ether	0.0100	0.00785		mg/L		78	12 - 150
Bis(2-ethylhexyl) phthalate	0.0100	0.00768	J	mg/L		77	10 - 150
Butyl benzyl phthalate	0.0100	0.00806		mg/L		81	10 - 150
Chrysene	0.0100	0.00701		mg/L		70	17 - 150
Dibenz(a,h)anthracene	0.0100	0.00690		mg/L		69	10 - 150

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-466199/2-A

Matrix: Water

Analysis Batch: 466779

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 466199

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diethyl phthalate	0.0100	0.00769		mg/L		77	10 - 120
Dimethyl phthalate	0.0100	0.00762		mg/L		76	10 - 120
Di-n-butyl phthalate	0.0100	0.00809	J	mg/L		81	10 - 120
Di-n-octyl phthalate	0.0100	0.00806		mg/L		81	10 - 146
Fluoranthene	0.0100	0.00762		mg/L		76	26 - 137
Fluorene	0.0100	0.00717		mg/L		72	59 - 121
Hexachlorobenzene	0.0100	0.00684		mg/L		68	10 - 150
Hexachlorobutadiene	0.0100	0.00713		mg/L		71	24 - 120
Hexachlorocyclopentadiene	0.0100	0.00568		mg/L		57	37 - 121
Hexachloroethane	0.0100	0.00762		mg/L		76	40 - 120
Indeno[1,2,3-cd]pyrene	0.0100	0.00758		mg/L		76	10 - 150
Isophorone	0.0100	0.00800		mg/L		80	21 - 150
Naphthalene	0.0100	0.00691		mg/L		69	21 - 133
Nitrobenzene	0.0100	0.00739		mg/L		74	35 - 150
N-Nitrosodimethylamine	0.0100	0.00774		mg/L		77	50 - 109
N-Nitrosodi-n-propylamine	0.0100	0.00878		mg/L		88	10 - 150
N-Nitrosodiphenylamine	0.0100	0.00703		mg/L		70	51 - 100
Pentachlorophenol	0.0200	0.0137		mg/L		68	14 - 150
Phenanthrene	0.0100	0.00682		mg/L		68	54 - 120
Phenol	0.0100	0.00740		mg/L		74	10 - 120
Pyrene	0.0100	0.00717		mg/L		72	52 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	64		42 - 115
2-Fluorobiphenyl	66		47 - 107
2-Fluorophenol (Surr)	74		54 - 109
Nitrobenzene-d5 (Surr)	73		47 - 110
Phenol-d5 (Surr)	74		37 - 110
Terphenyl-d14 (Surr)	55		32 - 115

Lab Sample ID: LCSD 180-466199/3-A

Matrix: Water

Analysis Batch: 466779

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 466199

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	0.0100	0.00724		mg/L		72	52 - 142	3	16
1,2-Dichlorobenzene	0.0100	0.00746		mg/L		75	50 - 100	0	15
1,2-Diphenylhydrazine(as Azobenzene)	0.0100	0.00786		mg/L		79	40 - 116	4	19
1,3-Dinitrobenzene	0.0100	0.00779		mg/L		78	54 - 100	0	15
1,4-Dichlorobenzene	0.0100	0.00740		mg/L		74	57 - 100	2	15
2,2'-oxybis[1-chloropropane]	0.0100	0.00804		mg/L		80	36 - 150	3	35
2,4,6-Trichlorophenol	0.0100	0.00760		mg/L		76	37 - 144	0	35
2,4-Dichlorophenol	0.0100	0.00781		mg/L		78	39 - 135	3	35
2,4-Dimethylphenol	0.0100	0.00685		mg/L		68	32 - 120	2	35
2,4-Dinitrophenol	0.0200	0.0129		mg/L		65	10 - 150	1	35
2,4-Dinitrotoluene	0.0100	0.00823		mg/L		82	39 - 139	2	35
2,6-Dinitrotoluene	0.0100	0.00789		mg/L		79	50 - 150	0	35
2-Chloronaphthalene	0.0100	0.00704		mg/L		70	60 - 120	0	24

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 180-466199/3-A

Matrix: Water

Analysis Batch: 466779

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 466199

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Chlorophenol	0.0100	0.00810		mg/L		81	23 - 134	2	34
2-Nitrophenol	0.0100	0.00841		mg/L		84	57 - 150	5	17
3,3'-Dichlorobenzidine	0.0100	0.00730		mg/L		73	44 - 150	2	19
4,6-Dinitro-2-methylphenol	0.0200	0.0144		mg/L		72	43 - 150	2	21
4-Bromophenyl phenyl ether	0.0100	0.00717		mg/L		72	53 - 127	2	20
4-Chloro-3-methylphenol	0.0100	0.00841		mg/L		84	54 - 147	2	35
4-Chlorophenyl phenyl ether	0.0100	0.00710		mg/L		71	25 - 150	0	35
4-Nitrophenol	0.0200	0.0155		mg/L		78	10 - 132	1	35
Acenaphthene	0.0100	0.00716		mg/L		72	47 - 145	2	35
Acenaphthylene	0.0100	0.00770		mg/L		77	33 - 145	1	35
Anthracene	0.0100	0.00772		mg/L		77	27 - 133	5	35
Benzidine	0.0100	ND		mg/L		50	5 - 100	3	35
Benzo[a]anthracene	0.0100	0.00783		mg/L		78	33 - 143	6	35
Benzo[a]pyrene	0.0100	0.00764		mg/L		76	17 - 150	5	35
Benzo[b]fluoranthene	0.0100	0.00657		mg/L		66	24 - 150	6	35
Benzo[g,h,i]perylene	0.0100	0.00727		mg/L		73	10 - 150	6	35
Benzo[k]fluoranthene	0.0100	0.00717		mg/L		72	11 - 150	7	35
Bis(2-chloroethoxy)methane	0.0100	0.00781		mg/L		78	33 - 150	6	35
Bis(2-chloroethyl)ether	0.0100	0.00785		mg/L		79	12 - 150	0	35
Bis(2-ethylhexyl) phthalate	0.0100	0.00827	J	mg/L		83	10 - 150	7	35
Butyl benzyl phthalate	0.0100	0.00846		mg/L		85	10 - 150	5	35
Chrysene	0.0100	0.00754		mg/L		75	17 - 150	7	35
Dibenz(a,h)anthracene	0.0100	0.00733		mg/L		73	10 - 150	6	35
Diethyl phthalate	0.0100	0.00777		mg/L		78	10 - 120	1	35
Dimethyl phthalate	0.0100	0.00764		mg/L		76	10 - 120	0	35
Di-n-butyl phthalate	0.0100	0.00848	J	mg/L		85	10 - 120	5	35
Di-n-octyl phthalate	0.0100	0.00839		mg/L		84	10 - 146	4	35
Fluoranthene	0.0100	0.00790		mg/L		79	26 - 137	4	35
Fluorene	0.0100	0.00720		mg/L		72	59 - 121	0	35
Hexachlorobenzene	0.0100	0.00706		mg/L		71	10 - 150	3	35
Hexachlorobutadiene	0.0100	0.00758		mg/L		76	24 - 120	6	35
Hexachlorocyclopentadiene	0.0100	0.00549		mg/L		55	37 - 121	3	15
Hexachloroethane	0.0100	0.00757		mg/L		76	40 - 120	1	35
Indeno[1,2,3-cd]pyrene	0.0100	0.00792		mg/L		79	10 - 150	4	35
Isophorone	0.0100	0.00820		mg/L		82	21 - 150	2	35
Naphthalene	0.0100	0.00713		mg/L		71	21 - 133	3	35
Nitrobenzene	0.0100	0.00781		mg/L		78	35 - 150	5	35
N-Nitrosodimethylamine	0.0100	0.00786		mg/L		79	50 - 109	1	19
N-Nitrosodi-n-propylamine	0.0100	0.00890		mg/L		89	10 - 150	1	35
N-Nitrosodiphenylamine	0.0100	0.00732		mg/L		73	51 - 100	4	20
Pentachlorophenol	0.0200	0.0147		mg/L		73	14 - 150	7	35
Phenanthrene	0.0100	0.00704		mg/L		70	54 - 120	3	35
Phenol	0.0100	0.00739		mg/L		74	10 - 120	0	35
Pyrene	0.0100	0.00757		mg/L		76	52 - 120	5	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	70		42 - 115
2-Fluorobiphenyl	66		47 - 107

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 180-466199/3-A

Matrix: Water

Analysis Batch: 466779

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 466199

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorophenol (Surr)	73		54 - 109
Nitrobenzene-d5 (Surr)	77		47 - 110
Phenol-d5 (Surr)	77		37 - 110
Terphenyl-d14 (Surr)	57		32 - 115

Method: EPA 608.3 - Organochlorine Pesticides in Water

Lab Sample ID: MB 180-465699/1-A

Matrix: Water

Analysis Batch: 466544

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 465699

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000013	0.0000003	mg/L		04/18/24 06:48	04/26/24 12:24	1
alpha-BHC	ND		0.0000013	0.0000002	mg/L		04/18/24 06:48	04/26/24 12:24	1
beta-BHC	ND		0.0000013	0.0000003	mg/L		04/18/24 06:48	04/26/24 12:24	1
gamma-BHC (Lindane)	ND		0.0000013	0.0000002	mg/L		04/18/24 06:48	04/26/24 12:24	1
delta-BHC	ND		0.0000013	0.0000006	mg/L		04/18/24 06:48	04/26/24 12:24	1
Chlordane (technical)	ND		0.000013	0.0000073	mg/L		04/18/24 06:48	04/26/24 12:24	1
4,4'-DDD	ND		0.0000013	0.0000005	mg/L		04/18/24 06:48	04/26/24 12:24	1
4,4'-DDE	ND		0.0000013	0.0000003	mg/L		04/18/24 06:48	04/26/24 12:24	1
4,4'-DDT	ND		0.0000013	0.0000006	mg/L		04/18/24 06:48	04/26/24 12:24	1
Dieldrin	ND		0.0000013	0.0000002	mg/L		04/18/24 06:48	04/26/24 12:24	1
Endosulfan I	ND		0.0000013	0.0000006	mg/L		04/18/24 06:48	04/26/24 12:24	1
Endosulfan II	ND		0.0000013	0.0000003	mg/L		04/18/24 06:48	04/26/24 12:24	1
Endosulfan sulfate	ND		0.0000013	0.0000006	mg/L		04/18/24 06:48	04/26/24 12:24	1
Endrin	ND		0.0000013	0.0000002	mg/L		04/18/24 06:48	04/26/24 12:24	1
Endrin aldehyde	ND		0.0000013	0.0000005	mg/L		04/18/24 06:48	04/26/24 12:24	1
Heptachlor	ND		0.0000013	0.0000004	mg/L		04/18/24 06:48	04/26/24 12:24	1
Heptachlor epoxide	ND		0.0000013	0.0000003	mg/L		04/18/24 06:48	04/26/24 12:24	1
Toxaphene	ND		0.00010	0.000049	mg/L		04/18/24 06:48	04/26/24 12:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	65		20 - 138	04/18/24 06:48	04/26/24 12:24	1
Tetrachloro-m-xylene (Surr)	81		20 - 138	04/18/24 06:48	04/26/24 12:24	1
DCB Decachlorobiphenyl (Surr)	41	S1-	43 - 143	04/18/24 06:48	04/26/24 12:24	1
DCB Decachlorobiphenyl (Surr)	80		43 - 143	04/18/24 06:48	04/26/24 12:24	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Method: EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: LCS 180-465699/4-A

Matrix: Water

Analysis Batch: 466544

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 465699

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aldrin	0.0000250	0.0000175		mg/L		70	42 - 140
alpha-BHC	0.0000250	0.0000161		mg/L		64	37 - 140
beta-BHC	0.0000250	0.0000168		mg/L		67	17 - 147
gamma-BHC (Lindane)	0.0000250	0.0000165		mg/L		66	32 - 140
delta-BHC	0.0000250	0.0000125		mg/L		50	19 - 140
4,4'-DDD	0.0000250	0.0000165		mg/L		66	31 - 141
4,4'-DDE	0.0000250	0.0000186		mg/L		74	30 - 145
4,4'-DDT	0.0000250	0.0000153		mg/L		61	25 - 150
Dieldrin	0.0000250	0.0000188		mg/L		75	36 - 146
Endosulfan I	0.0000250	0.0000168		mg/L		67	45 - 150
Endosulfan II	0.0000250	0.0000157		mg/L		63	10 - 150
Endosulfan sulfate	0.0000250	0.0000171		mg/L		68	26 - 144
Endrin	0.0000250	0.0000197		mg/L		79	30 - 147
Endrin aldehyde	0.0000250	0.0000207		mg/L		83	51 - 113
Heptachlor	0.0000250	0.0000169		mg/L		68	34 - 140
Heptachlor epoxide	0.0000250	0.0000177		mg/L		71	37 - 142

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene (Surr)	78		20 - 138
Tetrachloro-m-xylene (Surr)	103		20 - 138
DCB Decachlorobiphenyl (Surr)	50		43 - 143
DCB Decachlorobiphenyl (Surr)	108		43 - 143

Lab Sample ID: LCSD 180-465699/5-A

Matrix: Water

Analysis Batch: 466544

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 465699

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Aldrin	0.0000250	0.0000210		mg/L		84	42 - 140	19	35
alpha-BHC	0.0000250	0.0000189		mg/L		76	37 - 140	16	35
beta-BHC	0.0000250	0.0000197		mg/L		79	17 - 147	16	35
gamma-BHC (Lindane)	0.0000250	0.0000190		mg/L		76	32 - 140	14	35
delta-BHC	0.0000250	0.0000143		mg/L		57	19 - 140	13	35
4,4'-DDD	0.0000250	0.0000193		mg/L		77	31 - 141	15	35
4,4'-DDE	0.0000250	0.0000220		mg/L		88	30 - 145	17	35
4,4'-DDT	0.0000250	0.0000181		mg/L		72	25 - 150	16	35
Dieldrin	0.0000250	0.0000223		mg/L		89	36 - 146	17	35
Endosulfan I	0.0000250	0.0000204		mg/L		82	45 - 150	19	28
Endosulfan II	0.0000250	0.0000196		mg/L		79	10 - 150	23	35
Endosulfan sulfate	0.0000250	0.0000195		mg/L		78	26 - 144	13	35
Endrin	0.0000250	0.0000234		mg/L		94	30 - 147	17	35
Endrin aldehyde	0.0000250	0.0000240		mg/L		96	51 - 113	15	26
Heptachlor	0.0000250	0.0000200		mg/L		80	34 - 140	17	35
Heptachlor epoxide	0.0000250	0.0000213		mg/L		85	37 - 142	18	26

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene (Surr)	87		20 - 138
Tetrachloro-m-xylene (Surr)	112		20 - 138

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Method: EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: LCSD 180-465699/5-A
Matrix: Water
Analysis Batch: 466544

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 465699

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	56		43 - 143
DCB Decachlorobiphenyl (Surr)	107		43 - 143

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

Lab Sample ID: MB 180-465699/1-A
Matrix: Water
Analysis Batch: 465834

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 465699

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Result	Qualifier								
PCB-1016	ND		0.000010	0.0000048	mg/L		04/18/24 06:48	04/19/24 05:44	1
PCB-1221	ND		0.000010	0.0000057	mg/L		04/18/24 06:48	04/19/24 05:44	1
PCB-1232	ND		0.000010	0.0000052	mg/L		04/18/24 06:48	04/19/24 05:44	1
PCB-1242	ND		0.000010	0.0000091	mg/L		04/18/24 06:48	04/19/24 05:44	1
PCB-1248	ND		0.000010	0.0000030	mg/L		04/18/24 06:48	04/19/24 05:44	1
PCB-1254	ND		0.000010	0.0000095	mg/L		04/18/24 06:48	04/19/24 05:44	1
PCB-1260	ND		0.000010	0.0000039	mg/L		04/18/24 06:48	04/19/24 05:44	1

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
Tetrachloro-m-xylene (Surr)	92		20 - 138	04/18/24 06:48	04/19/24 05:44	1			
Tetrachloro-m-xylene (Surr)	92		20 - 138	04/18/24 06:48	04/19/24 05:44	1			
DCB Decachlorobiphenyl (Surr)	111		43 - 143	04/18/24 06:48	04/19/24 05:44	1			
DCB Decachlorobiphenyl (Surr)	98		43 - 143	04/18/24 06:48	04/19/24 05:44	1			

Lab Sample ID: LCS 180-465699/2-A
Matrix: Water
Analysis Batch: 465834

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 465699

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	Limits	
Added	Result	Qualifier							
PCB-1016	0.00100	0.000956		mg/L		96		50 - 140	
PCB-1260	0.00100	0.000869		mg/L		87		10 - 140	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene (Surr)	107		20 - 138
Tetrachloro-m-xylene (Surr)	107		20 - 138
DCB Decachlorobiphenyl (Surr)	114		43 - 143
DCB Decachlorobiphenyl (Surr)	108		43 - 143

Lab Sample ID: LCSD 180-465699/3-A
Matrix: Water
Analysis Batch: 465834

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 465699

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	Limits	RPD	RPD
Added	Result	Qualifier								Limit
PCB-1016	0.00100	0.000872		mg/L		87		50 - 140	9	35
PCB-1260	0.00100	0.000793		mg/L		79		10 - 140	9	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene (Surr)	101		20 - 138

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

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

Lab Sample ID: LCSD 180-465699/3-A

Matrix: Water

Analysis Batch: 465834

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 465699

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene (Surr)	99		20 - 138
DCB Decachlorobiphenyl (Surr)	110		43 - 143
DCB Decachlorobiphenyl (Surr)	100		43 - 143

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-465742/53

Matrix: Water

Analysis Batch: 465742

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			04/19/24 02:59	1
Chloride	ND		1.00	0.712	mg/L			04/19/24 02:59	1
Fluoride	ND		0.100	0.0260	mg/L			04/19/24 02:59	1
Sulfate	ND		1.00	0.756	mg/L			04/19/24 02:59	1

Lab Sample ID: MB 180-465742/6

Matrix: Water

Analysis Batch: 465742

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			04/18/24 12:00	1
Chloride	ND		1.00	0.712	mg/L			04/18/24 12:00	1
Fluoride	ND		0.100	0.0260	mg/L			04/18/24 12:00	1
Sulfate	ND		1.00	0.756	mg/L			04/18/24 12:00	1

Lab Sample ID: LCS 180-465742/54

Matrix: Water

Analysis Batch: 465742

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	10.0	10.74		mg/L		107	90 - 110
Chloride	50.0	52.34		mg/L		105	90 - 110
Fluoride	2.50	2.682		mg/L		107	90 - 110
Sulfate	50.0	51.79		mg/L		104	90 - 110

Lab Sample ID: LCS 180-465742/7

Matrix: Water

Analysis Batch: 465742

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	10.0	10.57		mg/L		106	90 - 110
Chloride	50.0	51.65		mg/L		103	90 - 110
Fluoride	2.50	2.629		mg/L		105	90 - 110
Sulfate	50.0	51.12		mg/L		102	90 - 110

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS)

Lab Sample ID: MB 180-465879/1-A
Matrix: Water
Analysis Batch: 466272

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 465879

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.030	0.019	mg/L		04/20/24 07:25	04/23/24 15:17	1
Antimony	ND		0.0020	0.0018	mg/L		04/20/24 07:25	04/23/24 15:17	1
Arsenic	ND		0.0010	0.00030	mg/L		04/20/24 07:25	04/23/24 15:17	1
Barium	ND		0.010	0.0019	mg/L		04/20/24 07:25	04/23/24 15:17	1
Beryllium	ND		0.0010	0.00025	mg/L		04/20/24 07:25	04/23/24 15:17	1
Boron	ND		0.080	0.063	mg/L		04/20/24 07:25	04/23/24 15:17	1
Cadmium	ND		0.0010	0.00034	mg/L		04/20/24 07:25	04/23/24 15:17	1
Calcium	ND		0.50	0.18	mg/L		04/20/24 07:25	04/23/24 15:17	1
Chromium	ND		0.0020	0.0012	mg/L		04/20/24 07:25	04/23/24 15:17	1
Cobalt	ND		0.00050	0.00010	mg/L		04/20/24 07:25	04/23/24 15:17	1
Copper	ND		0.0020	0.0016	mg/L		04/20/24 07:25	04/23/24 15:17	1
Iron	ND		0.050	0.041	mg/L		04/20/24 07:25	04/23/24 15:17	1
Lead	ND		0.0010	0.00061	mg/L		04/20/24 07:25	04/23/24 15:17	1
Magnesium	ND		0.50	0.070	mg/L		04/20/24 07:25	04/23/24 15:17	1
Manganese	ND		0.0050	0.0022	mg/L		04/20/24 07:25	04/23/24 15:17	1
Molybdenum	ND		0.0050	0.00070	mg/L		04/20/24 07:25	04/23/24 15:17	1
Nickel	ND		0.0010	0.00039	mg/L		04/20/24 07:25	04/23/24 15:17	1
Selenium	ND		0.0050	0.0012	mg/L		04/20/24 07:25	04/23/24 15:17	1
Silver	ND		0.0010	0.00079	mg/L		04/20/24 07:25	04/23/24 15:17	1
Thallium	ND		0.0010	0.00069	mg/L		04/20/24 07:25	04/23/24 15:17	1
Zinc	ND		0.015	0.0091	mg/L		04/20/24 07:25	04/23/24 15:17	1

Lab Sample ID: LCS 180-465879/2-A
Matrix: Water
Analysis Batch: 466272

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 465879

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	5.00	4.95		mg/L		99	85 - 115
Antimony	0.250	0.269		mg/L		108	85 - 115
Arsenic	1.00	1.01		mg/L		101	85 - 115
Barium	1.00	0.978		mg/L		98	85 - 115
Beryllium	0.500	0.498		mg/L		100	85 - 115
Boron	0.250	0.255		mg/L		102	85 - 115
Cadmium	0.500	0.487		mg/L		97	85 - 115
Calcium	25.0	26.2		mg/L		105	85 - 115
Chromium	0.500	0.487		mg/L		97	85 - 115
Cobalt	0.500	0.493		mg/L		99	85 - 115
Copper	0.500	0.488		mg/L		98	85 - 115
Iron	5.00	5.10		mg/L		102	85 - 115
Lead	0.500	0.504		mg/L		101	85 - 115
Magnesium	25.0	24.9		mg/L		100	85 - 115
Manganese	0.500	0.496		mg/L		99	85 - 115
Molybdenum	0.500	0.510		mg/L		102	85 - 115
Nickel	0.500	0.487		mg/L		97	85 - 115
Selenium	1.00	1.10		mg/L		110	85 - 115
Silver	0.250	0.230		mg/L		92	85 - 115
Thallium	1.00	1.01		mg/L		101	85 - 115
Zinc	0.250	0.248		mg/L		99	85 - 115

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-172533-2 MS

Matrix: Water

Analysis Batch: 466272

Client Sample ID: 101

Prep Type: Total Recoverable

Prep Batch: 465879

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	0.080		5.00	4.86		mg/L		96	70 - 130
Antimony	ND		0.250	0.274		mg/L		110	70 - 130
Arsenic	0.00039	J	1.00	1.03		mg/L		103	70 - 130
Barium	0.035		1.00	1.02		mg/L		98	70 - 130
Beryllium	ND		0.500	0.484		mg/L		97	70 - 130
Boron	ND		0.250	0.271		mg/L		108	70 - 130
Cadmium	ND		0.500	0.470		mg/L		94	70 - 130
Calcium	23		25.0	47.5		mg/L		99	70 - 130
Chromium	0.0023		0.500	0.460		mg/L		91	70 - 130
Cobalt	0.00027	J	0.500	0.496		mg/L		99	70 - 130
Copper	0.0018	J	0.500	0.490		mg/L		98	70 - 130
Iron	0.11		5.00	5.14		mg/L		101	70 - 130
Lead	ND		0.500	0.505		mg/L		101	70 - 130
Magnesium	5.1		25.0	28.8		mg/L		95	70 - 130
Manganese	0.18		0.500	0.662		mg/L		96	70 - 130
Molybdenum	0.0040	J	0.500	0.522		mg/L		104	70 - 130
Nickel	0.0068		0.500	0.482		mg/L		95	70 - 130
Selenium	ND		1.00	0.983		mg/L		98	70 - 130
Silver	ND		0.250	0.224		mg/L		90	70 - 130
Thallium	ND		1.00	1.01		mg/L		101	70 - 130
Zinc	0.042		0.250	0.279		mg/L		95	70 - 130

Lab Sample ID: 180-172533-2 MSD

Matrix: Water

Analysis Batch: 466272

Client Sample ID: 101

Prep Type: Total Recoverable

Prep Batch: 465879

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Aluminum	0.080		5.00	4.94		mg/L		97	70 - 130	2	20
Antimony	ND		0.250	0.279		mg/L		112	70 - 130	2	20
Arsenic	0.00039	J	1.00	1.04		mg/L		104	70 - 130	1	20
Barium	0.035		1.00	1.02		mg/L		99	70 - 130	1	20
Beryllium	ND		0.500	0.491		mg/L		98	70 - 130	1	20
Boron	ND		0.250	0.290		mg/L		116	70 - 130	7	20
Cadmium	ND		0.500	0.472		mg/L		94	70 - 130	1	20
Calcium	23		25.0	49.1		mg/L		106	70 - 130	3	20
Chromium	0.0023		0.500	0.474		mg/L		94	70 - 130	3	20
Cobalt	0.00027	J	0.500	0.505		mg/L		101	70 - 130	2	20
Copper	0.0018	J	0.500	0.498		mg/L		99	70 - 130	2	20
Iron	0.11		5.00	5.16		mg/L		101	70 - 130	0	20
Lead	ND		0.500	0.509		mg/L		102	70 - 130	1	20
Magnesium	5.1		25.0	29.4		mg/L		97	70 - 130	2	20
Manganese	0.18		0.500	0.677		mg/L		99	70 - 130	2	20
Molybdenum	0.0040	J	0.500	0.535		mg/L		106	70 - 130	3	20
Nickel	0.0068		0.500	0.486		mg/L		96	70 - 130	1	20
Selenium	ND		1.00	0.990		mg/L		99	70 - 130	1	20
Silver	ND		0.250	0.229		mg/L		92	70 - 130	2	20
Thallium	ND		1.00	1.02		mg/L		102	70 - 130	0	20
Zinc	0.042		0.250	0.286		mg/L		98	70 - 130	3	20

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Method: EPA 245.1 Rev. - Mercury (CVAA)

Lab Sample ID: MB 180-466442/1-A
Matrix: Water
Analysis Batch: 466639

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 466442

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		04/25/24 08:53	04/26/24 09:54	1

Lab Sample ID: LCS 180-466442/2-A
Matrix: Water
Analysis Batch: 466639

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 466442

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00250	0.00268		mg/L		107	85 - 115

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

Lab Sample ID: MB 180-465782/3
Matrix: Water
Analysis Batch: 465782

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0060	mg/L			04/17/24 15:46	1

Lab Sample ID: LCS 180-465782/4
Matrix: Water
Analysis Batch: 465782

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	0.500	0.485		mg/L		97	85 - 115

Lab Sample ID: 180-172533-2 MS
Matrix: Water
Analysis Batch: 465782

Client Sample ID: 101
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	ND		0.500	0.482		mg/L		96	85 - 115

Lab Sample ID: 180-172533-2 MSD
Matrix: Water
Analysis Batch: 465782

Client Sample ID: 101
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cr (VI)	ND		0.500	0.478		mg/L		96	85 - 115	1	20

Method: 4500 H+ B-2000 - pH - SM Online, 2011

Lab Sample ID: LCS 180-466240/1
Matrix: Water
Analysis Batch: 466240

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		99	99 - 101

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Method: 4500 H+ B-2000 - pH - SM Online, 2011 (Continued)

Lab Sample ID: LCS 180-466240/24

Matrix: Water

Analysis Batch: 466240

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		99	99 - 101

Lab Sample ID: LCS 180-466274/1

Matrix: Water

Analysis Batch: 466274

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Method: 4500 S2 F-2011 - Sulfide, Total

Lab Sample ID: MB 180-466374/4

Matrix: Water

Analysis Batch: 466374

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		3.0	1.3	mg/L			04/24/24 16:59	1

Lab Sample ID: LCS 180-466374/3

Matrix: Water

Analysis Batch: 466374

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	18.9	19.1		mg/L		101	90 - 110

Lab Sample ID: 180-172533-1 MS

Matrix: Water

Analysis Batch: 466374

Client Sample ID: 201

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	1.6	J	18.9	19.9		mg/L		97	75 - 125

Lab Sample ID: 180-172533-1 MSD

Matrix: Water

Analysis Batch: 466374

Client Sample ID: 201

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Sulfide	1.6	J	18.9	20.2		mg/L		99	75 - 125	2	20

Method: 5310 C-2014 - Total Organic Carbon/Persulfate - Ultrav

Lab Sample ID: MB 180-466193/5

Matrix: Water

Analysis Batch: 466193

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Quad	ND		1.0	0.51	mg/L			04/22/24 16:45	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Method: 5310 C-2014 - Total Organic Carbon/Persulfate - Ultrav (Continued)

Lab Sample ID: LCS 180-466193/4
Matrix: Water
Analysis Batch: 466193

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon - Quad	20.0	18.9		mg/L		95	85 - 115

Lab Sample ID: 180-172533-1 MS
Matrix: Water
Analysis Batch: 466193

Client Sample ID: 201
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon - Quad	28	FL	10.0	35.9	FL	mg/L		81	85 - 115

Lab Sample ID: 180-172533-2 DU
Matrix: Water
Analysis Batch: 466193

Client Sample ID: 101
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Organic Carbon - Quad	13		12.7		mg/L		1	15

Method: 5540C - 2011 - Methylene Blue Active Substant (MBAS)

Lab Sample ID: MB 180-466241/2
Matrix: Water
Analysis Batch: 466241

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Blue Active Substances	ND		0.050	0.049	mg/l LAS MW 340			04/18/24 16:55	1

Lab Sample ID: LCS 180-466241/3
Matrix: Water
Analysis Batch: 466241

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methylene Blue Active Substances	0.500	0.488		mg/l LAS MW 340		98	90 - 110

Lab Sample ID: 180-172533-1 MS
Matrix: Water
Analysis Batch: 466241

Client Sample ID: 201
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Methylene Blue Active Substances	0.12		0.500	0.721		mg/l LAS MW 340		121	75 - 125

Lab Sample ID: 180-172533-1 DU
Matrix: Water
Analysis Batch: 466241

Client Sample ID: 201
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Methylene Blue Active Substances	0.12		0.117		mg/l LAS MW 340		0	20

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Method: EPA 1664B - HEM and SGT-HEM

Lab Sample ID: MB 180-465712/1-A

Matrix: Water

Analysis Batch: 465721

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 465712

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		5.0	4.3	mg/L		04/18/24 07:33	04/18/24 08:14	1

Lab Sample ID: LCS 180-465712/2-A

Matrix: Water

Analysis Batch: 465721

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 465712

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HEM (Oil & Grease)	40.3	35.4		mg/L		88	78 - 114

Lab Sample ID: LCSD 180-465712/3-A

Matrix: Water

Analysis Batch: 465721

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 465712

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HEM (Oil & Grease)	40.3	33.8		mg/L		84	78 - 114	5	18

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-465776/49

Matrix: Water

Analysis Batch: 465776

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.10	0.088	mg/L			04/18/24 11:50	1

Lab Sample ID: LCS 180-465776/53

Matrix: Water

Analysis Batch: 465776

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	0.500	0.477		mg/L		95	90 - 110

Lab Sample ID: 180-172533-3 MS

Matrix: Water

Analysis Batch: 465776

Client Sample ID: 001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	ND		0.500	0.461		mg/L		92	90 - 110

Lab Sample ID: 180-172533-3 MSD

Matrix: Water

Analysis Batch: 465776

Client Sample ID: 001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia	ND		0.500	0.472		mg/L		94	90 - 110	2	20

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Method: EPA 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 180-465765/20

Matrix: Water

Analysis Batch: 465765

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.10	0.065	mg/L			04/18/24 11:00	1

Lab Sample ID: LCS 180-465765/21

Matrix: Water

Analysis Batch: 465765

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	2.00	2.08		mg/L		104	90 - 110

Method: EPA 410.4 - COD

Lab Sample ID: MB 180-465764/12-A

Matrix: Water

Analysis Batch: 465904

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 465764

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	9.1	mg/L		04/18/24 12:10	04/18/24 15:05	1

Lab Sample ID: LCS 180-465764/11-A

Matrix: Water

Analysis Batch: 465904

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 465764

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	75.0	78.2		mg/L		104	90 - 110

Lab Sample ID: 180-172533-1 MS

Matrix: Water

Analysis Batch: 465904

Client Sample ID: 201

Prep Type: Total/NA

Prep Batch: 465764

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	76		25.0	102		mg/L		105	90 - 110

Lab Sample ID: 180-172533-1 MSD

Matrix: Water

Analysis Batch: 465904

Client Sample ID: 201

Prep Type: Total/NA

Prep Batch: 465764

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chemical Oxygen Demand	76		25.0	104		mg/L		110	90 - 110	1	20

Method: SM 2120B - Color, Colorimetric

Lab Sample ID: MB 180-465681/1

Matrix: Water

Analysis Batch: 465681

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Color, Apparent	ND		5.0	5.0	Color Units			04/17/24 19:32	1
Color, True	ND		5.0	5.0	Color Units			04/17/24 19:32	1
pH at time of analysis	na		0.10	0.10	SU			04/17/24 19:32	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Method: SM 2120B - Color, Colorimetric (Continued)

Lab Sample ID: 180-172533-1 DU
Matrix: Water
Analysis Batch: 465681

Client Sample ID: 201
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Color, Apparent	50		50.0		Color Units		0	20
Color, True	30		30.0		Color Units		0	20
pH at time of analysis	7.3	!	7.24		SU		0.3	

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-465805/1
Matrix: Water
Analysis Batch: 465805

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			04/18/24 15:15	1

Lab Sample ID: LCS 180-465805/2
Matrix: Water
Analysis Batch: 465805

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	232	220		mg/L		95	85 - 115

Lab Sample ID: MB 180-465921/1
Matrix: Water
Analysis Batch: 465921

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			04/19/24 14:29	1

Lab Sample ID: LCS 180-465921/2
Matrix: Water
Analysis Batch: 465921

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	232	222		mg/L		96	85 - 115

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

Lab Sample ID: MB 180-465735/2
Matrix: Water
Analysis Batch: 465735

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		0.50	0.50	mg/L			04/18/24 08:47	1

Lab Sample ID: LCS 180-465735/1
Matrix: Water
Analysis Batch: 465735

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	52.0		mg/L		87	85 - 115

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Method: SM 5210B - 5 Day BOD test

Lab Sample ID: USB 180-466098/1
Matrix: Water
Analysis Batch: 466098

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

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	ND		2.0	2.0	mg/L			04/18/24 14:50	1

Lab Sample ID: LCS 180-466098/2
Matrix: Water
Analysis Batch: 466098

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	198	179		mg/L		90	85 - 115

Method: TKN_TPhos - EPA 351.2 1993 R2/365.4 1974

Lab Sample ID: MB 180-465696/7-A
Matrix: Water
Analysis Batch: 465876

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 465696

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	ND		0.50	0.12	mg/L as N		04/18/24 06:38	04/19/24 07:11	1
Phosphorus, Total	ND		0.10	0.040	mg/L as P		04/18/24 06:38	04/19/24 07:11	1

Lab Sample ID: LCS 180-465696/8-A
Matrix: Water
Analysis Batch: 465876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 465696

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	2.50	2.62		mg/L as N		105	90 - 110
Phosphorus, Total	2.50	2.51		mg/L as P		100	90 - 110

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

GC/MS VOA

Analysis Batch: 465701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	EPA 624.1	
180-172533-2	101	Total/NA	Water	EPA 624.1	
180-172533-3	001	Total/NA	Water	EPA 624.1	
180-172533-4	TRIP BLANK	Total/NA	Water	EPA 624.1	
MB 180-465701/7	Method Blank	Total/NA	Water	EPA 624.1	
LCS 180-465701/4	Lab Control Sample	Total/NA	Water	EPA 624.1	

GC/MS Semi VOA

Prep Batch: 466199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	625	
180-172533-2	101	Total/NA	Water	625	
180-172533-3	001	Total/NA	Water	625	
MB 180-466199/1-A	Method Blank	Total/NA	Water	625	
LCS 180-466199/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 180-466199/3-A	Lab Control Sample Dup	Total/NA	Water	625	

Analysis Batch: 466779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-466199/2-A	Lab Control Sample	Total/NA	Water	EPA 625.1	466199
LCSD 180-466199/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 625.1	466199

Analysis Batch: 466887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	EPA 625.1	466199
180-172533-2	101	Total/NA	Water	EPA 625.1	466199
180-172533-3	001	Total/NA	Water	EPA 625.1	466199
MB 180-466199/1-A	Method Blank	Total/NA	Water	EPA 625.1	466199

GC Semi VOA

Prep Batch: 465699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	608	
180-172533-2	101	Total/NA	Water	608	
180-172533-3	001	Total/NA	Water	608	
MB 180-465699/1-A	Method Blank	Total/NA	Water	608	
LCS 180-465699/2-A	Lab Control Sample	Total/NA	Water	608	
LCS 180-465699/4-A	Lab Control Sample	Total/NA	Water	608	
LCSD 180-465699/3-A	Lab Control Sample Dup	Total/NA	Water	608	
LCSD 180-465699/5-A	Lab Control Sample Dup	Total/NA	Water	608	

Analysis Batch: 465834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	EPA 608.3	465699
180-172533-2	101	Total/NA	Water	EPA 608.3	465699
180-172533-3	001	Total/NA	Water	EPA 608.3	465699
MB 180-465699/1-A	Method Blank	Total/NA	Water	EPA 608.3	465699
LCS 180-465699/2-A	Lab Control Sample	Total/NA	Water	EPA 608.3	465699
LCSD 180-465699/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 608.3	465699

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QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

GC Semi VOA

Analysis Batch: 466544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	EPA 608.3	465699
180-172533-2	101	Total/NA	Water	EPA 608.3	465699
180-172533-3	001	Total/NA	Water	EPA 608.3	465699
MB 180-465699/1-A	Method Blank	Total/NA	Water	EPA 608.3	465699
LCS 180-465699/4-A	Lab Control Sample	Total/NA	Water	EPA 608.3	465699
LCSD 180-465699/5-A	Lab Control Sample Dup	Total/NA	Water	EPA 608.3	465699

HPLC/IC

Analysis Batch: 465742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	EPA 300.0 R2.1	
180-172533-1	201	Total/NA	Water	EPA 300.0 R2.1	
180-172533-2	101	Total/NA	Water	EPA 300.0 R2.1	
180-172533-2	101	Total/NA	Water	EPA 300.0 R2.1	
180-172533-3	001	Total/NA	Water	EPA 300.0 R2.1	
180-172533-3	001	Total/NA	Water	EPA 300.0 R2.1	
MB 180-465742/53	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
MB 180-465742/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-465742/54	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-465742/7	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 465879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total Recoverable	Water	200.8	
180-172533-2	101	Total Recoverable	Water	200.8	
180-172533-3	001	Total Recoverable	Water	200.8	
MB 180-465879/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 180-465879/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
180-172533-2 MS	101	Total Recoverable	Water	200.8	
180-172533-2 MSD	101	Total Recoverable	Water	200.8	

Analysis Batch: 466272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total Recoverable	Water	EPA 200.8 Rev 5	465879
180-172533-2	101	Total Recoverable	Water	EPA 200.8 Rev 5	465879
180-172533-3	001	Total Recoverable	Water	EPA 200.8 Rev 5	465879
MB 180-465879/1-A	Method Blank	Total Recoverable	Water	EPA 200.8 Rev 5	465879
LCS 180-465879/2-A	Lab Control Sample	Total Recoverable	Water	EPA 200.8 Rev 5	465879
180-172533-2 MS	101	Total Recoverable	Water	EPA 200.8 Rev 5	465879
180-172533-2 MSD	101	Total Recoverable	Water	EPA 200.8 Rev 5	465879

Prep Batch: 466442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	245.1	
180-172533-2	101	Total/NA	Water	245.1	
180-172533-3	001	Total/NA	Water	245.1	
MB 180-466442/1-A	Method Blank	Total/NA	Water	245.1	
LCS 180-466442/2-A	Lab Control Sample	Total/NA	Water	245.1	

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QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

Metals

Analysis Batch: 466639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	EPA 245.1 Rev.	466442
180-172533-2	101	Total/NA	Water	EPA 245.1 Rev.	466442
180-172533-3	001	Total/NA	Water	EPA 245.1 Rev.	466442
MB 180-466442/1-A	Method Blank	Total/NA	Water	EPA 245.1 Rev.	466442
LCS 180-466442/2-A	Lab Control Sample	Total/NA	Water	EPA 245.1 Rev.	466442

Analysis Batch: 467030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total Recoverable	Water	SM 2340B	
180-172533-2	101	Total Recoverable	Water	SM 2340B	
180-172533-3	001	Total Recoverable	Water	SM 2340B	

General Chemistry

Analysis Batch: 465681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	SM 2120B	
180-172533-2	101	Total/NA	Water	SM 2120B	
180-172533-3	001	Total/NA	Water	SM 2120B	
MB 180-465681/1	Method Blank	Total/NA	Water	SM 2120B	
LCS 180-465681/2	Lab Control Sample	Total/NA	Water	SM 2120B	
180-172533-1 DU	201	Total/NA	Water	SM 2120B	

Prep Batch: 465696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	TKN/TPhos Prep	
180-172533-2	101	Total/NA	Water	TKN/TPhos Prep	
180-172533-3	001	Total/NA	Water	TKN/TPhos Prep	
MB 180-465696/7-A	Method Blank	Total/NA	Water	TKN/TPhos Prep	
LCS 180-465696/8-A	Lab Control Sample	Total/NA	Water	TKN/TPhos Prep	

Prep Batch: 465712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	1664B	
180-172533-2	101	Total/NA	Water	1664B	
180-172533-3	001	Total/NA	Water	1664B	
MB 180-465712/1-A	Method Blank	Total/NA	Water	1664B	
LCS 180-465712/2-A	Lab Control Sample	Total/NA	Water	1664B	
LCSD 180-465712/3-A	Lab Control Sample Dup	Total/NA	Water	1664B	

Analysis Batch: 465721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	EPA 1664B	465712
180-172533-2	101	Total/NA	Water	EPA 1664B	465712
180-172533-3	001	Total/NA	Water	EPA 1664B	465712
MB 180-465712/1-A	Method Blank	Total/NA	Water	EPA 1664B	465712
LCS 180-465712/2-A	Lab Control Sample	Total/NA	Water	EPA 1664B	465712
LCSD 180-465712/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 1664B	465712

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QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

General Chemistry

Analysis Batch: 465735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	SM 2540D	
180-172533-2	101	Total/NA	Water	SM 2540D	
180-172533-3	001	Total/NA	Water	SM 2540D	
MB 180-465735/2	Method Blank	Total/NA	Water	SM 2540D	
LCS 180-465735/1	Lab Control Sample	Total/NA	Water	SM 2540D	

Prep Batch: 465764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	410.4	
180-172533-2	101	Total/NA	Water	410.4	
180-172533-3	001	Total/NA	Water	410.4	
MB 180-465764/12-A	Method Blank	Total/NA	Water	410.4	
LCS 180-465764/11-A	Lab Control Sample	Total/NA	Water	410.4	
180-172533-1 MS	201	Total/NA	Water	410.4	
180-172533-1 MSD	201	Total/NA	Water	410.4	

Analysis Batch: 465765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-465765/20	Method Blank	Total/NA	Water	EPA 353.2	
LCS 180-465765/21	Lab Control Sample	Total/NA	Water	EPA 353.2	

Analysis Batch: 465776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	EPA 350.1	
180-172533-2	101	Total/NA	Water	EPA 350.1	
180-172533-3	001	Total/NA	Water	EPA 350.1	
MB 180-465776/49	Method Blank	Total/NA	Water	EPA 350.1	
LCS 180-465776/53	Lab Control Sample	Total/NA	Water	EPA 350.1	
180-172533-3 MS	001	Total/NA	Water	EPA 350.1	
180-172533-3 MSD	001	Total/NA	Water	EPA 350.1	

Analysis Batch: 465782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Dissolved	Water	3500-Cr B-2011	
180-172533-2	101	Dissolved	Water	3500-Cr B-2011	
180-172533-3	001	Dissolved	Water	3500-Cr B-2011	
MB 180-465782/3	Method Blank	Total/NA	Water	3500-Cr B-2011	
LCS 180-465782/4	Lab Control Sample	Total/NA	Water	3500-Cr B-2011	
180-172533-2 MS	101	Dissolved	Water	3500-Cr B-2011	
180-172533-2 MSD	101	Dissolved	Water	3500-Cr B-2011	

Analysis Batch: 465805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	SM 2540C	
MB 180-465805/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-465805/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 465847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	EPA 353.2	
180-172533-2	101	Total/NA	Water	EPA 353.2	

Eurofins Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

General Chemistry (Continued)

Analysis Batch: 465847 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-3	001	Total/NA	Water	EPA 353.2	

Analysis Batch: 465876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	TKN_TPhos	465696
180-172533-2	101	Total/NA	Water	TKN_TPhos	465696
180-172533-3	001	Total/NA	Water	TKN_TPhos	465696
MB 180-465696/7-A	Method Blank	Total/NA	Water	TKN_TPhos	465696
LCS 180-465696/8-A	Lab Control Sample	Total/NA	Water	TKN_TPhos	465696

Analysis Batch: 465904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	EPA 410.4	465764
180-172533-2	101	Total/NA	Water	EPA 410.4	465764
180-172533-3	001	Total/NA	Water	EPA 410.4	465764
MB 180-465764/12-A	Method Blank	Total/NA	Water	EPA 410.4	465764
LCS 180-465764/11-A	Lab Control Sample	Total/NA	Water	EPA 410.4	465764
180-172533-1 MS	201	Total/NA	Water	EPA 410.4	465764
180-172533-1 MSD	201	Total/NA	Water	EPA 410.4	465764

Analysis Batch: 465921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-2	101	Total/NA	Water	SM 2540C	
180-172533-3	001	Total/NA	Water	SM 2540C	
MB 180-465921/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-465921/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 466098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	SM 5210B	
180-172533-2	101	Total/NA	Water	SM 5210B	
180-172533-3	001	Total/NA	Water	SM 5210B	
USB 180-466098/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 180-466098/2	Lab Control Sample	Total/NA	Water	SM 5210B	

Analysis Batch: 466193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	5310 C-2014	
180-172533-2	101	Total/NA	Water	5310 C-2014	
180-172533-3	001	Total/NA	Water	5310 C-2014	
MB 180-466193/5	Method Blank	Total/NA	Water	5310 C-2014	
LCS 180-466193/4	Lab Control Sample	Total/NA	Water	5310 C-2014	
180-172533-1 MS	201	Total/NA	Water	5310 C-2014	
180-172533-2 DU	101	Total/NA	Water	5310 C-2014	

Analysis Batch: 466240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	4500 H+ B-2000	
180-172533-2	101	Total/NA	Water	4500 H+ B-2000	
180-172533-3	001	Total/NA	Water	4500 H+ B-2000	
LCS 180-466240/1	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	

Eurofins Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-172533-1

General Chemistry (Continued)

Analysis Batch: 466240 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-466240/24	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	

Analysis Batch: 466241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	5540C - 2011	
180-172533-2	101	Total/NA	Water	5540C - 2011	
180-172533-3	001	Total/NA	Water	5540C - 2011	
MB 180-466241/2	Method Blank	Total/NA	Water	5540C - 2011	
LCS 180-466241/3	Lab Control Sample	Total/NA	Water	5540C - 2011	
180-172533-1 MS	201	Total/NA	Water	5540C - 2011	
180-172533-1 DU	201	Total/NA	Water	5540C - 2011	

Analysis Batch: 466274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-466274/1	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	

Analysis Batch: 466374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-172533-1	201	Total/NA	Water	4500 S2 F-2011	
180-172533-2	101	Total/NA	Water	4500 S2 F-2011	
180-172533-3	001	Total/NA	Water	4500 S2 F-2011	
MB 180-466374/4	Method Blank	Total/NA	Water	4500 S2 F-2011	
LCS 180-466374/3	Lab Control Sample	Total/NA	Water	4500 S2 F-2011	
180-172533-1 MS	201	Total/NA	Water	4500 S2 F-2011	
180-172533-1 MSD	201	Total/NA	Water	4500 S2 F-2011	



Microbac Laboratories Inc., Pittsburgh Division

CERTIFICATE OF ANALYSIS

A4D2609

Eurofins Test America - Pittsburgh

Project Name: Fecal Testing

DAVID DUNLAP
301 ALPHA DRIVE RIDC PARK
PITTSBURGH, PA 15238

Project / PO Number: US0543365068 (2024)
Received: 04/17/2024
Reported: 04/18/2024

Analytical Testing Parameters

Client Sample ID:	201	Collected By:	BA+FG
Sample Matrix:	Aqueous	Collection Date:	04/17/2024 9:41
Lab Sample ID:	A4D2609-01		

Microbiology	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Colilert-18 (Fecal Coliforms)								
Fecal Coliforms	<1	1	MPN/100mL	1		04/17/24 1411	04/18/24 0930	AML

Client Sample ID:	101	Collected By:	BA+FG
Sample Matrix:	Aqueous	Collection Date:	04/17/2024 9:54
Lab Sample ID:	A4D2609-02		

Microbiology	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Colilert-18 (Fecal Coliforms)								
Fecal Coliforms	2	1	MPN/100mL	1		04/17/24 1411	04/18/24 0930	AML

Client Sample ID:	001	Collected By:	BA+FG
Sample Matrix:	Aqueous	Collection Date:	04/17/2024 10:16
Lab Sample ID:	A4D2609-03		

Microbiology	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Colilert-18 (Fecal Coliforms)								
Fecal Coliforms	1	1	MPN/100mL	1		04/17/24 1411	04/18/24 0930	AML

Definitions

MPN/100mL Most Probable Number per 100 Milliliters
RL: Reporting Limit

Project Requested Certification(s)

Microbac Laboratories Inc., Pittsburgh Division
02-00257

Pennsylvania Department of Environmental Protection
Pennsylvania Department of Environmental Protection - PARULE

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

Caroline Keefe
Customer Relationship Coordinator
Reported: 04/18/2024 16:25

Chain of Custody Record

eurofins

[illegible]

Chain of Custody Record

Client Information		Sampler: BA & FG		Lab PM: Colussy, Jill L.		Garner Tracking No(s):		COC No: 180-100735-18182.2	
Client Contact: Brenden Arbaugh		Phone:		E-Mail: Jill.Colussy@eurofins.com		State of Origin: PA		Page: Page 2 of 4	
Company: GHD Services Inc.		PWSID:		Analysis Requested		Total Number of containers		Preservation Codes: S - H2SO4	
Address: 4068 Mt Royal Blvd Suite 201		Due Date Requested:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Other:	
City: Allison Park		TAT Requested (days):		Matrix (W=water, S=solid, O=wastewater, B=biological, A=air)		Preservation Code: (S, I, S, H2SO4)		Special Instruc	
State, Zip: PA, 15101		Compliance Project: Δ Yes Δ No		Sample Type (C=Comp, G=grab)		Sample Time		Sample Date	
Phone: 513-942-4750(Tel) 513-942-8585(Fax)		PO #: 4501508098		Sample Date		Sample Time		Sample Date	
Email: brenden.arbaugh@ghd.com		WO #:		Sample Date		Sample Time		Sample Date	
Project Name: GHD Shell Monaca		Project #: 18026655		Sample Date		Sample Time		Sample Date	
Site:		SSOW#:		Sample Date		Sample Time		Sample Date	
Sample Identification		Sample Date		Sample Time		Sample Date		Sample Date	
201		4/17/24		0941		G		W	
101		4/17/24		0954		G		W	
001		4/17/24		1016		G		W	
Possible Hazard Identification		Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological ☐		Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client ☐ Disposal By Lab ☐ Archive For Months	
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:		Special Instructions/OC Requirements:	
Relinquished by: garden		Date/Time: 4/17/24 1302		Company: GHD		Received by: garden		Date/Time: 4/17/24 1310	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 0.7°C 1436 0.7°C		Company:		Ver: 01/16/2019	

301 Alpha Drive RDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Phone (412) 963-2468

[illegible]

Chain of Custody Record

euromins

Client Information			Company			Lab PII			Carrier Tracking No(s)			QC No		
Client Contact: Brenden Arbaugh			GHD Services Inc			BA & FG			Colussy, Jill L			180-100735-18182 2		
Phone			PWSID			Jill Colussy@et.eurofinsus.com			State of Origin			Page 2 of 4		
Due Date Requested:			Analysis Requested			Job #			Preservation Codes:			Other:		
TAT Requested (days):			Compliance Project: ☐ Yes ☐ No			PO #: 4501508098			WO #:			Project #: 18026655		
Email: brenden.arbaugh@ghd.com			Site			SSOW#:			Field Filtered Sample (Yes or No)			Perform MS/MSD (Yes or No)		
Sample Date			Sample Time			Sample Type (C=Comp, G=grab)			Matrix (W=water, S=solid, O=other)			Preservation Code		
Sample Identification			Sample Date			Sample Time			Sample Type (C=Comp, G=grab)			Matrix (W=water, S=solid, O=other)		
201			4/17/24			0941			G			W		
101			4/17/24			0954			G			W		
001			4/17/24			1016			G			W		
Special Instructions/Note:			Total Number of containers			Other:			Preservation Codes:			S - H2SO4		
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			Return To Client ☐			Disposal By Lab ☐			Archive For ☐			Months		
Possible Hazard Identification			Non-Hazard ☐			Flammable ☐			Skin Irritant ☐			Poison B ☐		
Deliverable Requested 1, II, III, IV, Other (specify)			Unknown ☐			Radiological ☐			Empty Kit Relinquished by			Relinquished by		
Date			Date			Date			Date			Date		
4/17/24			1302			GHD			GHD			GHD		
4/17/24			1350			GHD			GHD			GHD		
4/17/24			1350			GHD			GHD			GHD		
Custody Seal Intact: A Yes ☐ No ☐			Custody Seal No			Cooler Temperature(s) °C and Other Remarks			Cooler Temperature(s) °C and Other Remarks			Cooler Temperature(s) °C and Other Remarks		

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 180-172533-1

Login Number: 172533

List Source: Eurofins Pittsburgh

List Number: 1

Creator: Abernathy, Eric L

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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	
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?	True	
There are no discrepancies between the containers received and the COC.	False	
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.	True	
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	

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Angela Bown
GHD Services Inc.
2055 Niagara Falls Boulevard
Niagara Falls, New York 14304

Generated 5/30/2024 4:25:29 PM

JOB DESCRIPTION

GHD Shell Monaca

JOB NUMBER

180-173869-1

Eurofins Pittsburgh

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.

PA Lab ID: 02-00416

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 Pittsburgh Project Manager.

Authorization



Authorized for release by
Jill Colussy, Project Manager I
Jill.Colussy@et.eurofinsus.com
(412)963-2444

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Case Narrative

Client: GHD Services Inc.
Project: GHD Shell Monaca

Job ID: 180-173869-1

Job ID: 180-173869-1

Eurofins Pittsburgh

Job Narrative 180-173869-1

Receipt

The samples were received on 5/10/2024 5:11 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 3.4° C, 3.6° C and 5.2° C.

GC/MS VOA

The laboratory control sample (LCS) for analytical batch 180-468288 recovered outside control limits for Bromoform. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

GC/MS Semi VOA

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

IC

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

Pesticides

The continuing calibration verification (CCV) associated with 180-468996 recovered high and outside the control limits for Chlordane (technical) on one column. Results are confirmed on both columns and hits are reported from the passing column.

The continuing calibration verification (CCV) associated with batch 180-468996 recovered outside acceptance criteria, low biased, for Toxaphene. Sample was re-analyzed with the same results. Thus, the data is reported.

The closing continuing calibration verification (CCVC) associated with batch 180-468996 recovered outside acceptance criteria, low biased, for 4,4'-DDT, Heptachlor, and Methoxychlor. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

The continuing calibration verification (CCV) associated with 180-469307 recovered high and outside the control limits for Chlordane (technical) on one column. Results are confirmed on both columns and hits are reported from the passing column.

Metals

The laboratory control sample (LCS) for batch 180-468393 recovered above the control limits for Antimony. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Sample 015 (180-173869-2) was over range for Boron and required a dilution. Elevated reporting limits (RLs) are provided.

General Chemistry

The correction factor for the BOD Seeded Control Blank (SCB) for batch 180-468905 was below the method range of 0.6 to 1.0 mg/L at 0.45612mg/L. Thus, the sample results are biased high.

Chlorine was present in the following samples and treated per the BOD Method/SOP: 005 (180-173869-1) and 015 (180-173869-2). Results may be biased low.

Eurofins Pittsburgh

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
B	Analyte was found in the blank.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
!	Laboratory is not accredited for this parameter.
cn	Refer to Case Narrative for further detail
FH	MS and/or MSD recovery above control limits.
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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)

Eurofins Pittsburgh

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Laboratory: Eurofins Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	02-00416	04-30-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
4500 H+ B-2000		Water	Temperature
SM 2120B		Water	pH at time of analysis

Sample Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-173869-1	005	Water	05/10/24 14:14	05/10/24 17:11
180-173869-2	015	Water	05/10/24 14:41	05/10/24 17:11

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Method Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Method	Method Description	Protocol	Laboratory
EPA 624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	EET PIT
EPA 625.1	Semivolatile Organic Compounds (GC/MS)	40 CFR 761	EET PIT
EPA 608.3	Organochlorine Pesticides in Water	40CFR136A	EET PIT
EPA 608.3	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	EET PIT
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	EET PIT
EPA 200.8 Rev 5	Metals (ICP/MS)	EPA	EET PIT
EPA 245.1 Rev.	Mercury (CVAA)	EPA	EET PIT
3500-Cr B-2011	Chromium, Hexavalent	SM	EET PIT
4500 H+ B-2000	pH - SM Online, 2011	SM-Online	EET PIT
4500 S2 F-2011	Sulfide, Total	SM	EET PIT
5310 C-2014	Total Organic Carbon/Persulfate - Ultrav	SM	EET PIT
5540C - 2011	Methylene Blue Active Substant (MBAS)	SM	EET PIT
EPA 1664B	HEM and SGT-HEM	EPA	EET PIT
EPA 350.1	Nitrogen, Ammonia	EPA	EET PIT
EPA 353.2	Nitrogen, Nitrate-Nitrite	EPA	EET PIT
EPA 410.4	COD	MCAWW	EET PIT
SM 2120B	Color, Colorimetric	SM	EET PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET PIT
SM 2540D	Solids, Total Suspended (TSS)	SM	EET PIT
SM 5210B	5 Day BOD test	SM	EET PIT
TKN_TPhos	EPA 351.2 1993 R2/365.4 1974	EPA	EET PIT
Subcontract	Fecal Coliform	None	Warrendale
1664B	HEM and SGT-HEM (SPE)	1664B	EET PIT
200.8	Preparation, Total Recoverable Metals	EPA	EET PIT
245.1	Preparation, Mercury	EPA	EET PIT
410.4	COD	EPA	EET PIT
608	Liquid-Liquid Extraction (Separatory Funnel)	EPA	EET PIT
625	Liquid-Liquid Extraction	EPA	EET PIT
TKN/TPhos Prep	Preparation, 351.2 1993 R2/365.4 1974	EPA	EET PIT

Protocol References:

1664B = EPA-821-98-002

40 CFR 761 = Toxic Substances Control Act (TSCA)

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

EPA = US Environmental Protection Agency

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

None = None

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

SM-Online = Standard Methods Online

Laboratory References:

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Warrendale = Microbac - Warrendale, PA, 100 Marshall Drive, Warrendale, PA 15086, TEL (724)772-0610

Eurofins Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Client Sample ID: 005

Lab Sample ID: 180-173869-1

Date Collected: 05/10/24 14:14

Matrix: Water

Date Received: 05/10/24 17:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 624.1		1	5 mL	5 mL	468288	05/11/24 14:40	J1T	EET PIT
		Instrument ID: CHHP5								
Total/NA	Prep	625			240 mL	250 uL	468887	05/16/24 14:45	BJT	EET PIT
Total/NA	Analysis	EPA 625.1		1	1 mL	1 mL	469542	05/23/24 15:29	VVP	EET PIT
		Instrument ID: CH71								
Total/NA	Prep	608			1050 mL	1.0 mL	468492	05/13/24 23:55	CBY	EET PIT
Total/NA	Analysis	EPA 608.3		1			468996	05/18/24 17:56	C1F	EET PIT
		Instrument ID: CHGC15								
Total/NA	Prep	608			1050 mL	1.0 mL	468492	05/13/24 23:55	CBY	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 uL	1 uL	468641	05/15/24 16:31	JMO	EET PIT
		Instrument ID: CHGC16								
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1 mL	468669	05/15/24 17:45	M1D	EET PIT
		Instrument ID: INTEGRION								
Total Recoverable	Prep	200.8			25 mL	25 mL	468393	05/14/24 07:20	NWW	EET PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5		1			469237	05/20/24 17:00	RJR	EET PIT
		Instrument ID: DORY								
Total/NA	Prep	245.1			25 mL	25 mL	468981	05/17/24 11:45	SJM	EET PIT
Total/NA	Analysis	EPA 245.1 Rev.		1			469191	05/20/24 12:11	SJM	EET PIT
		Instrument ID: HGZ								
Dissolved	Analysis	3500-Cr B-2011		1	4 mL	4 mL	468301	05/11/24 09:57	CMC	EET PIT
		Instrument ID: RAPID-T								
Total/NA	Analysis	4500 H+ B-2000		1			468497	05/13/24 16:55	SNR	EET PIT
		Instrument ID: OZ								
Total/NA	Analysis	4500 S2 F-2011		1	50 mL	50 mL	468523	05/14/24 13:51	CMR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	5310 C-2014		1	40 mL	40 mL	468621	05/14/24 04:29	LWM	EET PIT
		Instrument ID: SAM								
Total/NA	Analysis	5540C - 2011		1	100 mL	100 mL	468309	05/11/24 13:19	EJH	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Prep	1664B			1020 mL	1000 mL	468655	05/15/24 07:09	A1K	EET PIT
Total/NA	Analysis	EPA 1664B		1			468674	05/15/24 09:12	A1K	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	EPA 350.1		1			469205	05/20/24 13:21	SNR	EET PIT
		Instrument ID: BLUE-ASTORIA								
Total/NA	Analysis	EPA 353.2		1			468416	05/13/24 12:31	RSK	EET PIT
		Instrument ID: ASTORIA2								
Total/NA	Prep	410.4			1 mL	1 mL	468569	05/14/24 12:22	ELS	EET PIT
Total/NA	Analysis	EPA 410.4		1	1 mL	1 mL	468673	05/14/24 15:29	ELS	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Analysis	SM 2120B		1	50 mL	50 mL	468284	05/10/24 18:17	EJH	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	468761	05/15/24 17:15	LWM	EET PIT
		Instrument ID: NOEQUIP								

Eurofins Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Client Sample ID: 005

Lab Sample ID: 180-173869-1

Date Collected: 05/10/24 14:14

Matrix: Water

Date Received: 05/10/24 17:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	468291	05/11/24 08:17	CMC	EET PIT
Total/NA	Analysis	SM 5210B		1	300 mL	300 mL	468905	05/11/24 13:15	ELS	EET PIT
		Instrument ID: BOD2								
Total/NA	Prep	TKN/TPhos Prep			25 mL	25 mL	468346	05/13/24 05:52	RSK	EET PIT
Total/NA	Analysis	TKN_TPhos		1			468467	05/14/24 07:02	RSK	EET PIT
		Instrument ID: ASTORIA1								

Client Sample ID: 015

Lab Sample ID: 180-173869-2

Date Collected: 05/10/24 14:41

Matrix: Water

Date Received: 05/10/24 17:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 624.1		1	5 mL	5 mL	468288	05/11/24 15:03	J1T	EET PIT
		Instrument ID: CHHP5								
Total/NA	Prep	625			250 mL	250 uL	468887	05/16/24 14:45	BJT	EET PIT
Total/NA	Analysis	EPA 625.1		1	1 mL	1 mL	469542	05/23/24 15:51	VVP	EET PIT
		Instrument ID: CH71								
Total/NA	Prep	608			1050 mL	1.0 mL	468492	05/13/24 23:55	CBY	EET PIT
Total/NA	Analysis	EPA 608.3		1			468996	05/18/24 18:14	C1F	EET PIT
		Instrument ID: CHGC15								
Total/NA	Prep	608			1050 mL	1.0 mL	468492	05/13/24 23:55	CBY	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 uL	1 uL	468641	05/15/24 16:49	JMO	EET PIT
		Instrument ID: CHGC16								
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1 mL	468669	05/15/24 17:08	M1D	EET PIT
		Instrument ID: INTEGRION								
Total Recoverable	Prep	200.8			25 mL	25 mL	468393	05/14/24 07:20	NWW	EET PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5		1			469237	05/20/24 17:03	RJR	EET PIT
		Instrument ID: DORY								
Total Recoverable	Prep	200.8			25 mL	25 mL	468393	05/14/24 07:20	NWW	EET PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5		5			469376	05/21/24 15:43	RJR	EET PIT
		Instrument ID: NEMO								
Total/NA	Prep	245.1			25 mL	25 mL	468981	05/17/24 11:45	SJM	EET PIT
Total/NA	Analysis	EPA 245.1 Rev.		1			469191	05/20/24 12:10	SJM	EET PIT
		Instrument ID: HGZ								
Dissolved	Analysis	3500-Cr B-2011		1	4 mL	4 mL	468301	05/11/24 09:53	CMC	EET PIT
		Instrument ID: RAPID-T								
Total/NA	Analysis	4500 H+ B-2000		1			468497	05/13/24 16:50	SNR	EET PIT
		Instrument ID: OZ								
Total/NA	Analysis	4500 S2 F-2011		1	50 mL	50 mL	468523	05/14/24 13:53	CMR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	5310 C-2014		1	40 mL	40 mL	468621	05/14/24 04:53	LWM	EET PIT
		Instrument ID: SAM								
Total/NA	Analysis	5540C - 2011		1	100 mL	100 mL	468309	05/11/24 13:22	EJH	EET PIT
		Instrument ID: GENESYS10S								

Eurofins Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Client Sample ID: 015

Lab Sample ID: 180-173869-2

Date Collected: 05/10/24 14:41

Matrix: Water

Date Received: 05/10/24 17:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1664B			990 mL	1000 mL	468655	05/15/24 07:09	A1K	EET PIT
Total/NA	Analysis	EPA 1664B		1			468674	05/15/24 09:12	A1K	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	EPA 350.1		1			469205	05/20/24 13:23	SNR	EET PIT
		Instrument ID: BLUE-ASTORIA								
Total/NA	Analysis	EPA 353.2		1			468416	05/13/24 12:41	RSK	EET PIT
		Instrument ID: ASTORIA2								
Total/NA	Prep	410.4			1 mL	1 mL	468569	05/14/24 12:22	ELS	EET PIT
Total/NA	Analysis	EPA 410.4		1	1 mL	1 mL	468673	05/14/24 15:29	ELS	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Analysis	SM 2120B		1	50 mL	50 mL	468284	05/10/24 18:17	EJH	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	468761	05/15/24 17:15	LWM	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	468291	05/11/24 08:17	CMC	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 5210B		1	300 mL	300 mL	468905	05/11/24 13:15	ELS	EET PIT
		Instrument ID: BOD2								
Total/NA	Prep	TKN/TPhos Prep			25 mL	25 mL	468347	05/13/24 05:56	RSK	EET PIT
Total/NA	Analysis	TKN_TPhos		1			468467	05/14/24 07:11	RSK	EET PIT
		Instrument ID: ASTORIA1								

Laboratory References:

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Warrendale = Microbac - Warrendale, PA, 100 Marshall Drive, Warrendale, PA 15086, TEL (724)772-0610

Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Analyst References:

Lab: EET PIT

Batch Type: Prep

- A1K = Agnes Komlos
- BJT = Bill Trout
- CBY = Charles Yushinski
- ELS = Edwin Shireman
- NWW = Nicholas Woten
- RSK = Robert Kurtz
- SJM = Shannon Mueller

Batch Type: Analysis

- A1K = Agnes Komlos
- C1F = Courtney Fenk
- CMC = Candace California
- CMR = Carl Reagle
- EJH = Everett Hinchberger
- ELS = Edwin Shireman
- J1T = Jianwu Tang
- JMO = John Oravec
- LWM = Leslie McIntire
- M1D = Maureen Donlin
- RJR = Ron Rosenbaum
- RSK = Robert Kurtz
- SJM = Shannon Mueller
- SNR = Sabra Richart
- VVP = Vincent Piccolino

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Client Sample ID: 005

Lab Sample ID: 180-173869-1

Date Collected: 05/10/24 14:14

Matrix: Water

Date Received: 05/10/24 17:11

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			05/11/24 14:40	1
Acrylonitrile	ND		0.020	0.0078	mg/L			05/11/24 14:40	1
Benzene	ND		0.0010	0.00060	mg/L			05/11/24 14:40	1
Bromoform	ND	+	0.0010	0.00098	mg/L			05/11/24 14:40	1
Bromomethane	ND		0.0010	0.00089	mg/L			05/11/24 14:40	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			05/11/24 14:40	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			05/11/24 14:40	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			05/11/24 14:40	1
Chloroethane	ND		0.0010	0.00090	mg/L			05/11/24 14:40	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			05/11/24 14:40	1
Chloroform	ND		0.0010	0.00060	mg/L			05/11/24 14:40	1
Chloromethane	ND		0.0010	0.00090	mg/L			05/11/24 14:40	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			05/11/24 14:40	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			05/11/24 14:40	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			05/11/24 14:40	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			05/11/24 14:40	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			05/11/24 14:40	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			05/11/24 14:40	1
1,4-Dioxane	ND		0.20	0.043	mg/L			05/11/24 14:40	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			05/11/24 14:40	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			05/11/24 14:40	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			05/11/24 14:40	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			05/11/24 14:40	1
Toluene	ND		0.0010	0.00046	mg/L			05/11/24 14:40	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			05/11/24 14:40	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			05/11/24 14:40	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			05/11/24 14:40	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			05/11/24 14:40	1
Trichloroethene	ND		0.0010	0.00069	mg/L			05/11/24 14:40	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			05/11/24 14:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		47 - 122		05/11/24 14:40	1
Dibromofluoromethane (Surr)	91		52 - 138		05/11/24 14:40	1
1,2-Dichloroethane-d4 (Surr)	101		24 - 145		05/11/24 14:40	1
Toluene-d8 (Surr)	99		65 - 143		05/11/24 14:40	1

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.0010	0.00025	mg/L		05/16/24 14:45	05/23/24 15:29	1
1,2-Dichlorobenzene	ND		0.0010	0.00022	mg/L		05/16/24 14:45	05/23/24 15:29	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.0010	0.00020	mg/L		05/16/24 14:45	05/23/24 15:29	1
1,3-Dinitrobenzene	ND		0.0010	0.00048	mg/L		05/16/24 14:45	05/23/24 15:29	1
1,4-Dichlorobenzene	ND		0.0010	0.00025	mg/L		05/16/24 14:45	05/23/24 15:29	1
2,2'-oxybis[1-chloropropane]	ND		0.00020	0.000060	mg/L		05/16/24 14:45	05/23/24 15:29	1
2,4,6-Trichlorophenol	ND		0.0010	0.00023	mg/L		05/16/24 14:45	05/23/24 15:29	1
2,4-Dichlorophenol	ND		0.00020	0.000053	mg/L		05/16/24 14:45	05/23/24 15:29	1
2,4-Dimethylphenol	ND		0.0010	0.00061	mg/L		05/16/24 14:45	05/23/24 15:29	1
2,4-Dinitrophenol	ND		0.010	0.0034	mg/L		05/16/24 14:45	05/23/24 15:29	1

Eurofins Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Client Sample ID: 005

Lab Sample ID: 180-173869-1

Date Collected: 05/10/24 14:14

Matrix: Water

Date Received: 05/10/24 17:11

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		0.0010	0.00037	mg/L		05/16/24 14:45	05/23/24 15:29	1
2,6-Dinitrotoluene	ND		0.0010	0.00018	mg/L		05/16/24 14:45	05/23/24 15:29	1
2-Chloronaphthalene	ND		0.00020	0.000061	mg/L		05/16/24 14:45	05/23/24 15:29	1
2-Chlorophenol	ND		0.0010	0.00023	mg/L		05/16/24 14:45	05/23/24 15:29	1
2-Nitrophenol	ND		0.0010	0.00020	mg/L		05/16/24 14:45	05/23/24 15:29	1
3,3'-Dichlorobenzidine	ND		0.0010	0.00061	mg/L		05/16/24 14:45	05/23/24 15:29	1
4,6-Dinitro-2-methylphenol	ND		0.0052	0.0015	mg/L		05/16/24 14:45	05/23/24 15:29	1
4-Bromophenyl phenyl ether	ND		0.0010	0.00033	mg/L		05/16/24 14:45	05/23/24 15:29	1
4-Chloro-3-methylphenol	ND		0.0010	0.00045	mg/L		05/16/24 14:45	05/23/24 15:29	1
4-Chlorophenyl phenyl ether	ND		0.0010	0.00023	mg/L		05/16/24 14:45	05/23/24 15:29	1
4-Nitrophenol	ND		0.0052	0.00098	mg/L		05/16/24 14:45	05/23/24 15:29	1
Acenaphthene	ND		0.00020	0.000068	mg/L		05/16/24 14:45	05/23/24 15:29	1
Acenaphthylene	ND		0.00020	0.000068	mg/L		05/16/24 14:45	05/23/24 15:29	1
Acrylamide	ND		0.052	0.021	mg/L		05/16/24 14:45	05/23/24 15:29	1
Anthracene	ND		0.00020	0.000051	mg/L		05/16/24 14:45	05/23/24 15:29	1
Benzidine	ND		0.021	0.0095	mg/L		05/16/24 14:45	05/23/24 15:29	1
Benzo[a]anthracene	ND		0.00020	0.000078	mg/L		05/16/24 14:45	05/23/24 15:29	1
Benzo[a]pyrene	ND		0.00020	0.000055	mg/L		05/16/24 14:45	05/23/24 15:29	1
Benzo[b]fluoranthene	ND		0.00020	0.00010	mg/L		05/16/24 14:45	05/23/24 15:29	1
Benzo[g,h,i]perylene	ND		0.00020	0.000072	mg/L		05/16/24 14:45	05/23/24 15:29	1
Benzo[k]fluoranthene	ND		0.00020	0.000092	mg/L		05/16/24 14:45	05/23/24 15:29	1
Bis(2-chloroethoxy)methane	ND		0.0010	0.00016	mg/L		05/16/24 14:45	05/23/24 15:29	1
Bis(2-chloroethyl)ether	ND		0.00020	0.000042	mg/L		05/16/24 14:45	05/23/24 15:29	1
Bis(2-ethylhexyl) phthalate	ND		0.010	0.0065	mg/L		05/16/24 14:45	05/23/24 15:29	1
Butyl benzyl phthalate	ND		0.0021	0.00098	mg/L		05/16/24 14:45	05/23/24 15:29	1
Chrysene	ND		0.00020	0.000084	mg/L		05/16/24 14:45	05/23/24 15:29	1
Dibenz(a,h)anthracene	ND		0.00020	0.000075	mg/L		05/16/24 14:45	05/23/24 15:29	1
Diethyl phthalate	ND		0.0010	0.00059	mg/L		05/16/24 14:45	05/23/24 15:29	1
Dimethyl phthalate	ND		0.0021	0.00021	mg/L		05/16/24 14:45	05/23/24 15:29	1
Di-n-butyl phthalate	ND		0.010	0.0051	mg/L		05/16/24 14:45	05/23/24 15:29	1
Di-n-octyl phthalate	ND		0.0010	0.00071	mg/L		05/16/24 14:45	05/23/24 15:29	1
Fluoranthene	ND		0.00020	0.000063	mg/L		05/16/24 14:45	05/23/24 15:29	1
Fluorene	ND		0.00020	0.000072	mg/L		05/16/24 14:45	05/23/24 15:29	1
Hexachlorobenzene	ND		0.00020	0.000058	mg/L		05/16/24 14:45	05/23/24 15:29	1
Hexachlorobutadiene	ND		0.00020	0.000072	mg/L		05/16/24 14:45	05/23/24 15:29	1
Hexachlorocyclopentadiene	ND		0.0010	0.00052	mg/L		05/16/24 14:45	05/23/24 15:29	1
Hexachloroethane	ND		0.0010	0.00014	mg/L		05/16/24 14:45	05/23/24 15:29	1
Indeno[1,2,3-cd]pyrene	ND		0.00020	0.000089	mg/L		05/16/24 14:45	05/23/24 15:29	1
Isophorone	ND		0.0010	0.00020	mg/L		05/16/24 14:45	05/23/24 15:29	1
Naphthalene	0.000070	J	0.00020	0.000061	mg/L		05/16/24 14:45	05/23/24 15:29	1
Nitrobenzene	ND		0.0021	0.00052	mg/L		05/16/24 14:45	05/23/24 15:29	1
N-Nitrosodimethylamine	ND		0.0010	0.00027	mg/L		05/16/24 14:45	05/23/24 15:29	1
N-Nitrosodi-n-propylamine	ND		0.00020	0.000074	mg/L		05/16/24 14:45	05/23/24 15:29	1
N-Nitrosodiphenylamine	ND		0.0010	0.00012	mg/L		05/16/24 14:45	05/23/24 15:29	1
Pentachlorophenol	ND		0.0052	0.00088	mg/L		05/16/24 14:45	05/23/24 15:29	1
Phenanthrene	ND		0.00020	0.00016	mg/L		05/16/24 14:45	05/23/24 15:29	1
Phenol	ND		0.0010	0.00051	mg/L		05/16/24 14:45	05/23/24 15:29	1
Pyrene	ND		0.00020	0.000056	mg/L		05/16/24 14:45	05/23/24 15:29	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Client Sample ID: 005

Lab Sample ID: 180-173869-1

Date Collected: 05/10/24 14:14

Matrix: Water

Date Received: 05/10/24 17:11

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	56		42 - 115	05/16/24 14:45	05/23/24 15:29	1
2-Fluorobiphenyl	63		47 - 107	05/16/24 14:45	05/23/24 15:29	1
2-Fluorophenol (Surr)	66		54 - 109	05/16/24 14:45	05/23/24 15:29	1
Nitrobenzene-d5 (Surr)	66		47 - 110	05/16/24 14:45	05/23/24 15:29	1
Phenol-d5 (Surr)	65		37 - 110	05/16/24 14:45	05/23/24 15:29	1
Terphenyl-d14 (Surr)	68		32 - 115	05/16/24 14:45	05/23/24 15:29	1

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000012	0.00000034	mg/L		05/13/24 23:55	05/18/24 17:56	1
alpha-BHC	ND		0.0000012	0.00000023	mg/L		05/13/24 23:55	05/18/24 17:56	1
beta-BHC	ND		0.0000012	0.00000035	mg/L		05/13/24 23:55	05/18/24 17:56	1
gamma-BHC (Lindane)	ND		0.0000012	0.00000028	mg/L		05/13/24 23:55	05/18/24 17:56	1
delta-BHC	ND		0.0000012	0.00000061	mg/L		05/13/24 23:55	05/18/24 17:56	1
Chlordane (technical)	ND		0.000012	0.0000069	mg/L		05/13/24 23:55	05/18/24 17:56	1
4,4'-DDD	ND		0.0000012	0.00000051	mg/L		05/13/24 23:55	05/18/24 17:56	1
4,4'-DDE	ND		0.0000012	0.00000028	mg/L		05/13/24 23:55	05/18/24 17:56	1
4,4'-DDT	ND		0.0000012	0.00000066	mg/L		05/13/24 23:55	05/18/24 17:56	1
Dieldrin	ND		0.0000012	0.00000026	mg/L		05/13/24 23:55	05/18/24 17:56	1
Endosulfan I	ND		0.0000012	0.00000065	mg/L		05/13/24 23:55	05/18/24 17:56	1
Endosulfan II	ND		0.0000012	0.00000030	mg/L		05/13/24 23:55	05/18/24 17:56	1
Endosulfan sulfate	ND		0.0000012	0.00000061	mg/L		05/13/24 23:55	05/18/24 17:56	1
Endrin	ND		0.0000012	0.00000022	mg/L		05/13/24 23:55	05/18/24 17:56	1
Endrin aldehyde	ND		0.0000012	0.00000049	mg/L		05/13/24 23:55	05/18/24 17:56	1
Heptachlor	ND		0.0000012	0.00000043	mg/L		05/13/24 23:55	05/18/24 17:56	1
Heptachlor epoxide	ND		0.0000012	0.00000032	mg/L		05/13/24 23:55	05/18/24 17:56	1
Toxaphene	ND		0.000095	0.000047	mg/L		05/13/24 23:55	05/18/24 17:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	74		20 - 138				05/13/24 23:55	05/18/24 17:56	1
Tetrachloro-m-xylene (Surr)	81		20 - 138				05/13/24 23:55	05/18/24 17:56	1
DCB Decachlorobiphenyl (Surr)	48		43 - 143				05/13/24 23:55	05/18/24 17:56	1
DCB Decachlorobiphenyl (Surr)	65		43 - 143				05/13/24 23:55	05/18/24 17:56	1

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.0000095	0.0000045	mg/L		05/13/24 23:55	05/15/24 16:31	1
PCB-1221	ND		0.0000095	0.0000054	mg/L		05/13/24 23:55	05/15/24 16:31	1
PCB-1232	ND		0.0000095	0.0000050	mg/L		05/13/24 23:55	05/15/24 16:31	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Client Sample ID: 005

Lab Sample ID: 180-173869-1

Date Collected: 05/10/24 14:14

Matrix: Water

Date Received: 05/10/24 17:11

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1242	ND		0.0000095	0.0000087	mg/L		05/13/24 23:55	05/15/24 16:31	1
PCB-1248	ND		0.0000095	0.0000028	mg/L		05/13/24 23:55	05/15/24 16:31	1
PCB-1254	ND		0.0000095	0.0000091	mg/L		05/13/24 23:55	05/15/24 16:31	1
PCB-1260	ND		0.0000095	0.0000037	mg/L		05/13/24 23:55	05/15/24 16:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	68		20 - 138				05/13/24 23:55	05/15/24 16:31	1
Tetrachloro-m-xylene (Surr)	74		20 - 138				05/13/24 23:55	05/15/24 16:31	1
DCB Decachlorobiphenyl (Surr)	70		43 - 143				05/13/24 23:55	05/15/24 16:31	1
DCB Decachlorobiphenyl (Surr)	88		43 - 143				05/13/24 23:55	05/15/24 16:31	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			05/15/24 17:45	1
Chloride	73.3		1.00	0.712	mg/L			05/15/24 17:45	1
Fluoride	0.235		0.100	0.0260	mg/L			05/15/24 17:45	1
Sulfate	120		1.00	0.756	mg/L			05/15/24 17:45	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.089		0.030	0.019	mg/L		05/14/24 07:20	05/20/24 17:00	1
Antimony	ND	+	0.0020	0.0018	mg/L		05/14/24 07:20	05/20/24 17:00	1
Arsenic	0.00049	J	0.0010	0.00030	mg/L		05/14/24 07:20	05/20/24 17:00	1
Barium	0.054		0.010	0.0019	mg/L		05/14/24 07:20	05/20/24 17:00	1
Beryllium	ND		0.0010	0.00025	mg/L		05/14/24 07:20	05/20/24 17:00	1
Boron	0.17		0.080	0.063	mg/L		05/14/24 07:20	05/20/24 17:00	1
Cadmium	0.0085		0.0010	0.00034	mg/L		05/14/24 07:20	05/20/24 17:00	1
Calcium	69		0.50	0.18	mg/L		05/14/24 07:20	05/20/24 17:00	1
Chromium	ND		0.0020	0.0012	mg/L		05/14/24 07:20	05/20/24 17:00	1
Cobalt	0.00021	J	0.00050	0.00010	mg/L		05/14/24 07:20	05/20/24 17:00	1
Copper	0.024		0.0020	0.0016	mg/L		05/14/24 07:20	05/20/24 17:00	1
Iron	0.12		0.050	0.041	mg/L		05/14/24 07:20	05/20/24 17:00	1
Lead	0.0019		0.0010	0.00061	mg/L		05/14/24 07:20	05/20/24 17:00	1
Magnesium	16		0.50	0.070	mg/L		05/14/24 07:20	05/20/24 17:00	1
Manganese	0.015		0.0050	0.0022	mg/L		05/14/24 07:20	05/20/24 17:00	1
Molybdenum	0.0015	J	0.0050	0.00070	mg/L		05/14/24 07:20	05/20/24 17:00	1
Nickel	0.069	B	0.0010	0.00039	mg/L		05/14/24 07:20	05/20/24 17:00	1
Selenium	0.0037	J	0.0050	0.0012	mg/L		05/14/24 07:20	05/20/24 17:00	1
Silver	ND		0.0010	0.00079	mg/L		05/14/24 07:20	05/20/24 17:00	1
Thallium	ND		0.0010	0.00069	mg/L		05/14/24 07:20	05/20/24 17:00	1
Zinc	2.5		0.015	0.0091	mg/L		05/14/24 07:20	05/20/24 17:00	1

Method: EPA 245.1 Rev. - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00028		0.00020	0.00013	mg/L		05/17/24 11:45	05/20/24 12:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM-Online 4500 H+ B-2000)	7.1	HF	0.1	0.1	SU			05/13/24 16:55	1
Temperature (SM-Online 4500 H+ B-2000)	21.6	! HF	0.1	0.1	Degrees C			05/13/24 16:55	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Client Sample ID: 005

Lab Sample ID: 180-173869-1

Date Collected: 05/10/24 14:14

Matrix: Water

Date Received: 05/10/24 17:11

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide (SM 4500 S2 F-2011)	2.1	J cn	3.0	1.3	mg/L			05/14/24 13:51	1
Total Organic Carbon - Quad (SM 5310 C-2014)	1.8		1.0	0.51	mg/L			05/14/24 04:29	1
Methylene Blue Active Substances (SM 5540C - 2011)	ND		0.050	0.049	mg/l LAS MW 340			05/11/24 13:19	1
HEM (Oil & Grease) (EPA 1664B)	ND		4.9	4.2	mg/L		05/15/24 07:09	05/15/24 09:12	1
Ammonia (EPA 350.1)	ND		0.10	0.088	mg/L			05/20/24 13:21	1
Nitrate Nitrite as N (EPA 353.2)	0.92		0.10	0.065	mg/L			05/13/24 12:31	1
Chemical Oxygen Demand (MCAWW EPA 410.4)	ND		10	9.1	mg/L		05/14/24 12:22	05/14/24 15:29	1
Color, Apparent (SM 2120B)	15		5.0	5.0	Color Units			05/10/24 18:17	1
Color, True (SM 2120B)	10		5.0	5.0	Color Units			05/10/24 18:17	1
pH at time of analysis (SM 2120B)	6.9	!	0.10	0.10	SU			05/10/24 18:17	1
Total Dissolved Solids (SM 2540C)	450		10	10	mg/L			05/15/24 17:15	1
Total Suspended Solids (SM 2540D)	1.7		0.50	0.50	mg/L			05/11/24 08:17	1
Biochemical Oxygen Demand (SM 5210B)	ND	cn	2.0	2.0	mg/L			05/11/24 13:15	1
Nitrogen, Kjeldahl (EPA TKN_TPhos)	ND		0.50	0.12	mg/L as N		05/13/24 05:52	05/14/24 07:02	1
Phosphorus, Total (EPA TKN_TPhos)	ND		0.10	0.040	mg/L as P		05/13/24 05:52	05/14/24 07:02	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SM 3500-Cr B-2011)	ND		0.010	0.0060	mg/L			05/11/24 09:57	1

Client Sample ID: 015

Lab Sample ID: 180-173869-2

Date Collected: 05/10/24 14:41

Matrix: Water

Date Received: 05/10/24 17:11

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			05/11/24 15:03	1
Acrylonitrile	ND		0.020	0.0078	mg/L			05/11/24 15:03	1
Benzene	ND		0.0010	0.00060	mg/L			05/11/24 15:03	1
Bromoform	ND	+	0.0010	0.00098	mg/L			05/11/24 15:03	1
Bromomethane	ND		0.0010	0.00089	mg/L			05/11/24 15:03	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			05/11/24 15:03	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			05/11/24 15:03	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			05/11/24 15:03	1
Chloroethane	ND		0.0010	0.00090	mg/L			05/11/24 15:03	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			05/11/24 15:03	1
Chloroform	ND		0.0010	0.00060	mg/L			05/11/24 15:03	1
Chloromethane	ND		0.0010	0.00090	mg/L			05/11/24 15:03	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			05/11/24 15:03	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			05/11/24 15:03	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			05/11/24 15:03	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			05/11/24 15:03	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			05/11/24 15:03	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			05/11/24 15:03	1
1,4-Dioxane	ND		0.20	0.043	mg/L			05/11/24 15:03	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			05/11/24 15:03	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Client Sample ID: 015

Lab Sample ID: 180-173869-2

Date Collected: 05/10/24 14:41

Matrix: Water

Date Received: 05/10/24 17:11

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		0.0010	0.00089	mg/L			05/11/24 15:03	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			05/11/24 15:03	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			05/11/24 15:03	1
Toluene	ND		0.0010	0.00046	mg/L			05/11/24 15:03	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			05/11/24 15:03	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			05/11/24 15:03	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			05/11/24 15:03	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			05/11/24 15:03	1
Trichloroethene	ND		0.0010	0.00069	mg/L			05/11/24 15:03	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			05/11/24 15:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		47 - 122		05/11/24 15:03	1
Dibromofluoromethane (Surr)	89		52 - 138		05/11/24 15:03	1
1,2-Dichloroethane-d4 (Surr)	95		24 - 145		05/11/24 15:03	1
Toluene-d8 (Surr)	98		65 - 143		05/11/24 15:03	1

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.0010	0.00024	mg/L		05/16/24 14:45	05/23/24 15:51	1
1,2-Dichlorobenzene	ND		0.0010	0.00021	mg/L		05/16/24 14:45	05/23/24 15:51	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.0010	0.00020	mg/L		05/16/24 14:45	05/23/24 15:51	1
1,3-Dinitrobenzene	ND		0.0010	0.00046	mg/L		05/16/24 14:45	05/23/24 15:51	1
1,4-Dichlorobenzene	ND		0.0010	0.00024	mg/L		05/16/24 14:45	05/23/24 15:51	1
2,2'-oxybis[1-chloropropane]	ND		0.00019	0.000058	mg/L		05/16/24 14:45	05/23/24 15:51	1
2,4,6-Trichlorophenol	ND		0.0010	0.00022	mg/L		05/16/24 14:45	05/23/24 15:51	1
2,4-Dichlorophenol	ND		0.00019	0.000051	mg/L		05/16/24 14:45	05/23/24 15:51	1
2,4-Dimethylphenol	ND		0.0010	0.00059	mg/L		05/16/24 14:45	05/23/24 15:51	1
2,4-Dinitrophenol	ND		0.010	0.0033	mg/L		05/16/24 14:45	05/23/24 15:51	1
2,4-Dinitrotoluene	ND		0.0010	0.00035	mg/L		05/16/24 14:45	05/23/24 15:51	1
2,6-Dinitrotoluene	ND		0.0010	0.00017	mg/L		05/16/24 14:45	05/23/24 15:51	1
2-Chloronaphthalene	ND		0.00019	0.000059	mg/L		05/16/24 14:45	05/23/24 15:51	1
2-Chlorophenol	ND		0.0010	0.00023	mg/L		05/16/24 14:45	05/23/24 15:51	1
2-Nitrophenol	ND		0.0010	0.00019	mg/L		05/16/24 14:45	05/23/24 15:51	1
3,3'-Dichlorobenzidine	ND		0.0010	0.00058	mg/L		05/16/24 14:45	05/23/24 15:51	1
4,6-Dinitro-2-methylphenol	ND		0.0050	0.0015	mg/L		05/16/24 14:45	05/23/24 15:51	1
4-Bromophenyl phenyl ether	ND		0.0010	0.00032	mg/L		05/16/24 14:45	05/23/24 15:51	1
4-Chloro-3-methylphenol	ND		0.0010	0.00044	mg/L		05/16/24 14:45	05/23/24 15:51	1
4-Chlorophenyl phenyl ether	ND		0.0010	0.00022	mg/L		05/16/24 14:45	05/23/24 15:51	1
4-Nitrophenol	ND		0.0050	0.00094	mg/L		05/16/24 14:45	05/23/24 15:51	1
Acenaphthene	ND		0.00019	0.000065	mg/L		05/16/24 14:45	05/23/24 15:51	1
Acenaphthylene	ND		0.00019	0.000065	mg/L		05/16/24 14:45	05/23/24 15:51	1
Acrylamide	ND		0.050	0.021	mg/L		05/16/24 14:45	05/23/24 15:51	1
Anthracene	ND		0.00019	0.000049	mg/L		05/16/24 14:45	05/23/24 15:51	1
Benzidine	ND		0.020	0.0091	mg/L		05/16/24 14:45	05/23/24 15:51	1
Benzo[a]anthracene	ND		0.00019	0.000075	mg/L		05/16/24 14:45	05/23/24 15:51	1
Benzo[a]pyrene	ND		0.00019	0.000053	mg/L		05/16/24 14:45	05/23/24 15:51	1
Benzo[b]fluoranthene	ND		0.00019	0.000097	mg/L		05/16/24 14:45	05/23/24 15:51	1
Benzo[g,h,i]perylene	ND		0.00019	0.000069	mg/L		05/16/24 14:45	05/23/24 15:51	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Client Sample ID: 015

Lab Sample ID: 180-173869-2

Date Collected: 05/10/24 14:41

Matrix: Water

Date Received: 05/10/24 17:11

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	ND		0.00019	0.000088	mg/L		05/16/24 14:45	05/23/24 15:51	1
Bis(2-chloroethoxy)methane	ND		0.0010	0.00015	mg/L		05/16/24 14:45	05/23/24 15:51	1
Bis(2-chloroethyl)ether	ND		0.00019	0.000040	mg/L		05/16/24 14:45	05/23/24 15:51	1
Bis(2-ethylhexyl) phthalate	ND		0.010	0.0062	mg/L		05/16/24 14:45	05/23/24 15:51	1
Butyl benzyl phthalate	ND		0.0020	0.00094	mg/L		05/16/24 14:45	05/23/24 15:51	1
Chrysene	ND		0.00019	0.000081	mg/L		05/16/24 14:45	05/23/24 15:51	1
Dibenz(a,h)anthracene	ND		0.00019	0.000072	mg/L		05/16/24 14:45	05/23/24 15:51	1
Diethyl phthalate	ND		0.0010	0.00057	mg/L		05/16/24 14:45	05/23/24 15:51	1
Dimethyl phthalate	ND		0.0020	0.00020	mg/L		05/16/24 14:45	05/23/24 15:51	1
Di-n-butyl phthalate	ND		0.010	0.0049	mg/L		05/16/24 14:45	05/23/24 15:51	1
Di-n-octyl phthalate	ND		0.0010	0.00069	mg/L		05/16/24 14:45	05/23/24 15:51	1
Fluoranthene	ND		0.00019	0.000060	mg/L		05/16/24 14:45	05/23/24 15:51	1
Fluorene	ND		0.00019	0.000069	mg/L		05/16/24 14:45	05/23/24 15:51	1
Hexachlorobenzene	ND		0.00019	0.000056	mg/L		05/16/24 14:45	05/23/24 15:51	1
Hexachlorobutadiene	ND		0.00019	0.000069	mg/L		05/16/24 14:45	05/23/24 15:51	1
Hexachlorocyclopentadiene	ND		0.0010	0.00050	mg/L		05/16/24 14:45	05/23/24 15:51	1
Hexachloroethane	ND		0.0010	0.00013	mg/L		05/16/24 14:45	05/23/24 15:51	1
Indeno[1,2,3-cd]pyrene	ND		0.00019	0.000085	mg/L		05/16/24 14:45	05/23/24 15:51	1
Isophorone	ND		0.0010	0.00019	mg/L		05/16/24 14:45	05/23/24 15:51	1
Naphthalene	ND		0.00019	0.000059	mg/L		05/16/24 14:45	05/23/24 15:51	1
Nitrobenzene	ND		0.0020	0.00050	mg/L		05/16/24 14:45	05/23/24 15:51	1
N-Nitrosodimethylamine	ND		0.0010	0.00026	mg/L		05/16/24 14:45	05/23/24 15:51	1
N-Nitrosodi-n-propylamine	ND		0.00019	0.000071	mg/L		05/16/24 14:45	05/23/24 15:51	1
N-Nitrosodiphenylamine	ND		0.0010	0.00012	mg/L		05/16/24 14:45	05/23/24 15:51	1
Pentachlorophenol	ND		0.0050	0.00085	mg/L		05/16/24 14:45	05/23/24 15:51	1
Phenanthrene	ND		0.00019	0.00016	mg/L		05/16/24 14:45	05/23/24 15:51	1
Phenol	ND		0.0010	0.00049	mg/L		05/16/24 14:45	05/23/24 15:51	1
Pyrene	ND		0.00019	0.000054	mg/L		05/16/24 14:45	05/23/24 15:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	72		42 - 115	05/16/24 14:45	05/23/24 15:51	1
2-Fluorobiphenyl	70		47 - 107	05/16/24 14:45	05/23/24 15:51	1
2-Fluorophenol (Surr)	78		54 - 109	05/16/24 14:45	05/23/24 15:51	1
Nitrobenzene-d5 (Surr)	79		47 - 110	05/16/24 14:45	05/23/24 15:51	1
Phenol-d5 (Surr)	78		37 - 110	05/16/24 14:45	05/23/24 15:51	1
Terphenyl-d14 (Surr)	82		32 - 115	05/16/24 14:45	05/23/24 15:51	1

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000012	0.0000003	mg/L		05/13/24 23:55	05/18/24 18:14	1
				4					
alpha-BHC	ND		0.0000012	0.0000002	mg/L		05/13/24 23:55	05/18/24 18:14	1
				3					
beta-BHC	ND		0.0000012	0.0000003	mg/L		05/13/24 23:55	05/18/24 18:14	1
				5					
gamma-BHC (Lindane)	ND		0.0000012	0.0000002	mg/L		05/13/24 23:55	05/18/24 18:14	1
				8					
delta-BHC	ND		0.0000012	0.0000006	mg/L		05/13/24 23:55	05/18/24 18:14	1
				1					
Chlordane (technical)	ND		0.000012	0.0000069	mg/L		05/13/24 23:55	05/18/24 18:14	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Client Sample ID: 015

Lab Sample ID: 180-173869-2

Date Collected: 05/10/24 14:41

Matrix: Water

Date Received: 05/10/24 17:11

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.0000012	0.0000005	mg/L		05/13/24 23:55	05/18/24 18:14	1
				1					
4,4'-DDE	ND		0.0000012	0.0000002	mg/L		05/13/24 23:55	05/18/24 18:14	1
				8					
4,4'-DDT	ND		0.0000012	0.0000006	mg/L		05/13/24 23:55	05/18/24 18:14	1
				6					
Dieldrin	ND		0.0000012	0.0000002	mg/L		05/13/24 23:55	05/18/24 18:14	1
				6					
Endosulfan I	ND		0.0000012	0.0000006	mg/L		05/13/24 23:55	05/18/24 18:14	1
				5					
Endosulfan II	ND		0.0000012	0.0000003	mg/L		05/13/24 23:55	05/18/24 18:14	1
				0					
Endosulfan sulfate	ND		0.0000012	0.0000006	mg/L		05/13/24 23:55	05/18/24 18:14	1
				1					
Endrin	ND		0.0000012	0.0000002	mg/L		05/13/24 23:55	05/18/24 18:14	1
				2					
Endrin aldehyde	ND		0.0000012	0.0000004	mg/L		05/13/24 23:55	05/18/24 18:14	1
				9					
Heptachlor	ND		0.0000012	0.0000004	mg/L		05/13/24 23:55	05/18/24 18:14	1
				3					
Heptachlor epoxide	ND		0.0000012	0.0000003	mg/L		05/13/24 23:55	05/18/24 18:14	1
				2					
Toxaphene	ND		0.0000095	0.000047	mg/L		05/13/24 23:55	05/18/24 18:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	93		20 - 138	05/13/24 23:55	05/18/24 18:14	1
Tetrachloro-m-xylene (Surr)	95		20 - 138	05/13/24 23:55	05/18/24 18:14	1
DCB Decachlorobiphenyl (Surr)	54		43 - 143	05/13/24 23:55	05/18/24 18:14	1
DCB Decachlorobiphenyl (Surr)	85		43 - 143	05/13/24 23:55	05/18/24 18:14	1

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.0000095	0.0000045	mg/L		05/13/24 23:55	05/15/24 16:49	1
PCB-1221	ND		0.0000095	0.0000054	mg/L		05/13/24 23:55	05/15/24 16:49	1
PCB-1232	ND		0.0000095	0.0000050	mg/L		05/13/24 23:55	05/15/24 16:49	1
PCB-1242	ND		0.0000095	0.0000087	mg/L		05/13/24 23:55	05/15/24 16:49	1
PCB-1248	ND		0.0000095	0.0000028	mg/L		05/13/24 23:55	05/15/24 16:49	1
PCB-1254	ND		0.0000095	0.0000091	mg/L		05/13/24 23:55	05/15/24 16:49	1
PCB-1260	ND		0.0000095	0.0000037	mg/L		05/13/24 23:55	05/15/24 16:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	75		20 - 138	05/13/24 23:55	05/15/24 16:49	1
Tetrachloro-m-xylene (Surr)	80		20 - 138	05/13/24 23:55	05/15/24 16:49	1
DCB Decachlorobiphenyl (Surr)	71		43 - 143	05/13/24 23:55	05/15/24 16:49	1
DCB Decachlorobiphenyl (Surr)	93		43 - 143	05/13/24 23:55	05/15/24 16:49	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			05/15/24 17:08	1
Chloride	99.4		1.00	0.712	mg/L			05/15/24 17:08	1
Fluoride	0.244		0.100	0.0260	mg/L			05/15/24 17:08	1
Sulfate	192		1.00	0.756	mg/L			05/15/24 17:08	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Client Sample ID: 015

Lab Sample ID: 180-173869-2

Date Collected: 05/10/24 14:41

Matrix: Water

Date Received: 05/10/24 17:11

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.19		0.030	0.019	mg/L		05/14/24 07:20	05/20/24 17:03	1
Antimony	ND	+	0.0020	0.0018	mg/L		05/14/24 07:20	05/20/24 17:03	1
Arsenic	0.0073		0.0010	0.00030	mg/L		05/14/24 07:20	05/20/24 17:03	1
Barium	0.050		0.010	0.0019	mg/L		05/14/24 07:20	05/20/24 17:03	1
Beryllium	ND		0.0010	0.00025	mg/L		05/14/24 07:20	05/20/24 17:03	1
Boron	1.6		0.40	0.32	mg/L		05/14/24 07:20	05/21/24 15:43	5
Cadmium	0.0059		0.0010	0.00034	mg/L		05/14/24 07:20	05/20/24 17:03	1
Calcium	110		0.50	0.18	mg/L		05/14/24 07:20	05/20/24 17:03	1
Chromium	ND		0.0020	0.0012	mg/L		05/14/24 07:20	05/20/24 17:03	1
Cobalt	0.00053		0.00050	0.00010	mg/L		05/14/24 07:20	05/20/24 17:03	1
Copper	0.0030		0.0020	0.0016	mg/L		05/14/24 07:20	05/20/24 17:03	1
Iron	0.25		0.050	0.041	mg/L		05/14/24 07:20	05/20/24 17:03	1
Lead	ND		0.0010	0.00061	mg/L		05/14/24 07:20	05/20/24 17:03	1
Magnesium	15		0.50	0.070	mg/L		05/14/24 07:20	05/20/24 17:03	1
Manganese	0.21		0.0050	0.0022	mg/L		05/14/24 07:20	05/20/24 17:03	1
Molybdenum	0.014		0.0050	0.00070	mg/L		05/14/24 07:20	05/20/24 17:03	1
Nickel	0.053	B	0.0010	0.00039	mg/L		05/14/24 07:20	05/20/24 17:03	1
Selenium	0.0063		0.0050	0.0012	mg/L		05/14/24 07:20	05/20/24 17:03	1
Silver	ND		0.0010	0.00079	mg/L		05/14/24 07:20	05/20/24 17:03	1
Thallium	ND		0.0010	0.00069	mg/L		05/14/24 07:20	05/20/24 17:03	1
Zinc	1.8		0.015	0.0091	mg/L		05/14/24 07:20	05/20/24 17:03	1

Method: EPA 245.1 Rev. - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00024		0.00020	0.00013	mg/L		05/17/24 11:45	05/20/24 12:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM-Online 4500 H+ B-2000)	8.1	HF	0.1	0.1	SU			05/13/24 16:50	1
Temperature (SM-Online 4500 H+ B-2000)	21.7	! HF	0.1	0.1	Degrees C			05/13/24 16:50	1
Sulfide (SM 4500 S2 F-2011)	2.0	J cn	3.0	1.3	mg/L			05/14/24 13:53	1
Total Organic Carbon - Quad (SM 5310 C-2014)	1.5		1.0	0.51	mg/L			05/14/24 04:53	1
Methylene Blue Active Substances (SM 5540C - 2011)	ND		0.050	0.049	mg/L LAS MW 340			05/11/24 13:22	1
HEM (Oil & Grease) (EPA 1664B)	ND		5.1	4.4	mg/L		05/15/24 07:09	05/15/24 09:12	1
Ammonia (EPA 350.1)	ND		0.10	0.088	mg/L			05/20/24 13:23	1
Nitrate Nitrite as N (EPA 353.2)	0.40		0.10	0.065	mg/L			05/13/24 12:41	1
Chemical Oxygen Demand (MCAWW EPA 410.4)	ND		10	9.1	mg/L		05/14/24 12:22	05/14/24 15:29	1
Color, Apparent (SM 2120B)	5.0		5.0	5.0	Color Units			05/10/24 18:17	1
Color, True (SM 2120B)	ND		5.0	5.0	Color Units			05/10/24 18:17	1
pH at time of analysis (SM 2120B)	8.3	!	0.10	0.10	SU			05/10/24 18:17	1
Total Dissolved Solids (SM 2540C)	610		10	10	mg/L			05/15/24 17:15	1
Total Suspended Solids (SM 2540D)	ND		1.0	1.0	mg/L			05/11/24 08:17	1
Biochemical Oxygen Demand (SM 5210B)	ND	cn	2.0	2.0	mg/L			05/11/24 13:15	1
Nitrogen, Kjeldahl (EPA TKN_TPhos)	0.71	FH	0.50	0.12	mg/L as N		05/13/24 05:56	05/14/24 07:11	1
Phosphorus, Total (EPA TKN_TPhos)	0.12		0.10	0.040	mg/L as P		05/13/24 05:56	05/14/24 07:11	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Client Sample ID: 015

Date Collected: 05/10/24 14:41

Date Received: 05/10/24 17:11

Lab Sample ID: 180-173869-2

Matrix: Water

General Chemistry - Dissolved									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SM 3500-Cr B-2011)	ND		0.010	0.0060	mg/L			05/11/24 09:53	1

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

QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

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

Lab Sample ID: MB 180-468288/8

Matrix: Water

Analysis Batch: 468288

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			05/11/24 10:04	1
Acrylonitrile	ND		0.020	0.0078	mg/L			05/11/24 10:04	1
Benzene	ND		0.0010	0.00060	mg/L			05/11/24 10:04	1
Bromoform	ND		0.0010	0.00098	mg/L			05/11/24 10:04	1
Bromomethane	ND		0.0010	0.00089	mg/L			05/11/24 10:04	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			05/11/24 10:04	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			05/11/24 10:04	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			05/11/24 10:04	1
Chloroethane	ND		0.0010	0.00090	mg/L			05/11/24 10:04	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			05/11/24 10:04	1
Chloroform	ND		0.0010	0.00060	mg/L			05/11/24 10:04	1
Chloromethane	ND		0.0010	0.00090	mg/L			05/11/24 10:04	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			05/11/24 10:04	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			05/11/24 10:04	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			05/11/24 10:04	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			05/11/24 10:04	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			05/11/24 10:04	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			05/11/24 10:04	1
1,4-Dioxane	ND		0.20	0.043	mg/L			05/11/24 10:04	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			05/11/24 10:04	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			05/11/24 10:04	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			05/11/24 10:04	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			05/11/24 10:04	1
Toluene	ND		0.0010	0.00046	mg/L			05/11/24 10:04	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			05/11/24 10:04	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			05/11/24 10:04	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			05/11/24 10:04	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			05/11/24 10:04	1
Trichloroethene	ND		0.0010	0.00069	mg/L			05/11/24 10:04	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			05/11/24 10:04	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		47 - 122		05/11/24 10:04	1
Dibromofluoromethane (Surr)	86		52 - 138		05/11/24 10:04	1
1,2-Dichloroethane-d4 (Surr)	89		24 - 145		05/11/24 10:04	1
Toluene-d8 (Surr)	92		65 - 143		05/11/24 10:04	1

Lab Sample ID: LCS 180-468288/5

Matrix: Water

Analysis Batch: 468288

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acrolein	0.0400	0.0288		mg/L		72	60 - 140
Acrylonitrile	0.100	0.0614		mg/L		61	60 - 140
Benzene	0.0100	0.00892		mg/L		89	65 - 135
Bromoform	0.0100	0.0131	*+	mg/L		131	70 - 130
Bromomethane	0.0100	0.00778		mg/L		78	15 - 170
Carbon tetrachloride	0.0100	0.0105		mg/L		105	70 - 130

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

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

Lab Sample ID: LCS 180-468288/5

Matrix: Water

Analysis Batch: 468288

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorobenzene	0.0100	0.00909		mg/L		91	65 - 135
Chlorodibromomethane	0.0100	0.0114		mg/L		114	70 - 135
Chloroethane	0.0100	0.00857		mg/L		86	40 - 160
2-Chloroethyl vinyl ether	0.0200	0.0121		mg/L		61	10 - 170
Chloroform	0.0100	0.00950		mg/L		95	70 - 135
Chloromethane	0.0100	0.00824		mg/L		82	10 - 170
cis-1,3-Dichloropropene	0.0100	0.0116		mg/L		116	25 - 170
Dichlorobromomethane	0.0100	0.0108		mg/L		108	65 - 135
1,1-Dichloroethane	0.0100	0.00989		mg/L		99	70 - 130
1,2-Dichloroethane	0.0100	0.0102		mg/L		102	70 - 130
1,1-Dichloroethene	0.0100	0.00955		mg/L		96	50 - 150
1,2-Dichloropropane	0.0100	0.0107		mg/L		107	35 - 165
1,4-Dioxane	0.200	0.111	J	mg/L		55	10 - 152
Ethylbenzene	0.0100	0.00934		mg/L		93	60 - 140
Methylene Chloride	0.0100	0.00874		mg/L		87	60 - 140
1,1,2,2-Tetrachloroethane	0.0100	0.00803		mg/L		80	60 - 140
Tetrachloroethene	0.0100	0.0100		mg/L		100	70 - 130
Toluene	0.0100	0.00912		mg/L		91	70 - 130
trans-1,2-Dichloroethene	0.0100	0.00891		mg/L		89	70 - 130
trans-1,3-Dichloropropene	0.0100	0.0120		mg/L		120	50 - 150
1,1,1-Trichloroethane	0.0100	0.00999		mg/L		100	70 - 130
1,1,2-Trichloroethane	0.0100	0.00937		mg/L		94	70 - 130
Trichloroethene	0.0100	0.00935		mg/L		93	65 - 135
Vinyl chloride	0.0100	0.0104		mg/L		104	10 - 170

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		47 - 122
Dibromofluoromethane (Surr)	93		52 - 138
1,2-Dichloroethane-d4 (Surr)	96		24 - 145
Toluene-d8 (Surr)	97		65 - 143

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 180-468887/1-A

Matrix: Water

Analysis Batch: 469542

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 468887

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.0010	0.00024	mg/L		05/16/24 14:45	05/23/24 15:08	1
1,2-Dichlorobenzene	ND		0.0010	0.00021	mg/L		05/16/24 14:45	05/23/24 15:08	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.0010	0.00020	mg/L		05/16/24 14:45	05/23/24 15:08	1
1,3-Dinitrobenzene	ND		0.0010	0.00046	mg/L		05/16/24 14:45	05/23/24 15:08	1
1,4-Dichlorobenzene	ND		0.0010	0.00024	mg/L		05/16/24 14:45	05/23/24 15:08	1
2,2'-oxybis[1-chloropropane]	ND		0.00019	0.000058	mg/L		05/16/24 14:45	05/23/24 15:08	1
2,4,6-Trichlorophenol	ND		0.0010	0.00022	mg/L		05/16/24 14:45	05/23/24 15:08	1
2,4-Dichlorophenol	ND		0.00019	0.000051	mg/L		05/16/24 14:45	05/23/24 15:08	1
2,4-Dimethylphenol	ND		0.0010	0.00059	mg/L		05/16/24 14:45	05/23/24 15:08	1
2,4-Dinitrophenol	ND		0.010	0.0033	mg/L		05/16/24 14:45	05/23/24 15:08	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-468887/1-A

Matrix: Water

Analysis Batch: 469542

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 468887

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		0.0010	0.00035	mg/L		05/16/24 14:45	05/23/24 15:08	1
2,6-Dinitrotoluene	ND		0.0010	0.00017	mg/L		05/16/24 14:45	05/23/24 15:08	1
2-Chloronaphthalene	ND		0.00019	0.000059	mg/L		05/16/24 14:45	05/23/24 15:08	1
2-Chlorophenol	ND		0.0010	0.00023	mg/L		05/16/24 14:45	05/23/24 15:08	1
2-Nitrophenol	ND		0.0010	0.00019	mg/L		05/16/24 14:45	05/23/24 15:08	1
3,3'-Dichlorobenzidine	ND		0.0010	0.00058	mg/L		05/16/24 14:45	05/23/24 15:08	1
4,6-Dinitro-2-methylphenol	ND		0.0050	0.0015	mg/L		05/16/24 14:45	05/23/24 15:08	1
4-Bromophenyl phenyl ether	ND		0.0010	0.00032	mg/L		05/16/24 14:45	05/23/24 15:08	1
4-Chloro-3-methylphenol	ND		0.0010	0.00044	mg/L		05/16/24 14:45	05/23/24 15:08	1
4-Chlorophenyl phenyl ether	ND		0.0010	0.00022	mg/L		05/16/24 14:45	05/23/24 15:08	1
4-Nitrophenol	ND		0.0050	0.00094	mg/L		05/16/24 14:45	05/23/24 15:08	1
Acenaphthene	ND		0.00019	0.000065	mg/L		05/16/24 14:45	05/23/24 15:08	1
Acenaphthylene	ND		0.00019	0.000065	mg/L		05/16/24 14:45	05/23/24 15:08	1
Acrylamide	ND		0.050	0.021	mg/L		05/16/24 14:45	05/23/24 15:08	1
Anthracene	ND		0.00019	0.000049	mg/L		05/16/24 14:45	05/23/24 15:08	1
Benzidine	ND		0.020	0.0091	mg/L		05/16/24 14:45	05/23/24 15:08	1
Benzo[a]anthracene	ND		0.00019	0.000075	mg/L		05/16/24 14:45	05/23/24 15:08	1
Benzo[a]pyrene	ND		0.00019	0.000053	mg/L		05/16/24 14:45	05/23/24 15:08	1
Benzo[b]fluoranthene	ND		0.00019	0.000097	mg/L		05/16/24 14:45	05/23/24 15:08	1
Benzo[g,h,i]perylene	ND		0.00019	0.000069	mg/L		05/16/24 14:45	05/23/24 15:08	1
Benzo[k]fluoranthene	ND		0.00019	0.000088	mg/L		05/16/24 14:45	05/23/24 15:08	1
Bis(2-chloroethoxy)methane	ND		0.0010	0.00015	mg/L		05/16/24 14:45	05/23/24 15:08	1
Bis(2-chloroethyl)ether	ND		0.00019	0.000040	mg/L		05/16/24 14:45	05/23/24 15:08	1
Bis(2-ethylhexyl) phthalate	ND		0.010	0.0062	mg/L		05/16/24 14:45	05/23/24 15:08	1
Butyl benzyl phthalate	ND		0.0020	0.00094	mg/L		05/16/24 14:45	05/23/24 15:08	1
Chrysene	ND		0.00019	0.000081	mg/L		05/16/24 14:45	05/23/24 15:08	1
Dibenz(a,h)anthracene	ND		0.00019	0.000072	mg/L		05/16/24 14:45	05/23/24 15:08	1
Diethyl phthalate	ND		0.0010	0.00057	mg/L		05/16/24 14:45	05/23/24 15:08	1
Dimethyl phthalate	ND		0.0020	0.00020	mg/L		05/16/24 14:45	05/23/24 15:08	1
Di-n-butyl phthalate	ND		0.010	0.0049	mg/L		05/16/24 14:45	05/23/24 15:08	1
Di-n-octyl phthalate	ND		0.0010	0.00069	mg/L		05/16/24 14:45	05/23/24 15:08	1
Fluoranthene	ND		0.00019	0.000060	mg/L		05/16/24 14:45	05/23/24 15:08	1
Fluorene	ND		0.00019	0.000069	mg/L		05/16/24 14:45	05/23/24 15:08	1
Hexachlorobenzene	ND		0.00019	0.000056	mg/L		05/16/24 14:45	05/23/24 15:08	1
Hexachlorobutadiene	ND		0.00019	0.000069	mg/L		05/16/24 14:45	05/23/24 15:08	1
Hexachlorocyclopentadiene	ND		0.0010	0.00050	mg/L		05/16/24 14:45	05/23/24 15:08	1
Hexachloroethane	ND		0.0010	0.00013	mg/L		05/16/24 14:45	05/23/24 15:08	1
Indeno[1,2,3-cd]pyrene	ND		0.00019	0.000085	mg/L		05/16/24 14:45	05/23/24 15:08	1
Isophorone	ND		0.0010	0.00019	mg/L		05/16/24 14:45	05/23/24 15:08	1
Naphthalene	ND		0.00019	0.000059	mg/L		05/16/24 14:45	05/23/24 15:08	1
Nitrobenzene	ND		0.0020	0.00050	mg/L		05/16/24 14:45	05/23/24 15:08	1
N-Nitrosodimethylamine	ND		0.0010	0.00026	mg/L		05/16/24 14:45	05/23/24 15:08	1
N-Nitrosodi-n-propylamine	ND		0.00019	0.000071	mg/L		05/16/24 14:45	05/23/24 15:08	1
N-Nitrosodiphenylamine	ND		0.0010	0.00012	mg/L		05/16/24 14:45	05/23/24 15:08	1
Pentachlorophenol	ND		0.0050	0.00085	mg/L		05/16/24 14:45	05/23/24 15:08	1
Phenanthrene	ND		0.00019	0.00016	mg/L		05/16/24 14:45	05/23/24 15:08	1
Phenol	ND		0.0010	0.00049	mg/L		05/16/24 14:45	05/23/24 15:08	1
Pyrene	ND		0.00019	0.000054	mg/L		05/16/24 14:45	05/23/24 15:08	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-468887/1-A

Matrix: Water

Analysis Batch: 469542

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 468887

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	58		42 - 115	05/16/24 14:45	05/23/24 15:08	1
2-Fluorobiphenyl	67		47 - 107	05/16/24 14:45	05/23/24 15:08	1
2-Fluorophenol (Surr)	73		54 - 109	05/16/24 14:45	05/23/24 15:08	1
Nitrobenzene-d5 (Surr)	74		47 - 110	05/16/24 14:45	05/23/24 15:08	1
Phenol-d5 (Surr)	72		37 - 110	05/16/24 14:45	05/23/24 15:08	1
Terphenyl-d14 (Surr)	71		32 - 115	05/16/24 14:45	05/23/24 15:08	1

Lab Sample ID: LCS 180-468887/2-A

Matrix: Water

Analysis Batch: 469542

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 468887

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	0.0100	0.00808		mg/L		81	52 - 142
1,2-Dichlorobenzene	0.0100	0.00824		mg/L		82	50 - 100
1,2-Diphenylhydrazine(as Azobenzene)	0.0100	0.00888		mg/L		89	40 - 116
1,3-Dinitrobenzene	0.0100	0.00830		mg/L		83	54 - 100
1,4-Dichlorobenzene	0.0100	0.00820		mg/L		82	57 - 100
2,2'-oxybis[1-chloropropane]	0.0100	0.00849		mg/L		85	36 - 150
2,4,6-Trichlorophenol	0.0100	0.00873		mg/L		87	37 - 144
2,4-Dichlorophenol	0.0100	0.00851		mg/L		85	39 - 135
2,4-Dimethylphenol	0.0100	0.00737		mg/L		74	32 - 120
2,4-Dinitrophenol	0.0200	0.0142		mg/L		71	10 - 150
2,4-Dinitrotoluene	0.0100	0.00859		mg/L		86	39 - 139
2,6-Dinitrotoluene	0.0100	0.00858		mg/L		86	50 - 150
2-Chloronaphthalene	0.0100	0.00836		mg/L		84	60 - 120
2-Chlorophenol	0.0100	0.00883		mg/L		88	23 - 134
2-Nitrophenol	0.0100	0.00924		mg/L		92	57 - 150
3,3'-Dichlorobenzidine	0.0100	0.00741		mg/L		74	44 - 150
4,6-Dinitro-2-methylphenol	0.0200	0.0153		mg/L		76	43 - 150
4-Bromophenyl phenyl ether	0.0100	0.00828		mg/L		83	53 - 127
4-Chloro-3-methylphenol	0.0100	0.00837		mg/L		84	54 - 147
4-Chlorophenyl phenyl ether	0.0100	0.00790		mg/L		79	25 - 150
4-Nitrophenol	0.0200	0.0145		mg/L		72	10 - 132
Acenaphthene	0.0100	0.00829		mg/L		83	47 - 145
Acenaphthylene	0.0100	0.00877		mg/L		88	33 - 145
Anthracene	0.0100	0.00837		mg/L		84	27 - 133
Benzidine	0.0100	ND		mg/L		56	5 - 100
Benzo[a]anthracene	0.0100	0.00850		mg/L		85	33 - 143
Benzo[a]pyrene	0.0100	0.00844		mg/L		84	17 - 150
Benzo[b]fluoranthene	0.0100	0.00769		mg/L		77	24 - 150
Benzo[g,h,i]perylene	0.0100	0.00812		mg/L		81	10 - 150
Benzo[k]fluoranthene	0.0100	0.00800		mg/L		80	11 - 150
Bis(2-chloroethoxy)methane	0.0100	0.00840		mg/L		84	33 - 150
Bis(2-chloroethyl)ether	0.0100	0.00838		mg/L		84	12 - 150
Bis(2-ethylhexyl) phthalate	0.0100	0.00902	J	mg/L		90	10 - 150
Butyl benzyl phthalate	0.0100	0.00960		mg/L		96	10 - 150
Chrysene	0.0100	0.00817		mg/L		82	17 - 150
Dibenz(a,h)anthracene	0.0100	0.00789		mg/L		79	10 - 150

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-468887/2-A

Matrix: Water

Analysis Batch: 469542

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 468887

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diethyl phthalate	0.0100	0.00843		mg/L		84	10 - 120
Dimethyl phthalate	0.0100	0.00824		mg/L		82	10 - 120
Di-n-butyl phthalate	0.0100	0.00918	J	mg/L		92	10 - 120
Di-n-octyl phthalate	0.0100	0.00964		mg/L		96	10 - 146
Fluoranthene	0.0100	0.00804		mg/L		80	26 - 137
Fluorene	0.0100	0.00796		mg/L		80	59 - 121
Hexachlorobenzene	0.0100	0.00806		mg/L		81	10 - 150
Hexachlorobutadiene	0.0100	0.00837		mg/L		84	24 - 120
Hexachlorocyclopentadiene	0.0100	0.00770		mg/L		77	37 - 121
Hexachloroethane	0.0100	0.00863		mg/L		86	40 - 120
Indeno[1,2,3-cd]pyrene	0.0100	0.00873		mg/L		87	10 - 150
Isophorone	0.0100	0.00872		mg/L		87	21 - 150
Naphthalene	0.0100	0.00796		mg/L		80	21 - 133
Nitrobenzene	0.0100	0.00831		mg/L		83	35 - 150
N-Nitrosodimethylamine	0.0100	0.00838		mg/L		84	50 - 109
N-Nitrosodi-n-propylamine	0.0100	0.00899		mg/L		90	10 - 150
N-Nitrosodiphenylamine	0.0100	0.00845		mg/L		85	51 - 100
Pentachlorophenol	0.0200	0.0168		mg/L		84	14 - 150
Phenanthrene	0.0100	0.00790		mg/L		79	54 - 120
Phenol	0.0100	0.00821		mg/L		82	10 - 120
Pyrene	0.0100	0.00888		mg/L		89	52 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	78		42 - 115
2-Fluorobiphenyl	78		47 - 107
2-Fluorophenol (Surr)	83		54 - 109
Nitrobenzene-d5 (Surr)	82		47 - 110
Phenol-d5 (Surr)	81		37 - 110
Terphenyl-d14 (Surr)	68		32 - 115

Lab Sample ID: LCSD 180-468887/3-A

Matrix: Water

Analysis Batch: 469542

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 468887

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	0.0100	0.00823		mg/L		82	52 - 142	2	16
1,2-Dichlorobenzene	0.0100	0.00844		mg/L		84	50 - 100	2	15
1,2-Diphenylhydrazine(as Azobenzene)	0.0100	0.00865		mg/L		86	40 - 116	3	19
1,3-Dinitrobenzene	0.0100	0.00855		mg/L		85	54 - 100	3	15
1,4-Dichlorobenzene	0.0100	0.00862		mg/L		86	57 - 100	5	15
2,2'-oxybis[1-chloropropane]	0.0100	0.00878		mg/L		88	36 - 150	3	35
2,4,6-Trichlorophenol	0.0100	0.00879		mg/L		88	37 - 144	1	35
2,4-Dichlorophenol	0.0100	0.00894		mg/L		89	39 - 135	5	35
2,4-Dimethylphenol	0.0100	0.00777		mg/L		78	32 - 120	5	35
2,4-Dinitrophenol	0.0200	0.0152		mg/L		76	10 - 150	7	35
2,4-Dinitrotoluene	0.0100	0.00872		mg/L		87	39 - 139	2	35
2,6-Dinitrotoluene	0.0100	0.00882		mg/L		88	50 - 150	3	35
2-Chloronaphthalene	0.0100	0.00826		mg/L		83	60 - 120	1	24

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 180-468887/3-A

Matrix: Water

Analysis Batch: 469542

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 468887

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Chlorophenol	0.0100	0.00898		mg/L		90	23 - 134	2	34
2-Nitrophenol	0.0100	0.00937		mg/L		94	57 - 150	1	17
3,3'-Dichlorobenzidine	0.0100	0.00767		mg/L		77	44 - 150	4	19
4,6-Dinitro-2-methylphenol	0.0200	0.0158		mg/L		79	43 - 150	3	21
4-Bromophenyl phenyl ether	0.0100	0.00822		mg/L		82	53 - 127	1	20
4-Chloro-3-methylphenol	0.0100	0.00894		mg/L		89	54 - 147	7	35
4-Chlorophenyl phenyl ether	0.0100	0.00806		mg/L		81	25 - 150	2	35
4-Nitrophenol	0.0200	0.0160		mg/L		80	10 - 132	10	35
Acenaphthene	0.0100	0.00815		mg/L		81	47 - 145	2	35
Acenaphthylene	0.0100	0.00880		mg/L		88	33 - 145	0	35
Anthracene	0.0100	0.00860		mg/L		86	27 - 133	3	35
Benzidine	0.0100	ND		mg/L		59	5 - 100	4	35
Benzo[a]anthracene	0.0100	0.00865		mg/L		87	33 - 143	2	35
Benzo[a]pyrene	0.0100	0.00865		mg/L		87	17 - 150	3	35
Benzo[b]fluoranthene	0.0100	0.00759		mg/L		76	24 - 150	1	35
Benzo[g,h,i]perylene	0.0100	0.00781		mg/L		78	10 - 150	4	35
Benzo[k]fluoranthene	0.0100	0.00824		mg/L		82	11 - 150	3	35
Bis(2-chloroethoxy)methane	0.0100	0.00862		mg/L		86	33 - 150	3	35
Bis(2-chloroethyl)ether	0.0100	0.00851		mg/L		85	12 - 150	1	35
Bis(2-ethylhexyl) phthalate	0.0100	0.00898	J	mg/L		90	10 - 150	0	35
Butyl benzyl phthalate	0.0100	0.00914		mg/L		91	10 - 150	5	35
Chrysene	0.0100	0.00835		mg/L		84	17 - 150	2	35
Dibenz(a,h)anthracene	0.0100	0.00795		mg/L		79	10 - 150	1	35
Diethyl phthalate	0.0100	0.00859		mg/L		86	10 - 120	2	35
Dimethyl phthalate	0.0100	0.00869		mg/L		87	10 - 120	5	35
Di-n-butyl phthalate	0.0100	0.00940	J	mg/L		94	10 - 120	2	35
Di-n-octyl phthalate	0.0100	0.00962		mg/L		96	10 - 146	0	35
Fluoranthene	0.0100	0.00858		mg/L		86	26 - 137	6	35
Fluorene	0.0100	0.00824		mg/L		82	59 - 121	4	35
Hexachlorobenzene	0.0100	0.00811		mg/L		81	10 - 150	1	35
Hexachlorobutadiene	0.0100	0.00821		mg/L		82	24 - 120	2	35
Hexachlorocyclopentadiene	0.0100	0.00728		mg/L		73	37 - 121	6	15
Hexachloroethane	0.0100	0.00872		mg/L		87	40 - 120	1	35
Indeno[1,2,3-cd]pyrene	0.0100	0.00868		mg/L		87	10 - 150	1	35
Isophorone	0.0100	0.00906		mg/L		91	21 - 150	4	35
Naphthalene	0.0100	0.00814		mg/L		81	21 - 133	2	35
Nitrobenzene	0.0100	0.00880		mg/L		88	35 - 150	6	35
N-Nitrosodimethylamine	0.0100	0.00878		mg/L		88	50 - 109	5	19
N-Nitrosodi-n-propylamine	0.0100	0.00965		mg/L		96	10 - 150	7	35
N-Nitrosodiphenylamine	0.0100	0.00827		mg/L		83	51 - 100	2	20
Pentachlorophenol	0.0200	0.0177		mg/L		88	14 - 150	5	35
Phenanthrene	0.0100	0.00811		mg/L		81	54 - 120	3	35
Phenol	0.0100	0.00860		mg/L		86	10 - 120	5	35
Pyrene	0.0100	0.00863		mg/L		86	52 - 120	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	81		42 - 115
2-Fluorobiphenyl	78		47 - 107

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 180-468887/3-A

Matrix: Water

Analysis Batch: 469542

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 468887

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorophenol (Surr)	86		54 - 109
Nitrobenzene-d5 (Surr)	85		47 - 110
Phenol-d5 (Surr)	85		37 - 110
Terphenyl-d14 (Surr)	65		32 - 115

Method: EPA 608.3 - Organochlorine Pesticides in Water

Lab Sample ID: MB 180-468492/1-A

Matrix: Water

Analysis Batch: 469307

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 468492

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000013	0.0000003	mg/L		05/13/24 23:55	05/21/24 13:52	1
alpha-BHC	ND		0.0000013	0.0000002	mg/L		05/13/24 23:55	05/21/24 13:52	1
beta-BHC	ND		0.0000013	0.0000003	mg/L		05/13/24 23:55	05/21/24 13:52	1
gamma-BHC (Lindane)	ND		0.0000013	0.0000002	mg/L		05/13/24 23:55	05/21/24 13:52	1
delta-BHC	ND		0.0000013	0.0000006	mg/L		05/13/24 23:55	05/21/24 13:52	1
Chlordane (technical)	ND		0.000013	0.0000073	mg/L		05/13/24 23:55	05/21/24 13:52	1
4,4'-DDD	ND		0.0000013	0.0000005	mg/L		05/13/24 23:55	05/21/24 13:52	1
4,4'-DDE	ND		0.0000013	0.0000003	mg/L		05/13/24 23:55	05/21/24 13:52	1
4,4'-DDT	ND		0.0000013	0.0000006	mg/L		05/13/24 23:55	05/21/24 13:52	1
Dieldrin	ND		0.0000013	0.0000002	mg/L		05/13/24 23:55	05/21/24 13:52	1
Endosulfan I	ND		0.0000013	0.0000006	mg/L		05/13/24 23:55	05/21/24 13:52	1
Endosulfan II	ND		0.0000013	0.0000003	mg/L		05/13/24 23:55	05/21/24 13:52	1
Endosulfan sulfate	ND		0.0000013	0.0000006	mg/L		05/13/24 23:55	05/21/24 13:52	1
Endrin	ND		0.0000013	0.0000002	mg/L		05/13/24 23:55	05/21/24 13:52	1
Endrin aldehyde	ND		0.0000013	0.0000005	mg/L		05/13/24 23:55	05/21/24 13:52	1
Heptachlor	ND		0.0000013	0.0000004	mg/L		05/13/24 23:55	05/21/24 13:52	1
Heptachlor epoxide	ND		0.0000013	0.0000003	mg/L		05/13/24 23:55	05/21/24 13:52	1
Toxaphene	ND		0.00010	0.000049	mg/L		05/13/24 23:55	05/21/24 13:52	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	113		20 - 138				05/13/24 23:55	05/21/24 13:52	1
Tetrachloro-m-xylene (Surr)	87		20 - 138				05/13/24 23:55	05/21/24 13:52	1
DCB Decachlorobiphenyl (Surr)	86		43 - 143				05/13/24 23:55	05/21/24 13:52	1
DCB Decachlorobiphenyl (Surr)	87		43 - 143				05/13/24 23:55	05/21/24 13:52	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Method: EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: LCS 180-468492/2-A

Matrix: Water

Analysis Batch: 469307

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 468492

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aldrin	0.0000250	0.0000193		mg/L		77	42 - 140
alpha-BHC	0.0000250	0.0000154		mg/L		62	37 - 140
beta-BHC	0.0000250	0.0000194		mg/L		78	17 - 147
gamma-BHC (Lindane)	0.0000250	0.0000175		mg/L		70	32 - 140
delta-BHC	0.0000250	0.00000519		mg/L		21	19 - 140
4,4'-DDD	0.0000250	0.0000199		mg/L		80	31 - 141
4,4'-DDE	0.0000250	0.0000204		mg/L		82	30 - 145
4,4'-DDT	0.0000250	0.0000191		mg/L		76	25 - 150
Dieldrin	0.0000250	0.0000191		mg/L		76	36 - 146
Endosulfan I	0.0000250	0.0000192		mg/L		77	45 - 150
Endosulfan II	0.0000250	0.0000203		mg/L		81	10 - 150
Endosulfan sulfate	0.0000250	0.0000111		mg/L		44	26 - 144
Endrin	0.0000250	0.0000208		mg/L		83	30 - 147
Endrin aldehyde	0.0000250	0.0000194		mg/L		78	51 - 113
Heptachlor	0.0000250	0.0000207		mg/L		83	34 - 140
Heptachlor epoxide	0.0000250	0.0000201		mg/L		80	37 - 142

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene (Surr)	107		20 - 138
Tetrachloro-m-xylene (Surr)	83		20 - 138
DCB Decachlorobiphenyl (Surr)	86		43 - 143
DCB Decachlorobiphenyl (Surr)	86		43 - 143

Lab Sample ID: LCSD 180-468492/3-A

Matrix: Water

Analysis Batch: 469307

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 468492

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Aldrin	0.0000250	0.0000200		mg/L		80	42 - 140	3	35
alpha-BHC	0.0000250	0.0000160		mg/L		64	37 - 140	4	35
beta-BHC	0.0000250	0.0000202		mg/L		81	17 - 147	4	35
gamma-BHC (Lindane)	0.0000250	0.0000181		mg/L		73	32 - 140	3	35
delta-BHC	0.0000250	0.00000472		mg/L		19	19 - 140	4	35
4,4'-DDD	0.0000250	0.0000201		mg/L		80	31 - 141	1	35
4,4'-DDE	0.0000250	0.0000202		mg/L		81	30 - 145	1	35
4,4'-DDT	0.0000250	0.0000195		mg/L		78	25 - 150	2	35
Dieldrin	0.0000250	0.0000191		mg/L		76	36 - 146	0	35
Endosulfan I	0.0000250	0.0000198		mg/L		79	45 - 150	3	28
Endosulfan II	0.0000250	0.0000208		mg/L		83	10 - 150	3	35
Endosulfan sulfate	0.0000250	0.0000120		mg/L		48	26 - 144	8	35
Endrin	0.0000250	0.0000213		mg/L		85	30 - 147	2	35
Endrin aldehyde	0.0000250	0.0000199		mg/L		80	51 - 113	3	26
Heptachlor	0.0000250	0.0000214		mg/L		86	34 - 140	3	35
Heptachlor epoxide	0.0000250	0.0000210		mg/L		84	37 - 142	5	26

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene (Surr)	103		20 - 138
Tetrachloro-m-xylene (Surr)	82		20 - 138

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Method: EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: LCSD 180-468492/3-A
Matrix: Water
Analysis Batch: 469307

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 468492

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	83		43 - 143
DCB Decachlorobiphenyl (Surr)	89		43 - 143

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

Lab Sample ID: MB 180-468492/1-A
Matrix: Water
Analysis Batch: 468641

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 468492

Analyte	MB	MB							
	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.000010	0.0000048	mg/L		05/13/24 23:55	05/15/24 13:05	1
PCB-1221	ND		0.000010	0.0000057	mg/L		05/13/24 23:55	05/15/24 13:05	1
PCB-1232	ND		0.000010	0.0000052	mg/L		05/13/24 23:55	05/15/24 13:05	1
PCB-1242	ND		0.000010	0.0000091	mg/L		05/13/24 23:55	05/15/24 13:05	1
PCB-1248	ND		0.000010	0.0000030	mg/L		05/13/24 23:55	05/15/24 13:05	1
PCB-1254	ND		0.000010	0.0000095	mg/L		05/13/24 23:55	05/15/24 13:05	1
PCB-1260	ND		0.000010	0.0000039	mg/L		05/13/24 23:55	05/15/24 13:05	1

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	75		20 - 138				05/13/24 23:55	05/15/24 13:05	1
Tetrachloro-m-xylene (Surr)	80		20 - 138				05/13/24 23:55	05/15/24 13:05	1
DCB Decachlorobiphenyl (Surr)	76		43 - 143				05/13/24 23:55	05/15/24 13:05	1
DCB Decachlorobiphenyl (Surr)	93		43 - 143				05/13/24 23:55	05/15/24 13:05	1

Lab Sample ID: LCS 180-468492/4-A
Matrix: Water
Analysis Batch: 468641

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 468492

Analyte	Spike	LCS	LCS						
	Added	Result	Qualifier	Unit	D	%Rec	Limits		
PCB-1016	0.00100	0.000813		mg/L		81	50 - 140		
PCB-1260	0.00100	0.000670		mg/L		67	10 - 140		

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene (Surr)	82		20 - 138
Tetrachloro-m-xylene (Surr)	90		20 - 138
DCB Decachlorobiphenyl (Surr)	72		43 - 143
DCB Decachlorobiphenyl (Surr)	96		43 - 143

Lab Sample ID: LCSD 180-468492/5-A
Matrix: Water
Analysis Batch: 468641

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 468492

Analyte	Spike	LCSD	LCSD							
	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	RPD	Limit
PCB-1016	0.00100	0.000802		mg/L		80	50 - 140	1		35
PCB-1260	0.00100	0.000667		mg/L		67	10 - 140	0		35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene (Surr)	83		20 - 138

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

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

Lab Sample ID: LCSD 180-468492/5-A
Matrix: Water
Analysis Batch: 468641

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 468492

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene (Surr)	89		20 - 138
DCB Decachlorobiphenyl (Surr)	82		43 - 143
DCB Decachlorobiphenyl (Surr)	93		43 - 143

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-468669/6
Matrix: Water
Analysis Batch: 468669

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
Bromide	ND		0.100	0.0530	mg/L			05/15/24 11:23	1	
Chloride	ND		1.00	0.712	mg/L			05/15/24 11:23	1	
Fluoride	ND		0.100	0.0260	mg/L			05/15/24 11:23	1	
Sulfate	ND		1.00	0.756	mg/L			05/15/24 11:23	1	

Lab Sample ID: LCS 180-468669/7
Matrix: Water
Analysis Batch: 468669

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	10.0	9.852		mg/L		99	90 - 110
Chloride	50.0	49.77		mg/L		100	90 - 110
Fluoride	2.50	2.504		mg/L		100	90 - 110
Sulfate	50.0	49.19		mg/L		98	90 - 110

Method: EPA 200.8 Rev 5 - Metals (ICP/MS)

Lab Sample ID: MB 180-468393/1-A
Matrix: Water
Analysis Batch: 469237

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 468393

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
Aluminum	ND		0.030	0.019	mg/L		05/14/24 07:20	05/20/24 16:52	1	
Antimony	ND		0.0020	0.0018	mg/L		05/14/24 07:20	05/20/24 16:52	1	
Arsenic	ND		0.0010	0.00030	mg/L		05/14/24 07:20	05/20/24 16:52	1	
Barium	ND		0.010	0.0019	mg/L		05/14/24 07:20	05/20/24 16:52	1	
Beryllium	ND		0.0010	0.00025	mg/L		05/14/24 07:20	05/20/24 16:52	1	
Boron	ND		0.080	0.063	mg/L		05/14/24 07:20	05/20/24 16:52	1	
Cadmium	ND		0.0010	0.00034	mg/L		05/14/24 07:20	05/20/24 16:52	1	
Calcium	ND		0.50	0.18	mg/L		05/14/24 07:20	05/20/24 16:52	1	
Chromium	ND		0.0020	0.0012	mg/L		05/14/24 07:20	05/20/24 16:52	1	
Cobalt	ND		0.00050	0.00010	mg/L		05/14/24 07:20	05/20/24 16:52	1	
Copper	ND		0.0020	0.0016	mg/L		05/14/24 07:20	05/20/24 16:52	1	
Iron	ND		0.050	0.041	mg/L		05/14/24 07:20	05/20/24 16:52	1	
Lead	ND		0.0010	0.00061	mg/L		05/14/24 07:20	05/20/24 16:52	1	
Magnesium	ND		0.50	0.070	mg/L		05/14/24 07:20	05/20/24 16:52	1	
Manganese	ND		0.0050	0.0022	mg/L		05/14/24 07:20	05/20/24 16:52	1	
Molybdenum	ND		0.0050	0.00070	mg/L		05/14/24 07:20	05/20/24 16:52	1	

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 180-468393/1-A
Matrix: Water
Analysis Batch: 469237

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 468393

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	0.000537	J B	0.0010	0.00039	mg/L		05/14/24 07:20	05/20/24 16:52	1
Selenium	ND		0.0050	0.0012	mg/L		05/14/24 07:20	05/20/24 16:52	1
Silver	ND		0.0010	0.00079	mg/L		05/14/24 07:20	05/20/24 16:52	1
Thallium	ND		0.0010	0.00069	mg/L		05/14/24 07:20	05/20/24 16:52	1
Zinc	ND		0.015	0.0091	mg/L		05/14/24 07:20	05/20/24 16:52	1

Lab Sample ID: LCS 180-468393/2-A
Matrix: Water
Analysis Batch: 469237

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 468393

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	5.00	5.27		mg/L		105	85 - 115
Antimony	0.250	0.290	*+	mg/L		116	85 - 115
Arsenic	1.00	1.04		mg/L		104	85 - 115
Barium	1.00	1.11		mg/L		111	85 - 115
Beryllium	0.500	0.527		mg/L		105	85 - 115
Boron	0.250	0.250		mg/L		100	85 - 115
Cadmium	0.500	0.524		mg/L		105	85 - 115
Calcium	25.0	27.8		mg/L		111	85 - 115
Chromium	0.500	0.527		mg/L		105	85 - 115
Cobalt	0.500	0.517		mg/L		103	85 - 115
Copper	0.500	0.506		mg/L		101	85 - 115
Iron	5.00	5.54		mg/L		111	85 - 115
Lead	0.500	0.538		mg/L		108	85 - 115
Magnesium	25.0	25.9		mg/L		104	85 - 115
Manganese	0.500	0.524		mg/L		105	85 - 115
Molybdenum	0.500	0.549		mg/L		110	85 - 115
Nickel	0.500	0.508		mg/L		102	85 - 115
Selenium	1.00	1.06		mg/L		106	85 - 115
Silver	0.250	0.260		mg/L		104	85 - 115
Thallium	1.00	1.08		mg/L		108	85 - 115
Zinc	0.250	0.264		mg/L		106	85 - 115

Method: EPA 245.1 Rev. - Mercury (CVAA)

Lab Sample ID: MB 180-468981/1-A
Matrix: Water
Analysis Batch: 469191

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 468981

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/17/24 11:45	05/20/24 11:34	1

Lab Sample ID: LCS 180-468981/2-A
Matrix: Water
Analysis Batch: 469191

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 468981

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00250	0.00250		mg/L		100	85 - 115

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

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

Lab Sample ID: MB 180-468301/12
Matrix: Water
Analysis Batch: 468301

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0060	mg/L			05/11/24 09:51	1

Lab Sample ID: LCS 180-468301/13
Matrix: Water
Analysis Batch: 468301

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	0.500	0.502		mg/L		100	85 - 115

Lab Sample ID: 180-173869-2 MS
Matrix: Water
Analysis Batch: 468301

Client Sample ID: 015
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	ND		0.500	0.442		mg/L		88	85 - 115

Lab Sample ID: 180-173869-2 MSD
Matrix: Water
Analysis Batch: 468301

Client Sample ID: 015
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cr (VI)	ND		0.500	0.457		mg/L		91	85 - 115	3	20

Method: 4500 H+ B-2000 - pH - SM Online, 2011

Lab Sample ID: LCS 180-468497/1
Matrix: Water
Analysis Batch: 468497

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Method: 4500 S2 F-2011 - Sulfide, Total

Lab Sample ID: MB 180-468523/3
Matrix: Water
Analysis Batch: 468523

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		3.0	1.3	mg/L			05/14/24 13:19	1

Lab Sample ID: LCS 180-468523/4
Matrix: Water
Analysis Batch: 468523

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	17.8	17.6		mg/L		99	90 - 110

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Method: 5310 C-2014 - Total Organic Carbon/Persulfate - Ultrav

Lab Sample ID: MB 180-468621/5
Matrix: Water
Analysis Batch: 468621

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Quad	ND		1.0	0.51	mg/L			05/13/24 20:56	1

Lab Sample ID: LCS 180-468621/4
Matrix: Water
Analysis Batch: 468621

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon - Quad	20.0	19.5		mg/L		98	85 - 115

Method: 5540C - 2011 - Methylene Blue Active Substant (MBAS)

Lab Sample ID: MB 180-468309/2
Matrix: Water
Analysis Batch: 468309

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Blue Active Substances	ND		0.050	0.049	mg/l LAS MW 340			05/11/24 13:17	1

Lab Sample ID: LCS 180-468309/3
Matrix: Water
Analysis Batch: 468309

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methylene Blue Active Substances	0.500	0.470		mg/l LAS MW 340		94	90 - 110

Lab Sample ID: 180-173869-1 MS
Matrix: Water
Analysis Batch: 468309

Client Sample ID: 005
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Methylene Blue Active Substances	ND		0.500	0.542		mg/l LAS MW 340		108	75 - 125

Lab Sample ID: 180-173869-1 DU
Matrix: Water
Analysis Batch: 468309

Client Sample ID: 005
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Methylene Blue Active Substances	ND		ND		mg/l LAS MW 340		NC	20

Method: EPA 1664B - HEM and SGT-HEM

Lab Sample ID: MB 180-468655/1-A
Matrix: Water
Analysis Batch: 468674

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 468655

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		5.0	4.3	mg/L		05/15/24 07:09	05/15/24 09:12	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

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

Lab Sample ID: LCS 180-468655/2-A
Matrix: Water
Analysis Batch: 468674

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 468655

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HEM (Oil & Grease)	40.1	33.0		mg/L		82	78 - 114

Lab Sample ID: LCSD 180-468655/3-A
Matrix: Water
Analysis Batch: 468674

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 468655

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HEM (Oil & Grease)	40.1	31.6		mg/L		79	78 - 114	4	18

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-469205/17
Matrix: Water
Analysis Batch: 469205

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.10	0.088	mg/L			05/20/24 12:53	1

Lab Sample ID: LCS 180-469205/18
Matrix: Water
Analysis Batch: 469205

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	0.500	0.493		mg/L		99	90 - 110

Method: EPA 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 180-468416/20
Matrix: Water
Analysis Batch: 468416

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.10	0.065	mg/L			05/13/24 11:42	1

Lab Sample ID: MB 180-468416/52
Matrix: Water
Analysis Batch: 468416

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.10	0.065	mg/L			05/13/24 12:33	1

Lab Sample ID: LCS 180-468416/21
Matrix: Water
Analysis Batch: 468416

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	2.00	1.98		mg/L		99	90 - 110

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Method: EPA 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: LCS 180-468416/56

Matrix: Water

Analysis Batch: 468416

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	2.00	1.94		mg/L		97	90 - 110

Lab Sample ID: 180-173869-2 MS

Matrix: Water

Analysis Batch: 468416

Client Sample ID: 015

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	0.40		2.00	2.38		mg/L		99	90 - 110

Lab Sample ID: 180-173869-2 MSD

Matrix: Water

Analysis Batch: 468416

Client Sample ID: 015

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.40		2.00	2.43		mg/L		101	90 - 110	2	20

Method: EPA 410.4 - COD

Lab Sample ID: MB 180-468569/12-A

Matrix: Water

Analysis Batch: 468673

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 468569

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	9.1	mg/L		05/14/24 12:22	05/14/24 14:59	1

Lab Sample ID: MB 180-468569/36-A

Matrix: Water

Analysis Batch: 468673

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 468569

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	9.1	mg/L		05/14/24 12:22	05/14/24 15:17	1

Lab Sample ID: LCS 180-468569/35-A

Matrix: Water

Analysis Batch: 468673

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 468569

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	75.0	71.6		mg/L		95	90 - 110

Method: SM 2120B - Color, Colorimetric

Lab Sample ID: MB 180-468284/2

Matrix: Water

Analysis Batch: 468284

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Color, Apparent	ND		5.0	5.0	Color Units			05/10/24 18:17	1
Color, True	ND		5.0	5.0	Color Units			05/10/24 18:17	1
pH at time of analysis	na		0.10	0.10	SU			05/10/24 18:17	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Method: SM 2120B - Color, Colorimetric (Continued)

Lab Sample ID: 180-173869-1 DU
Matrix: Water
Analysis Batch: 468284

Client Sample ID: 005
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Color, Apparent	15		15.0		Color Units		0	20
Color, True	10		10.0		Color Units		0	20
pH at time of analysis	6.9	!	7.01		SU		1	

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-468761/1
Matrix: Water
Analysis Batch: 468761

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			05/15/24 17:15	1

Lab Sample ID: LCS 180-468761/2
Matrix: Water
Analysis Batch: 468761

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	417	408		mg/L		98	85 - 115

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

Lab Sample ID: MB 180-468291/2
Matrix: Water
Analysis Batch: 468291

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		0.50	0.50	mg/L			05/11/24 08:17	1

Lab Sample ID: LCS 180-468291/1
Matrix: Water
Analysis Batch: 468291

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	52.0		mg/L		87	85 - 115

Lab Sample ID: 180-173869-2 DU
Matrix: Water
Analysis Batch: 468291

Client Sample ID: 015
Prep Type: Total/NA

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

Method: SM 5210B - 5 Day BOD test

Lab Sample ID: USB 180-468905/1
Matrix: Water
Analysis Batch: 468905

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

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	ND		2.0	2.0	mg/L			05/11/24 13:15	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Method: SM 5210B - 5 Day BOD test

Lab Sample ID: LCS 180-468905/2
Matrix: Water
Analysis Batch: 468905

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	198	172	cn	mg/L		87	85 - 115

Lab Sample ID: 180-173869-1 DU
Matrix: Water
Analysis Batch: 468905

Client Sample ID: 005
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Biochemical Oxygen Demand	ND	cn	ND	cn	mg/L		NC	20

Method: TKN_TPhos - EPA 351.2 1993 R2/365.4 1974

Lab Sample ID: MB 180-468346/7-A
Matrix: Water
Analysis Batch: 468467

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 468346

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	ND		0.50	0.12	mg/L as N		05/13/24 05:52	05/14/24 06:15	1
Phosphorus, Total	ND		0.10	0.040	mg/L as P		05/13/24 05:52	05/14/24 06:15	1

Lab Sample ID: LCS 180-468346/8-A
Matrix: Water
Analysis Batch: 468467

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 468346

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	2.50	2.68		mg/L as N		107	90 - 110
Phosphorus, Total	2.50	2.38		mg/L as P		95	90 - 110

Lab Sample ID: MB 180-468347/7-A
Matrix: Water
Analysis Batch: 468467

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 468347

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	ND		0.50	0.12	mg/L as N		05/13/24 05:55	05/14/24 07:03	1
Phosphorus, Total	ND		0.10	0.040	mg/L as P		05/13/24 05:55	05/14/24 07:03	1

Lab Sample ID: LCS 180-468347/8-A
Matrix: Water
Analysis Batch: 468467

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 468347

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	2.50	2.67		mg/L as N		107	90 - 110
Phosphorus, Total	2.50	2.36		mg/L as P		94	90 - 110

Lab Sample ID: 180-173869-2 MS
Matrix: Water
Analysis Batch: 468467

Client Sample ID: 015
Prep Type: Total/NA
Prep Batch: 468347

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	0.71	FH	2.50	3.54	FH	mg/L as N		113	90 - 110
Phosphorus, Total	0.12		2.50	2.67		mg/L as P		102	90 - 110

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

Method: TKN_TPhos - EPA 351.2 1993 R2/365.4 1974 (Continued)

Lab Sample ID: 180-173869-2 MSD							Client Sample ID: 015					
Matrix: Water							Prep Type: Total/NA					
Analysis Batch: 468467							Prep Batch: 468347					
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit	
Nitrogen, Kjeldahl	0.71	FH	2.50	3.47	FH	mg/L as N		111	90 - 110	2	20	
Phosphorus, Total	0.12		2.50	2.69		mg/L as P		103	90 - 110	1	20	

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

GC/MS VOA

Analysis Batch: 468288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	EPA 624.1	
180-173869-2	015	Total/NA	Water	EPA 624.1	
MB 180-468288/8	Method Blank	Total/NA	Water	EPA 624.1	
LCS 180-468288/5	Lab Control Sample	Total/NA	Water	EPA 624.1	

GC/MS Semi VOA

Prep Batch: 468887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	625	
180-173869-2	015	Total/NA	Water	625	
MB 180-468887/1-A	Method Blank	Total/NA	Water	625	
LCS 180-468887/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 180-468887/3-A	Lab Control Sample Dup	Total/NA	Water	625	

Analysis Batch: 469542

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	EPA 625.1	468887
180-173869-2	015	Total/NA	Water	EPA 625.1	468887
MB 180-468887/1-A	Method Blank	Total/NA	Water	EPA 625.1	468887
LCS 180-468887/2-A	Lab Control Sample	Total/NA	Water	EPA 625.1	468887
LCSD 180-468887/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 625.1	468887

GC Semi VOA

Prep Batch: 468492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	608	
180-173869-2	015	Total/NA	Water	608	
MB 180-468492/1-A	Method Blank	Total/NA	Water	608	
LCS 180-468492/2-A	Lab Control Sample	Total/NA	Water	608	
LCS 180-468492/4-A	Lab Control Sample	Total/NA	Water	608	
LCSD 180-468492/3-A	Lab Control Sample Dup	Total/NA	Water	608	
LCSD 180-468492/5-A	Lab Control Sample Dup	Total/NA	Water	608	

Analysis Batch: 468641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	EPA 608.3	468492
180-173869-2	015	Total/NA	Water	EPA 608.3	468492
MB 180-468492/1-A	Method Blank	Total/NA	Water	EPA 608.3	468492
LCS 180-468492/4-A	Lab Control Sample	Total/NA	Water	EPA 608.3	468492
LCSD 180-468492/5-A	Lab Control Sample Dup	Total/NA	Water	EPA 608.3	468492

Analysis Batch: 468996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	EPA 608.3	468492
180-173869-2	015	Total/NA	Water	EPA 608.3	468492

Analysis Batch: 469307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-468492/1-A	Method Blank	Total/NA	Water	EPA 608.3	468492
LCS 180-468492/2-A	Lab Control Sample	Total/NA	Water	EPA 608.3	468492

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QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

GC Semi VOA (Continued)

Analysis Batch: 469307 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 180-468492/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 608.3	468492

HPLC/IC

Analysis Batch: 468669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	EPA 300.0 R2.1	
180-173869-2	015	Total/NA	Water	EPA 300.0 R2.1	
MB 180-468669/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-468669/7	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 468393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total Recoverable	Water	200.8	
180-173869-2	015	Total Recoverable	Water	200.8	
MB 180-468393/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 180-468393/2-A	Lab Control Sample	Total Recoverable	Water	200.8	

Prep Batch: 468981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	245.1	
180-173869-2	015	Total/NA	Water	245.1	
MB 180-468981/1-A	Method Blank	Total/NA	Water	245.1	
LCS 180-468981/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 469191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	EPA 245.1 Rev.	468981
180-173869-2	015	Total/NA	Water	EPA 245.1 Rev.	468981
MB 180-468981/1-A	Method Blank	Total/NA	Water	EPA 245.1 Rev.	468981
LCS 180-468981/2-A	Lab Control Sample	Total/NA	Water	EPA 245.1 Rev.	468981

Analysis Batch: 469237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total Recoverable	Water	EPA 200.8 Rev 5	468393
180-173869-2	015	Total Recoverable	Water	EPA 200.8 Rev 5	468393
MB 180-468393/1-A	Method Blank	Total Recoverable	Water	EPA 200.8 Rev 5	468393
LCS 180-468393/2-A	Lab Control Sample	Total Recoverable	Water	EPA 200.8 Rev 5	468393

Analysis Batch: 469376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-2	015	Total Recoverable	Water	EPA 200.8 Rev 5	468393

General Chemistry

Analysis Batch: 468284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	SM 2120B	
180-173869-2	015	Total/NA	Water	SM 2120B	
MB 180-468284/2	Method Blank	Total/NA	Water	SM 2120B	

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QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

General Chemistry (Continued)

Analysis Batch: 468284 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-468284/1	Lab Control Sample	Total/NA	Water	SM 2120B	
180-173869-1 DU	005	Total/NA	Water	SM 2120B	

Analysis Batch: 468291

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	SM 2540D	
180-173869-2	015	Total/NA	Water	SM 2540D	
MB 180-468291/2	Method Blank	Total/NA	Water	SM 2540D	
LCS 180-468291/1	Lab Control Sample	Total/NA	Water	SM 2540D	
180-173869-2 DU	015	Total/NA	Water	SM 2540D	

Analysis Batch: 468301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Dissolved	Water	3500-Cr B-2011	
180-173869-2	015	Dissolved	Water	3500-Cr B-2011	
MB 180-468301/12	Method Blank	Total/NA	Water	3500-Cr B-2011	
LCS 180-468301/13	Lab Control Sample	Total/NA	Water	3500-Cr B-2011	
180-173869-2 MS	015	Dissolved	Water	3500-Cr B-2011	
180-173869-2 MSD	015	Dissolved	Water	3500-Cr B-2011	

Analysis Batch: 468309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	5540C - 2011	
180-173869-2	015	Total/NA	Water	5540C - 2011	
MB 180-468309/2	Method Blank	Total/NA	Water	5540C - 2011	
LCS 180-468309/3	Lab Control Sample	Total/NA	Water	5540C - 2011	
180-173869-1 MS	005	Total/NA	Water	5540C - 2011	
180-173869-1 DU	005	Total/NA	Water	5540C - 2011	

Prep Batch: 468346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	TKN/TPhos Prep	
MB 180-468346/7-A	Method Blank	Total/NA	Water	TKN/TPhos Prep	
LCS 180-468346/8-A	Lab Control Sample	Total/NA	Water	TKN/TPhos Prep	

Prep Batch: 468347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-2	015	Total/NA	Water	TKN/TPhos Prep	
MB 180-468347/7-A	Method Blank	Total/NA	Water	TKN/TPhos Prep	
LCS 180-468347/8-A	Lab Control Sample	Total/NA	Water	TKN/TPhos Prep	
180-173869-2 MS	015	Total/NA	Water	TKN/TPhos Prep	
180-173869-2 MSD	015	Total/NA	Water	TKN/TPhos Prep	

Analysis Batch: 468416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	EPA 353.2	
180-173869-2	015	Total/NA	Water	EPA 353.2	
MB 180-468416/20	Method Blank	Total/NA	Water	EPA 353.2	
MB 180-468416/52	Method Blank	Total/NA	Water	EPA 353.2	
LCS 180-468416/21	Lab Control Sample	Total/NA	Water	EPA 353.2	
LCS 180-468416/56	Lab Control Sample	Total/NA	Water	EPA 353.2	

Eurofins Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

General Chemistry (Continued)

Analysis Batch: 468416 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-2 MS	015	Total/NA	Water	EPA 353.2	
180-173869-2 MSD	015	Total/NA	Water	EPA 353.2	

Analysis Batch: 468467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	TKN_TPhos	468346
180-173869-2	015	Total/NA	Water	TKN_TPhos	468347
MB 180-468346/7-A	Method Blank	Total/NA	Water	TKN_TPhos	468346
MB 180-468347/7-A	Method Blank	Total/NA	Water	TKN_TPhos	468347
LCS 180-468346/8-A	Lab Control Sample	Total/NA	Water	TKN_TPhos	468346
LCS 180-468347/8-A	Lab Control Sample	Total/NA	Water	TKN_TPhos	468347
180-173869-2 MS	015	Total/NA	Water	TKN_TPhos	468347
180-173869-2 MSD	015	Total/NA	Water	TKN_TPhos	468347

Analysis Batch: 468497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	4500 H+ B-2000	
180-173869-2	015	Total/NA	Water	4500 H+ B-2000	
LCS 180-468497/1	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	

Analysis Batch: 468523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	4500 S2 F-2011	
180-173869-2	015	Total/NA	Water	4500 S2 F-2011	
MB 180-468523/3	Method Blank	Total/NA	Water	4500 S2 F-2011	
LCS 180-468523/4	Lab Control Sample	Total/NA	Water	4500 S2 F-2011	

Prep Batch: 468569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	410.4	
180-173869-2	015	Total/NA	Water	410.4	
MB 180-468569/12-A	Method Blank	Total/NA	Water	410.4	
MB 180-468569/36-A	Method Blank	Total/NA	Water	410.4	
LCS 180-468569/35-A	Lab Control Sample	Total/NA	Water	410.4	

Analysis Batch: 468621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	5310 C-2014	
180-173869-2	015	Total/NA	Water	5310 C-2014	
MB 180-468621/5	Method Blank	Total/NA	Water	5310 C-2014	
LCS 180-468621/4	Lab Control Sample	Total/NA	Water	5310 C-2014	

Prep Batch: 468655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	1664B	
180-173869-2	015	Total/NA	Water	1664B	
MB 180-468655/1-A	Method Blank	Total/NA	Water	1664B	
LCS 180-468655/2-A	Lab Control Sample	Total/NA	Water	1664B	
LCSD 180-468655/3-A	Lab Control Sample Dup	Total/NA	Water	1664B	

Eurofins Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-173869-1

General Chemistry

Analysis Batch: 468673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	EPA 410.4	468569
180-173869-2	015	Total/NA	Water	EPA 410.4	468569
MB 180-468569/12-A	Method Blank	Total/NA	Water	EPA 410.4	468569
MB 180-468569/36-A	Method Blank	Total/NA	Water	EPA 410.4	468569
LCS 180-468569/35-A	Lab Control Sample	Total/NA	Water	EPA 410.4	468569

Analysis Batch: 468674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	EPA 1664B	468655
180-173869-2	015	Total/NA	Water	EPA 1664B	468655
MB 180-468655/1-A	Method Blank	Total/NA	Water	EPA 1664B	468655
LCS 180-468655/2-A	Lab Control Sample	Total/NA	Water	EPA 1664B	468655
LCSD 180-468655/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 1664B	468655

Analysis Batch: 468761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	SM 2540C	
180-173869-2	015	Total/NA	Water	SM 2540C	
MB 180-468761/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-468761/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 468905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	SM 5210B	
180-173869-2	015	Total/NA	Water	SM 5210B	
USB 180-468905/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 180-468905/2	Lab Control Sample	Total/NA	Water	SM 5210B	
180-173869-1 DU	005	Total/NA	Water	SM 5210B	

Analysis Batch: 469205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-173869-1	005	Total/NA	Water	EPA 350.1	
180-173869-2	015	Total/NA	Water	EPA 350.1	
MB 180-469205/17	Method Blank	Total/NA	Water	EPA 350.1	
LCS 180-469205/18	Lab Control Sample	Total/NA	Water	EPA 350.1	



Microbac Laboratories Inc., Pittsburgh Division

CERTIFICATE OF ANALYSIS

A4E1257

Eurofins Test America - Pittsburgh

Project Name: 18026655

Jill Colussy
5102 LaRoche AVE
Savannah, GA 31404

Project / PO Number: US0543365068 (2024)
Received: 05/10/2024
Reported: 05/13/2024

Analytical Testing Parameters

Client Sample ID:	005	Collected By:	Client
Sample Matrix:	Aqueous	Collection Date:	05/10/2024 14:14
Lab Sample ID:	A4E1257-01		

Microbiology	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Colilert-18 (Fecal Coliforms)								
Fecal Coliforms	37	1	MPN/100mL	1		05/10/24 1658	05/11/24 1120	MXG

Client Sample ID:	015	Collected By:	Client
Sample Matrix:	Aqueous	Collection Date:	05/10/2024 14:41
Lab Sample ID:	A4E1257-02		

Microbiology	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Colilert-18 (Fecal Coliforms)								
Fecal Coliforms	104	1	MPN/100mL	1		05/10/24 1658	05/11/24 1120	MXG

Definitions

MPN/100mL Most Probable Number per 100 Milliliters
RL: Reporting Limit

Project Requested Certification(s)

Microbac Laboratories Inc., Pittsburgh Division
02-00257

Pennsylvania Department of Environmental Protection
Pennsylvania Department of Environmental Protection - PARULE

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

Caroline Keefe
Customer Relationship Coordinator
Reported: 05/13/2024 13:03

301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Phone (412) 963-2468

[illegible]

[illegible]

[illegible]

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 180-173869-1

Login Number: 173869

List Number: 1

Creator: Watson, Debbie

List Source: Eurofins Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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	
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?	True	
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.	True	
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").	False	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Angela Bown
GHD Services Inc.
2055 Niagara Falls Boulevard
Niagara Falls, New York 14304

Generated 6/5/2024 9:33:55 AM

JOB DESCRIPTION

GHD Shell Monaca

JOB NUMBER

180-174282-1

Eurofins Pittsburgh

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.

PA Lab ID: 02-00416

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 Pittsburgh Project Manager.

Authorization



Authorized for release by
Jill Colussy, Project Manager I
Jill.Colussy@et.eurofinsus.com
(412)963-2444

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Case Narrative

Client: GHD Services Inc.
Project: GHD Shell Monaca

Job ID: 180-174282-1

Job ID: 180-174282-1

Eurofins Pittsburgh

Job Narrative 180-174282-1

Receipt

The samples were received on 5/17/2024 4:22 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 2.6° C, 3.3° C, 3.5° C and 3.8° C.

The laboratory received a TRIP BLANK that was not listed on the chain of custody. This sample was logged in.

GC/MS VOA

The laboratory control sample (LCS) for analytical batch 180-469052 recovered outside control limits for the following analytes: Acrylonitrile. A low-level LCS (LLCS), spiked at the reporting limit (RL), was prepared with this batch. The affected target analytes recovered within acceptance limits; therefore, the LLCS demonstrates the analytical system had sufficient sensitivity to detect the compounds had they been present. Since the affected target compounds were not detected in the samples, the data have been reported and qualified.

GC/MS Semi VOA

Sample 022 (180-174282-2) had internal standards not meet criteria. The sample shows evidence of matrix interference. All data was reported.

The relative percent difference between the laboratory control standard and the laboratory control duplicate for batch 180-469621 was outside of the control limits for 2-Nitrophenol. The recoveries were within the control limits.

Pesticides

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

PCBs

Sample 022 (180-174282-2) had surrogate Tetrachloro-m-xylene recover above the control limits on one column. The recovery was high and the sample was non-detect for all PCBs. All data was reported.

IC

Sample 022 (180-174282-2) was analyzed at a dilution for Chloride. Elevated reporting limits (RLs) are provided.

Sample 016 (180-174282-3) was analyzed at a dilution for Sulfate. Elevated reporting limits (RLs) are provided.

Metals

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

General Chemistry

The Sulfide containers were received with headspace.

Method SM 2120B: Sample 022 (180-174282-2) and 016 (180-174282-3) do not fall in the yellow scale used for method 2120B. Sample is brown and too turbid to get an accurate result for Apparent Color. Only True Color was reported for these samples.

Chlorine was present in the following samples and treated per the BOD Method/SOP: 021 (180-174282-1) and (180-174282-L-1 DU). Results may be biased low.

The correction factor for the BOD Seeded Control Blank (SCB) for batch 180-469652 was below the method range of 0.6 to 1.0 mg/L at 0.501515mg/L. Thus, there is added uncertainty for the associated sample results.

The BOD method blank result associated with batch 180-469652 was higher than the method-required limit of 0.2 mg/L. The result was less than the reporting limit.

The relative percent difference between the highest and the lowest BOD replicates for the laboratory control standard for batch 180-469652 was greater than 30%.

Eurofins Pittsburgh

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
*3	ISTD response or retention time outside acceptable limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

Metals

Qualifier	Qualifier Description
!	Laboratory is not accredited for this parameter.
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
!	Laboratory is not accredited for this parameter.
b	Result Detected in the Unseeded Control blank (USB).
cn	Refer to Case Narrative for further detail
FL	MS and/or MSD recovery below control limits.
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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

Eurofins Pittsburgh

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Laboratory: Eurofins Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	02-00416	04-30-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
4500 H+ B-2000		Water	Temperature
SM 2120B		Water	pH at time of analysis
SM 2340B		Water	Hardness as calcium carbonate

Laboratory: Eurofins Cleveland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	68-00340	08-31-24

Sample Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-174282-1	021	Water	05/17/24 09:15	05/17/24 16:22
180-174282-2	022	Water	05/17/24 09:35	05/17/24 16:22
180-174282-3	016	Water	05/17/24 13:14	05/17/24 16:22
180-174282-4	TRIP BLANK	Water	05/17/24 00:00	05/17/24 16:22

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

Method Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Method	Method Description	Protocol	Laboratory
EPA 624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	EET PIT
EPA 625.1	Semivolatile Organic Compounds (GC/MS)	40 CFR 761	EET PIT
EPA 608.3	Organochlorine Pesticides in Water	40CFR136A	EET PIT
EPA 608.3	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	EET PIT
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	EET PIT
200.8-1994 R5.4	Metals (ICP/MS)	EPA	EET CLE
EPA 245.1 Rev.	Mercury (CVAA)	EPA	EET PIT
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET PIT
3500-Cr B-2011	Chromium, Hexavalent	SM	EET PIT
4500 H+ B-2000	pH - SM Online, 2011	SM-Online	EET PIT
4500 S2 F-2011	Sulfide, Total	SM	EET PIT
5310 C-2014	Total Organic Carbon/Persulfate - Ultrav	SM	EET PIT
5540C - 2011	Methylene Blue Active Substant (MBAS)	SM	EET PIT
EPA 1664B	HEM and SGT-HEM	EPA	EET PIT
EPA 350.1	Nitrogen, Ammonia	EPA	EET PIT
EPA 353.2	Nitrogen, Nitrate-Nitrite	EPA	EET PIT
EPA 410.4	COD	MCAWW	EET PIT
SM 2120B	Color, Colorimetric	SM	EET PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET PIT
SM 2540D	Solids, Total Suspended (TSS)	SM	EET PIT
SM 5210B	5 Day BOD test	SM	EET PIT
TKN_TPhos	EPA 351.2 1993 R2/365.4 1974	EPA	EET PIT
Subcontract	Fecal Coliform	None	Warrendale
1664B	HEM and SGT-HEM (SPE)	1664B	EET PIT
200.8-1994 R5.4	Preparation, Total Recoverable Metals	EPA	EET CLE
245.1	Preparation, Mercury	EPA	EET PIT
410.4	COD	EPA	EET PIT
608	Liquid-Liquid Extraction (Separatory Funnel)	EPA	EET PIT
625	Liquid-Liquid Extraction	EPA	EET PIT
TKN/TPhos Prep	Preparation, 351.2 1993 R2/365.4 1974	EPA	EET PIT

Protocol References:

1664B = EPA-821-98-002

40 CFR 761 = Toxic Substances Control Act (TSCA)

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

EPA = US Environmental Protection Agency

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

None = None

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

SM-Online = Standard Methods Online

Laboratory References:

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

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Warrendale = Microbac - Warrendale, PA, 100 Marshall Drive, Warrendale, PA 15086, TEL (724)772-0610

Eurofins Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: 021

Lab Sample ID: 180-174282-1

Date Collected: 05/17/24 09:15

Matrix: Water

Date Received: 05/17/24 16:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 624.1		1	5 mL	5 mL	469052	05/18/24 11:36	J1T	EET PIT
		Instrument ID: CHHP5								
Total/NA	Prep	625			240 mL	250 uL	469621	05/23/24 13:23	BJT	EET PIT
Total/NA	Analysis	EPA 625.1		1	1 mL	1 mL	470417	06/03/24 19:48	VVP	EET PIT
		Instrument ID: CHMSD7								
Total/NA	Prep	608			1050 mL	1.0 mL	469115	05/19/24 23:45	CBY	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 uL	1 uL	469224	05/21/24 07:12	JMO	EET PIT
		Instrument ID: CHGC16								
Total/NA	Prep	608			1050 mL	1.0 mL	469115	05/19/24 23:45	CBY	EET PIT
Total/NA	Analysis	EPA 608.3		1			469846	05/27/24 13:41	JMO	EET PIT
		Instrument ID: CHGC17								
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1 mL	469441	05/22/24 21:40	M1D	EET PIT
		Instrument ID: INTEGRION								
Total Recoverable	Prep	200.8-1994 R5.4			50 mL	50 mL	614011	05/22/24 14:00	BN	EET CLE
Total Recoverable	Analysis	200.8-1994 R5.4		1			614768	05/28/24 14:07	AJC	EET CLE
		Instrument ID: I10								
Total Recoverable	Prep	200.8-1994 R5.4			50 mL	50 mL	614011	05/22/24 14:00	BN	EET CLE
Total Recoverable	Analysis	200.8-1994 R5.4		1			614280	05/23/24 21:17	RKT	EET CLE
		Instrument ID: I14								
Total Recoverable	Prep	200.8-1994 R5.4			50 mL	50 mL	614011	05/22/24 14:00	BN	EET CLE
Total Recoverable	Analysis	200.8-1994 R5.4		1			614474	05/24/24 20:30	AJC	EET CLE
		Instrument ID: I14								
Total/NA	Prep	245.1			25 mL	25 mL	469250	05/21/24 08:36	SJM	EET PIT
Total/NA	Analysis	EPA 245.1 Rev.		1			469338	05/21/24 13:23	MTW	EET PIT
		Instrument ID: HGY								
Total Recoverable	Analysis	SM 2340B		1			470265	05/31/24 08:19	VAD	EET PIT
		Instrument ID: DORY								
Dissolved	Analysis	3500-Cr B-2011		1	4 mL	4 mL	469050	05/17/24 19:15	LWM	EET PIT
		Instrument ID: RAPID-T								
Total/NA	Analysis	4500 H+ B-2000		1			469075	05/18/24 10:50	BAB	EET PIT
		Instrument ID: OZ								
Total/NA	Analysis	4500 S2 F-2011		1	50 mL	50 mL	469415	05/22/24 14:32	CMR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	5310 C-2014		1	40 mL	40 mL	469603	05/21/24 13:33	LWM	EET PIT
		Instrument ID: TOC1030								
Total/NA	Analysis	5540C - 2011		1	100 mL	100 mL	469546	05/17/24 18:09	SNR	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Prep	1664B			1020 mL	1000 mL	469540	05/23/24 07:16	A1K	EET PIT
Total/NA	Analysis	EPA 1664B		1			469559	05/23/24 08:22	A1K	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	EPA 350.1		1			469343	05/21/24 13:28	SNR	EET PIT
		Instrument ID: BLUE-ASTORIA								
Total/NA	Analysis	EPA 353.2		1			469311	05/21/24 10:13	RSK	EET PIT
		Instrument ID: ASTORIA2								

Eurofins Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: 021

Lab Sample ID: 180-174282-1

Date Collected: 05/17/24 09:15

Matrix: Water

Date Received: 05/17/24 16:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	410.4			1 mL	1 mL	469735	05/24/24 11:03	ELS	EET PIT
Total/NA	Analysis	EPA 410.4		1	1 mL	1 mL	469765	05/24/24 15:31	ELS	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Analysis	SM 2120B		1	50 mL	50 mL	469339	05/17/24 18:01	SNR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	469213	05/20/24 19:07	LWM	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	469064	05/18/24 08:52	SGR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 5210B		1	300 mL	300 mL	469652	05/18/24 10:31	ELS	EET PIT
		Instrument ID: BOD2								
Total/NA	Prep	TKN/TPhos Prep			25 mL	25 mL	469120	05/20/24 05:18	RSK	EET PIT
Total/NA	Analysis	TKN_TPhos		1			469294	05/21/24 08:31	RSK	EET PIT
		Instrument ID: ASTORIA1								

Client Sample ID: 022

Lab Sample ID: 180-174282-2

Date Collected: 05/17/24 09:35

Matrix: Water

Date Received: 05/17/24 16:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 624.1		1	5 mL	5 mL	469052	05/18/24 11:13	J1T	EET PIT
		Instrument ID: CHHP5								
Total/NA	Prep	625			250 mL	250 uL	469621	05/23/24 13:23	BJT	EET PIT
Total/NA	Analysis	EPA 625.1		1	1 mL	1 mL	470417	06/03/24 20:10	VVP	EET PIT
		Instrument ID: CHMSD7								
Total/NA	Prep	608			1050 mL	1.0 mL	469115	05/19/24 23:45	CBY	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 uL	1 uL	469224	05/21/24 07:31	JMO	EET PIT
		Instrument ID: CHGC16								
Total/NA	Prep	608			1050 mL	1.0 mL	469115	05/19/24 23:45	CBY	EET PIT
Total/NA	Analysis	EPA 608.3		1			469846	05/27/24 13:58	JMO	EET PIT
		Instrument ID: CHGC17								
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1 mL	469441	05/22/24 20:44	M1D	EET PIT
		Instrument ID: INTEGRION								
Total/NA	Analysis	EPA 300.0 R2.1		5	1 mL	1 mL	469441	05/22/24 21:03	M1D	EET PIT
		Instrument ID: INTEGRION								
Total Recoverable	Prep	200.8-1994 R5.4			50 mL	50 mL	614011	05/22/24 14:00	BN	EET CLE
Total Recoverable	Analysis	200.8-1994 R5.4		1			614768	05/28/24 14:11	AJC	EET CLE
		Instrument ID: I10								
Total Recoverable	Prep	200.8-1994 R5.4			50 mL	50 mL	614011	05/22/24 14:00	BN	EET CLE
Total Recoverable	Analysis	200.8-1994 R5.4		1			614280	05/23/24 21:19	RKT	EET CLE
		Instrument ID: I14								
Total Recoverable	Prep	200.8-1994 R5.4			50 mL	50 mL	614011	05/22/24 14:00	BN	EET CLE
Total Recoverable	Analysis	200.8-1994 R5.4		1			614474	05/24/24 20:32	AJC	EET CLE
		Instrument ID: I14								

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Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: 022

Lab Sample ID: 180-174282-2

Date Collected: 05/17/24 09:35

Matrix: Water

Date Received: 05/17/24 16:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	245.1			25 mL	25 mL	469250	05/21/24 08:36	SJM	EET PIT
Total/NA	Analysis	EPA 245.1 Rev. Instrument ID: HGY		1			469338	05/21/24 13:24	MTW	EET PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: DORY		1			470265	05/31/24 08:19	VAD	EET PIT
Dissolved	Analysis	3500-Cr B-2011 Instrument ID: RAPID-T		1	4 mL	4 mL	469050	05/17/24 19:16	LWM	EET PIT
Total/NA	Analysis	4500 H+ B-2000 Instrument ID: OZ		1			469075	05/18/24 10:55	BAB	EET PIT
Total/NA	Analysis	4500 S2 F-2011 Instrument ID: NOEQUIP		1	50 mL	50 mL	469415	05/22/24 14:33	CMR	EET PIT
Total/NA	Analysis	5310 C-2014 Instrument ID: TOC1030		1	40 mL	40 mL	469603	05/21/24 14:47	LWM	EET PIT
Total/NA	Analysis	5540C - 2011 Instrument ID: GENESYS10S		1	100 mL	100 mL	469546	05/17/24 18:07	SNR	EET PIT
Total/NA	Prep	1664B			1010 mL	1000 mL	469540	05/23/24 07:16	A1K	EET PIT
Total/NA	Analysis	EPA 1664B Instrument ID: NOEQUIP		1			469559	05/23/24 08:22	A1K	EET PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: BLUE-ASTORIA		1			469343	05/21/24 13:30	SNR	EET PIT
Total/NA	Analysis	EPA 353.2 Instrument ID: ASTORIA2		1			469311	05/21/24 10:18	RSK	EET PIT
Total/NA	Prep	410.4			1 mL	1 mL	469735	05/24/24 11:03	ELS	EET PIT
Total/NA	Analysis	EPA 410.4 Instrument ID: GENESYS10S		1	1 mL	1 mL	469765	05/24/24 15:32	ELS	EET PIT
Total/NA	Analysis	SM 2120B Instrument ID: NOEQUIP		1	50 mL	50 mL	469339	05/17/24 18:03	SNR	EET PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	469213	05/20/24 19:07	LWM	EET PIT
Total/NA	Analysis	SM 2540D Instrument ID: NOEQUIP		1	600 mL	1000 mL	469064	05/18/24 08:52	SGR	EET PIT
Total/NA	Analysis	SM 5210B Instrument ID: BOD2		1	300 mL	300 mL	469652	05/18/24 10:31	ELS	EET PIT
Total/NA	Prep	TKN/TPhos Prep			25 mL	25 mL	469120	05/20/24 05:18	RSK	EET PIT
Total/NA	Analysis	TKN_TPhos Instrument ID: ASTORIA1		1			469294	05/21/24 08:37	RSK	EET PIT

Client Sample ID: 016

Lab Sample ID: 180-174282-3

Date Collected: 05/17/24 13:14

Matrix: Water

Date Received: 05/17/24 16:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 624.1 Instrument ID: CHHP5		1	5 mL	5 mL	469052	05/18/24 10:50	J1T	EET PIT

Eurofins Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: 016

Lab Sample ID: 180-174282-3

Date Collected: 05/17/24 13:14

Matrix: Water

Date Received: 05/17/24 16:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	625			250 mL	250 uL	469621	05/23/24 13:23	BJT	EET PIT
Total/NA	Analysis	EPA 625.1		1	1 mL	1 mL	470417	06/03/24 20:32	VVP	EET PIT
		Instrument ID: CHMSD7								
Total/NA	Prep	608			1050 mL	1.0 mL	469115	05/19/24 23:45	CBY	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 uL	1 uL	469224	05/21/24 07:49	JMO	EET PIT
		Instrument ID: CHGC16								
Total/NA	Prep	608			1050 mL	1.0 mL	469115	05/19/24 23:45	CBY	EET PIT
Total/NA	Analysis	EPA 608.3		1			469846	05/27/24 14:14	JMO	EET PIT
		Instrument ID: CHGC17								
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1 mL	469569	05/23/24 20:21	M1D	EET PIT
		Instrument ID: INTEGRION								
Total/NA	Analysis	EPA 300.0 R2.1		5	1 mL	1 mL	469569	05/23/24 20:40	M1D	EET PIT
		Instrument ID: INTEGRION								
Total Recoverable	Prep	200.8-1994 R5.4			50 mL	50 mL	614011	05/22/24 14:00	BN	EET CLE
Total Recoverable	Analysis	200.8-1994 R5.4		1			614768	05/28/24 14:16	AJC	EET CLE
		Instrument ID: I10								
Total Recoverable	Prep	200.8-1994 R5.4			50 mL	50 mL	614011	05/22/24 14:00	BN	EET CLE
Total Recoverable	Analysis	200.8-1994 R5.4		1			614280	05/23/24 21:22	RKT	EET CLE
		Instrument ID: I14								
Total Recoverable	Prep	200.8-1994 R5.4			50 mL	50 mL	614011	05/22/24 14:00	BN	EET CLE
Total Recoverable	Analysis	200.8-1994 R5.4		1			614474	05/24/24 20:35	AJC	EET CLE
		Instrument ID: I14								
Total/NA	Prep	245.1			25 mL	25 mL	469250	05/21/24 08:36	SJM	EET PIT
Total/NA	Analysis	EPA 245.1 Rev.		1			469338	05/21/24 13:25	MTW	EET PIT
		Instrument ID: HGY								
Total Recoverable	Analysis	SM 2340B		1			470265	05/31/24 08:19	VAD	EET PIT
		Instrument ID: DORY								
Dissolved	Analysis	3500-Cr B-2011		1	4 mL	4 mL	469050	05/17/24 19:12	LWM	EET PIT
		Instrument ID: RAPID-T								
Total/NA	Analysis	4500 H+ B-2000		1			469075	05/18/24 10:59	BAB	EET PIT
		Instrument ID: OZ								
Total/NA	Analysis	4500 S2 F-2011		1	50 mL	50 mL	469415	05/22/24 14:35	CMR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	5310 C-2014		1	40 mL	40 mL	469603	05/21/24 15:36	LWM	EET PIT
		Instrument ID: TOC1030								
Total/NA	Analysis	5540C - 2011		1	100 mL	100 mL	469546	05/17/24 18:08	SNR	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Prep	1664B			1030 mL	1000 mL	469540	05/23/24 07:16	A1K	EET PIT
Total/NA	Analysis	EPA 1664B		1			469559	05/23/24 08:22	A1K	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	EPA 350.1		1			469343	05/21/24 13:32	SNR	EET PIT
		Instrument ID: BLUE-ASTORIA								
Total/NA	Analysis	EPA 353.2		1			469311	05/21/24 10:24	RSK	EET PIT
		Instrument ID: ASTORIA2								

Eurofins Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: 016

Lab Sample ID: 180-174282-3

Date Collected: 05/17/24 13:14

Matrix: Water

Date Received: 05/17/24 16:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	410.4			1 mL	1 mL	469735	05/24/24 11:03	ELS	EET PIT
Total/NA	Analysis	EPA 410.4		1	1 mL	1 mL	469765	05/24/24 15:33	ELS	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Analysis	SM 2120B		1	50 mL	50 mL	469339	05/17/24 18:04	SNR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	469213	05/20/24 19:07	LWM	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2540D		1	50 mL	1000 mL	469064	05/18/24 08:52	SGR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 5210B		1	300 mL	300 mL	469652	05/18/24 10:58	ELS	EET PIT
		Instrument ID: BOD2								
Total/NA	Prep	TKN/TPhos Prep			25 mL	25 mL	469120	05/20/24 05:18	RSK	EET PIT
Total/NA	Analysis	TKN_TPhos		1			469294	05/21/24 08:39	RSK	EET PIT
		Instrument ID: ASTORIA1								

Client Sample ID: TRIP BLANK

Lab Sample ID: 180-174282-4

Date Collected: 05/17/24 00:00

Matrix: Water

Date Received: 05/17/24 16:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 624.1		1	5 mL	5 mL	469052	05/18/24 09:18	J1T	EET PIT
		Instrument ID: CHHP5								

Laboratory References:

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

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Warrendale = Microbac - Warrendale, PA, 100 Marshall Drive, Warrendale, PA 15086, TEL (724)772-0610

Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Analyst References:

Lab: EET CLE

- Batch Type: Prep
 - BN = Benjamin Norman
- Batch Type: Analysis
 - AJC = Alexander Colosi
 - RKT = Roger Toth

Lab: EET PIT

- Batch Type: Prep
 - A1K = Agnes Komlos
 - BJT = Bill Trout
 - CBY = Charles Yushinski
 - ELS = Edwin Shireman
 - RSK = Robert Kurtz
 - SJM = Shannon Mueller
- Batch Type: Analysis
 - A1K = Agnes Komlos
 - BAB = Brooke Batyi
 - CMR = Carl Reagle
 - ELS = Edwin Shireman
 - J1T = Jianwu Tang
 - JMO = John Oravec
 - LWM = Leslie McIntire
 - M1D = Maureen Donlin
 - MTW = Michael Wesoloski
 - RSK = Robert Kurtz
 - SGR = Shannon Ryan
 - SNR = Sabra Richart
 - VAD = Vincent Domena
 - VVP = Vincent Piccolino

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: 021

Lab Sample ID: 180-174282-1

Date Collected: 05/17/24 09:15

Matrix: Water

Date Received: 05/17/24 16:22

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			05/18/24 11:36	1
Acrylonitrile	ND	*-	0.020	0.0078	mg/L			05/18/24 11:36	1
Benzene	ND		0.0010	0.00060	mg/L			05/18/24 11:36	1
Bromoform	ND		0.0010	0.00098	mg/L			05/18/24 11:36	1
Bromomethane	ND		0.0010	0.00089	mg/L			05/18/24 11:36	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			05/18/24 11:36	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			05/18/24 11:36	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			05/18/24 11:36	1
Chloroethane	ND		0.0010	0.00090	mg/L			05/18/24 11:36	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			05/18/24 11:36	1
Chloroform	ND		0.0010	0.00060	mg/L			05/18/24 11:36	1
Chloromethane	ND		0.0010	0.00090	mg/L			05/18/24 11:36	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			05/18/24 11:36	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			05/18/24 11:36	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			05/18/24 11:36	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			05/18/24 11:36	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			05/18/24 11:36	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			05/18/24 11:36	1
1,4-Dioxane	ND		0.20	0.043	mg/L			05/18/24 11:36	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			05/18/24 11:36	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			05/18/24 11:36	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			05/18/24 11:36	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			05/18/24 11:36	1
Toluene	ND		0.0010	0.00046	mg/L			05/18/24 11:36	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			05/18/24 11:36	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			05/18/24 11:36	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			05/18/24 11:36	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			05/18/24 11:36	1
Trichloroethene	ND		0.0010	0.00069	mg/L			05/18/24 11:36	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			05/18/24 11:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		47 - 122		05/18/24 11:36	1
Dibromofluoromethane (Surr)	75		52 - 138		05/18/24 11:36	1
1,2-Dichloroethane-d4 (Surr)	77		24 - 145		05/18/24 11:36	1
Toluene-d8 (Surr)	92		65 - 143		05/18/24 11:36	1

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.0010	0.00025	mg/L		05/23/24 13:23	06/03/24 19:48	1
1,2-Dichlorobenzene	ND		0.0010	0.00022	mg/L		05/23/24 13:23	06/03/24 19:48	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.0010	0.00020	mg/L		05/23/24 13:23	06/03/24 19:48	1
1,3-Dinitrobenzene	ND		0.0010	0.00048	mg/L		05/23/24 13:23	06/03/24 19:48	1
1,4-Dichlorobenzene	ND		0.0010	0.00025	mg/L		05/23/24 13:23	06/03/24 19:48	1
2,2'-oxybis[1-chloropropane]	ND		0.00020	0.000060	mg/L		05/23/24 13:23	06/03/24 19:48	1
2,4,6-Trichlorophenol	ND		0.0010	0.00023	mg/L		05/23/24 13:23	06/03/24 19:48	1
2,4-Dichlorophenol	ND		0.00020	0.000053	mg/L		05/23/24 13:23	06/03/24 19:48	1
2,4-Dimethylphenol	ND		0.0010	0.00061	mg/L		05/23/24 13:23	06/03/24 19:48	1
2,4-Dinitrophenol	ND		0.010	0.0034	mg/L		05/23/24 13:23	06/03/24 19:48	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: 021

Lab Sample ID: 180-174282-1

Date Collected: 05/17/24 09:15

Matrix: Water

Date Received: 05/17/24 16:22

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		0.0010	0.00037	mg/L		05/23/24 13:23	06/03/24 19:48	1
2,6-Dinitrotoluene	ND		0.0010	0.00018	mg/L		05/23/24 13:23	06/03/24 19:48	1
2-Chloronaphthalene	ND		0.00020	0.000061	mg/L		05/23/24 13:23	06/03/24 19:48	1
2-Chlorophenol	ND		0.0010	0.00023	mg/L		05/23/24 13:23	06/03/24 19:48	1
2-Nitrophenol	ND	*1	0.0010	0.00020	mg/L		05/23/24 13:23	06/03/24 19:48	1
3,3'-Dichlorobenzidine	ND		0.0010	0.00061	mg/L		05/23/24 13:23	06/03/24 19:48	1
4,6-Dinitro-2-methylphenol	ND		0.0052	0.0015	mg/L		05/23/24 13:23	06/03/24 19:48	1
4-Bromophenyl phenyl ether	ND		0.0010	0.00033	mg/L		05/23/24 13:23	06/03/24 19:48	1
4-Chloro-3-methylphenol	ND		0.0010	0.00045	mg/L		05/23/24 13:23	06/03/24 19:48	1
4-Chlorophenyl phenyl ether	ND		0.0010	0.00023	mg/L		05/23/24 13:23	06/03/24 19:48	1
4-Nitrophenol	ND		0.0052	0.00098	mg/L		05/23/24 13:23	06/03/24 19:48	1
Acenaphthene	ND		0.00020	0.000068	mg/L		05/23/24 13:23	06/03/24 19:48	1
Acenaphthylene	ND		0.00020	0.000068	mg/L		05/23/24 13:23	06/03/24 19:48	1
Acrylamide	ND		0.052	0.021	mg/L		05/23/24 13:23	06/03/24 19:48	1
Anthracene	ND		0.00020	0.000051	mg/L		05/23/24 13:23	06/03/24 19:48	1
Benzidine	ND		0.021	0.0095	mg/L		05/23/24 13:23	06/03/24 19:48	1
Benzo[a]anthracene	ND		0.00020	0.000078	mg/L		05/23/24 13:23	06/03/24 19:48	1
Benzo[a]pyrene	ND		0.00020	0.000055	mg/L		05/23/24 13:23	06/03/24 19:48	1
Benzo[b]fluoranthene	ND		0.00020	0.00010	mg/L		05/23/24 13:23	06/03/24 19:48	1
Benzo[g,h,i]perylene	ND		0.00020	0.000072	mg/L		05/23/24 13:23	06/03/24 19:48	1
Benzo[k]fluoranthene	ND		0.00020	0.000092	mg/L		05/23/24 13:23	06/03/24 19:48	1
Bis(2-chloroethoxy)methane	ND		0.0010	0.00016	mg/L		05/23/24 13:23	06/03/24 19:48	1
Bis(2-chloroethyl)ether	ND		0.00020	0.000042	mg/L		05/23/24 13:23	06/03/24 19:48	1
Bis(2-ethylhexyl) phthalate	ND		0.010	0.0065	mg/L		05/23/24 13:23	06/03/24 19:48	1
Butyl benzyl phthalate	ND		0.0021	0.00098	mg/L		05/23/24 13:23	06/03/24 19:48	1
Chrysene	ND		0.00020	0.000084	mg/L		05/23/24 13:23	06/03/24 19:48	1
Dibenz(a,h)anthracene	ND		0.00020	0.000075	mg/L		05/23/24 13:23	06/03/24 19:48	1
Diethyl phthalate	ND		0.0010	0.00059	mg/L		05/23/24 13:23	06/03/24 19:48	1
Dimethyl phthalate	ND		0.0021	0.00021	mg/L		05/23/24 13:23	06/03/24 19:48	1
Di-n-butyl phthalate	0.0084	J	0.010	0.0051	mg/L		05/23/24 13:23	06/03/24 19:48	1
Di-n-octyl phthalate	ND		0.0010	0.00071	mg/L		05/23/24 13:23	06/03/24 19:48	1
Fluoranthene	ND		0.00020	0.000063	mg/L		05/23/24 13:23	06/03/24 19:48	1
Fluorene	ND		0.00020	0.000072	mg/L		05/23/24 13:23	06/03/24 19:48	1
Hexachlorobenzene	ND		0.00020	0.000058	mg/L		05/23/24 13:23	06/03/24 19:48	1
Hexachlorobutadiene	ND		0.00020	0.000072	mg/L		05/23/24 13:23	06/03/24 19:48	1
Hexachlorocyclopentadiene	ND		0.0010	0.00052	mg/L		05/23/24 13:23	06/03/24 19:48	1
Hexachloroethane	ND		0.0010	0.00014	mg/L		05/23/24 13:23	06/03/24 19:48	1
Indeno[1,2,3-cd]pyrene	ND		0.00020	0.000089	mg/L		05/23/24 13:23	06/03/24 19:48	1
Isophorone	ND		0.0010	0.00020	mg/L		05/23/24 13:23	06/03/24 19:48	1
Naphthalene	ND		0.00020	0.000061	mg/L		05/23/24 13:23	06/03/24 19:48	1
Nitrobenzene	ND		0.0021	0.00052	mg/L		05/23/24 13:23	06/03/24 19:48	1
N-Nitrosodimethylamine	ND		0.0010	0.00027	mg/L		05/23/24 13:23	06/03/24 19:48	1
N-Nitrosodi-n-propylamine	ND		0.00020	0.000074	mg/L		05/23/24 13:23	06/03/24 19:48	1
N-Nitrosodiphenylamine	ND		0.0010	0.00012	mg/L		05/23/24 13:23	06/03/24 19:48	1
Pentachlorophenol	ND		0.0052	0.00088	mg/L		05/23/24 13:23	06/03/24 19:48	1
Phenanthrene	ND		0.00020	0.00016	mg/L		05/23/24 13:23	06/03/24 19:48	1
Phenol	ND		0.0010	0.00051	mg/L		05/23/24 13:23	06/03/24 19:48	1
Pyrene	ND		0.00020	0.000056	mg/L		05/23/24 13:23	06/03/24 19:48	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: 021

Lab Sample ID: 180-174282-1

Date Collected: 05/17/24 09:15

Matrix: Water

Date Received: 05/17/24 16:22

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	65		42 - 115	05/23/24 13:23	06/03/24 19:48	1
2-Fluorobiphenyl	96		47 - 107	05/23/24 13:23	06/03/24 19:48	1
2-Fluorophenol (Surr)	76		54 - 109	05/23/24 13:23	06/03/24 19:48	1
Nitrobenzene-d5 (Surr)	90		47 - 110	05/23/24 13:23	06/03/24 19:48	1
Phenol-d5 (Surr)	81		37 - 110	05/23/24 13:23	06/03/24 19:48	1
Terphenyl-d14 (Surr)	88		32 - 115	05/23/24 13:23	06/03/24 19:48	1

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000012	0.0000003	mg/L		05/19/24 23:45	05/27/24 13:41	1
alpha-BHC	ND		0.0000012	0.0000002	mg/L		05/19/24 23:45	05/27/24 13:41	1
beta-BHC	ND		0.0000012	0.0000003	mg/L		05/19/24 23:45	05/27/24 13:41	1
gamma-BHC (Lindane)	ND		0.0000012	0.0000002	mg/L		05/19/24 23:45	05/27/24 13:41	1
delta-BHC	ND		0.0000012	0.0000006	mg/L		05/19/24 23:45	05/27/24 13:41	1
Chlordane (technical)	ND		0.000012	0.0000069	mg/L		05/19/24 23:45	05/27/24 13:41	1
4,4'-DDD	ND		0.0000012	0.0000005	mg/L		05/19/24 23:45	05/27/24 13:41	1
4,4'-DDE	ND		0.0000012	0.0000002	mg/L		05/19/24 23:45	05/27/24 13:41	1
4,4'-DDT	ND		0.0000012	0.0000006	mg/L		05/19/24 23:45	05/27/24 13:41	1
Dieldrin	ND		0.0000012	0.0000002	mg/L		05/19/24 23:45	05/27/24 13:41	1
Endosulfan I	ND		0.0000012	0.0000006	mg/L		05/19/24 23:45	05/27/24 13:41	1
Endosulfan II	ND		0.0000012	0.0000003	mg/L		05/19/24 23:45	05/27/24 13:41	1
Endosulfan sulfate	ND		0.0000012	0.0000006	mg/L		05/19/24 23:45	05/27/24 13:41	1
Endrin	ND		0.0000012	0.0000002	mg/L		05/19/24 23:45	05/27/24 13:41	1
Endrin aldehyde	ND		0.0000012	0.0000004	mg/L		05/19/24 23:45	05/27/24 13:41	1
Heptachlor	ND		0.0000012	0.0000004	mg/L		05/19/24 23:45	05/27/24 13:41	1
Heptachlor epoxide	ND		0.0000012	0.0000003	mg/L		05/19/24 23:45	05/27/24 13:41	1
Toxaphene	ND		0.000095	0.000047	mg/L		05/19/24 23:45	05/27/24 13:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	87		20 - 138	05/19/24 23:45	05/27/24 13:41	1
Tetrachloro-m-xylene (Surr)	84		20 - 138	05/19/24 23:45	05/27/24 13:41	1
DCB Decachlorobiphenyl (Surr)	64		43 - 143	05/19/24 23:45	05/27/24 13:41	1
DCB Decachlorobiphenyl (Surr)	104		43 - 143	05/19/24 23:45	05/27/24 13:41	1

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.0000095	0.0000045	mg/L		05/19/24 23:45	05/21/24 07:12	1
PCB-1221	ND		0.0000095	0.0000054	mg/L		05/19/24 23:45	05/21/24 07:12	1
PCB-1232	ND		0.0000095	0.0000050	mg/L		05/19/24 23:45	05/21/24 07:12	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: 021

Lab Sample ID: 180-174282-1

Date Collected: 05/17/24 09:15

Matrix: Water

Date Received: 05/17/24 16:22

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1242	ND		0.0000095	0.0000087	mg/L		05/19/24 23:45	05/21/24 07:12	1
PCB-1248	ND		0.0000095	0.0000028	mg/L		05/19/24 23:45	05/21/24 07:12	1
PCB-1254	ND		0.0000095	0.0000091	mg/L		05/19/24 23:45	05/21/24 07:12	1
PCB-1260	ND		0.0000095	0.0000037	mg/L		05/19/24 23:45	05/21/24 07:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	102		20 - 138	05/19/24 23:45	05/21/24 07:12	1
Tetrachloro-m-xylene (Surr)	101		20 - 138	05/19/24 23:45	05/21/24 07:12	1
DCB Decachlorobiphenyl (Surr)	87		43 - 143	05/19/24 23:45	05/21/24 07:12	1
DCB Decachlorobiphenyl (Surr)	97		43 - 143	05/19/24 23:45	05/21/24 07:12	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			05/22/24 21:40	1
Chloride	61.8		1.00	0.712	mg/L			05/22/24 21:40	1
Fluoride	0.247		0.100	0.0260	mg/L			05/22/24 21:40	1
Sulfate	69.0		1.00	0.756	mg/L			05/22/24 21:40	1

Method: EPA 200.8-1994 R5.4 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.053	ug/L		05/22/24 14:00	05/23/24 21:17	1
Aluminum	210		50	34	ug/L		05/22/24 14:00	05/23/24 21:17	1
Arsenic	ND		5.0	0.75	ug/L		05/22/24 14:00	05/23/24 21:17	1
Boron	38		20	16	ug/L		05/22/24 14:00	05/28/24 14:07	1
Barium	79		5.0	2.2	ug/L		05/22/24 14:00	05/23/24 21:17	1
Beryllium	ND		1.0	0.62	ug/L		05/22/24 14:00	05/23/24 21:17	1
Calcium	54000		1000	250	ug/L		05/22/24 14:00	05/23/24 21:17	1
Cadmium	1.6		1.0	0.20	ug/L		05/22/24 14:00	05/23/24 21:17	1
Cobalt	0.20 J		1.0	0.19	ug/L		05/22/24 14:00	05/23/24 21:17	1
Chromium	ND		5.0	1.2	ug/L		05/22/24 14:00	05/23/24 21:17	1
Copper	ND		2.0	1.7	ug/L		05/22/24 14:00	05/23/24 21:17	1
Iron	290		100	47	ug/L		05/22/24 14:00	05/24/24 20:30	1
Magnesium	14000		1000	61	ug/L		05/22/24 14:00	05/23/24 21:17	1
Manganese	29		5.0	3.5	ug/L		05/22/24 14:00	05/23/24 21:17	1
Molybdenum	ND		5.0	1.1	ug/L		05/22/24 14:00	05/23/24 21:17	1
Nickel	ND		2.0	1.5	ug/L		05/22/24 14:00	05/23/24 21:17	1
Lead	0.58 J		1.0	0.45	ug/L		05/22/24 14:00	05/23/24 21:17	1
Antimony	ND		2.0	0.57	ug/L		05/22/24 14:00	05/23/24 21:17	1
Selenium	ND		5.0	0.89	ug/L		05/22/24 14:00	05/23/24 21:17	1
Thallium	ND		1.0	0.20	ug/L		05/22/24 14:00	05/23/24 21:17	1
Zinc	43		20	15	ug/L		05/22/24 14:00	05/23/24 21:17	1

Method: EPA 245.1 Rev. - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/21/24 08:36	05/21/24 13:23	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	190	!	3.3	0.52	mg/L			05/31/24 08:19	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: 021

Lab Sample ID: 180-174282-1

Date Collected: 05/17/24 09:15

Matrix: Water

Date Received: 05/17/24 16:22

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM-Online 4500 H+ B-2000)	7.3	HF	0.1	0.1	SU			05/18/24 10:50	1
Temperature (SM-Online 4500 H+ B-2000)	20.3	! HF	0.1	0.1	Degrees C			05/18/24 10:50	1
Sulfide (SM 4500 S2 F-2011)	ND		3.0	1.3	mg/L			05/22/24 14:32	1
Total Organic Carbon - Quad (SM 5310 C-2014)	1.8		1.0	0.51	mg/L			05/21/24 13:33	1
Methylene Blue Active Substances (SM 5540C - 2011)	ND		0.050	0.049	mg/l LAS MW 340			05/17/24 18:09	1
HEM (Oil & Grease) (EPA 1664B)	ND		4.9	4.2	mg/L		05/23/24 07:16	05/23/24 08:22	1
Ammonia (EPA 350.1)	ND		0.10	0.088	mg/L			05/21/24 13:28	1
Nitrate Nitrite as N (EPA 353.2)	0.15	FL	0.10	0.065	mg/L			05/21/24 10:13	1
Chemical Oxygen Demand (MCAWW EPA 410.4)	ND		10	9.1	mg/L		05/24/24 11:03	05/24/24 15:31	1
Color, Apparent (SM 2120B)	10		5.0	5.0	Color Units			05/17/24 18:01	1
Color, True (SM 2120B)	5.0		5.0	5.0	Color Units			05/17/24 18:01	1
pH at time of analysis (SM 2120B)	7.2	!	0.10	0.10	SU			05/17/24 18:01	1
Total Dissolved Solids (SM 2540C)	340		10	10	mg/L			05/20/24 19:07	1
Total Suspended Solids (SM 2540D)	8.6		1.0	1.0	mg/L			05/18/24 08:52	1
Biochemical Oxygen Demand (SM 5210B)	ND	cn	2.0	2.0	mg/L			05/18/24 10:31	1
Nitrogen, Kjeldahl (EPA TKN_TPhos)	0.17	J	0.50	0.12	mg/L as N		05/20/24 05:18	05/21/24 08:31	1
Phosphorus, Total (EPA TKN_TPhos)	0.046	J	0.10	0.040	mg/L as P		05/20/24 05:18	05/21/24 08:31	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SM 3500-Cr B-2011)	ND		0.010	0.0060	mg/L			05/17/24 19:15	1

Client Sample ID: 022

Lab Sample ID: 180-174282-2

Date Collected: 05/17/24 09:35

Matrix: Water

Date Received: 05/17/24 16:22

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			05/18/24 11:13	1
Acrylonitrile	ND	*-	0.020	0.0078	mg/L			05/18/24 11:13	1
Benzene	ND		0.0010	0.00060	mg/L			05/18/24 11:13	1
Bromoform	ND		0.0010	0.00098	mg/L			05/18/24 11:13	1
Bromomethane	ND		0.0010	0.00089	mg/L			05/18/24 11:13	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			05/18/24 11:13	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			05/18/24 11:13	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			05/18/24 11:13	1
Chloroethane	ND		0.0010	0.00090	mg/L			05/18/24 11:13	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			05/18/24 11:13	1
Chloroform	ND		0.0010	0.00060	mg/L			05/18/24 11:13	1
Chloromethane	ND		0.0010	0.00090	mg/L			05/18/24 11:13	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			05/18/24 11:13	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			05/18/24 11:13	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			05/18/24 11:13	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			05/18/24 11:13	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: 022

Lab Sample ID: 180-174282-2

Date Collected: 05/17/24 09:35

Matrix: Water

Date Received: 05/17/24 16:22

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			05/18/24 11:13	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			05/18/24 11:13	1
1,4-Dioxane	ND		0.20	0.043	mg/L			05/18/24 11:13	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			05/18/24 11:13	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			05/18/24 11:13	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			05/18/24 11:13	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			05/18/24 11:13	1
Toluene	ND		0.0010	0.00046	mg/L			05/18/24 11:13	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			05/18/24 11:13	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			05/18/24 11:13	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			05/18/24 11:13	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			05/18/24 11:13	1
Trichloroethene	ND		0.0010	0.00069	mg/L			05/18/24 11:13	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			05/18/24 11:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		47 - 122		05/18/24 11:13	1
Dibromofluoromethane (Surr)	72		52 - 138		05/18/24 11:13	1
1,2-Dichloroethane-d4 (Surr)	84		24 - 145		05/18/24 11:13	1
Toluene-d8 (Surr)	96		65 - 143		05/18/24 11:13	1

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.0010	0.00024	mg/L		05/23/24 13:23	06/03/24 20:10	1
1,2-Dichlorobenzene	ND		0.0010	0.00021	mg/L		05/23/24 13:23	06/03/24 20:10	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.0010	0.00020	mg/L		05/23/24 13:23	06/03/24 20:10	1
1,3-Dinitrobenzene	ND		0.0010	0.00046	mg/L		05/23/24 13:23	06/03/24 20:10	1
1,4-Dichlorobenzene	ND		0.0010	0.00024	mg/L		05/23/24 13:23	06/03/24 20:10	1
2,2'-oxybis[1-chloropropane]	ND		0.00019	0.000058	mg/L		05/23/24 13:23	06/03/24 20:10	1
2,4,6-Trichlorophenol	ND		0.0010	0.00022	mg/L		05/23/24 13:23	06/03/24 20:10	1
2,4-Dichlorophenol	ND		0.00019	0.000051	mg/L		05/23/24 13:23	06/03/24 20:10	1
2,4-Dimethylphenol	ND		0.0010	0.00059	mg/L		05/23/24 13:23	06/03/24 20:10	1
2,4-Dinitrophenol	ND		0.010	0.0033	mg/L		05/23/24 13:23	06/03/24 20:10	1
2,4-Dinitrotoluene	ND		0.0010	0.00035	mg/L		05/23/24 13:23	06/03/24 20:10	1
2,6-Dinitrotoluene	ND		0.0010	0.00017	mg/L		05/23/24 13:23	06/03/24 20:10	1
2-Chloronaphthalene	ND		0.00019	0.000059	mg/L		05/23/24 13:23	06/03/24 20:10	1
2-Chlorophenol	ND		0.0010	0.00023	mg/L		05/23/24 13:23	06/03/24 20:10	1
2-Nitrophenol	ND	*1	0.0010	0.00019	mg/L		05/23/24 13:23	06/03/24 20:10	1
3,3'-Dichlorobenzidine	ND		0.0010	0.00058	mg/L		05/23/24 13:23	06/03/24 20:10	1
4,6-Dinitro-2-methylphenol	ND		0.0050	0.0015	mg/L		05/23/24 13:23	06/03/24 20:10	1
4-Bromophenyl phenyl ether	ND		0.0010	0.00032	mg/L		05/23/24 13:23	06/03/24 20:10	1
4-Chloro-3-methylphenol	ND		0.0010	0.00044	mg/L		05/23/24 13:23	06/03/24 20:10	1
4-Chlorophenyl phenyl ether	ND		0.0010	0.00022	mg/L		05/23/24 13:23	06/03/24 20:10	1
4-Nitrophenol	ND		0.0050	0.00094	mg/L		05/23/24 13:23	06/03/24 20:10	1
Acenaphthene	ND		0.00019	0.000065	mg/L		05/23/24 13:23	06/03/24 20:10	1
Acenaphthylene	ND		0.00019	0.000065	mg/L		05/23/24 13:23	06/03/24 20:10	1
Acrylamide	ND		0.050	0.021	mg/L		05/23/24 13:23	06/03/24 20:10	1
Anthracene	ND		0.00019	0.000049	mg/L		05/23/24 13:23	06/03/24 20:10	1
Benzidine	ND		0.020	0.0091	mg/L		05/23/24 13:23	06/03/24 20:10	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: 022

Lab Sample ID: 180-174282-2

Date Collected: 05/17/24 09:35

Matrix: Water

Date Received: 05/17/24 16:22

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.00019	0.000075	mg/L		05/23/24 13:23	06/03/24 20:10	1
Benzo[a]pyrene	ND	*3	0.00019	0.000053	mg/L		05/23/24 13:23	06/03/24 20:10	1
Benzo[b]fluoranthene	ND	*3	0.00019	0.000097	mg/L		05/23/24 13:23	06/03/24 20:10	1
Benzo[g,h,i]perylene	ND	*3	0.00019	0.000069	mg/L		05/23/24 13:23	06/03/24 20:10	1
Benzo[k]fluoranthene	ND	*3	0.00019	0.000088	mg/L		05/23/24 13:23	06/03/24 20:10	1
Bis(2-chloroethoxy)methane	ND		0.0010	0.00015	mg/L		05/23/24 13:23	06/03/24 20:10	1
Bis(2-chloroethyl)ether	ND		0.00019	0.000040	mg/L		05/23/24 13:23	06/03/24 20:10	1
Bis(2-ethylhexyl) phthalate	ND		0.010	0.0062	mg/L		05/23/24 13:23	06/03/24 20:10	1
Butyl benzyl phthalate	ND		0.0020	0.00094	mg/L		05/23/24 13:23	06/03/24 20:10	1
Chrysene	ND		0.00019	0.000081	mg/L		05/23/24 13:23	06/03/24 20:10	1
Dibenz(a,h)anthracene	ND	*3	0.00019	0.000072	mg/L		05/23/24 13:23	06/03/24 20:10	1
Diethyl phthalate	ND		0.0010	0.00057	mg/L		05/23/24 13:23	06/03/24 20:10	1
Dimethyl phthalate	ND		0.0020	0.00020	mg/L		05/23/24 13:23	06/03/24 20:10	1
Di-n-butyl phthalate	ND		0.010	0.0049	mg/L		05/23/24 13:23	06/03/24 20:10	1
Di-n-octyl phthalate	ND	*3	0.0010	0.00069	mg/L		05/23/24 13:23	06/03/24 20:10	1
Fluoranthene	ND		0.00019	0.000060	mg/L		05/23/24 13:23	06/03/24 20:10	1
Fluorene	ND		0.00019	0.000069	mg/L		05/23/24 13:23	06/03/24 20:10	1
Hexachlorobenzene	ND		0.00019	0.000056	mg/L		05/23/24 13:23	06/03/24 20:10	1
Hexachlorobutadiene	ND		0.00019	0.000069	mg/L		05/23/24 13:23	06/03/24 20:10	1
Hexachlorocyclopentadiene	ND		0.0010	0.00050	mg/L		05/23/24 13:23	06/03/24 20:10	1
Hexachloroethane	ND		0.0010	0.00013	mg/L		05/23/24 13:23	06/03/24 20:10	1
Indeno[1,2,3-cd]pyrene	ND	*3	0.00019	0.000085	mg/L		05/23/24 13:23	06/03/24 20:10	1
Isophorone	ND		0.0010	0.00019	mg/L		05/23/24 13:23	06/03/24 20:10	1
Naphthalene	ND		0.00019	0.000059	mg/L		05/23/24 13:23	06/03/24 20:10	1
Nitrobenzene	ND		0.0020	0.00050	mg/L		05/23/24 13:23	06/03/24 20:10	1
N-Nitrosodimethylamine	ND		0.0010	0.00026	mg/L		05/23/24 13:23	06/03/24 20:10	1
N-Nitrosodi-n-propylamine	ND		0.00019	0.000071	mg/L		05/23/24 13:23	06/03/24 20:10	1
N-Nitrosodiphenylamine	ND		0.0010	0.00012	mg/L		05/23/24 13:23	06/03/24 20:10	1
Pentachlorophenol	ND		0.0050	0.00085	mg/L		05/23/24 13:23	06/03/24 20:10	1
Phenanthrene	ND		0.00019	0.00016	mg/L		05/23/24 13:23	06/03/24 20:10	1
Phenol	ND		0.0010	0.00049	mg/L		05/23/24 13:23	06/03/24 20:10	1
Pyrene	ND		0.00019	0.000054	mg/L		05/23/24 13:23	06/03/24 20:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	88		42 - 115	05/23/24 13:23	06/03/24 20:10	1
2-Fluorobiphenyl	96		47 - 107	05/23/24 13:23	06/03/24 20:10	1
2-Fluorophenol (Surr)	89		54 - 109	05/23/24 13:23	06/03/24 20:10	1
Nitrobenzene-d5 (Surr)	90		47 - 110	05/23/24 13:23	06/03/24 20:10	1
Phenol-d5 (Surr)	85		37 - 110	05/23/24 13:23	06/03/24 20:10	1
Terphenyl-d14 (Surr)	83		32 - 115	05/23/24 13:23	06/03/24 20:10	1

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000012	0.0000003	mg/L		05/19/24 23:45	05/27/24 13:58	1
				4					
alpha-BHC	ND		0.0000012	0.0000002	mg/L		05/19/24 23:45	05/27/24 13:58	1
				3					
beta-BHC	ND		0.0000012	0.0000003	mg/L		05/19/24 23:45	05/27/24 13:58	1
				5					
gamma-BHC (Lindane)	ND		0.0000012	0.0000002	mg/L		05/19/24 23:45	05/27/24 13:58	1
				8					

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: 022

Lab Sample ID: 180-174282-2

Date Collected: 05/17/24 09:35

Matrix: Water

Date Received: 05/17/24 16:22

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	ND		0.0000012	0.0000006	mg/L		05/19/24 23:45	05/27/24 13:58	1
				1					
Chlordane (technical)	ND		0.000012	0.0000069	mg/L		05/19/24 23:45	05/27/24 13:58	1
4,4'-DDD	ND		0.0000012	0.0000005	mg/L		05/19/24 23:45	05/27/24 13:58	1
				1					
4,4'-DDE	ND		0.0000012	0.0000002	mg/L		05/19/24 23:45	05/27/24 13:58	1
				8					
4,4'-DDT	ND		0.0000012	0.0000006	mg/L		05/19/24 23:45	05/27/24 13:58	1
				6					
Dieldrin	ND		0.0000012	0.0000002	mg/L		05/19/24 23:45	05/27/24 13:58	1
				6					
Endosulfan I	ND		0.0000012	0.0000006	mg/L		05/19/24 23:45	05/27/24 13:58	1
				5					
Endosulfan II	ND		0.0000012	0.0000003	mg/L		05/19/24 23:45	05/27/24 13:58	1
				0					
Endosulfan sulfate	ND		0.0000012	0.0000006	mg/L		05/19/24 23:45	05/27/24 13:58	1
				1					
Endrin	ND		0.0000012	0.0000002	mg/L		05/19/24 23:45	05/27/24 13:58	1
				2					
Endrin aldehyde	ND		0.0000012	0.0000004	mg/L		05/19/24 23:45	05/27/24 13:58	1
				9					
Heptachlor	ND		0.0000012	0.0000004	mg/L		05/19/24 23:45	05/27/24 13:58	1
				3					
Heptachlor epoxide	ND		0.0000012	0.0000003	mg/L		05/19/24 23:45	05/27/24 13:58	1
				2					
Toxaphene	ND		0.000095	0.000047	mg/L		05/19/24 23:45	05/27/24 13:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	75		20 - 138				05/19/24 23:45	05/27/24 13:58	1
Tetrachloro-m-xylene (Surr)	121		20 - 138				05/19/24 23:45	05/27/24 13:58	1
DCB Decachlorobiphenyl (Surr)	66		43 - 143				05/19/24 23:45	05/27/24 13:58	1
DCB Decachlorobiphenyl (Surr)	100		43 - 143				05/19/24 23:45	05/27/24 13:58	1

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.0000095	0.0000045	mg/L		05/19/24 23:45	05/21/24 07:31	1
PCB-1221	ND		0.0000095	0.0000054	mg/L		05/19/24 23:45	05/21/24 07:31	1
PCB-1232	ND		0.0000095	0.0000050	mg/L		05/19/24 23:45	05/21/24 07:31	1
PCB-1242	ND		0.0000095	0.0000087	mg/L		05/19/24 23:45	05/21/24 07:31	1
PCB-1248	ND		0.0000095	0.0000028	mg/L		05/19/24 23:45	05/21/24 07:31	1
PCB-1254	ND		0.0000095	0.0000091	mg/L		05/19/24 23:45	05/21/24 07:31	1
PCB-1260	ND		0.0000095	0.0000037	mg/L		05/19/24 23:45	05/21/24 07:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	84		20 - 138				05/19/24 23:45	05/21/24 07:31	1
Tetrachloro-m-xylene (Surr)	166	S1+	20 - 138				05/19/24 23:45	05/21/24 07:31	1
DCB Decachlorobiphenyl (Surr)	84		43 - 143				05/19/24 23:45	05/21/24 07:31	1
DCB Decachlorobiphenyl (Surr)	87		43 - 143				05/19/24 23:45	05/21/24 07:31	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			05/22/24 20:44	1
Chloride	316		5.00	3.56	mg/L			05/22/24 21:03	5

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: 022

Lab Sample ID: 180-174282-2

Date Collected: 05/17/24 09:35

Matrix: Water

Date Received: 05/17/24 16:22

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.402		0.100	0.0260	mg/L			05/22/24 20:44	1
Sulfate	36.4		1.00	0.756	mg/L			05/22/24 20:44	1

Method: EPA 200.8-1994 R5.4 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.053	ug/L		05/22/24 14:00	05/23/24 21:19	1
Aluminum	190		50	34	ug/L		05/22/24 14:00	05/23/24 21:19	1
Arsenic	ND		5.0	0.75	ug/L		05/22/24 14:00	05/23/24 21:19	1
Boron	32		20	16	ug/L		05/22/24 14:00	05/28/24 14:11	1
Barium	26		5.0	2.2	ug/L		05/22/24 14:00	05/23/24 21:19	1
Beryllium	ND		1.0	0.62	ug/L		05/22/24 14:00	05/23/24 21:19	1
Calcium	25000		1000	250	ug/L		05/22/24 14:00	05/23/24 21:19	1
Cadmium	0.54 J		1.0	0.20	ug/L		05/22/24 14:00	05/23/24 21:19	1
Cobalt	ND		1.0	0.19	ug/L		05/22/24 14:00	05/23/24 21:19	1
Chromium	26		5.0	1.2	ug/L		05/22/24 14:00	05/23/24 21:19	1
Copper	3.6		2.0	1.7	ug/L		05/22/24 14:00	05/23/24 21:19	1
Iron	330		100	47	ug/L		05/22/24 14:00	05/24/24 20:32	1
Magnesium	2800		1000	61	ug/L		05/22/24 14:00	05/23/24 21:19	1
Manganese	22		5.0	3.5	ug/L		05/22/24 14:00	05/23/24 21:19	1
Molybdenum	9.1		5.0	1.1	ug/L		05/22/24 14:00	05/23/24 21:19	1
Nickel	1.6 J		2.0	1.5	ug/L		05/22/24 14:00	05/23/24 21:19	1
Lead	ND		1.0	0.45	ug/L		05/22/24 14:00	05/23/24 21:19	1
Antimony	ND		2.0	0.57	ug/L		05/22/24 14:00	05/23/24 21:19	1
Selenium	ND		5.0	0.89	ug/L		05/22/24 14:00	05/23/24 21:19	1
Thallium	ND		1.0	0.20	ug/L		05/22/24 14:00	05/23/24 21:19	1
Zinc	66		20	15	ug/L		05/22/24 14:00	05/23/24 21:19	1

Method: EPA 245.1 Rev. - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/21/24 08:36	05/21/24 13:24	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	74 !		3.3	0.52	mg/L			05/31/24 08:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM-Online 4500 H+ B-2000)	7.4	HF	0.1	0.1	SU			05/18/24 10:55	1
Temperature (SM-Online 4500 H+ B-2000)	20.3 ! HF		0.1	0.1	Degrees C			05/18/24 10:55	1
Sulfide (SM 4500 S2 F-2011)	ND		3.0	1.3	mg/L			05/22/24 14:33	1
Total Organic Carbon - Quad (SM 5310 C-2014)	28		1.0	0.51	mg/L			05/21/24 14:47	1
Methylene Blue Active Substances (SM 5540C - 2011)	0.65		0.050	0.049	mg/l LAS MW 340			05/17/24 18:07	1
HEM (Oil & Grease) (EPA 1664B)	ND		5.0	4.3	mg/L		05/23/24 07:16	05/23/24 08:22	1
Ammonia (EPA 350.1)	0.12		0.10	0.088	mg/L			05/21/24 13:30	1
Nitrate Nitrite as N (EPA 353.2)	0.47		0.10	0.065	mg/L			05/21/24 10:18	1
Chemical Oxygen Demand (MCAWW EPA 410.4)	33		10	9.1	mg/L		05/24/24 11:03	05/24/24 15:32	1
Color, True (SM 2120B)	40		5.0	5.0	Color Units			05/17/24 18:03	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: 022

Lab Sample ID: 180-174282-2

Date Collected: 05/17/24 09:35

Matrix: Water

Date Received: 05/17/24 16:22

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH at time of analysis (SM 2120B)	7.5	!	0.10	0.10	SU			05/17/24 18:03	1
Total Dissolved Solids (SM 2540C)	630		10	10	mg/L			05/20/24 19:07	1
Total Suspended Solids (SM 2540D)	15		0.83	0.83	mg/L			05/18/24 08:52	1
Biochemical Oxygen Demand (SM 5210B)	5.4	b cn	2.0	2.0	mg/L			05/18/24 10:31	1
Nitrogen, Kjeldahl (EPA TKN_TPhos)	0.73		0.50	0.12	mg/L as N		05/20/24 05:18	05/21/24 08:37	1
Phosphorus, Total (EPA TKN_TPhos)	0.087	J	0.10	0.040	mg/L as P		05/20/24 05:18	05/21/24 08:37	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SM 3500-Cr B-2011)	ND		0.010	0.0060	mg/L			05/17/24 19:16	1

Client Sample ID: 016

Lab Sample ID: 180-174282-3

Date Collected: 05/17/24 13:14

Matrix: Water

Date Received: 05/17/24 16:22

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			05/18/24 10:50	1
Acrylonitrile	ND	*-	0.020	0.0078	mg/L			05/18/24 10:50	1
Benzene	ND		0.0010	0.00060	mg/L			05/18/24 10:50	1
Bromoform	ND		0.0010	0.00098	mg/L			05/18/24 10:50	1
Bromomethane	ND		0.0010	0.00089	mg/L			05/18/24 10:50	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			05/18/24 10:50	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			05/18/24 10:50	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			05/18/24 10:50	1
Chloroethane	ND		0.0010	0.00090	mg/L			05/18/24 10:50	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			05/18/24 10:50	1
Chloroform	ND		0.0010	0.00060	mg/L			05/18/24 10:50	1
Chloromethane	ND		0.0010	0.00090	mg/L			05/18/24 10:50	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			05/18/24 10:50	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			05/18/24 10:50	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			05/18/24 10:50	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			05/18/24 10:50	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			05/18/24 10:50	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			05/18/24 10:50	1
1,4-Dioxane	ND		0.20	0.043	mg/L			05/18/24 10:50	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			05/18/24 10:50	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			05/18/24 10:50	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			05/18/24 10:50	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			05/18/24 10:50	1
Toluene	ND		0.0010	0.00046	mg/L			05/18/24 10:50	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			05/18/24 10:50	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			05/18/24 10:50	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			05/18/24 10:50	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			05/18/24 10:50	1
Trichloroethene	ND		0.0010	0.00069	mg/L			05/18/24 10:50	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			05/18/24 10:50	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: 016

Lab Sample ID: 180-174282-3

Date Collected: 05/17/24 13:14

Matrix: Water

Date Received: 05/17/24 16:22

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		47 - 122		05/18/24 10:50	1
Dibromofluoromethane (Surr)	74		52 - 138		05/18/24 10:50	1
1,2-Dichloroethane-d4 (Surr)	81		24 - 145		05/18/24 10:50	1
Toluene-d8 (Surr)	92		65 - 143		05/18/24 10:50	1

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.0010	0.00024	mg/L		05/23/24 13:23	06/03/24 20:32	1
1,2-Dichlorobenzene	ND		0.0010	0.00021	mg/L		05/23/24 13:23	06/03/24 20:32	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.0010	0.00020	mg/L		05/23/24 13:23	06/03/24 20:32	1
1,3-Dinitrobenzene	ND		0.0010	0.00046	mg/L		05/23/24 13:23	06/03/24 20:32	1
1,4-Dichlorobenzene	ND		0.0010	0.00024	mg/L		05/23/24 13:23	06/03/24 20:32	1
2,2'-oxybis[1-chloropropane]	ND		0.00019	0.000058	mg/L		05/23/24 13:23	06/03/24 20:32	1
2,4,6-Trichlorophenol	ND		0.0010	0.00022	mg/L		05/23/24 13:23	06/03/24 20:32	1
2,4-Dichlorophenol	ND		0.00019	0.000051	mg/L		05/23/24 13:23	06/03/24 20:32	1
2,4-Dimethylphenol	ND		0.0010	0.00059	mg/L		05/23/24 13:23	06/03/24 20:32	1
2,4-Dinitrophenol	ND		0.010	0.0033	mg/L		05/23/24 13:23	06/03/24 20:32	1
2,4-Dinitrotoluene	ND		0.0010	0.00035	mg/L		05/23/24 13:23	06/03/24 20:32	1
2,6-Dinitrotoluene	ND		0.0010	0.00017	mg/L		05/23/24 13:23	06/03/24 20:32	1
2-Chloronaphthalene	ND		0.00019	0.000059	mg/L		05/23/24 13:23	06/03/24 20:32	1
2-Chlorophenol	ND		0.0010	0.00023	mg/L		05/23/24 13:23	06/03/24 20:32	1
2-Nitrophenol	ND	*1	0.0010	0.00019	mg/L		05/23/24 13:23	06/03/24 20:32	1
3,3'-Dichlorobenzidine	ND		0.0010	0.00058	mg/L		05/23/24 13:23	06/03/24 20:32	1
4,6-Dinitro-2-methylphenol	ND		0.0050	0.0015	mg/L		05/23/24 13:23	06/03/24 20:32	1
4-Bromophenyl phenyl ether	ND		0.0010	0.00032	mg/L		05/23/24 13:23	06/03/24 20:32	1
4-Chloro-3-methylphenol	ND		0.0010	0.00044	mg/L		05/23/24 13:23	06/03/24 20:32	1
4-Chlorophenyl phenyl ether	ND		0.0010	0.00022	mg/L		05/23/24 13:23	06/03/24 20:32	1
4-Nitrophenol	ND		0.0050	0.00094	mg/L		05/23/24 13:23	06/03/24 20:32	1
Acenaphthene	ND		0.00019	0.000065	mg/L		05/23/24 13:23	06/03/24 20:32	1
Acenaphthylene	ND		0.00019	0.000065	mg/L		05/23/24 13:23	06/03/24 20:32	1
Acrylamide	ND		0.050	0.021	mg/L		05/23/24 13:23	06/03/24 20:32	1
Anthracene	ND		0.00019	0.000049	mg/L		05/23/24 13:23	06/03/24 20:32	1
Benzidine	ND		0.020	0.0091	mg/L		05/23/24 13:23	06/03/24 20:32	1
Benzo[a]anthracene	ND		0.00019	0.000075	mg/L		05/23/24 13:23	06/03/24 20:32	1
Benzo[a]pyrene	ND		0.00019	0.000053	mg/L		05/23/24 13:23	06/03/24 20:32	1
Benzo[b]fluoranthene	ND		0.00019	0.000097	mg/L		05/23/24 13:23	06/03/24 20:32	1
Benzo[g,h,i]perylene	ND		0.00019	0.000069	mg/L		05/23/24 13:23	06/03/24 20:32	1
Benzo[k]fluoranthene	ND		0.00019	0.000088	mg/L		05/23/24 13:23	06/03/24 20:32	1
Bis(2-chloroethoxy)methane	ND		0.0010	0.00015	mg/L		05/23/24 13:23	06/03/24 20:32	1
Bis(2-chloroethyl)ether	ND		0.00019	0.000040	mg/L		05/23/24 13:23	06/03/24 20:32	1
Bis(2-ethylhexyl) phthalate	ND		0.010	0.0062	mg/L		05/23/24 13:23	06/03/24 20:32	1
Butyl benzyl phthalate	ND		0.0020	0.00094	mg/L		05/23/24 13:23	06/03/24 20:32	1
Chrysene	ND		0.00019	0.000081	mg/L		05/23/24 13:23	06/03/24 20:32	1
Dibenz(a,h)anthracene	ND		0.00019	0.000072	mg/L		05/23/24 13:23	06/03/24 20:32	1
Diethyl phthalate	ND		0.0010	0.00057	mg/L		05/23/24 13:23	06/03/24 20:32	1
Dimethyl phthalate	ND		0.0020	0.00020	mg/L		05/23/24 13:23	06/03/24 20:32	1
Di-n-butyl phthalate	ND		0.010	0.0049	mg/L		05/23/24 13:23	06/03/24 20:32	1
Di-n-octyl phthalate	ND		0.0010	0.00069	mg/L		05/23/24 13:23	06/03/24 20:32	1
Fluoranthene	ND		0.00019	0.000060	mg/L		05/23/24 13:23	06/03/24 20:32	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: 016

Lab Sample ID: 180-174282-3

Date Collected: 05/17/24 13:14

Matrix: Water

Date Received: 05/17/24 16:22

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	ND		0.00019	0.000069	mg/L		05/23/24 13:23	06/03/24 20:32	1
Hexachlorobenzene	ND		0.00019	0.000056	mg/L		05/23/24 13:23	06/03/24 20:32	1
Hexachlorobutadiene	ND		0.00019	0.000069	mg/L		05/23/24 13:23	06/03/24 20:32	1
Hexachlorocyclopentadiene	ND		0.0010	0.00050	mg/L		05/23/24 13:23	06/03/24 20:32	1
Hexachloroethane	ND		0.0010	0.00013	mg/L		05/23/24 13:23	06/03/24 20:32	1
Indeno[1,2,3-cd]pyrene	ND		0.00019	0.000085	mg/L		05/23/24 13:23	06/03/24 20:32	1
Isophorone	ND		0.0010	0.00019	mg/L		05/23/24 13:23	06/03/24 20:32	1
Naphthalene	ND		0.00019	0.000059	mg/L		05/23/24 13:23	06/03/24 20:32	1
Nitrobenzene	ND		0.0020	0.00050	mg/L		05/23/24 13:23	06/03/24 20:32	1
N-Nitrosodimethylamine	ND		0.0010	0.00026	mg/L		05/23/24 13:23	06/03/24 20:32	1
N-Nitrosodi-n-propylamine	ND		0.00019	0.000071	mg/L		05/23/24 13:23	06/03/24 20:32	1
N-Nitrosodiphenylamine	ND		0.0010	0.00012	mg/L		05/23/24 13:23	06/03/24 20:32	1
Pentachlorophenol	ND		0.0050	0.00085	mg/L		05/23/24 13:23	06/03/24 20:32	1
Phenanthrene	ND		0.00019	0.00016	mg/L		05/23/24 13:23	06/03/24 20:32	1
Phenol	ND		0.0010	0.00049	mg/L		05/23/24 13:23	06/03/24 20:32	1
Pyrene	ND		0.00019	0.000054	mg/L		05/23/24 13:23	06/03/24 20:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	83		42 - 115	05/23/24 13:23	06/03/24 20:32	1
2-Fluorobiphenyl	92		47 - 107	05/23/24 13:23	06/03/24 20:32	1
2-Fluorophenol (Surr)	72		54 - 109	05/23/24 13:23	06/03/24 20:32	1
Nitrobenzene-d5 (Surr)	85		47 - 110	05/23/24 13:23	06/03/24 20:32	1
Phenol-d5 (Surr)	78		37 - 110	05/23/24 13:23	06/03/24 20:32	1
Terphenyl-d14 (Surr)	87		32 - 115	05/23/24 13:23	06/03/24 20:32	1

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000012	0.0000003	mg/L		05/19/24 23:45	05/27/24 14:14	1
				4					
alpha-BHC	ND		0.0000012	0.0000002	mg/L		05/19/24 23:45	05/27/24 14:14	1
				3					
beta-BHC	ND		0.0000012	0.0000003	mg/L		05/19/24 23:45	05/27/24 14:14	1
				5					
gamma-BHC (Lindane)	ND		0.0000012	0.0000002	mg/L		05/19/24 23:45	05/27/24 14:14	1
				8					
delta-BHC	ND		0.0000012	0.0000006	mg/L		05/19/24 23:45	05/27/24 14:14	1
				1					
Chlordane (technical)	ND		0.000012	0.0000069	mg/L		05/19/24 23:45	05/27/24 14:14	1
4,4'-DDD	ND		0.0000012	0.0000005	mg/L		05/19/24 23:45	05/27/24 14:14	1
				1					
4,4'-DDE	ND		0.0000012	0.0000002	mg/L		05/19/24 23:45	05/27/24 14:14	1
				8					
4,4'-DDT	ND		0.0000012	0.0000006	mg/L		05/19/24 23:45	05/27/24 14:14	1
				6					
Dieldrin	ND		0.0000012	0.0000002	mg/L		05/19/24 23:45	05/27/24 14:14	1
				6					
Endosulfan I	ND		0.0000012	0.0000006	mg/L		05/19/24 23:45	05/27/24 14:14	1
				5					
Endosulfan II	ND		0.0000012	0.0000003	mg/L		05/19/24 23:45	05/27/24 14:14	1
				0					
Endosulfan sulfate	ND		0.0000012	0.0000006	mg/L		05/19/24 23:45	05/27/24 14:14	1
				1					

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: 016

Lab Sample ID: 180-174282-3

Date Collected: 05/17/24 13:14

Matrix: Water

Date Received: 05/17/24 16:22

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin	ND		0.0000012	0.0000002	mg/L		05/19/24 23:45	05/27/24 14:14	1
				2					
Endrin aldehyde	ND		0.0000012	0.0000004	mg/L		05/19/24 23:45	05/27/24 14:14	1
				9					
Heptachlor	ND		0.0000012	0.0000004	mg/L		05/19/24 23:45	05/27/24 14:14	1
				3					
Heptachlor epoxide	ND		0.0000012	0.0000003	mg/L		05/19/24 23:45	05/27/24 14:14	1
				2					
Toxaphene	ND		0.000095	0.000047	mg/L		05/19/24 23:45	05/27/24 14:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	68		20 - 138				05/19/24 23:45	05/27/24 14:14	1
Tetrachloro-m-xylene (Surr)	84		20 - 138				05/19/24 23:45	05/27/24 14:14	1
DCB Decachlorobiphenyl (Surr)	58		43 - 143				05/19/24 23:45	05/27/24 14:14	1
DCB Decachlorobiphenyl (Surr)	107		43 - 143				05/19/24 23:45	05/27/24 14:14	1

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.0000095	0.0000045	mg/L		05/19/24 23:45	05/21/24 07:49	1
PCB-1221	ND		0.0000095	0.0000054	mg/L		05/19/24 23:45	05/21/24 07:49	1
PCB-1232	ND		0.0000095	0.0000050	mg/L		05/19/24 23:45	05/21/24 07:49	1
PCB-1242	ND		0.0000095	0.0000087	mg/L		05/19/24 23:45	05/21/24 07:49	1
PCB-1248	ND		0.0000095	0.0000028	mg/L		05/19/24 23:45	05/21/24 07:49	1
PCB-1254	ND		0.0000095	0.0000091	mg/L		05/19/24 23:45	05/21/24 07:49	1
PCB-1260	ND		0.0000095	0.0000037	mg/L		05/19/24 23:45	05/21/24 07:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	83		20 - 138				05/19/24 23:45	05/21/24 07:49	1
Tetrachloro-m-xylene (Surr)	96		20 - 138				05/19/24 23:45	05/21/24 07:49	1
DCB Decachlorobiphenyl (Surr)	84		43 - 143				05/19/24 23:45	05/21/24 07:49	1
DCB Decachlorobiphenyl (Surr)	90		43 - 143				05/19/24 23:45	05/21/24 07:49	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			05/23/24 20:21	1
Chloride	162		1.00	0.712	mg/L			05/23/24 20:21	1
Fluoride	0.145		0.100	0.0260	mg/L			05/23/24 20:21	1
Sulfate	302		5.00	3.78	mg/L			05/23/24 20:40	5

Method: EPA 200.8-1994 R5.4 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.36	J	1.0	0.053	ug/L		05/22/24 14:00	05/23/24 21:22	1
Aluminum	9500		50	34	ug/L		05/22/24 14:00	05/23/24 21:22	1
Arsenic	14		5.0	0.75	ug/L		05/22/24 14:00	05/23/24 21:22	1
Boron	33		20	16	ug/L		05/22/24 14:00	05/28/24 14:16	1
Barium	500		5.0	2.2	ug/L		05/22/24 14:00	05/23/24 21:22	1
Beryllium	0.83	J	1.0	0.62	ug/L		05/22/24 14:00	05/23/24 21:22	1
Calcium	320000		1000	250	ug/L		05/22/24 14:00	05/23/24 21:22	1
Cadmium	3.3		1.0	0.20	ug/L		05/22/24 14:00	05/23/24 21:22	1
Cobalt	8.9		1.0	0.19	ug/L		05/22/24 14:00	05/23/24 21:22	1
Chromium	16		5.0	1.2	ug/L		05/22/24 14:00	05/23/24 21:22	1
Copper	41		2.0	1.7	ug/L		05/22/24 14:00	05/23/24 21:22	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: 016

Lab Sample ID: 180-174282-3

Date Collected: 05/17/24 13:14

Matrix: Water

Date Received: 05/17/24 16:22

Method: EPA 200.8-1994 R5.4 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	21000		100	47	ug/L		05/22/24 14:00	05/24/24 20:35	1
Magnesium	21000		1000	61	ug/L		05/22/24 14:00	05/23/24 21:22	1
Manganese	710		5.0	3.5	ug/L		05/22/24 14:00	05/23/24 21:22	1
Molybdenum	3.8	J	5.0	1.1	ug/L		05/22/24 14:00	05/23/24 21:22	1
Nickel	34		2.0	1.5	ug/L		05/22/24 14:00	05/23/24 21:22	1
Lead	34		1.0	0.45	ug/L		05/22/24 14:00	05/23/24 21:22	1
Antimony	1.3	J	2.0	0.57	ug/L		05/22/24 14:00	05/23/24 21:22	1
Selenium	6.7		5.0	0.89	ug/L		05/22/24 14:00	05/23/24 21:22	1
Thallium	0.26	J	1.0	0.20	ug/L		05/22/24 14:00	05/23/24 21:22	1
Zinc	440		20	15	ug/L		05/22/24 14:00	05/23/24 21:22	1

Method: EPA 245.1 Rev. - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00028		0.00020	0.00013	mg/L		05/21/24 08:36	05/21/24 13:25	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	890	!	3.3	0.52	mg/L			05/31/24 08:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM-Online 4500 H+ B-2000)	8.0	HF	0.1	0.1	SU			05/18/24 10:59	1
Temperature (SM-Online 4500 H+ B-2000)	20.3	! HF	0.1	0.1	Degrees C			05/18/24 10:59	1
Sulfide (SM 4500 S2 F-2011)	ND		3.0	1.3	mg/L			05/22/24 14:35	1
Total Organic Carbon - Quad (SM 5310 C-2014)	4.3		1.0	0.51	mg/L			05/21/24 15:36	1
Methylene Blue Active Substances (SM 5540C - 2011)	0.075		0.050	0.049	mg/l LAS MW 340			05/17/24 18:08	1
HEM (Oil & Grease) (EPA 1664B)	ND		4.9	4.2	mg/L		05/23/24 07:16	05/23/24 08:22	1
Ammonia (EPA 350.1)	ND		0.10	0.088	mg/L			05/21/24 13:32	1
Nitrate Nitrite as N (EPA 353.2)	0.69		0.10	0.065	mg/L			05/21/24 10:24	1
Chemical Oxygen Demand (MCAWW EPA 410.4)	ND		10	9.1	mg/L		05/24/24 11:03	05/24/24 15:33	1
Color, True (SM 2120B)	5.0		5.0	5.0	Color Units			05/17/24 18:04	1
pH at time of analysis (SM 2120B)	8.1	!	0.10	0.10	SU			05/17/24 18:04	1
Total Dissolved Solids (SM 2540C)	750		10	10	mg/L			05/20/24 19:07	1
Total Suspended Solids (SM 2540D)	1400		10	10	mg/L			05/18/24 08:52	1
Biochemical Oxygen Demand (SM 5210B)	2.6	b cn	2.0	2.0	mg/L			05/18/24 10:58	1
Nitrogen, Kjeldahl (EPA TKN_TPhos)	1.5		0.50	0.12	mg/L as N		05/20/24 05:18	05/21/24 08:39	1
Phosphorus, Total (EPA TKN_TPhos)	1.3		0.10	0.040	mg/L as P		05/20/24 05:18	05/21/24 08:39	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SM 3500-Cr B-2011)	ND		0.010	0.0060	mg/L			05/17/24 19:12	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 180-174282-4

Date Collected: 05/17/24 00:00

Matrix: Water

Date Received: 05/17/24 16:22

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			05/18/24 09:18	1
Acrylonitrile	ND	*-	0.020	0.0078	mg/L			05/18/24 09:18	1
Benzene	ND		0.0010	0.00060	mg/L			05/18/24 09:18	1
Bromoform	ND		0.0010	0.00098	mg/L			05/18/24 09:18	1
Bromomethane	ND		0.0010	0.00089	mg/L			05/18/24 09:18	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			05/18/24 09:18	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			05/18/24 09:18	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			05/18/24 09:18	1
Chloroethane	ND		0.0010	0.00090	mg/L			05/18/24 09:18	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			05/18/24 09:18	1
Chloroform	ND		0.0010	0.00060	mg/L			05/18/24 09:18	1
Chloromethane	ND		0.0010	0.00090	mg/L			05/18/24 09:18	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			05/18/24 09:18	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			05/18/24 09:18	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			05/18/24 09:18	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			05/18/24 09:18	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			05/18/24 09:18	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			05/18/24 09:18	1
1,4-Dioxane	ND		0.20	0.043	mg/L			05/18/24 09:18	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			05/18/24 09:18	1
Methylene Chloride	0.0030		0.0010	0.00089	mg/L			05/18/24 09:18	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			05/18/24 09:18	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			05/18/24 09:18	1
Toluene	ND		0.0010	0.00046	mg/L			05/18/24 09:18	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			05/18/24 09:18	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			05/18/24 09:18	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			05/18/24 09:18	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			05/18/24 09:18	1
Trichloroethene	ND		0.0010	0.00069	mg/L			05/18/24 09:18	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			05/18/24 09:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		47 - 122		05/18/24 09:18	1
Dibromofluoromethane (Surr)	78		52 - 138		05/18/24 09:18	1
1,2-Dichloroethane-d4 (Surr)	86		24 - 145		05/18/24 09:18	1
Toluene-d8 (Surr)	129		65 - 143		05/18/24 09:18	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

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

Lab Sample ID: MB 180-469052/5

Matrix: Water

Analysis Batch: 469052

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			05/18/24 08:54	1
Acrylonitrile	ND		0.020	0.0078	mg/L			05/18/24 08:54	1
Benzene	ND		0.0010	0.00060	mg/L			05/18/24 08:54	1
Bromoform	ND		0.0010	0.00098	mg/L			05/18/24 08:54	1
Bromomethane	ND		0.0010	0.00089	mg/L			05/18/24 08:54	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			05/18/24 08:54	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			05/18/24 08:54	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			05/18/24 08:54	1
Chloroethane	ND		0.0010	0.00090	mg/L			05/18/24 08:54	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			05/18/24 08:54	1
Chloroform	ND		0.0010	0.00060	mg/L			05/18/24 08:54	1
Chloromethane	ND		0.0010	0.00090	mg/L			05/18/24 08:54	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			05/18/24 08:54	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			05/18/24 08:54	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			05/18/24 08:54	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			05/18/24 08:54	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			05/18/24 08:54	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			05/18/24 08:54	1
1,4-Dioxane	ND		0.20	0.043	mg/L			05/18/24 08:54	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			05/18/24 08:54	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			05/18/24 08:54	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			05/18/24 08:54	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			05/18/24 08:54	1
Toluene	ND		0.0010	0.00046	mg/L			05/18/24 08:54	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			05/18/24 08:54	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			05/18/24 08:54	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			05/18/24 08:54	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			05/18/24 08:54	1
Trichloroethene	ND		0.0010	0.00069	mg/L			05/18/24 08:54	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			05/18/24 08:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		47 - 122		05/18/24 08:54	1
Dibromofluoromethane (Surr)	77		52 - 138		05/18/24 08:54	1
1,2-Dichloroethane-d4 (Surr)	93		24 - 145		05/18/24 08:54	1
Toluene-d8 (Surr)	96		65 - 143		05/18/24 08:54	1

Lab Sample ID: LCS 180-469052/3

Matrix: Water

Analysis Batch: 469052

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acrolein	0.0300	0.0269		mg/L		90	60 - 140
Acrylonitrile	0.100	0.0510	*-	mg/L		51	60 - 140
Benzene	0.0100	0.00963		mg/L		96	65 - 135
Bromoform	0.0100	0.00805		mg/L		80	70 - 130
Bromomethane	0.0100	0.00795		mg/L		79	15 - 170
Carbon tetrachloride	0.0100	0.00998		mg/L		100	70 - 130

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

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

Lab Sample ID: LCS 180-469052/3

Matrix: Water

Analysis Batch: 469052

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorobenzene	0.0100	0.00977		mg/L		98	65 - 135
Chlorodibromomethane	0.0100	0.00913		mg/L		91	70 - 135
Chloroethane	0.0100	0.00918		mg/L		92	40 - 160
2-Chloroethyl vinyl ether	0.0200	0.0292		mg/L		146	10 - 170
Chloroform	0.0100	0.00999		mg/L		100	70 - 135
Chloromethane	0.0100	0.00760		mg/L		76	10 - 170
cis-1,3-Dichloropropene	0.0100	0.0105		mg/L		105	25 - 170
Dichlorobromomethane	0.0100	0.00971		mg/L		97	65 - 135
1,1-Dichloroethane	0.0100	0.0106		mg/L		106	70 - 130
1,2-Dichloroethane	0.0100	0.00989		mg/L		99	70 - 130
1,1-Dichloroethene	0.0100	0.0110		mg/L		110	50 - 150
1,2-Dichloropropane	0.0100	0.0112		mg/L		112	35 - 165
1,4-Dioxane	0.200	0.0651	J	mg/L		33	10 - 152
Ethylbenzene	0.0100	0.00988		mg/L		99	60 - 140
Methylene Chloride	0.0100	0.00949		mg/L		95	60 - 140
1,1,2,2-Tetrachloroethane	0.0100	0.00643		mg/L		64	60 - 140
Tetrachloroethene	0.0100	0.0107		mg/L		107	70 - 130
Toluene	0.0100	0.0105		mg/L		105	70 - 130
trans-1,2-Dichloroethene	0.0100	0.00968		mg/L		97	70 - 130
trans-1,3-Dichloropropene	0.0100	0.0108		mg/L		108	50 - 150
1,1,1-Trichloroethane	0.0100	0.0104		mg/L		104	70 - 130
1,1,2-Trichloroethane	0.0100	0.00890		mg/L		89	70 - 130
Trichloroethene	0.0100	0.0101		mg/L		101	65 - 135
Vinyl chloride	0.0100	0.00980		mg/L		98	10 - 170

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		47 - 122
Dibromofluoromethane (Surr)	82		52 - 138
1,2-Dichloroethane-d4 (Surr)	94		24 - 145
Toluene-d8 (Surr)	100		65 - 143

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 180-469621/1-A

Matrix: Water

Analysis Batch: 470417

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 469621

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.0010	0.00024	mg/L		05/23/24 13:23	06/03/24 15:46	1
1,2-Dichlorobenzene	ND		0.0010	0.00021	mg/L		05/23/24 13:23	06/03/24 15:46	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.0010	0.00020	mg/L		05/23/24 13:23	06/03/24 15:46	1
1,3-Dinitrobenzene	ND		0.0010	0.00046	mg/L		05/23/24 13:23	06/03/24 15:46	1
1,4-Dichlorobenzene	ND		0.0010	0.00024	mg/L		05/23/24 13:23	06/03/24 15:46	1
2,2'-oxybis[1-chloropropane]	ND		0.00019	0.000058	mg/L		05/23/24 13:23	06/03/24 15:46	1
2,4,6-Trichlorophenol	ND		0.0010	0.00022	mg/L		05/23/24 13:23	06/03/24 15:46	1
2,4-Dichlorophenol	ND		0.00019	0.000051	mg/L		05/23/24 13:23	06/03/24 15:46	1
2,4-Dimethylphenol	ND		0.0010	0.00059	mg/L		05/23/24 13:23	06/03/24 15:46	1
2,4-Dinitrophenol	ND		0.010	0.0033	mg/L		05/23/24 13:23	06/03/24 15:46	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-469621/1-A

Matrix: Water

Analysis Batch: 470417

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 469621

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		0.0010	0.00035	mg/L		05/23/24 13:23	06/03/24 15:46	1
2,6-Dinitrotoluene	ND		0.0010	0.00017	mg/L		05/23/24 13:23	06/03/24 15:46	1
2-Chloronaphthalene	ND		0.00019	0.000059	mg/L		05/23/24 13:23	06/03/24 15:46	1
2-Chlorophenol	ND		0.0010	0.00023	mg/L		05/23/24 13:23	06/03/24 15:46	1
2-Nitrophenol	ND		0.0010	0.00019	mg/L		05/23/24 13:23	06/03/24 15:46	1
3,3'-Dichlorobenzidine	ND		0.0010	0.00058	mg/L		05/23/24 13:23	06/03/24 15:46	1
4,6-Dinitro-2-methylphenol	ND		0.0050	0.0015	mg/L		05/23/24 13:23	06/03/24 15:46	1
4-Bromophenyl phenyl ether	ND		0.0010	0.00032	mg/L		05/23/24 13:23	06/03/24 15:46	1
4-Chloro-3-methylphenol	ND		0.0010	0.00044	mg/L		05/23/24 13:23	06/03/24 15:46	1
4-Chlorophenyl phenyl ether	ND		0.0010	0.00022	mg/L		05/23/24 13:23	06/03/24 15:46	1
4-Nitrophenol	ND		0.0050	0.00094	mg/L		05/23/24 13:23	06/03/24 15:46	1
Acenaphthene	ND		0.00019	0.000065	mg/L		05/23/24 13:23	06/03/24 15:46	1
Acenaphthylene	ND		0.00019	0.000065	mg/L		05/23/24 13:23	06/03/24 15:46	1
Acrylamide	ND		0.050	0.021	mg/L		05/23/24 13:23	06/03/24 15:46	1
Anthracene	ND		0.00019	0.000049	mg/L		05/23/24 13:23	06/03/24 15:46	1
Benzidine	ND		0.020	0.0091	mg/L		05/23/24 13:23	06/03/24 15:46	1
Benzo[a]anthracene	ND		0.00019	0.000075	mg/L		05/23/24 13:23	06/03/24 15:46	1
Benzo[a]pyrene	ND		0.00019	0.000053	mg/L		05/23/24 13:23	06/03/24 15:46	1
Benzo[b]fluoranthene	ND		0.00019	0.000097	mg/L		05/23/24 13:23	06/03/24 15:46	1
Benzo[g,h,i]perylene	ND		0.00019	0.000069	mg/L		05/23/24 13:23	06/03/24 15:46	1
Benzo[k]fluoranthene	ND		0.00019	0.000088	mg/L		05/23/24 13:23	06/03/24 15:46	1
Bis(2-chloroethoxy)methane	ND		0.0010	0.00015	mg/L		05/23/24 13:23	06/03/24 15:46	1
Bis(2-chloroethyl)ether	ND		0.00019	0.000040	mg/L		05/23/24 13:23	06/03/24 15:46	1
Bis(2-ethylhexyl) phthalate	ND		0.010	0.0062	mg/L		05/23/24 13:23	06/03/24 15:46	1
Butyl benzyl phthalate	ND		0.0020	0.00094	mg/L		05/23/24 13:23	06/03/24 15:46	1
Chrysene	ND		0.00019	0.000081	mg/L		05/23/24 13:23	06/03/24 15:46	1
Dibenz(a,h)anthracene	ND		0.00019	0.000072	mg/L		05/23/24 13:23	06/03/24 15:46	1
Diethyl phthalate	ND		0.0010	0.00057	mg/L		05/23/24 13:23	06/03/24 15:46	1
Dimethyl phthalate	ND		0.0020	0.00020	mg/L		05/23/24 13:23	06/03/24 15:46	1
Di-n-butyl phthalate	ND		0.010	0.0049	mg/L		05/23/24 13:23	06/03/24 15:46	1
Di-n-octyl phthalate	ND		0.0010	0.00069	mg/L		05/23/24 13:23	06/03/24 15:46	1
Fluoranthene	ND		0.00019	0.000060	mg/L		05/23/24 13:23	06/03/24 15:46	1
Fluorene	ND		0.00019	0.000069	mg/L		05/23/24 13:23	06/03/24 15:46	1
Hexachlorobenzene	ND		0.00019	0.000056	mg/L		05/23/24 13:23	06/03/24 15:46	1
Hexachlorobutadiene	ND		0.00019	0.000069	mg/L		05/23/24 13:23	06/03/24 15:46	1
Hexachlorocyclopentadiene	ND		0.0010	0.00050	mg/L		05/23/24 13:23	06/03/24 15:46	1
Hexachloroethane	ND		0.0010	0.00013	mg/L		05/23/24 13:23	06/03/24 15:46	1
Indeno[1,2,3-cd]pyrene	ND		0.00019	0.000085	mg/L		05/23/24 13:23	06/03/24 15:46	1
Isophorone	ND		0.0010	0.00019	mg/L		05/23/24 13:23	06/03/24 15:46	1
Naphthalene	ND		0.00019	0.000059	mg/L		05/23/24 13:23	06/03/24 15:46	1
Nitrobenzene	ND		0.0020	0.00050	mg/L		05/23/24 13:23	06/03/24 15:46	1
N-Nitrosodimethylamine	ND		0.0010	0.00026	mg/L		05/23/24 13:23	06/03/24 15:46	1
N-Nitrosodi-n-propylamine	ND		0.00019	0.000071	mg/L		05/23/24 13:23	06/03/24 15:46	1
N-Nitrosodiphenylamine	ND		0.0010	0.00012	mg/L		05/23/24 13:23	06/03/24 15:46	1
Pentachlorophenol	ND		0.0050	0.00085	mg/L		05/23/24 13:23	06/03/24 15:46	1
Phenanthrene	ND		0.00019	0.00016	mg/L		05/23/24 13:23	06/03/24 15:46	1
Phenol	ND		0.0010	0.00049	mg/L		05/23/24 13:23	06/03/24 15:46	1
Pyrene	ND		0.00019	0.000054	mg/L		05/23/24 13:23	06/03/24 15:46	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-469621/1-A

Matrix: Water

Analysis Batch: 470417

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 469621

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	91		42 - 115	05/23/24 13:23	06/03/24 15:46	1
2-Fluorobiphenyl	99		47 - 107	05/23/24 13:23	06/03/24 15:46	1
2-Fluorophenol (Surr)	86		54 - 109	05/23/24 13:23	06/03/24 15:46	1
Nitrobenzene-d5 (Surr)	84		47 - 110	05/23/24 13:23	06/03/24 15:46	1
Phenol-d5 (Surr)	91		37 - 110	05/23/24 13:23	06/03/24 15:46	1
Terphenyl-d14 (Surr)	100		32 - 115	05/23/24 13:23	06/03/24 15:46	1

Lab Sample ID: LCS 180-469621/2-A

Matrix: Water

Analysis Batch: 470417

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 469621

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	0.0100	0.00898		mg/L		90	52 - 142
1,2-Dichlorobenzene	0.0100	0.00831		mg/L		83	50 - 100
1,2-Diphenylhydrazine(as Azobenzene)	0.0100	0.00896		mg/L		90	40 - 116
1,3-Dinitrobenzene	0.0100	0.00851		mg/L		85	54 - 100
1,4-Dichlorobenzene	0.0100	0.00851		mg/L		85	57 - 100
2,2'-oxybis[1-chloropropane]	0.0100	0.00907		mg/L		91	36 - 150
2,4,6-Trichlorophenol	0.0100	0.00959		mg/L		96	37 - 144
2,4-Dichlorophenol	0.0100	0.00862		mg/L		86	39 - 135
2,4-Dimethylphenol	0.0100	0.00860		mg/L		86	32 - 120
2,4-Dinitrophenol	0.0200	0.0157		mg/L		79	10 - 150
2,4-Dinitrotoluene	0.0100	0.00792		mg/L		79	39 - 139
2,6-Dinitrotoluene	0.0100	0.00869		mg/L		87	50 - 150
2-Chloronaphthalene	0.0100	0.00938		mg/L		94	60 - 120
2-Chlorophenol	0.0100	0.00876		mg/L		88	23 - 134
2-Nitrophenol	0.0100	0.0111		mg/L		111	57 - 150
3,3'-Dichlorobenzidine	0.0100	0.00908		mg/L		91	44 - 150
4,6-Dinitro-2-methylphenol	0.0200	0.0169		mg/L		85	43 - 150
4-Bromophenyl phenyl ether	0.0100	0.00930		mg/L		93	53 - 127
4-Chloro-3-methylphenol	0.0100	0.00829		mg/L		83	54 - 147
4-Chlorophenyl phenyl ether	0.0100	0.00831		mg/L		83	25 - 150
4-Nitrophenol	0.0200	0.0162		mg/L		81	10 - 132
Acenaphthene	0.0100	0.00863		mg/L		86	47 - 145
Acenaphthylene	0.0100	0.00914		mg/L		91	33 - 145
Anthracene	0.0100	0.00873		mg/L		87	27 - 133
Benzidine	0.0100	0.00933	J	mg/L		93	5 - 100
Benzo[a]anthracene	0.0100	0.00859		mg/L		86	33 - 143
Benzo[a]pyrene	0.0100	0.00931		mg/L		93	17 - 150
Benzo[b]fluoranthene	0.0100	0.00858		mg/L		86	24 - 150
Benzo[g,h,i]perylene	0.0100	0.00812		mg/L		81	10 - 150
Benzo[k]fluoranthene	0.0100	0.00966		mg/L		97	11 - 150
Bis(2-chloroethoxy)methane	0.0100	0.00782		mg/L		78	33 - 150
Bis(2-chloroethyl)ether	0.0100	0.00794		mg/L		79	12 - 150
Bis(2-ethylhexyl) phthalate	0.0100	0.00807	J	mg/L		81	10 - 150
Butyl benzyl phthalate	0.0100	0.00918		mg/L		92	10 - 150
Chrysene	0.0100	0.00897		mg/L		90	17 - 150
Dibenz(a,h)anthracene	0.0100	0.00793		mg/L		79	10 - 150

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-469621/2-A

Matrix: Water

Analysis Batch: 470417

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 469621

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diethyl phthalate	0.0100	0.00791		mg/L		79	10 - 120
Dimethyl phthalate	0.0100	0.00816		mg/L		82	10 - 120
Di-n-butyl phthalate	0.0100	0.00770	J	mg/L		77	10 - 120
Di-n-octyl phthalate	0.0100	0.00920		mg/L		92	10 - 146
Fluoranthene	0.0100	0.00870		mg/L		87	26 - 137
Fluorene	0.0100	0.00822		mg/L		82	59 - 121
Hexachlorobenzene	0.0100	0.00919		mg/L		92	10 - 150
Hexachlorobutadiene	0.0100	0.00965		mg/L		96	24 - 120
Hexachlorocyclopentadiene	0.0100	0.0102		mg/L		102	37 - 121
Hexachloroethane	0.0100	0.00843		mg/L		84	40 - 120
Indeno[1,2,3-cd]pyrene	0.0100	0.00841		mg/L		84	10 - 150
Isophorone	0.0100	0.00778		mg/L		78	21 - 150
Naphthalene	0.0100	0.00873		mg/L		87	21 - 133
Nitrobenzene	0.0100	0.00786		mg/L		79	35 - 150
N-Nitrosodimethylamine	0.0100	0.00916		mg/L		92	50 - 109
N-Nitrosodi-n-propylamine	0.0100	0.00751		mg/L		75	10 - 150
N-Nitrosodiphenylamine	0.0100	0.00914		mg/L		91	51 - 100
Pentachlorophenol	0.0200	0.0171		mg/L		85	14 - 150
Phenanthrene	0.0100	0.00838		mg/L		84	54 - 120
Phenol	0.0100	0.00883		mg/L		88	10 - 120
Pyrene	0.0100	0.00951		mg/L		95	52 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	102		42 - 115
2-Fluorobiphenyl	89		47 - 107
2-Fluorophenol (Surr)	84		54 - 109
Nitrobenzene-d5 (Surr)	84		47 - 110
Phenol-d5 (Surr)	81		37 - 110
Terphenyl-d14 (Surr)	83		32 - 115

Lab Sample ID: LCSD 180-469621/3-A

Matrix: Water

Analysis Batch: 470417

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 469621

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	0.0100	0.00875		mg/L		87	52 - 142	3	16
1,2-Dichlorobenzene	0.0100	0.00895		mg/L		90	50 - 100	7	15
1,2-Diphenylhydrazine(as Azobenzene)	0.0100	0.00825		mg/L		82	40 - 116	8	19
1,3-Dinitrobenzene	0.0100	0.00834		mg/L		83	54 - 100	2	15
1,4-Dichlorobenzene	0.0100	0.00894		mg/L		89	57 - 100	5	15
2,2'-oxybis[1-chloropropane]	0.0100	0.00902		mg/L		90	36 - 150	1	35
2,4,6-Trichlorophenol	0.0100	0.0106		mg/L		106	37 - 144	10	35
2,4-Dichlorophenol	0.0100	0.00828		mg/L		83	39 - 135	4	35
2,4-Dimethylphenol	0.0100	0.00846		mg/L		85	32 - 120	2	35
2,4-Dinitrophenol	0.0200	0.0151		mg/L		76	10 - 150	4	35
2,4-Dinitrotoluene	0.0100	0.00763		mg/L		76	39 - 139	4	35
2,6-Dinitrotoluene	0.0100	0.00828		mg/L		83	50 - 150	5	35
2-Chloronaphthalene	0.0100	0.00853		mg/L		85	60 - 120	10	24

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 180-469621/3-A

Matrix: Water

Analysis Batch: 470417

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 469621

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Chlorophenol	0.0100	0.00887		mg/L		89	23 - 134	1	34
2-Nitrophenol	0.0100	0.00885	*1	mg/L		89	57 - 150	23	17
3,3'-Dichlorobenzidine	0.0100	0.00898		mg/L		90	44 - 150	1	19
4,6-Dinitro-2-methylphenol	0.0200	0.0178		mg/L		89	43 - 150	5	21
4-Bromophenyl phenyl ether	0.0100	0.00882		mg/L		88	53 - 127	5	20
4-Chloro-3-methylphenol	0.0100	0.00765		mg/L		76	54 - 147	8	35
4-Chlorophenyl phenyl ether	0.0100	0.00773		mg/L		77	25 - 150	7	35
4-Nitrophenol	0.0200	0.0145		mg/L		73	10 - 132	11	35
Acenaphthene	0.0100	0.00808		mg/L		81	47 - 145	7	35
Acenaphthylene	0.0100	0.00859		mg/L		86	33 - 145	6	35
Anthracene	0.0100	0.00852		mg/L		85	27 - 133	2	35
Benzidine	0.0100	0.00929	J	mg/L		93	5 - 100	0	35
Benzo[a]anthracene	0.0100	0.00845		mg/L		84	33 - 143	2	35
Benzo[a]pyrene	0.0100	0.00837		mg/L		84	17 - 150	11	35
Benzo[b]fluoranthene	0.0100	0.00818		mg/L		82	24 - 150	5	35
Benzo[g,h,i]perylene	0.0100	0.00780		mg/L		78	10 - 150	4	35
Benzo[k]fluoranthene	0.0100	0.00833		mg/L		83	11 - 150	15	35
Bis(2-chloroethoxy)methane	0.0100	0.00809		mg/L		81	33 - 150	3	35
Bis(2-chloroethyl)ether	0.0100	0.00812		mg/L		81	12 - 150	2	35
Bis(2-ethylhexyl) phthalate	0.0100	0.00812	J	mg/L		81	10 - 150	1	35
Butyl benzyl phthalate	0.0100	0.00888		mg/L		89	10 - 150	3	35
Chrysene	0.0100	0.00906		mg/L		91	17 - 150	1	35
Dibenz(a,h)anthracene	0.0100	0.00777		mg/L		78	10 - 150	2	35
Diethyl phthalate	0.0100	0.00744		mg/L		74	10 - 120	6	35
Dimethyl phthalate	0.0100	0.00761		mg/L		76	10 - 120	7	35
Di-n-butyl phthalate	0.0100	0.00771	J	mg/L		77	10 - 120	0	35
Di-n-octyl phthalate	0.0100	0.00813		mg/L		81	10 - 146	12	35
Fluoranthene	0.0100	0.00899		mg/L		90	26 - 137	3	35
Fluorene	0.0100	0.00804		mg/L		80	59 - 121	2	35
Hexachlorobenzene	0.0100	0.00854		mg/L		85	10 - 150	7	35
Hexachlorobutadiene	0.0100	0.00861		mg/L		86	24 - 120	11	35
Hexachlorocyclopentadiene	0.0100	0.00919		mg/L		92	37 - 121	10	15
Hexachloroethane	0.0100	0.00886		mg/L		89	40 - 120	5	35
Indeno[1,2,3-cd]pyrene	0.0100	0.00802		mg/L		80	10 - 150	5	35
Isophorone	0.0100	0.00763		mg/L		76	21 - 150	2	35
Naphthalene	0.0100	0.00821		mg/L		82	21 - 133	6	35
Nitrobenzene	0.0100	0.00830		mg/L		83	35 - 150	5	35
N-Nitrosodimethylamine	0.0100	0.0101		mg/L		101	50 - 109	10	19
N-Nitrosodi-n-propylamine	0.0100	0.00804		mg/L		80	10 - 150	7	35
N-Nitrosodiphenylamine	0.0100	0.00906		mg/L		91	51 - 100	1	20
Pentachlorophenol	0.0200	0.0197		mg/L		99	14 - 150	14	35
Phenanthrene	0.0100	0.00856		mg/L		86	54 - 120	2	35
Phenol	0.0100	0.00845		mg/L		84	10 - 120	4	35
Pyrene	0.0100	0.00934		mg/L		93	52 - 120	2	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	94		42 - 115
2-Fluorobiphenyl	83		47 - 107

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 180-469621/3-A

Matrix: Water

Analysis Batch: 470417

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 469621

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
2-Fluorophenol (Surr)	89		54 - 109
Nitrobenzene-d5 (Surr)	82		47 - 110
Phenol-d5 (Surr)	88		37 - 110
Terphenyl-d14 (Surr)	80		32 - 115

Method: EPA 608.3 - Organochlorine Pesticides in Water

Lab Sample ID: MB 180-469115/1-A

Matrix: Water

Analysis Batch: 469846

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 469115

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000013	0.0000003	mg/L		05/19/24 23:45	05/27/24 12:16	1
alpha-BHC	ND		0.0000013	0.0000002	mg/L		05/19/24 23:45	05/27/24 12:16	1
beta-BHC	ND		0.0000013	0.0000003	mg/L		05/19/24 23:45	05/27/24 12:16	1
gamma-BHC (Lindane)	ND		0.0000013	0.0000002	mg/L		05/19/24 23:45	05/27/24 12:16	1
delta-BHC	ND		0.0000013	0.0000006	mg/L		05/19/24 23:45	05/27/24 12:16	1
Chlordane (technical)	ND		0.000013	0.0000073	mg/L		05/19/24 23:45	05/27/24 12:16	1
4,4'-DDD	ND		0.0000013	0.0000005	mg/L		05/19/24 23:45	05/27/24 12:16	1
4,4'-DDE	ND		0.0000013	0.0000003	mg/L		05/19/24 23:45	05/27/24 12:16	1
4,4'-DDT	ND		0.0000013	0.0000006	mg/L		05/19/24 23:45	05/27/24 12:16	1
Dieldrin	ND		0.0000013	0.0000002	mg/L		05/19/24 23:45	05/27/24 12:16	1
Endosulfan I	ND		0.0000013	0.0000006	mg/L		05/19/24 23:45	05/27/24 12:16	1
Endosulfan II	ND		0.0000013	0.0000003	mg/L		05/19/24 23:45	05/27/24 12:16	1
Endosulfan sulfate	ND		0.0000013	0.0000006	mg/L		05/19/24 23:45	05/27/24 12:16	1
Endrin	ND		0.0000013	0.0000002	mg/L		05/19/24 23:45	05/27/24 12:16	1
Endrin aldehyde	ND		0.0000013	0.0000005	mg/L		05/19/24 23:45	05/27/24 12:16	1
Heptachlor	ND		0.0000013	0.0000004	mg/L		05/19/24 23:45	05/27/24 12:16	1
Heptachlor epoxide	ND		0.0000013	0.0000003	mg/L		05/19/24 23:45	05/27/24 12:16	1
Toxaphene	ND		0.00010	0.000049	mg/L		05/19/24 23:45	05/27/24 12:16	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	85		20 - 138				05/19/24 23:45	05/27/24 12:16	1
Tetrachloro-m-xylene (Surr)	94		20 - 138				05/19/24 23:45	05/27/24 12:16	1
DCB Decachlorobiphenyl (Surr)	59		43 - 143				05/19/24 23:45	05/27/24 12:16	1
DCB Decachlorobiphenyl (Surr)	99		43 - 143				05/19/24 23:45	05/27/24 12:16	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Method: EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: LCS 180-469115/2-A

Matrix: Water

Analysis Batch: 469846

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 469115

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aldrin	0.0000250	0.0000190		mg/L		76	42 - 140
alpha-BHC	0.0000250	0.0000189		mg/L		76	37 - 140
beta-BHC	0.0000250	0.0000203		mg/L		81	17 - 147
gamma-BHC (Lindane)	0.0000250	0.0000196		mg/L		78	32 - 140
delta-BHC	0.0000250	0.0000151		mg/L		60	19 - 140
4,4'-DDD	0.0000250	0.0000212		mg/L		85	31 - 141
4,4'-DDE	0.0000250	0.0000212		mg/L		85	30 - 145
4,4'-DDT	0.0000250	0.0000217		mg/L		87	25 - 150
Dieldrin	0.0000250	0.0000219		mg/L		88	36 - 146
Endosulfan I	0.0000250	0.0000196		mg/L		78	45 - 150
Endosulfan II	0.0000250	0.0000219		mg/L		87	10 - 150
Endosulfan sulfate	0.0000250	0.0000190		mg/L		76	26 - 144
Endrin	0.0000250	0.0000228		mg/L		91	30 - 147
Endrin aldehyde	0.0000250	0.0000214		mg/L		86	51 - 113
Heptachlor	0.0000250	0.0000199		mg/L		80	34 - 140
Heptachlor epoxide	0.0000250	0.0000198		mg/L		79	37 - 142

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene (Surr)	83		20 - 138
Tetrachloro-m-xylene (Surr)	90		20 - 138
DCB Decachlorobiphenyl (Surr)	57		43 - 143
DCB Decachlorobiphenyl (Surr)	96		43 - 143

Lab Sample ID: LCSD 180-469115/3-A

Matrix: Water

Analysis Batch: 469846

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 469115

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Aldrin	0.0000250	0.0000188		mg/L		75	42 - 140	2	35
alpha-BHC	0.0000250	0.0000187		mg/L		75	37 - 140	1	35
beta-BHC	0.0000250	0.0000203		mg/L		81	17 - 147	0	35
gamma-BHC (Lindane)	0.0000250	0.0000192		mg/L		77	32 - 140	2	35
delta-BHC	0.0000250	0.0000145		mg/L		58	19 - 140	4	35
4,4'-DDD	0.0000250	0.0000206		mg/L		83	31 - 141	3	35
4,4'-DDE	0.0000250	0.0000205		mg/L		82	30 - 145	4	35
4,4'-DDT	0.0000250	0.0000208		mg/L		83	25 - 150	4	35
Dieldrin	0.0000250	0.0000208		mg/L		83	36 - 146	5	35
Endosulfan I	0.0000250	0.0000193		mg/L		77	45 - 150	2	28
Endosulfan II	0.0000250	0.0000209		mg/L		84	10 - 150	5	35
Endosulfan sulfate	0.0000250	0.0000181		mg/L		72	26 - 144	5	35
Endrin	0.0000250	0.0000219		mg/L		87	30 - 147	4	35
Endrin aldehyde	0.0000250	0.0000200		mg/L		80	51 - 113	7	26
Heptachlor	0.0000250	0.0000197		mg/L		79	34 - 140	1	35
Heptachlor epoxide	0.0000250	0.0000195		mg/L		78	37 - 142	2	26

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene (Surr)	85		20 - 138
Tetrachloro-m-xylene (Surr)	90		20 - 138

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Method: EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: LCSD 180-469115/3-A
Matrix: Water
Analysis Batch: 469846

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 469115

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	59		43 - 143
DCB Decachlorobiphenyl (Surr)	98		43 - 143

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

Lab Sample ID: MB 180-469115/1-A
Matrix: Water
Analysis Batch: 469224

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 469115

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Result	Qualifier								
PCB-1016	ND		0.000010	0.0000048	mg/L		05/19/24 23:45	05/21/24 05:39	1
PCB-1221	ND		0.000010	0.0000057	mg/L		05/19/24 23:45	05/21/24 05:39	1
PCB-1232	ND		0.000010	0.0000052	mg/L		05/19/24 23:45	05/21/24 05:39	1
PCB-1242	ND		0.000010	0.0000091	mg/L		05/19/24 23:45	05/21/24 05:39	1
PCB-1248	ND		0.000010	0.0000030	mg/L		05/19/24 23:45	05/21/24 05:39	1
PCB-1254	ND		0.000010	0.0000095	mg/L		05/19/24 23:45	05/21/24 05:39	1
PCB-1260	ND		0.000010	0.0000039	mg/L		05/19/24 23:45	05/21/24 05:39	1

	MB	MB					Prepared	Analyzed	Dil Fac
Surrogate	%Recovery	Qualifier	Limits						
Tetrachloro-m-xylene (Surr)	81		20 - 138				05/19/24 23:45	05/21/24 05:39	1
Tetrachloro-m-xylene (Surr)	91		20 - 138				05/19/24 23:45	05/21/24 05:39	1
DCB Decachlorobiphenyl (Surr)	80		43 - 143				05/19/24 23:45	05/21/24 05:39	1
DCB Decachlorobiphenyl (Surr)	86		43 - 143				05/19/24 23:45	05/21/24 05:39	1

Lab Sample ID: LCS 180-469115/4-A
Matrix: Water
Analysis Batch: 469224

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 469115

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	Limits	
Added	Result	Qualifier							
PCB-1016	0.00100	0.000844		mg/L		84		50 - 140	
PCB-1260	0.00100	0.000816		mg/L		82		10 - 140	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene (Surr)	89		20 - 138
Tetrachloro-m-xylene (Surr)	99		20 - 138
DCB Decachlorobiphenyl (Surr)	88		43 - 143
DCB Decachlorobiphenyl (Surr)	100		43 - 143

Lab Sample ID: LCSD 180-469115/5-A
Matrix: Water
Analysis Batch: 469224

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 469115

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	Limits	RPD	RPD
Added	Result	Qualifier								Limit
PCB-1016	0.00100	0.000886		mg/L		89		50 - 140	5	35
PCB-1260	0.00100	0.000806		mg/L		81		10 - 140	1	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene (Surr)	95		20 - 138

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

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

Lab Sample ID: LCSD 180-469115/5-A
Matrix: Water
Analysis Batch: 469224

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 469115

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene (Surr)	101		20 - 138
DCB Decachlorobiphenyl (Surr)	89		43 - 143
DCB Decachlorobiphenyl (Surr)	98		43 - 143

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-469441/6
Matrix: Water
Analysis Batch: 469441

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			05/22/24 12:07	1
Chloride	ND		1.00	0.712	mg/L			05/22/24 12:07	1
Fluoride	ND		0.100	0.0260	mg/L			05/22/24 12:07	1
Sulfate	ND		1.00	0.756	mg/L			05/22/24 12:07	1

Lab Sample ID: LCS 180-469441/7
Matrix: Water
Analysis Batch: 469441

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	10.0	10.37		mg/L		104	90 - 110
Chloride	50.0	50.36		mg/L		101	90 - 110
Fluoride	2.50	2.572		mg/L		103	90 - 110
Sulfate	50.0	49.89		mg/L		100	90 - 110

Lab Sample ID: MB 180-469569/6
Matrix: Water
Analysis Batch: 469569

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			05/23/24 11:44	1
Chloride	ND		1.00	0.712	mg/L			05/23/24 11:44	1
Fluoride	ND		0.100	0.0260	mg/L			05/23/24 11:44	1
Sulfate	ND		1.00	0.756	mg/L			05/23/24 11:44	1

Lab Sample ID: LCS 180-469569/7
Matrix: Water
Analysis Batch: 469569

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	10.0	10.57		mg/L		106	90 - 110
Chloride	50.0	51.06		mg/L		102	90 - 110
Fluoride	2.50	2.612		mg/L		104	90 - 110
Sulfate	50.0	50.70		mg/L		101	90 - 110

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Method: 200.8-1994 R5.4 - Metals (ICP/MS)

Lab Sample ID: MB 240-614011/1-A
Matrix: Water
Analysis Batch: 614280

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 614011

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.053	ug/L		05/22/24 14:00	05/23/24 20:32	1
Aluminum	ND		50	34	ug/L		05/22/24 14:00	05/23/24 20:32	1
Arsenic	ND		5.0	0.75	ug/L		05/22/24 14:00	05/23/24 20:32	1
Barium	ND		5.0	2.2	ug/L		05/22/24 14:00	05/23/24 20:32	1
Beryllium	ND		1.0	0.62	ug/L		05/22/24 14:00	05/23/24 20:32	1
Calcium	ND		1000	250	ug/L		05/22/24 14:00	05/23/24 20:32	1
Cadmium	ND		1.0	0.20	ug/L		05/22/24 14:00	05/23/24 20:32	1
Cobalt	ND		1.0	0.19	ug/L		05/22/24 14:00	05/23/24 20:32	1
Chromium	ND		5.0	1.2	ug/L		05/22/24 14:00	05/23/24 20:32	1
Copper	ND		2.0	1.7	ug/L		05/22/24 14:00	05/23/24 20:32	1
Iron	ND	^+	100	47	ug/L		05/22/24 14:00	05/23/24 20:32	1
Magnesium	ND		1000	61	ug/L		05/22/24 14:00	05/23/24 20:32	1
Manganese	ND		5.0	3.5	ug/L		05/22/24 14:00	05/23/24 20:32	1
Molybdenum	ND		5.0	1.1	ug/L		05/22/24 14:00	05/23/24 20:32	1
Nickel	ND		2.0	1.5	ug/L		05/22/24 14:00	05/23/24 20:32	1
Lead	ND		1.0	0.45	ug/L		05/22/24 14:00	05/23/24 20:32	1
Antimony	ND		2.0	0.57	ug/L		05/22/24 14:00	05/23/24 20:32	1
Selenium	ND		5.0	0.89	ug/L		05/22/24 14:00	05/23/24 20:32	1
Thallium	ND		1.0	0.20	ug/L		05/22/24 14:00	05/23/24 20:32	1
Zinc	ND		20	15	ug/L		05/22/24 14:00	05/23/24 20:32	1

Lab Sample ID: MB 240-614011/1-A
Matrix: Water
Analysis Batch: 614818

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 614011

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.053	ug/L		05/22/24 14:00	05/29/24 16:07	1
Aluminum	ND		50	34	ug/L		05/22/24 14:00	05/29/24 16:07	1
Arsenic	ND		5.0	0.75	ug/L		05/22/24 14:00	05/29/24 16:07	1
Boron	ND		20	16	ug/L		05/22/24 14:00	05/29/24 16:07	1
Barium	ND		5.0	2.2	ug/L		05/22/24 14:00	05/29/24 16:07	1
Beryllium	ND		1.0	0.62	ug/L		05/22/24 14:00	05/29/24 16:07	1
Calcium	ND		1000	250	ug/L		05/22/24 14:00	05/29/24 16:07	1
Cadmium	ND		1.0	0.20	ug/L		05/22/24 14:00	05/29/24 16:07	1
Cobalt	ND		1.0	0.19	ug/L		05/22/24 14:00	05/29/24 16:07	1
Chromium	ND		5.0	1.2	ug/L		05/22/24 14:00	05/29/24 16:07	1
Copper	ND		2.0	1.7	ug/L		05/22/24 14:00	05/29/24 16:07	1
Iron	ND		100	47	ug/L		05/22/24 14:00	05/29/24 16:07	1
Magnesium	ND		1000	61	ug/L		05/22/24 14:00	05/29/24 16:07	1
Manganese	ND		5.0	3.5	ug/L		05/22/24 14:00	05/29/24 16:07	1
Molybdenum	ND		5.0	1.1	ug/L		05/22/24 14:00	05/29/24 16:07	1
Nickel	ND		2.0	1.5	ug/L		05/22/24 14:00	05/29/24 16:07	1
Lead	ND		1.0	0.45	ug/L		05/22/24 14:00	05/29/24 16:07	1
Antimony	ND		2.0	0.57	ug/L		05/22/24 14:00	05/29/24 16:07	1
Selenium	ND		5.0	0.89	ug/L		05/22/24 14:00	05/29/24 16:07	1
Thallium	ND		1.0	0.20	ug/L		05/22/24 14:00	05/29/24 16:07	1
Zinc	ND		20	15	ug/L		05/22/24 14:00	05/29/24 16:07	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Method: 200.8-1994 R5.4 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-614011/2-A

Matrix: Water

Analysis Batch: 614280

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 614011

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	100	94.4		ug/L		94	85 - 115
Aluminum	5000	4650		ug/L		93	85 - 115
Arsenic	1000	934		ug/L		93	85 - 115
Barium	1000	967		ug/L		97	85 - 115
Beryllium	500	472		ug/L		94	85 - 115
Calcium	25000	23700		ug/L		95	85 - 115
Cadmium	500	503		ug/L		101	85 - 115
Cobalt	500	456		ug/L		91	85 - 115
Chromium	500	490		ug/L		98	85 - 115
Copper	500	465		ug/L		93	85 - 115
Iron	5000	5560	^+	ug/L		111	85 - 115
Magnesium	25000	25100		ug/L		100	85 - 115
Manganese	500	476		ug/L		95	85 - 115
Molybdenum	500	462		ug/L		92	85 - 115
Nickel	500	450		ug/L		90	85 - 115
Lead	500	494		ug/L		99	85 - 115
Antimony	100	97.6		ug/L		98	85 - 115
Selenium	1000	886		ug/L		89	85 - 115
Thallium	1000	992		ug/L		99	85 - 115
Zinc	500	452		ug/L		90	85 - 115

Lab Sample ID: LCS 240-614011/2-A

Matrix: Water

Analysis Batch: 614818

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 614011

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	100	94.5		ug/L		94	85 - 115
Aluminum	5000	4610		ug/L		92	85 - 115
Arsenic	1000	955		ug/L		95	85 - 115
Boron	100	94.7		ug/L		95	85 - 115
Barium	1000	959		ug/L		96	85 - 115
Beryllium	500	506		ug/L		101	85 - 115
Calcium	25000	24200		ug/L		97	85 - 115
Cadmium	500	480		ug/L		96	85 - 115
Cobalt	500	480		ug/L		96	85 - 115
Chromium	500	481		ug/L		96	85 - 115
Copper	500	488		ug/L		98	85 - 115
Iron	5000	4930		ug/L		99	85 - 115
Magnesium	25000	24400		ug/L		98	85 - 115
Manganese	500	476		ug/L		95	85 - 115
Molybdenum	500	476		ug/L		95	85 - 115
Nickel	500	487		ug/L		97	85 - 115
Lead	500	473		ug/L		95	85 - 115
Antimony	100	96.0		ug/L		96	85 - 115
Selenium	1000	966		ug/L		97	85 - 115
Thallium	1000	951		ug/L		95	85 - 115
Zinc	500	483		ug/L		97	85 - 115

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Method: EPA 245.1 Rev. - Mercury (CVAA)

Lab Sample ID: MB 180-469250/1-A
Matrix: Water
Analysis Batch: 469338

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 469250

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/21/24 08:36	05/21/24 13:03	1

Lab Sample ID: LCS 180-469250/2-A
Matrix: Water
Analysis Batch: 469338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 469250

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00250	0.00256		mg/L		102	85 - 115

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

Lab Sample ID: MB 180-469050/3
Matrix: Water
Analysis Batch: 469050

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0060	mg/L			05/17/24 19:10	1

Lab Sample ID: LCS 180-469050/4
Matrix: Water
Analysis Batch: 469050

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	0.500	0.533		mg/L		107	85 - 115

Lab Sample ID: 180-174282-3 MS
Matrix: Water
Analysis Batch: 469050

Client Sample ID: 016
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	ND		0.500	0.429		mg/L		86	85 - 115

Lab Sample ID: 180-174282-3 MSD
Matrix: Water
Analysis Batch: 469050

Client Sample ID: 016
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cr (VI)	ND		0.500	0.430		mg/L		86	85 - 115	0	20

Method: 4500 H+ B-2000 - pH - SM Online, 2011

Lab Sample ID: LCS 180-469075/1
Matrix: Water
Analysis Batch: 469075

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Method: 4500 S2 F-2011 - Sulfide, Total

Lab Sample ID: MB 180-469415/3
Matrix: Water
Analysis Batch: 469415

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		3.0	1.3	mg/L			05/22/24 14:13	1

Lab Sample ID: LCS 180-469415/4
Matrix: Water
Analysis Batch: 469415

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	18.8	18.7		mg/L		100	90 - 110

Method: 5310 C-2014 - Total Organic Carbon/Persulfate - Ultrav

Lab Sample ID: MB 180-469603/35
Matrix: Water
Analysis Batch: 469603

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Quad	ND		1.0	0.51	mg/L			05/21/24 07:58	1

Lab Sample ID: LCS 180-469603/34
Matrix: Water
Analysis Batch: 469603

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon - Quad	20.0	19.0		mg/L		95	85 - 115

Lab Sample ID: 180-174282-2 MS
Matrix: Water
Analysis Batch: 469603

Client Sample ID: 022
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon - Quad	28		10.0	36.3		mg/L		85	85 - 115

Lab Sample ID: 180-174282-3 DU
Matrix: Water
Analysis Batch: 469603

Client Sample ID: 016
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon - Quad	4.3		3.95		mg/L		8	15

Method: 5540C - 2011 - Methylene Blue Active Substant (MBAS)

Lab Sample ID: MB 180-469546/2
Matrix: Water
Analysis Batch: 469546

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Blue Active Substances	ND		0.050	0.049	mg/l LAS MW 340			05/17/24 17:30	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Method: 5540C - 2011 - Methylene Blue Active Substant (MBAS) (Continued)

Lab Sample ID: LCS 180-469546/3

Matrix: Water

Analysis Batch: 469546

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methylene Blue Active Substances	0.500	0.536		mg/l LAS MW 340		107	90 - 110

Method: EPA 1664B - HEM and SGT-HEM

Lab Sample ID: MB 180-469540/1-A

Matrix: Water

Analysis Batch: 469559

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 469540

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		5.0	4.3	mg/L		05/23/24 07:16	05/23/24 08:22	1

Lab Sample ID: LCS 180-469540/2-A

Matrix: Water

Analysis Batch: 469559

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 469540

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HEM (Oil & Grease)	40.0	33.1		mg/L		83	78 - 114

Lab Sample ID: LCSD 180-469540/3-A

Matrix: Water

Analysis Batch: 469559

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 469540

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HEM (Oil & Grease)	40.0	33.8		mg/L		85	78 - 114	2	18

Lab Sample ID: 180-174282-1 MS

Matrix: Water

Analysis Batch: 469559

Client Sample ID: 021

Prep Type: Total/NA

Prep Batch: 469540

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
HEM (Oil & Grease)	ND		39.2	32.2		mg/L		82	78 - 114

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-469343/84

Matrix: Water

Analysis Batch: 469343

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.10	0.088	mg/L			05/21/24 13:08	1

Lab Sample ID: LCS 180-469343/85

Matrix: Water

Analysis Batch: 469343

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	0.500	0.486		mg/L		97	90 - 110

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Method: EPA 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 180-469311/20

Matrix: Water

Analysis Batch: 469311

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.10	0.065	mg/L			05/21/24 09:46	1

Lab Sample ID: LCS 180-469311/21

Matrix: Water

Analysis Batch: 469311

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	2.00	2.17		mg/L		108	90 - 110

Lab Sample ID: 180-174282-1 MS

Matrix: Water

Analysis Batch: 469311

Client Sample ID: 021

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	0.15	FL	2.00	1.90	FL	mg/L		87	90 - 110

Lab Sample ID: 180-174282-1 MSD

Matrix: Water

Analysis Batch: 469311

Client Sample ID: 021

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.15	FL	2.00	1.90	FL	mg/L		87	90 - 110	0	20

Method: EPA 410.4 - COD

Lab Sample ID: MB 180-469735/12-A

Matrix: Water

Analysis Batch: 469765

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 469735

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	9.1	mg/L		05/24/24 11:03	05/24/24 15:24	1

Lab Sample ID: LCS 180-469735/11-A

Matrix: Water

Analysis Batch: 469765

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 469735

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	75.0	72.0		mg/L		96	90 - 110

Method: SM 2120B - Color, Colorimetric

Lab Sample ID: MB 180-469339/1

Matrix: Water

Analysis Batch: 469339

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Color, Apparent	ND		5.0	5.0	Color Units			05/17/24 18:00	1
Color, True	ND		5.0	5.0	Color Units			05/17/24 18:00	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Method: SM 2120B - Color, Colorimetric (Continued)

Lab Sample ID: 180-174282-1 DU

Matrix: Water

Analysis Batch: 469339

Client Sample ID: 021

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Color, Apparent	10		10.0		Color Units		0	20
Color, True	5.0		5.00		Color Units		0	20
pH at time of analysis	7.2	!	7.24		SU		0	

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-469213/1

Matrix: Water

Analysis Batch: 469213

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			05/20/24 19:07	1

Lab Sample ID: LCS 180-469213/2

Matrix: Water

Analysis Batch: 469213

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	417	412		mg/L		99	85 - 115

Lab Sample ID: 180-174282-1 DU

Matrix: Water

Analysis Batch: 469213

Client Sample ID: 021

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	340		343		mg/L		0	10

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

Lab Sample ID: MB 180-469064/2

Matrix: Water

Analysis Batch: 469064

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		0.50	0.50	mg/L			05/18/24 08:52	1

Lab Sample ID: LCS 180-469064/1

Matrix: Water

Analysis Batch: 469064

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	49.0	44.0		mg/L		90	85 - 115

Lab Sample ID: 180-174282-1 DU

Matrix: Water

Analysis Batch: 469064

Client Sample ID: 021

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	8.6		8.20		mg/L		5	10

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Method: SM 5210B - 5 Day BOD test

Lab Sample ID: USB 180-469652/1
Matrix: Water
Analysis Batch: 469652

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

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	ND	cn	2.0	2.0	mg/L			05/18/24 10:31	1

Lab Sample ID: LCS 180-469652/2
Matrix: Water
Analysis Batch: 469652

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	198	190	cn	mg/L		96	85 - 115

Lab Sample ID: 180-174282-1 DU
Matrix: Water
Analysis Batch: 469652

Client Sample ID: 021
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Biochemical Oxygen Demand	ND	cn	ND	cn	mg/L		NC	20

Method: TKN_TPhos - EPA 351.2 1993 R2/365.4 1974

Lab Sample ID: MB 180-469120/7-A
Matrix: Water
Analysis Batch: 469294

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 469120

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	ND		0.50	0.12	mg/L as N		05/20/24 05:18	05/21/24 08:13	1
Phosphorus, Total	ND		0.10	0.040	mg/L as P		05/20/24 05:18	05/21/24 08:13	1

Lab Sample ID: LCS 180-469120/8-A
Matrix: Water
Analysis Batch: 469294

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 469120

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	2.50	2.59		mg/L as N		104	90 - 110
Phosphorus, Total	2.50	2.38		mg/L as P		95	90 - 110

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

GC/MS VOA

Analysis Batch: 469052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	EPA 624.1	
180-174282-2	022	Total/NA	Water	EPA 624.1	
180-174282-3	016	Total/NA	Water	EPA 624.1	
180-174282-4	TRIP BLANK	Total/NA	Water	EPA 624.1	
MB 180-469052/5	Method Blank	Total/NA	Water	EPA 624.1	
LCS 180-469052/3	Lab Control Sample	Total/NA	Water	EPA 624.1	

GC/MS Semi VOA

Prep Batch: 469621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	625	
180-174282-2	022	Total/NA	Water	625	
180-174282-3	016	Total/NA	Water	625	
MB 180-469621/1-A	Method Blank	Total/NA	Water	625	
LCS 180-469621/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 180-469621/3-A	Lab Control Sample Dup	Total/NA	Water	625	

Analysis Batch: 470417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	EPA 625.1	469621
180-174282-2	022	Total/NA	Water	EPA 625.1	469621
180-174282-3	016	Total/NA	Water	EPA 625.1	469621
MB 180-469621/1-A	Method Blank	Total/NA	Water	EPA 625.1	469621
LCS 180-469621/2-A	Lab Control Sample	Total/NA	Water	EPA 625.1	469621
LCSD 180-469621/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 625.1	469621

GC Semi VOA

Prep Batch: 469115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	608	
180-174282-2	022	Total/NA	Water	608	
180-174282-3	016	Total/NA	Water	608	
MB 180-469115/1-A	Method Blank	Total/NA	Water	608	
LCS 180-469115/2-A	Lab Control Sample	Total/NA	Water	608	
LCS 180-469115/4-A	Lab Control Sample	Total/NA	Water	608	
LCSD 180-469115/3-A	Lab Control Sample Dup	Total/NA	Water	608	
LCSD 180-469115/5-A	Lab Control Sample Dup	Total/NA	Water	608	

Analysis Batch: 469224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	EPA 608.3	469115
180-174282-2	022	Total/NA	Water	EPA 608.3	469115
180-174282-3	016	Total/NA	Water	EPA 608.3	469115
MB 180-469115/1-A	Method Blank	Total/NA	Water	EPA 608.3	469115
LCS 180-469115/4-A	Lab Control Sample	Total/NA	Water	EPA 608.3	469115
LCSD 180-469115/5-A	Lab Control Sample Dup	Total/NA	Water	EPA 608.3	469115

Analysis Batch: 469846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	EPA 608.3	469115

Eurofins Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

GC Semi VOA (Continued)

Analysis Batch: 469846 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-2	022	Total/NA	Water	EPA 608.3	469115
180-174282-3	016	Total/NA	Water	EPA 608.3	469115
MB 180-469115/1-A	Method Blank	Total/NA	Water	EPA 608.3	469115
LCS 180-469115/2-A	Lab Control Sample	Total/NA	Water	EPA 608.3	469115
LCSD 180-469115/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 608.3	469115

HPLC/IC

Analysis Batch: 469441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	EPA 300.0 R2.1	
180-174282-2	022	Total/NA	Water	EPA 300.0 R2.1	
180-174282-2	022	Total/NA	Water	EPA 300.0 R2.1	
MB 180-469441/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-469441/7	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 469569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-3	016	Total/NA	Water	EPA 300.0 R2.1	
180-174282-3	016	Total/NA	Water	EPA 300.0 R2.1	
MB 180-469569/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-469569/7	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 469250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	245.1	
180-174282-2	022	Total/NA	Water	245.1	
180-174282-3	016	Total/NA	Water	245.1	
MB 180-469250/1-A	Method Blank	Total/NA	Water	245.1	
LCS 180-469250/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 469338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	EPA 245.1 Rev.	469250
180-174282-2	022	Total/NA	Water	EPA 245.1 Rev.	469250
180-174282-3	016	Total/NA	Water	EPA 245.1 Rev.	469250
MB 180-469250/1-A	Method Blank	Total/NA	Water	EPA 245.1 Rev.	469250
LCS 180-469250/2-A	Lab Control Sample	Total/NA	Water	EPA 245.1 Rev.	469250

Analysis Batch: 470265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total Recoverable	Water	SM 2340B	
180-174282-2	022	Total Recoverable	Water	SM 2340B	
180-174282-3	016	Total Recoverable	Water	SM 2340B	

Prep Batch: 614011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total Recoverable	Water	200.8-1994 R5.4	
180-174282-2	022	Total Recoverable	Water	200.8-1994 R5.4	
180-174282-3	016	Total Recoverable	Water	200.8-1994 R5.4	

Eurofins Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

Metals (Continued)

Prep Batch: 614011 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-614011/1-A	Method Blank	Total Recoverable	Water	200.8-1994 R5.4	
LCS 240-614011/2-A	Lab Control Sample	Total Recoverable	Water	200.8-1994 R5.4	

Analysis Batch: 614280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total Recoverable	Water	200.8-1994 R5.4	614011
180-174282-2	022	Total Recoverable	Water	200.8-1994 R5.4	614011
180-174282-3	016	Total Recoverable	Water	200.8-1994 R5.4	614011
MB 240-614011/1-A	Method Blank	Total Recoverable	Water	200.8-1994 R5.4	614011
LCS 240-614011/2-A	Lab Control Sample	Total Recoverable	Water	200.8-1994 R5.4	614011

Analysis Batch: 614474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total Recoverable	Water	200.8-1994 R5.4	614011
180-174282-2	022	Total Recoverable	Water	200.8-1994 R5.4	614011
180-174282-3	016	Total Recoverable	Water	200.8-1994 R5.4	614011

Analysis Batch: 614768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total Recoverable	Water	200.8-1994 R5.4	614011
180-174282-2	022	Total Recoverable	Water	200.8-1994 R5.4	614011
180-174282-3	016	Total Recoverable	Water	200.8-1994 R5.4	614011

Analysis Batch: 614818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-614011/1-A	Method Blank	Total Recoverable	Water	200.8-1994 R5.4	614011
LCS 240-614011/2-A	Lab Control Sample	Total Recoverable	Water	200.8-1994 R5.4	614011

General Chemistry

Analysis Batch: 469050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Dissolved	Water	3500-Cr B-2011	
180-174282-2	022	Dissolved	Water	3500-Cr B-2011	
180-174282-3	016	Dissolved	Water	3500-Cr B-2011	
MB 180-469050/3	Method Blank	Total/NA	Water	3500-Cr B-2011	
LCS 180-469050/4	Lab Control Sample	Total/NA	Water	3500-Cr B-2011	
180-174282-3 MS	016	Dissolved	Water	3500-Cr B-2011	
180-174282-3 MSD	016	Dissolved	Water	3500-Cr B-2011	

Analysis Batch: 469064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	SM 2540D	
180-174282-2	022	Total/NA	Water	SM 2540D	
180-174282-3	016	Total/NA	Water	SM 2540D	
MB 180-469064/2	Method Blank	Total/NA	Water	SM 2540D	
LCS 180-469064/1	Lab Control Sample	Total/NA	Water	SM 2540D	
180-174282-1 DU	021	Total/NA	Water	SM 2540D	

Eurofins Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

General Chemistry

Analysis Batch: 469075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	4500 H+ B-2000	
180-174282-2	022	Total/NA	Water	4500 H+ B-2000	
180-174282-3	016	Total/NA	Water	4500 H+ B-2000	
LCS 180-469075/1	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	

Prep Batch: 469120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	TKN/TPhos Prep	
180-174282-2	022	Total/NA	Water	TKN/TPhos Prep	
180-174282-3	016	Total/NA	Water	TKN/TPhos Prep	
MB 180-469120/7-A	Method Blank	Total/NA	Water	TKN/TPhos Prep	
LCS 180-469120/8-A	Lab Control Sample	Total/NA	Water	TKN/TPhos Prep	

Analysis Batch: 469213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	SM 2540C	
180-174282-2	022	Total/NA	Water	SM 2540C	
180-174282-3	016	Total/NA	Water	SM 2540C	
MB 180-469213/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-469213/2	Lab Control Sample	Total/NA	Water	SM 2540C	
180-174282-1 DU	021	Total/NA	Water	SM 2540C	

Analysis Batch: 469294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	TKN_TPhos	469120
180-174282-2	022	Total/NA	Water	TKN_TPhos	469120
180-174282-3	016	Total/NA	Water	TKN_TPhos	469120
MB 180-469120/7-A	Method Blank	Total/NA	Water	TKN_TPhos	469120
LCS 180-469120/8-A	Lab Control Sample	Total/NA	Water	TKN_TPhos	469120

Analysis Batch: 469311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	EPA 353.2	
180-174282-2	022	Total/NA	Water	EPA 353.2	
180-174282-3	016	Total/NA	Water	EPA 353.2	
MB 180-469311/20	Method Blank	Total/NA	Water	EPA 353.2	
LCS 180-469311/21	Lab Control Sample	Total/NA	Water	EPA 353.2	
180-174282-1 MS	021	Total/NA	Water	EPA 353.2	
180-174282-1 MSD	021	Total/NA	Water	EPA 353.2	

Analysis Batch: 469339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	SM 2120B	
180-174282-2	022	Total/NA	Water	SM 2120B	
180-174282-3	016	Total/NA	Water	SM 2120B	
MB 180-469339/1	Method Blank	Total/NA	Water	SM 2120B	
LCS 180-469339/2	Lab Control Sample	Total/NA	Water	SM 2120B	
180-174282-1 DU	021	Total/NA	Water	SM 2120B	

Eurofins Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

General Chemistry

Analysis Batch: 469343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	EPA 350.1	
180-174282-2	022	Total/NA	Water	EPA 350.1	
180-174282-3	016	Total/NA	Water	EPA 350.1	
MB 180-469343/84	Method Blank	Total/NA	Water	EPA 350.1	
LCS 180-469343/85	Lab Control Sample	Total/NA	Water	EPA 350.1	

Analysis Batch: 469415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	4500 S2 F-2011	
180-174282-2	022	Total/NA	Water	4500 S2 F-2011	
180-174282-3	016	Total/NA	Water	4500 S2 F-2011	
MB 180-469415/3	Method Blank	Total/NA	Water	4500 S2 F-2011	
LCS 180-469415/4	Lab Control Sample	Total/NA	Water	4500 S2 F-2011	

Prep Batch: 469540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	1664B	
180-174282-2	022	Total/NA	Water	1664B	
180-174282-3	016	Total/NA	Water	1664B	
MB 180-469540/1-A	Method Blank	Total/NA	Water	1664B	
LCS 180-469540/2-A	Lab Control Sample	Total/NA	Water	1664B	
LCSD 180-469540/3-A	Lab Control Sample Dup	Total/NA	Water	1664B	
180-174282-1 MS	021	Total/NA	Water	1664B	

Analysis Batch: 469546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	5540C - 2011	
180-174282-2	022	Total/NA	Water	5540C - 2011	
180-174282-3	016	Total/NA	Water	5540C - 2011	
MB 180-469546/2	Method Blank	Total/NA	Water	5540C - 2011	
LCS 180-469546/3	Lab Control Sample	Total/NA	Water	5540C - 2011	

Analysis Batch: 469559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	EPA 1664B	469540
180-174282-2	022	Total/NA	Water	EPA 1664B	469540
180-174282-3	016	Total/NA	Water	EPA 1664B	469540
MB 180-469540/1-A	Method Blank	Total/NA	Water	EPA 1664B	469540
LCS 180-469540/2-A	Lab Control Sample	Total/NA	Water	EPA 1664B	469540
LCSD 180-469540/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 1664B	469540
180-174282-1 MS	021	Total/NA	Water	EPA 1664B	469540

Analysis Batch: 469603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	5310 C-2014	
180-174282-2	022	Total/NA	Water	5310 C-2014	
180-174282-3	016	Total/NA	Water	5310 C-2014	
MB 180-469603/35	Method Blank	Total/NA	Water	5310 C-2014	
LCS 180-469603/34	Lab Control Sample	Total/NA	Water	5310 C-2014	
180-174282-2 MS	022	Total/NA	Water	5310 C-2014	
180-174282-3 DU	016	Total/NA	Water	5310 C-2014	

Eurofins Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174282-1

General Chemistry

Analysis Batch: 469652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	SM 5210B	
180-174282-2	022	Total/NA	Water	SM 5210B	
180-174282-3	016	Total/NA	Water	SM 5210B	
USB 180-469652/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 180-469652/2	Lab Control Sample	Total/NA	Water	SM 5210B	
180-174282-1 DU	021	Total/NA	Water	SM 5210B	

Prep Batch: 469735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	410.4	
180-174282-2	022	Total/NA	Water	410.4	
180-174282-3	016	Total/NA	Water	410.4	
MB 180-469735/12-A	Method Blank	Total/NA	Water	410.4	
LCS 180-469735/11-A	Lab Control Sample	Total/NA	Water	410.4	

Analysis Batch: 469765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174282-1	021	Total/NA	Water	EPA 410.4	469735
180-174282-2	022	Total/NA	Water	EPA 410.4	469735
180-174282-3	016	Total/NA	Water	EPA 410.4	469735
MB 180-469735/12-A	Method Blank	Total/NA	Water	EPA 410.4	469735
LCS 180-469735/11-A	Lab Control Sample	Total/NA	Water	EPA 410.4	469735



Microbac Laboratories, Inc., New Brighton

CERTIFICATE OF ANALYSIS

I4E0260

Eurofins Test America - Pittsburgh

Project Name: NBN Fecal Testing

DAVID DUNLAP
301 ALPHA DRIVE RIDC PARK
PITTSBURGH, PA 15238

Project / PO Number: US0543365068 (2024)
Received: 05/17/2024
Reported: 05/21/2024

Analytical Testing Parameters

Client Sample ID:	021	Collected By:	Client
Sample Matrix:	Aqueous	Collection Date:	05/17/2024 9:15
Lab Sample ID:	I4E0260-01		

Analyses Performed by: Microbac Laboratories Inc., Pittsburgh Division

Microbiology	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Colilert-18 (Fecal Coliforms)								
Fecal Coliforms	308	1	MPN/100mL	1		05/17/24 1323	05/18/24 0906	AML

Client Sample ID:	022	Collected By:	Client
Sample Matrix:	Aqueous	Collection Date:	05/17/2024 9:35
Lab Sample ID:	I4E0260-02		

Analyses Performed by: Microbac Laboratories Inc., Pittsburgh Division

Microbiology	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Colilert-18 (Fecal Coliforms)								
Fecal Coliforms	155	1	MPN/100mL	1		05/17/24 1323	05/18/24 0906	AML

Definitions

MPN/100mL Most Probable Number per 100 Milliliters
RL: Reporting Limit

Project Requested Certification(s)

Microbac Laboratories Inc., Pittsburgh Division
02-00257

Pennsylvania Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

Cindy G. Campbell

Cindy Campbell
Client Success Specialist
Reported: 05/21/2024 10:39

Chain of Custody Record



Environment Testing

Client Information		Sampler:		Lab PM:	Carrier Tracking No(s):	COC No:
Client Contact: Brenden Arbaugh		Phone:		Colussy, Jill L.		180-100735-18182.6
Company: GHD Services Inc.		PWSID:		E-Mail:	State of Origin:	Page: Page 6 of 4
				Jill Colussy@et.eurofinsus.com		Job #:
Address: 4068 Mt Royal Blvd Suite 201		Due Date Requested:		Analysis Requested		
City: Allison Park		TAT Requested (days):				
State/Zip: PA, 15101		Compliance Project: ☐ Yes ☐ No				
Phone: 513-942-4750(Tel) 513-942-8585(Fax)		PO #: 4501508098				
Email: brenden.arbaugh@ghd.com		WO #:				
Project Name: GHD Shell Monaca		Project #: 18026655				
Site:		SSOW#:				
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oli, BI=Tissue, A=Air)	Preservation Code:
021	5/17/14	0915	6	W	W	W
022	5/17/14	0935	6	W	W	W
Total Number of containers		Fecal Coliform		Perform MS/MSD (Yes or No)		Field Filtered Sample (Yes or No)
X		X		X		X
Other:		Note:		Eurofins TestAmerica Pittsburgh		PM: Cindy Campbell
Barcode: I 4 E 0 2 6 0						
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client		Disposal By Lab		Archive For
☐ Return To Client		☐ Disposal By Lab		☐ Archive For		Months
Special Instructions/QC Requirements:		Date:		Time:		Method of Shipment:
Possible Hazard Identification		☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological		Date/Time:		Company
Deliverable Requested: I, II, III, IV, Other (specify)		Date/Time:		Date/Time:		Company
Empty Kit Relinquished by:		Date/Time:		Date/Time:		Company
Relinquished by:		Date/Time:		Date/Time:		Company
Relinquished by:		Date/Time:		Date/Time:		Company
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		



Microbac Laboratories, Inc., New Brighton

CERTIFICATE OF ANALYSIS

I4E0285

Eurofins Test America - Pittsburgh

Project Name: NBN Fecal Testing

DAVID DUNLAP
301 ALPHA DRIVE RIDC PARK
PITTSBURGH, PA 15238

Project / PO Number: US0543365068 (2024)
Received: 05/17/2024
Reported: 05/21/2024

Analytical Testing Parameters

Client Sample ID:	016	Collected By:	Client
Sample Matrix:	Aqueous	Collection Date:	05/17/2024 13:14
Lab Sample ID:	I4E0285-01		

Analyses Performed by: Microbac Laboratories Inc., Pittsburgh Division

Microbiology	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Colilert-18 (Fecal Coliforms)								
Fecal Coliforms	6867	10	MPN/100mL	10		05/17/24 1603	05/18/24 1047	AML

Definitions

MPN/100mL Most Probable Number per 100 Milliliters
RL: Reporting Limit

Project Requested Certification(s)

Microbac Laboratories Inc., Pittsburgh Division
02-00257

Pennsylvania Department of Environmental Protection

Report Comments

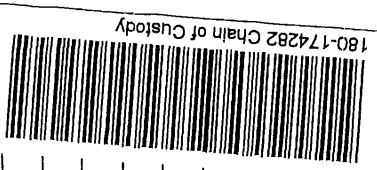
Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

Cindy G. Campbell

Cindy Campbell
Client Success Specialist
Reported: 05/21/2024 10:38



301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Phone (412) 963-2468

eurofins

File # 100-11776

6/5/2024

#17 RO CF = -0.3

C26 : 4.1 → 3.8

27 : 3.8 → 3.5

28 : 2.9 → 2.6

29 : 3.6 → 3.3



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Eurofins - Cleveland Sample Receipt Form/Narrative
Barberton Facility

Client ETA Site Name _____ Login # _____

Cooler Received on 5-21-24 Opened on 5-21-24 Cooler unpacked by: TAMMY ROYER

FedEx. 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____

Receipt After-Hours Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # ES Form Box Client Cooler Box Other _____

Packing material used Bubble Wrap Foam Plastic Bag None Other _____

COOLANT. Water Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt See Multiple Cooler Form

IR GUN # 17 (CF 672 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

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

-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 NA

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

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

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

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

8 Could all bottle labels (ID/Date/Time) be reconciled with the COC? 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)? Yes No NA

10 Were correct bottle(s) used for the test(s) indicated? Yes No NA

11 Sufficient quantity received to perform indicated analyses? Yes No NA

12 Are these work share samples and all listed on the COC? 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 No NA pH Strip Lot# HC439975

14 Were VOAs on the COC? Yes No NA

15 Were air bubbles >6 mm in any VOA vials? 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 NA

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

Concerning _____

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

Only received 1 for each sample.

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 _____

Tests that are not checked for pH by Receiving
VOAs
Oil and Grease
TOC

Login #. _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
EC Client Box Other	IR GUN #: <u> 7 </u>	<u>18.8</u>	<u>19.0</u>	We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____	<u>19.0</u>	<u>19.2</u>	We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____	<u>1.9</u>	<u>2.1</u>	We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			We'llce Blue Ice Dry Ice Water None

☐ See Temperature Excursion Form

23

Part # 159469-434 MTW EXP 02/25

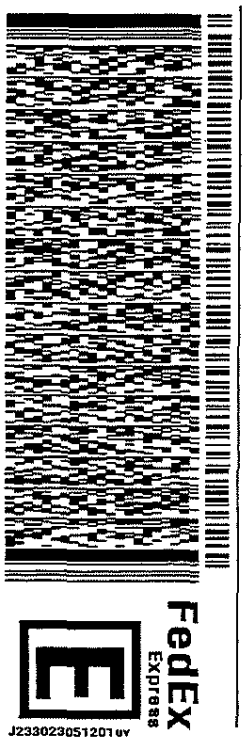
ORIGIN ID AGCA (412) 963-7530
SAMPLE RECEIVING DEPARTMENT
EUROFINS ENVIRO TESTING PITT N E
301 ALPHA DRIVE
PITTSBURGH, PA 152382907
UNITED STATES US

SHIP DATE 20HAY24
ACTING 25 00 LB MAN
CAD 05222921/CAFE3755

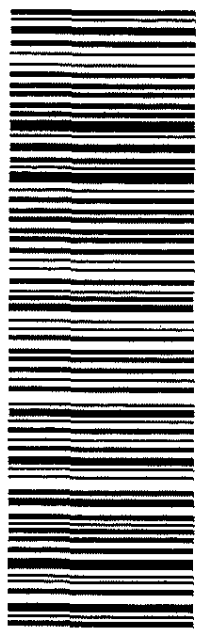
BILL SENDER

TO SHIPPING/RECEIVING
EUROFINS ENVIRONMENT TESTING NORTH
180 S. VAN BUREN AVENUE

BARBERTON OH 44203
(330) 497-9396 REF 8180-102685
PO: YES



1 of 3
TRK# 7224 1466 5900
0201
MASTER ##
TUE - 21 MAY 10:30A
PRIORITY OVERNIGHT
64 CAKA
44203
OH-US CLE



Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 180-174282-1

Login Number: 174282

List Source: Eurofins Pittsburgh

List Number: 1

Creator: Abernathy, Eric L

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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	
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?	True	
There are no discrepancies between the containers received and the COC.	False	Received Trip Blank(s) not listed on COC.
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.	True	
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").	False	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Angela Bown
GHD Services Inc.
2055 Niagara Falls Boulevard
Niagara Falls, New York 14304

Generated 6/12/2024 1:31:24 PM

JOB DESCRIPTION

GHD Shell Monaca

JOB NUMBER

180-174639-1

Eurofins Pittsburgh

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.

PA Lab ID: 02-00416

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 Pittsburgh Project Manager.

Authorization



Authorized for release by
Jill Colussy, Project Manager I
Jill.Colussy@et.eurofinsus.com
(412)963-2444

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Case Narrative

Client: GHD Services Inc.
Project: GHD Shell Monaca

Job ID: 180-174639-1

Job ID: 180-174639-1

Eurofins Pittsburgh

Job Narrative 180-174639-1

Receipt

The samples were received on 5/28/2024 5:04 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.8° C, 1.8° C and 2.0° C.

The laboratory received a TRIP BLANK that was not listed on the chain of custody. This sample was logged in.

One of three VOA vials for sample 019 (180-174639-2) was received broken.

GC/MS VOA

Method 624.1: The following trip blank had a hit of Methylene Chloride. However, Methylene Chloride was "ND" in the associated samples from the same work order. therefore, the reanalysis was not performed.

TRIP BLANK (180-174639-3)

The laboratory control sample (LCS) for analytical batch 180-470086 recovered outside control limits for the following analytes: 1,4-Dioxane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

GC/MS Semi VOA

Method 625.1: The laboratory control sample (LCS) for batch 180-470299 recovered outside control limits for the following analyte: 1,3-Dinitrobenzene. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

The relative percent difference between the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch 180-470299 was outside of the control limits for 1,2-Dichlorobenzene, 1,3-Dinitrobenzene, 1,2,4-Trichlorobenzene, Hexachlorocyclopentadiene and 2-Nitrophenol.

Pesticides

Sample 017 (180-174639-1) and 019 (180-174639-2) had surrogate Decachlorobiphenyl recover below the control limits on one column. Evidence of matrix interference was present; therefore, all data was reported.

The continuing calibration verification (CCV) associated with 180-470236 recovered high and outside the control limits for Chlordane on one column. Results are confirmed on both columns and reported from the passing column.

PCBs

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

IC

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

Metals

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

General Chemistry

Method SM 2120B: Samples were very turbid, making it hard to get an accurate value for Apparent Color. Result report is an estimate.

017 (180-174639-1) and 019 (180-174639-2)

Method 350.1: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 180-470476 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method SM 5210B: The correction factor for the Seeded Control Blank (SCB) for batch 180-470529 was below the method range of 0.6 to 1.0 mg/L at 0.58093 mg/L. Thus, the samples are biased high.

Method SM 5310C: The matrix spike (MS) recoveries for analytical batch 180-470672 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. Total

Eurofins Pittsburgh

Case Narrative

Client: GHD Services Inc.
Project: GHD Shell Monaca

Job ID: 180-174639-1

Job ID: 180-174639-1 (Continued)

Eurofins Pittsburgh

Organic Carbon - Quad 017 (180-174639-1)

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

Organic Prep

Method 625: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with 470299.

Method 1664B: The matrix spike (MS) recoveries for preparation batch 180-470395 and analytical batch 180-470420 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

Eurofins Pittsburgh

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.

GC/MS Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
!	Laboratory is not accredited for this parameter.
cn	Refer to Case Narrative for further detail
FL	MS and/or MSD recovery below control limits.
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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)

Eurofins Pittsburgh

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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

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Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Laboratory: Eurofins Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	02-00416	04-30-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
4500 H+ B-2000		Water	Temperature
SM 2120B		Water	pH at time of analysis

Laboratory: Eurofins Cleveland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	68-00340	08-31-24

Sample Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-174639-1	017	Water	05/28/24 11:39	05/28/24 17:04
180-174639-2	019	Water	05/28/24 12:09	05/28/24 17:04
180-174639-3	TRIP BLANK	Water	05/28/24 00:00	05/28/24 17:04

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

Method Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Method	Method Description	Protocol	Laboratory
EPA 624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	EET PIT
EPA 625.1	Semivolatile Organic Compounds (GC/MS)	40 CFR 761	EET PIT
EPA 608.3	Organochlorine Pesticides in Water	40CFR136A	EET PIT
EPA 608.3	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	EET PIT
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	EET PIT
200.8-1994 R5.4	Metals (ICP/MS)	EPA	EET CLE
EPA 245.1 Rev.	Mercury (CVAA)	EPA	EET PIT
3500-Cr B-2011	Chromium, Hexavalent	SM	EET PIT
4500 H+ B-2000	pH - SM Online, 2011	SM-Online	EET PIT
4500 S2 F-2011	Sulfide, Total	SM	EET PIT
5310 C-2014	Total Organic Carbon/Persulfate - Ultrav	SM	EET PIT
5540C - 2011	Methylene Blue Active Substant (MBAS)	SM	EET PIT
EPA 1664B	HEM and SGT-HEM	EPA	EET PIT
EPA 350.1	Nitrogen, Ammonia	EPA	EET PIT
EPA 353.2	Nitrogen, Nitrate-Nitrite	EPA	EET PIT
EPA 410.4	COD	MCAWW	EET PIT
SM 2120B	Color, Colorimetric	SM	EET PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET PIT
SM 2540D	Solids, Total Suspended (TSS)	SM	EET PIT
SM 5210B	5 Day BOD test	SM	EET PIT
TKN_TPhos	EPA 351.2 1993 R2/365.4 1974	EPA	EET PIT
Subcontract	Fecal Coliform	None	Warrendale
1664B	HEM and SGT-HEM (SPE)	1664B	EET PIT
200.8-1994 R5.4	Preparation, Total Recoverable Metals	EPA	EET CLE
245.1	Preparation, Mercury	EPA	EET PIT
410.4	COD	EPA	EET PIT
608	Liquid-Liquid Extraction (Separatory Funnel)	EPA	EET PIT
625	Liquid-Liquid Extraction	EPA	EET PIT
TKN/TPhos Prep	Preparation, 351.2 1993 R2/365.4 1974	EPA	EET PIT

Protocol References:

1664B = EPA-821-98-002

40 CFR 761 = Toxic Substances Control Act (TSCA)

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

EPA = US Environmental Protection Agency

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

None = None

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

SM-Online = Standard Methods Online

Laboratory References:

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

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Warrendale = Microbac - Warrendale, PA, 100 Marshall Drive, Warrendale, PA 15086, TEL (724)772-0610

Eurofins Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Client Sample ID: 017

Lab Sample ID: 180-174639-1

Date Collected: 05/28/24 11:39

Matrix: Water

Date Received: 05/28/24 17:04

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 624.1		1	5 mL	5 mL	470086	05/30/24 03:55	J1T	EET PIT
		Instrument ID: CHHP5								
Total/NA	Prep	625			250 mL	250 uL	470299	05/31/24 11:22	BJT	EET PIT
Total/NA	Analysis	EPA 625.1		1	1 mL	1 mL	470839	06/07/24 13:13	VVP	EET PIT
		Instrument ID: CHMSD7								
Total/NA	Prep	608			1050 mL	1.0 mL	470106	05/30/24 05:43	DPD	EET PIT
Total/NA	Analysis	EPA 608.3		1			470236	05/31/24 08:11	JMO	EET PIT
		Instrument ID: CHGC17								
Total/NA	Prep	608			1050 mL	1.0 mL	470106	05/30/24 05:43	DPD	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 mL	1 mL	470233	05/31/24 08:30	JMO	EET PIT
		Instrument ID: CHGC20								
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1 mL	470170	05/31/24 07:39	M1D	EET PIT
		Instrument ID: INTEGRION								
Total Recoverable	Prep	200.8-1994 R5.4			50 mL	50 mL	615260	06/03/24 14:00	BN	EET CLE
Total Recoverable	Analysis	200.8-1994 R5.4		1			615494	06/04/24 20:53	RKT	EET CLE
		Instrument ID: I14								
Total Recoverable	Prep	200.8-1994 R5.4			50 mL	50 mL	615260	06/03/24 14:00	BN	EET CLE
Total Recoverable	Analysis	200.8-1994 R5.4		1			615659	06/05/24 10:44	RKT	EET CLE
		Instrument ID: I14								
Total/NA	Prep	245.1			25 mL	25 mL	470201	05/31/24 06:00	MTW	EET PIT
Total/NA	Analysis	EPA 245.1 Rev.		1			470316	05/31/24 11:42	MTW	EET PIT
		Instrument ID: HGZ								
Dissolved	Analysis	3500-Cr B-2011		1	4 mL	4 mL	470191	05/29/24 10:37	CMC	EET PIT
		Instrument ID: RAPID-T								
Total/NA	Analysis	4500 H+ B-2000		1			470334	05/31/24 15:41	BAB	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	4500 S2 F-2011		1	50 mL	50 mL	470227	05/30/24 18:16	CMR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	5310 C-2014		1	40 mL	40 mL	470672	06/04/24 13:29	ELS	EET PIT
		Instrument ID: SAM								
Total/NA	Analysis	5540C - 2011		1	100 mL	100 mL	470141	05/29/24 15:35	SNR	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Prep	1664B			1060 mL	1000 mL	470395	06/03/24 07:27	A1K	EET PIT
Total/NA	Analysis	EPA 1664B		1			470420	06/03/24 09:22	A1K	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	EPA 350.1		1			470476	06/03/24 13:14	SNR	EET PIT
		Instrument ID: BLUE-ASTORIA								
Total/NA	Analysis	EPA 353.2		1			470450	06/03/24 09:20	RSK	EET PIT
		Instrument ID: ASTORIA2								
Total/NA	Prep	410.4			1 mL	1 mL	470317	05/31/24 12:22	ELS	EET PIT
Total/NA	Analysis	EPA 410.4		1	1 mL	1 mL	470339	05/31/24 15:25	ELS	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Analysis	SM 2120B		1	50 mL	50 mL	470224	05/30/24 08:16	SNR	EET PIT
		Instrument ID: NOEQUIP								

Eurofins Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Client Sample ID: 017

Lab Sample ID: 180-174639-1

Date Collected: 05/28/24 11:39

Matrix: Water

Date Received: 05/28/24 17:04

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470218	05/30/24 14:30	LWM	EET PIT
Total/NA	Analysis	SM 2540D		1	360 mL	1000 mL	470164	05/30/24 09:19	JMA	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 5210B		1	300 mL	300 mL	470447	05/29/24 15:43	ELS	EET PIT
		Instrument ID: BOD2								
Total/NA	Prep	TKN/TPhos Prep			25 mL	25 mL	470241	05/31/24 06:25	RSK	EET PIT
Total/NA	Analysis	TKN_TPhos		1			470414	06/03/24 06:58	RSK	EET PIT
		Instrument ID: ASTORIA1								

Client Sample ID: 019

Lab Sample ID: 180-174639-2

Date Collected: 05/28/24 12:09

Matrix: Water

Date Received: 05/28/24 17:04

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 624.1		1	5 mL	5 mL	470086	05/30/24 04:18	J1T	EET PIT
		Instrument ID: CHHP5								
Total/NA	Prep	625			240 mL	250 uL	470299	05/31/24 11:22	BJT	EET PIT
Total/NA	Analysis	EPA 625.1		1	1 mL	1 mL	470839	06/07/24 13:35	VVP	EET PIT
		Instrument ID: CHMSD7								
Total/NA	Prep	608			1060 mL	1.0 mL	470106	05/30/24 05:43	DPD	EET PIT
Total/NA	Analysis	EPA 608.3		1			470236	05/31/24 08:28	JMO	EET PIT
		Instrument ID: CHGC17								
Total/NA	Prep	608			1060 mL	1.0 mL	470106	05/30/24 05:43	DPD	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 mL	1 mL	470233	05/31/24 08:47	JMO	EET PIT
		Instrument ID: CHGC20								
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1 mL	470170	05/31/24 08:35	M1D	EET PIT
		Instrument ID: INTEGRION								
Total Recoverable	Prep	200.8-1994 R5.4			50 mL	50 mL	615260	06/03/24 14:00	BN	EET CLE
Total Recoverable	Analysis	200.8-1994 R5.4		1			615494	06/04/24 20:55	RKT	EET CLE
		Instrument ID: I14								
Total Recoverable	Prep	200.8-1994 R5.4			50 mL	50 mL	615260	06/03/24 14:00	BN	EET CLE
Total Recoverable	Analysis	200.8-1994 R5.4		1			615659	06/05/24 10:47	RKT	EET CLE
		Instrument ID: I14								
Total/NA	Prep	245.1			25 mL	25 mL	470201	05/31/24 06:00	MTW	EET PIT
Total/NA	Analysis	EPA 245.1 Rev.		1			470316	05/31/24 11:43	MTW	EET PIT
		Instrument ID: HGZ								
Dissolved	Analysis	3500-Cr B-2011		1	4 mL	4 mL	470191	05/29/24 10:04	CMC	EET PIT
		Instrument ID: RAPID-T								
Total/NA	Analysis	4500 H+ B-2000		1			470334	05/31/24 15:33	BAB	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	4500 S2 F-2011		1	50 mL	50 mL	470227	05/30/24 18:18	CMR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	5310 C-2014		1	40 mL	40 mL	470672	06/04/24 14:16	ELS	EET PIT
		Instrument ID: SAM								

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Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Client Sample ID: 019

Lab Sample ID: 180-174639-2

Date Collected: 05/28/24 12:09

Matrix: Water

Date Received: 05/28/24 17:04

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5540C - 2011		1	100 mL	100 mL	470141	05/29/24 15:36	SNR	EET PIT
Total/NA	Prep	1664B			1020 mL	1000 mL	470395	06/03/24 07:27	A1K	EET PIT
Total/NA	Analysis	EPA 1664B		1			470420	06/03/24 09:22	A1K	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	EPA 350.1		1			470476	06/03/24 13:20	SNR	EET PIT
		Instrument ID: BLUE-ASTORIA								
Total/NA	Analysis	EPA 353.2		1			470450	06/03/24 09:22	RSK	EET PIT
		Instrument ID: ASTORIA2								
Total/NA	Prep	410.4			1 mL	1 mL	470317	05/31/24 12:22	ELS	EET PIT
Total/NA	Analysis	EPA 410.4		1	1 mL	1 mL	470339	05/31/24 15:26	ELS	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Analysis	SM 2120B		1	50 mL	50 mL	470224	05/30/24 08:17	SNR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470218	05/30/24 14:30	LWM	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	470164	05/30/24 09:19	JMA	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 5210B		1	300 mL	300 mL	470529	05/30/24 11:58	ELS	EET PIT
		Instrument ID: BOD2								
Total/NA	Prep	TKN/TPhos Prep			25 mL	25 mL	470241	05/31/24 06:25	RSK	EET PIT
Total/NA	Analysis	TKN_TPhos		1			470414	06/03/24 06:59	RSK	EET PIT
		Instrument ID: ASTORIA1								

Client Sample ID: TRIP BLANK

Lab Sample ID: 180-174639-3

Date Collected: 05/28/24 00:00

Matrix: Water

Date Received: 05/28/24 17:04

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 624.1		1	5 mL	5 mL	470086	05/30/24 04:41	J1T	EET PIT
		Instrument ID: CHHP5								

Laboratory References:

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

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Warrendale = Microbac - Warrendale, PA, 100 Marshall Drive, Warrendale, PA 15086, TEL (724)772-0610

Eurofins Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Analyst References:

- Lab: EET CLE
- Batch Type: Prep
 - BN = Benjamin Norman
 - Batch Type: Analysis
 - RKT = Roger Toth
- Lab: EET PIT
- Batch Type: Prep
 - A1K = Agnes Komlos
 - BJT = Bill Trout
 - DPD = Declan Donley
 - ELS = Edwin Shireman
 - MTW = Michael Wesoloski
 - RSK = Robert Kurtz
 - Batch Type: Analysis
 - A1K = Agnes Komlos
 - BAB = Brooke Batyi
 - CMC = Candace California
 - CMR = Carl Reagle
 - ELS = Edwin Shireman
 - J1T = Jianwu Tang
 - JMA = Justin Adametz
 - JMO = John Oravec
 - LWM = Leslie McIntire
 - M1D = Maureen Donlin
 - MTW = Michael Wesoloski
 - RSK = Robert Kurtz
 - SNR = Sabra Richart
 - VVP = Vincent Piccolino

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Client Sample ID: 017

Lab Sample ID: 180-174639-1

Date Collected: 05/28/24 11:39

Matrix: Water

Date Received: 05/28/24 17:04

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			05/30/24 03:55	1
Acrylonitrile	ND		0.020	0.0078	mg/L			05/30/24 03:55	1
Benzene	ND		0.0010	0.00060	mg/L			05/30/24 03:55	1
Bromoform	ND		0.0010	0.00098	mg/L			05/30/24 03:55	1
Bromomethane	ND		0.0010	0.00089	mg/L			05/30/24 03:55	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			05/30/24 03:55	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			05/30/24 03:55	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			05/30/24 03:55	1
Chloroethane	ND		0.0010	0.00090	mg/L			05/30/24 03:55	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			05/30/24 03:55	1
Chloroform	ND		0.0010	0.00060	mg/L			05/30/24 03:55	1
Chloromethane	ND		0.0010	0.00090	mg/L			05/30/24 03:55	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			05/30/24 03:55	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			05/30/24 03:55	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			05/30/24 03:55	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			05/30/24 03:55	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			05/30/24 03:55	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			05/30/24 03:55	1
1,4-Dioxane	ND	*+	0.20	0.043	mg/L			05/30/24 03:55	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			05/30/24 03:55	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			05/30/24 03:55	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			05/30/24 03:55	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			05/30/24 03:55	1
Toluene	ND		0.0010	0.00046	mg/L			05/30/24 03:55	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			05/30/24 03:55	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			05/30/24 03:55	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			05/30/24 03:55	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			05/30/24 03:55	1
Trichloroethene	ND		0.0010	0.00069	mg/L			05/30/24 03:55	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			05/30/24 03:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		47 - 122		05/30/24 03:55	1
Dibromofluoromethane (Surr)	96		52 - 138		05/30/24 03:55	1
1,2-Dichloroethane-d4 (Surr)	82		24 - 145		05/30/24 03:55	1
Toluene-d8 (Surr)	83		65 - 143		05/30/24 03:55	1

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	*1	0.0010	0.00024	mg/L		05/31/24 11:22	06/07/24 13:13	1
1,2-Dichlorobenzene	ND	*1	0.0010	0.00021	mg/L		05/31/24 11:22	06/07/24 13:13	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.0010	0.00020	mg/L		05/31/24 11:22	06/07/24 13:13	1
1,3-Dinitrobenzene	ND	*+ *1	0.0010	0.00046	mg/L		05/31/24 11:22	06/07/24 13:13	1
1,4-Dichlorobenzene	ND		0.0010	0.00024	mg/L		05/31/24 11:22	06/07/24 13:13	1
2,2'-oxybis[1-chloropropane]	ND		0.00019	0.000058	mg/L		05/31/24 11:22	06/07/24 13:13	1
2,4,6-Trichlorophenol	ND		0.0010	0.00022	mg/L		05/31/24 11:22	06/07/24 13:13	1
2,4-Dichlorophenol	ND		0.00019	0.000051	mg/L		05/31/24 11:22	06/07/24 13:13	1
2,4-Dimethylphenol	ND		0.0010	0.00059	mg/L		05/31/24 11:22	06/07/24 13:13	1
2,4-Dinitrophenol	ND		0.010	0.0033	mg/L		05/31/24 11:22	06/07/24 13:13	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Client Sample ID: 017

Lab Sample ID: 180-174639-1

Date Collected: 05/28/24 11:39

Matrix: Water

Date Received: 05/28/24 17:04

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		0.0010	0.00035	mg/L		05/31/24 11:22	06/07/24 13:13	1
2,6-Dinitrotoluene	ND		0.0010	0.00017	mg/L		05/31/24 11:22	06/07/24 13:13	1
2-Chloronaphthalene	ND		0.00019	0.000059	mg/L		05/31/24 11:22	06/07/24 13:13	1
2-Chlorophenol	ND		0.0010	0.00023	mg/L		05/31/24 11:22	06/07/24 13:13	1
2-Nitrophenol	ND	*1	0.0010	0.00019	mg/L		05/31/24 11:22	06/07/24 13:13	1
3,3'-Dichlorobenzidine	ND		0.0010	0.00058	mg/L		05/31/24 11:22	06/07/24 13:13	1
4,6-Dinitro-2-methylphenol	ND		0.0050	0.0015	mg/L		05/31/24 11:22	06/07/24 13:13	1
4-Bromophenyl phenyl ether	ND		0.0010	0.00032	mg/L		05/31/24 11:22	06/07/24 13:13	1
4-Chloro-3-methylphenol	ND		0.0010	0.00044	mg/L		05/31/24 11:22	06/07/24 13:13	1
4-Chlorophenyl phenyl ether	ND		0.0010	0.00022	mg/L		05/31/24 11:22	06/07/24 13:13	1
4-Nitrophenol	ND		0.0050	0.00094	mg/L		05/31/24 11:22	06/07/24 13:13	1
Acenaphthene	ND		0.00019	0.000065	mg/L		05/31/24 11:22	06/07/24 13:13	1
Acenaphthylene	ND		0.00019	0.000065	mg/L		05/31/24 11:22	06/07/24 13:13	1
Acrylamide	ND		0.050	0.021	mg/L		05/31/24 11:22	06/07/24 13:13	1
Anthracene	ND		0.00019	0.000049	mg/L		05/31/24 11:22	06/07/24 13:13	1
Benzidine	ND		0.020	0.0091	mg/L		05/31/24 11:22	06/07/24 13:13	1
Benzo[a]anthracene	ND		0.00019	0.000075	mg/L		05/31/24 11:22	06/07/24 13:13	1
Benzo[a]pyrene	ND		0.00019	0.000053	mg/L		05/31/24 11:22	06/07/24 13:13	1
Benzo[b]fluoranthene	ND		0.00019	0.000097	mg/L		05/31/24 11:22	06/07/24 13:13	1
Benzo[g,h,i]perylene	ND		0.00019	0.000069	mg/L		05/31/24 11:22	06/07/24 13:13	1
Benzo[k]fluoranthene	ND		0.00019	0.000088	mg/L		05/31/24 11:22	06/07/24 13:13	1
Bis(2-chloroethoxy)methane	ND		0.0010	0.00015	mg/L		05/31/24 11:22	06/07/24 13:13	1
Bis(2-chloroethyl)ether	ND		0.00019	0.000040	mg/L		05/31/24 11:22	06/07/24 13:13	1
Bis(2-ethylhexyl) phthalate	ND		0.010	0.0062	mg/L		05/31/24 11:22	06/07/24 13:13	1
Butyl benzyl phthalate	ND		0.0020	0.00094	mg/L		05/31/24 11:22	06/07/24 13:13	1
Chrysene	ND		0.00019	0.000081	mg/L		05/31/24 11:22	06/07/24 13:13	1
Dibenz(a,h)anthracene	ND		0.00019	0.000072	mg/L		05/31/24 11:22	06/07/24 13:13	1
Diethyl phthalate	ND		0.0010	0.00057	mg/L		05/31/24 11:22	06/07/24 13:13	1
Dimethyl phthalate	ND		0.0020	0.00020	mg/L		05/31/24 11:22	06/07/24 13:13	1
Di-n-butyl phthalate	ND		0.010	0.0049	mg/L		05/31/24 11:22	06/07/24 13:13	1
Di-n-octyl phthalate	ND		0.0010	0.00069	mg/L		05/31/24 11:22	06/07/24 13:13	1
Fluoranthene	ND		0.00019	0.000060	mg/L		05/31/24 11:22	06/07/24 13:13	1
Fluorene	ND		0.00019	0.000069	mg/L		05/31/24 11:22	06/07/24 13:13	1
Hexachlorobenzene	ND		0.00019	0.000056	mg/L		05/31/24 11:22	06/07/24 13:13	1
Hexachlorobutadiene	ND		0.00019	0.000069	mg/L		05/31/24 11:22	06/07/24 13:13	1
Hexachlorocyclopentadiene	ND	*1	0.0010	0.00050	mg/L		05/31/24 11:22	06/07/24 13:13	1
Hexachloroethane	ND		0.0010	0.00013	mg/L		05/31/24 11:22	06/07/24 13:13	1
Indeno[1,2,3-cd]pyrene	ND		0.00019	0.000085	mg/L		05/31/24 11:22	06/07/24 13:13	1
Isophorone	ND		0.0010	0.00019	mg/L		05/31/24 11:22	06/07/24 13:13	1
Naphthalene	0.00013	J	0.00019	0.000059	mg/L		05/31/24 11:22	06/07/24 13:13	1
Nitrobenzene	ND		0.0020	0.00050	mg/L		05/31/24 11:22	06/07/24 13:13	1
N-Nitrosodimethylamine	ND		0.0010	0.00026	mg/L		05/31/24 11:22	06/07/24 13:13	1
N-Nitrosodi-n-propylamine	ND		0.00019	0.000071	mg/L		05/31/24 11:22	06/07/24 13:13	1
N-Nitrosodiphenylamine	ND		0.0010	0.00012	mg/L		05/31/24 11:22	06/07/24 13:13	1
Pentachlorophenol	ND		0.0050	0.00085	mg/L		05/31/24 11:22	06/07/24 13:13	1
Phenanthrene	ND		0.00019	0.00016	mg/L		05/31/24 11:22	06/07/24 13:13	1
Phenol	ND		0.0010	0.00049	mg/L		05/31/24 11:22	06/07/24 13:13	1
Pyrene	ND		0.00019	0.000054	mg/L		05/31/24 11:22	06/07/24 13:13	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Client Sample ID: 017

Lab Sample ID: 180-174639-1

Date Collected: 05/28/24 11:39

Matrix: Water

Date Received: 05/28/24 17:04

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	69		42 - 115	05/31/24 11:22	06/07/24 13:13	1
2-Fluorobiphenyl	87		47 - 107	05/31/24 11:22	06/07/24 13:13	1
2-Fluorophenol (Surr)	62		54 - 109	05/31/24 11:22	06/07/24 13:13	1
Nitrobenzene-d5 (Surr)	81		47 - 110	05/31/24 11:22	06/07/24 13:13	1
Phenol-d5 (Surr)	63		37 - 110	05/31/24 11:22	06/07/24 13:13	1
Terphenyl-d14 (Surr)	74		32 - 115	05/31/24 11:22	06/07/24 13:13	1

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000012	0.00000034	mg/L		05/30/24 05:43	05/31/24 08:11	1
alpha-BHC	ND		0.0000012	0.00000023	mg/L		05/30/24 05:43	05/31/24 08:11	1
beta-BHC	ND		0.0000012	0.00000035	mg/L		05/30/24 05:43	05/31/24 08:11	1
gamma-BHC (Lindane)	ND		0.0000012	0.00000028	mg/L		05/30/24 05:43	05/31/24 08:11	1
delta-BHC	ND		0.0000012	0.00000061	mg/L		05/30/24 05:43	05/31/24 08:11	1
Chlordane (technical)	ND		0.000012	0.0000069	mg/L		05/30/24 05:43	05/31/24 08:11	1
4,4'-DDD	ND		0.0000012	0.00000051	mg/L		05/30/24 05:43	05/31/24 08:11	1
4,4'-DDE	ND		0.0000012	0.00000028	mg/L		05/30/24 05:43	05/31/24 08:11	1
4,4'-DDT	ND		0.0000012	0.00000066	mg/L		05/30/24 05:43	05/31/24 08:11	1
Dieldrin	ND		0.0000012	0.00000026	mg/L		05/30/24 05:43	05/31/24 08:11	1
Endosulfan I	ND		0.0000012	0.00000065	mg/L		05/30/24 05:43	05/31/24 08:11	1
Endosulfan II	ND		0.0000012	0.00000030	mg/L		05/30/24 05:43	05/31/24 08:11	1
Endosulfan sulfate	ND		0.0000012	0.00000061	mg/L		05/30/24 05:43	05/31/24 08:11	1
Endrin	ND		0.0000012	0.00000022	mg/L		05/30/24 05:43	05/31/24 08:11	1
Endrin aldehyde	ND		0.0000012	0.00000049	mg/L		05/30/24 05:43	05/31/24 08:11	1
Heptachlor	ND		0.0000012	0.00000043	mg/L		05/30/24 05:43	05/31/24 08:11	1
Heptachlor epoxide	ND		0.0000012	0.00000032	mg/L		05/30/24 05:43	05/31/24 08:11	1
Toxaphene	ND		0.000095	0.000047	mg/L		05/30/24 05:43	05/31/24 08:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	53		20 - 138				05/30/24 05:43	05/31/24 08:11	1
Tetrachloro-m-xylene (Surr)	72		20 - 138				05/30/24 05:43	05/31/24 08:11	1
DCB Decachlorobiphenyl (Surr)	39	S1-	43 - 143				05/30/24 05:43	05/31/24 08:11	1
DCB Decachlorobiphenyl (Surr)	92		43 - 143				05/30/24 05:43	05/31/24 08:11	1

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.0000095	0.0000045	mg/L		05/30/24 05:43	05/31/24 08:30	1
PCB-1221	ND		0.0000095	0.0000054	mg/L		05/30/24 05:43	05/31/24 08:30	1
PCB-1232	ND		0.0000095	0.0000050	mg/L		05/30/24 05:43	05/31/24 08:30	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Client Sample ID: 017

Lab Sample ID: 180-174639-1

Date Collected: 05/28/24 11:39

Matrix: Water

Date Received: 05/28/24 17:04

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1242	ND		0.0000095	0.0000087	mg/L		05/30/24 05:43	05/31/24 08:30	1
PCB-1248	ND		0.0000095	0.0000028	mg/L		05/30/24 05:43	05/31/24 08:30	1
PCB-1254	ND		0.0000095	0.0000091	mg/L		05/30/24 05:43	05/31/24 08:30	1
PCB-1260	ND		0.0000095	0.0000037	mg/L		05/30/24 05:43	05/31/24 08:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	69		20 - 138				05/30/24 05:43	05/31/24 08:30	1
Tetrachloro-m-xylene (Surr)	79		20 - 138				05/30/24 05:43	05/31/24 08:30	1
DCB Decachlorobiphenyl (Surr)	96		43 - 143				05/30/24 05:43	05/31/24 08:30	1
DCB Decachlorobiphenyl (Surr)	80		43 - 143				05/30/24 05:43	05/31/24 08:30	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			05/31/24 07:39	1
Chloride	18.0		1.00	0.712	mg/L			05/31/24 07:39	1
Fluoride	0.173		0.100	0.0260	mg/L			05/31/24 07:39	1
Sulfate	49.1		1.00	0.756	mg/L			05/31/24 07:39	1

Method: EPA 200.8-1994 R5.4 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.063	J	1.0	0.053	ug/L		06/03/24 14:00	06/04/24 20:53	1
Aluminum	4500		50	34	ug/L		06/03/24 14:00	06/04/24 20:53	1
Arsenic	3.6	J	5.0	0.75	ug/L		06/03/24 14:00	06/04/24 20:53	1
Boron	27		20	16	ug/L		06/03/24 14:00	06/05/24 10:44	1
Barium	87		5.0	2.2	ug/L		06/03/24 14:00	06/04/24 20:53	1
Beryllium	0.72	J	1.0	0.62	ug/L		06/03/24 14:00	06/04/24 20:53	1
Calcium	65000		1000	250	ug/L		06/03/24 14:00	06/04/24 20:53	1
Cadmium	0.45	J	1.0	0.20	ug/L		06/03/24 14:00	06/04/24 20:53	1
Cobalt	3.2		1.0	0.19	ug/L		06/03/24 14:00	06/04/24 20:53	1
Chromium	7.1		5.0	1.2	ug/L		06/03/24 14:00	06/04/24 20:53	1
Copper	13		2.0	1.7	ug/L		06/03/24 14:00	06/04/24 20:53	1
Iron	6400		100	47	ug/L		06/03/24 14:00	06/05/24 10:44	1
Magnesium	6000		1000	61	ug/L		06/03/24 14:00	06/04/24 20:53	1
Manganese	240		5.0	3.5	ug/L		06/03/24 14:00	06/04/24 20:53	1
Molybdenum	1.7	J	5.0	1.1	ug/L		06/03/24 14:00	06/04/24 20:53	1
Nickel	12		2.0	1.5	ug/L		06/03/24 14:00	06/04/24 20:53	1
Lead	8.8		1.0	0.45	ug/L		06/03/24 14:00	06/04/24 20:53	1
Antimony	1.0	J	2.0	0.57	ug/L		06/03/24 14:00	06/04/24 20:53	1
Selenium	1.0	J	5.0	0.89	ug/L		06/03/24 14:00	06/04/24 20:53	1
Thallium	ND		1.0	0.20	ug/L		06/03/24 14:00	06/04/24 20:53	1
Zinc	110		20	15	ug/L		06/03/24 14:00	06/04/24 20:53	1

Method: EPA 245.1 Rev. - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/31/24 06:00	05/31/24 11:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM-Online 4500 H+ B-2000)	7.8	HF	0.1	0.1	SU			05/31/24 15:41	1
Temperature (SM-Online 4500 H+ B-2000)	20.7	HF !	0.1	0.1	Degrees C			05/31/24 15:41	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Client Sample ID: 017

Lab Sample ID: 180-174639-1

Date Collected: 05/28/24 11:39

Matrix: Water

Date Received: 05/28/24 17:04

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide (SM 4500 S2 F-2011)	ND		3.0	1.3	mg/L			05/30/24 18:16	1
Total Organic Carbon - Quad (SM 5310 C-2014)	4.4	FL	1.0	0.51	mg/L			06/04/24 13:29	1
Methylene Blue Active Substances (SM 5540C - 2011)	0.11		0.050	0.049	mg/l LAS MW 340			05/29/24 15:35	1
HEM (Oil & Grease) (EPA 1664B)	ND		4.7	4.1	mg/L		06/03/24 07:27	06/03/24 09:22	1
Ammonia (EPA 350.1)	0.16	FL	0.10	0.088	mg/L			06/03/24 13:14	1
Nitrate Nitrite as N (EPA 353.2)	0.41		0.10	0.065	mg/L			06/03/24 09:20	1
Chemical Oxygen Demand (MCAWW EPA 410.4)	15		10	9.1	mg/L		05/31/24 12:22	05/31/24 15:25	1
Color, Apparent (SM 2120B)	30		5.0	5.0	Color Units			05/30/24 08:16	1
Color, True (SM 2120B)	15		5.0	5.0	Color Units			05/30/24 08:16	1
pH at time of analysis (SM 2120B)	7.9	!	0.10	0.10	SU			05/30/24 08:16	1
Total Dissolved Solids (SM 2540C)	230		10	10	mg/L			05/30/24 14:30	1
Total Suspended Solids (SM 2540D)	79		1.4	1.4	mg/L			05/30/24 09:19	1
Biochemical Oxygen Demand (SM 5210B)	2.3		2.0	2.0	mg/L			05/29/24 15:43	1
Nitrogen, Kjeldahl (EPA TKN_TPhos)	0.74		0.50	0.12	mg/L as N		05/31/24 06:25	06/03/24 06:58	1
Phosphorus, Total (EPA TKN_TPhos)	0.26		0.10	0.040	mg/L as P		05/31/24 06:25	06/03/24 06:58	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SM 3500-Cr B-2011)	0.0060	J	0.010	0.0060	mg/L			05/29/24 10:37	1

Client Sample ID: 019

Lab Sample ID: 180-174639-2

Date Collected: 05/28/24 12:09

Matrix: Water

Date Received: 05/28/24 17:04

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			05/30/24 04:18	1
Acrylonitrile	ND		0.020	0.0078	mg/L			05/30/24 04:18	1
Benzene	ND		0.0010	0.00060	mg/L			05/30/24 04:18	1
Bromoform	ND		0.0010	0.00098	mg/L			05/30/24 04:18	1
Bromomethane	ND		0.0010	0.00089	mg/L			05/30/24 04:18	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			05/30/24 04:18	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			05/30/24 04:18	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			05/30/24 04:18	1
Chloroethane	ND		0.0010	0.00090	mg/L			05/30/24 04:18	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			05/30/24 04:18	1
Chloroform	ND		0.0010	0.00060	mg/L			05/30/24 04:18	1
Chloromethane	ND		0.0010	0.00090	mg/L			05/30/24 04:18	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			05/30/24 04:18	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			05/30/24 04:18	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			05/30/24 04:18	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			05/30/24 04:18	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			05/30/24 04:18	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			05/30/24 04:18	1
1,4-Dioxane	ND	*+	0.20	0.043	mg/L			05/30/24 04:18	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Client Sample ID: 019

Lab Sample ID: 180-174639-2

Date Collected: 05/28/24 12:09

Matrix: Water

Date Received: 05/28/24 17:04

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.0010	0.00051	mg/L			05/30/24 04:18	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			05/30/24 04:18	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			05/30/24 04:18	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			05/30/24 04:18	1
Toluene	ND		0.0010	0.00046	mg/L			05/30/24 04:18	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			05/30/24 04:18	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			05/30/24 04:18	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			05/30/24 04:18	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			05/30/24 04:18	1
Trichloroethene	ND		0.0010	0.00069	mg/L			05/30/24 04:18	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			05/30/24 04:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		47 - 122		05/30/24 04:18	1
Dibromofluoromethane (Surr)	97		52 - 138		05/30/24 04:18	1
1,2-Dichloroethane-d4 (Surr)	90		24 - 145		05/30/24 04:18	1
Toluene-d8 (Surr)	84		65 - 143		05/30/24 04:18	1

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	*1	0.0010	0.00025	mg/L		05/31/24 11:22	06/07/24 13:35	1
1,2-Dichlorobenzene	ND	*1	0.0010	0.00022	mg/L		05/31/24 11:22	06/07/24 13:35	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.0010	0.00020	mg/L		05/31/24 11:22	06/07/24 13:35	1
1,3-Dinitrobenzene	ND	*+ *1	0.0010	0.00048	mg/L		05/31/24 11:22	06/07/24 13:35	1
1,4-Dichlorobenzene	ND		0.0010	0.00025	mg/L		05/31/24 11:22	06/07/24 13:35	1
2,2'-oxybis[1-chloropropane]	ND		0.00020	0.000060	mg/L		05/31/24 11:22	06/07/24 13:35	1
2,4,6-Trichlorophenol	ND		0.0010	0.00023	mg/L		05/31/24 11:22	06/07/24 13:35	1
2,4-Dichlorophenol	ND		0.00020	0.000053	mg/L		05/31/24 11:22	06/07/24 13:35	1
2,4-Dimethylphenol	ND		0.0010	0.00061	mg/L		05/31/24 11:22	06/07/24 13:35	1
2,4-Dinitrophenol	ND		0.010	0.0034	mg/L		05/31/24 11:22	06/07/24 13:35	1
2,4-Dinitrotoluene	ND		0.0010	0.00037	mg/L		05/31/24 11:22	06/07/24 13:35	1
2,6-Dinitrotoluene	ND		0.0010	0.00018	mg/L		05/31/24 11:22	06/07/24 13:35	1
2-Chloronaphthalene	ND		0.00020	0.000061	mg/L		05/31/24 11:22	06/07/24 13:35	1
2-Chlorophenol	ND		0.0010	0.00023	mg/L		05/31/24 11:22	06/07/24 13:35	1
2-Nitrophenol	ND	*1	0.0010	0.00020	mg/L		05/31/24 11:22	06/07/24 13:35	1
3,3'-Dichlorobenzidine	ND		0.0010	0.00061	mg/L		05/31/24 11:22	06/07/24 13:35	1
4,6-Dinitro-2-methylphenol	ND		0.0052	0.0015	mg/L		05/31/24 11:22	06/07/24 13:35	1
4-Bromophenyl phenyl ether	ND		0.0010	0.00033	mg/L		05/31/24 11:22	06/07/24 13:35	1
4-Chloro-3-methylphenol	ND		0.0010	0.00045	mg/L		05/31/24 11:22	06/07/24 13:35	1
4-Chlorophenyl phenyl ether	ND		0.0010	0.00023	mg/L		05/31/24 11:22	06/07/24 13:35	1
4-Nitrophenol	ND		0.0052	0.00098	mg/L		05/31/24 11:22	06/07/24 13:35	1
Acenaphthene	ND		0.00020	0.000068	mg/L		05/31/24 11:22	06/07/24 13:35	1
Acenaphthylene	ND		0.00020	0.000068	mg/L		05/31/24 11:22	06/07/24 13:35	1
Acrylamide	ND		0.052	0.021	mg/L		05/31/24 11:22	06/07/24 13:35	1
Anthracene	ND		0.00020	0.000051	mg/L		05/31/24 11:22	06/07/24 13:35	1
Benzidine	ND		0.021	0.0095	mg/L		05/31/24 11:22	06/07/24 13:35	1
Benzo[a]anthracene	ND		0.00020	0.000078	mg/L		05/31/24 11:22	06/07/24 13:35	1
Benzo[a]pyrene	ND		0.00020	0.000055	mg/L		05/31/24 11:22	06/07/24 13:35	1
Benzo[b]fluoranthene	ND		0.00020	0.00010	mg/L		05/31/24 11:22	06/07/24 13:35	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Client Sample ID: 019

Lab Sample ID: 180-174639-2

Date Collected: 05/28/24 12:09

Matrix: Water

Date Received: 05/28/24 17:04

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		0.00020	0.000072	mg/L		05/31/24 11:22	06/07/24 13:35	1
Benzo[k]fluoranthene	ND		0.00020	0.000092	mg/L		05/31/24 11:22	06/07/24 13:35	1
Bis(2-chloroethoxy)methane	ND		0.0010	0.00016	mg/L		05/31/24 11:22	06/07/24 13:35	1
Bis(2-chloroethyl)ether	ND		0.00020	0.000042	mg/L		05/31/24 11:22	06/07/24 13:35	1
Bis(2-ethylhexyl) phthalate	ND		0.010	0.0065	mg/L		05/31/24 11:22	06/07/24 13:35	1
Butyl benzyl phthalate	ND		0.0021	0.00098	mg/L		05/31/24 11:22	06/07/24 13:35	1
Chrysene	ND		0.00020	0.000084	mg/L		05/31/24 11:22	06/07/24 13:35	1
Dibenz(a,h)anthracene	ND		0.00020	0.000075	mg/L		05/31/24 11:22	06/07/24 13:35	1
Diethyl phthalate	ND		0.0010	0.00059	mg/L		05/31/24 11:22	06/07/24 13:35	1
Dimethyl phthalate	ND		0.0021	0.00021	mg/L		05/31/24 11:22	06/07/24 13:35	1
Di-n-butyl phthalate	ND		0.010	0.0051	mg/L		05/31/24 11:22	06/07/24 13:35	1
Di-n-octyl phthalate	ND		0.0010	0.00071	mg/L		05/31/24 11:22	06/07/24 13:35	1
Fluoranthene	ND		0.00020	0.000063	mg/L		05/31/24 11:22	06/07/24 13:35	1
Fluorene	ND		0.00020	0.000072	mg/L		05/31/24 11:22	06/07/24 13:35	1
Hexachlorobenzene	ND		0.00020	0.000058	mg/L		05/31/24 11:22	06/07/24 13:35	1
Hexachlorobutadiene	ND		0.00020	0.000072	mg/L		05/31/24 11:22	06/07/24 13:35	1
Hexachlorocyclopentadiene	ND	*1	0.0010	0.00052	mg/L		05/31/24 11:22	06/07/24 13:35	1
Hexachloroethane	ND		0.0010	0.00014	mg/L		05/31/24 11:22	06/07/24 13:35	1
Indeno[1,2,3-cd]pyrene	ND		0.00020	0.000089	mg/L		05/31/24 11:22	06/07/24 13:35	1
Isophorone	ND		0.0010	0.00020	mg/L		05/31/24 11:22	06/07/24 13:35	1
Naphthalene	0.00025		0.00020	0.000061	mg/L		05/31/24 11:22	06/07/24 13:35	1
Nitrobenzene	ND		0.0021	0.00052	mg/L		05/31/24 11:22	06/07/24 13:35	1
N-Nitrosodimethylamine	ND		0.0010	0.00027	mg/L		05/31/24 11:22	06/07/24 13:35	1
N-Nitrosodi-n-propylamine	ND		0.00020	0.000074	mg/L		05/31/24 11:22	06/07/24 13:35	1
N-Nitrosodiphenylamine	ND		0.0010	0.00012	mg/L		05/31/24 11:22	06/07/24 13:35	1
Pentachlorophenol	ND		0.0052	0.00088	mg/L		05/31/24 11:22	06/07/24 13:35	1
Phenanthrene	ND		0.00020	0.00016	mg/L		05/31/24 11:22	06/07/24 13:35	1
Phenol	ND		0.0010	0.00051	mg/L		05/31/24 11:22	06/07/24 13:35	1
Pyrene	ND		0.00020	0.000056	mg/L		05/31/24 11:22	06/07/24 13:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	88		42 - 115	05/31/24 11:22	06/07/24 13:35	1
2-Fluorobiphenyl	85		47 - 107	05/31/24 11:22	06/07/24 13:35	1
2-Fluorophenol (Surr)	88		54 - 109	05/31/24 11:22	06/07/24 13:35	1
Nitrobenzene-d5 (Surr)	91		47 - 110	05/31/24 11:22	06/07/24 13:35	1
Phenol-d5 (Surr)	83		37 - 110	05/31/24 11:22	06/07/24 13:35	1
Terphenyl-d14 (Surr)	89		32 - 115	05/31/24 11:22	06/07/24 13:35	1

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000012	0.0000003	mg/L		05/30/24 05:43	05/31/24 08:28	1
				4					
alpha-BHC	ND		0.0000012	0.0000002	mg/L		05/30/24 05:43	05/31/24 08:28	1
				2					
beta-BHC	ND		0.0000012	0.0000003	mg/L		05/30/24 05:43	05/31/24 08:28	1
				5					
gamma-BHC (Lindane)	ND		0.0000012	0.0000002	mg/L		05/30/24 05:43	05/31/24 08:28	1
				8					
delta-BHC	ND		0.0000012	0.0000006	mg/L		05/30/24 05:43	05/31/24 08:28	1
				1					
Chlordane (technical)	ND		0.000012	0.0000068	mg/L		05/30/24 05:43	05/31/24 08:28	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Client Sample ID: 019

Lab Sample ID: 180-174639-2

Date Collected: 05/28/24 12:09

Matrix: Water

Date Received: 05/28/24 17:04

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.0000012	0.0000005	mg/L		05/30/24 05:43	05/31/24 08:28	1
				0					
4,4'-DDE	ND		0.0000012	0.0000002	mg/L		05/30/24 05:43	05/31/24 08:28	1
				8					
4,4'-DDT	ND		0.0000012	0.0000006	mg/L		05/30/24 05:43	05/31/24 08:28	1
				5					
Dieldrin	ND		0.0000012	0.0000002	mg/L		05/30/24 05:43	05/31/24 08:28	1
				6					
Endosulfan I	ND		0.0000012	0.0000006	mg/L		05/30/24 05:43	05/31/24 08:28	1
				5					
Endosulfan II	ND		0.0000012	0.0000003	mg/L		05/30/24 05:43	05/31/24 08:28	1
				0					
Endosulfan sulfate	ND		0.0000012	0.0000006	mg/L		05/30/24 05:43	05/31/24 08:28	1
				0					
Endrin	ND		0.0000012	0.0000002	mg/L		05/30/24 05:43	05/31/24 08:28	1
				2					
Endrin aldehyde	ND		0.0000012	0.0000004	mg/L		05/30/24 05:43	05/31/24 08:28	1
				9					
Heptachlor	ND		0.0000012	0.0000004	mg/L		05/30/24 05:43	05/31/24 08:28	1
				3					
Heptachlor epoxide	ND		0.0000012	0.0000003	mg/L		05/30/24 05:43	05/31/24 08:28	1
				2					
Toxaphene	ND		0.000094	0.000046	mg/L		05/30/24 05:43	05/31/24 08:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	51		20 - 138	05/30/24 05:43	05/31/24 08:28	1
Tetrachloro-m-xylene (Surr)	68		20 - 138	05/30/24 05:43	05/31/24 08:28	1
DCB Decachlorobiphenyl (Surr)	41	S1-	43 - 143	05/30/24 05:43	05/31/24 08:28	1
DCB Decachlorobiphenyl (Surr)	85		43 - 143	05/30/24 05:43	05/31/24 08:28	1

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.0000094	0.0000045	mg/L		05/30/24 05:43	05/31/24 08:47	1
PCB-1221	ND		0.0000094	0.0000054	mg/L		05/30/24 05:43	05/31/24 08:47	1
PCB-1232	ND		0.0000094	0.0000049	mg/L		05/30/24 05:43	05/31/24 08:47	1
PCB-1242	ND		0.0000094	0.0000086	mg/L		05/30/24 05:43	05/31/24 08:47	1
PCB-1248	ND		0.0000094	0.0000028	mg/L		05/30/24 05:43	05/31/24 08:47	1
PCB-1254	ND		0.0000094	0.0000090	mg/L		05/30/24 05:43	05/31/24 08:47	1
PCB-1260	ND		0.0000094	0.0000037	mg/L		05/30/24 05:43	05/31/24 08:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	101		20 - 138	05/30/24 05:43	05/31/24 08:47	1
Tetrachloro-m-xylene (Surr)	89		20 - 138	05/30/24 05:43	05/31/24 08:47	1
DCB Decachlorobiphenyl (Surr)	93		43 - 143	05/30/24 05:43	05/31/24 08:47	1
DCB Decachlorobiphenyl (Surr)	79		43 - 143	05/30/24 05:43	05/31/24 08:47	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			05/31/24 08:35	1
Chloride	66.2		1.00	0.712	mg/L			05/31/24 08:35	1
Fluoride	0.118		0.100	0.0260	mg/L			05/31/24 08:35	1
Sulfate	38.1		1.00	0.756	mg/L			05/31/24 08:35	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Client Sample ID: 019

Lab Sample ID: 180-174639-2

Date Collected: 05/28/24 12:09

Matrix: Water

Date Received: 05/28/24 17:04

Method: EPA 200.8-1994 R5.4 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.053	ug/L		06/03/24 14:00	06/04/24 20:55	1
Aluminum	3500		50	34	ug/L		06/03/24 14:00	06/04/24 20:55	1
Arsenic	4.2	J	5.0	0.75	ug/L		06/03/24 14:00	06/04/24 20:55	1
Boron	18	J	20	16	ug/L		06/03/24 14:00	06/05/24 10:47	1
Barium	110		5.0	2.2	ug/L		06/03/24 14:00	06/04/24 20:55	1
Beryllium	ND		1.0	0.62	ug/L		06/03/24 14:00	06/04/24 20:55	1
Calcium	91000		1000	250	ug/L		06/03/24 14:00	06/04/24 20:55	1
Cadmium	ND		1.0	0.20	ug/L		06/03/24 14:00	06/04/24 20:55	1
Cobalt	3.1		1.0	0.19	ug/L		06/03/24 14:00	06/04/24 20:55	1
Chromium	5.5		5.0	1.2	ug/L		06/03/24 14:00	06/04/24 20:55	1
Copper	7.5		2.0	1.7	ug/L		06/03/24 14:00	06/04/24 20:55	1
Iron	6600		100	47	ug/L		06/03/24 14:00	06/05/24 10:47	1
Magnesium	6700		1000	61	ug/L		06/03/24 14:00	06/04/24 20:55	1
Manganese	560		5.0	3.5	ug/L		06/03/24 14:00	06/04/24 20:55	1
Molybdenum	1.1	J	5.0	1.1	ug/L		06/03/24 14:00	06/04/24 20:55	1
Nickel	11		2.0	1.5	ug/L		06/03/24 14:00	06/04/24 20:55	1
Lead	4.3		1.0	0.45	ug/L		06/03/24 14:00	06/04/24 20:55	1
Antimony	ND		2.0	0.57	ug/L		06/03/24 14:00	06/04/24 20:55	1
Selenium	ND		5.0	0.89	ug/L		06/03/24 14:00	06/04/24 20:55	1
Thallium	ND		1.0	0.20	ug/L		06/03/24 14:00	06/04/24 20:55	1
Zinc	62		20	15	ug/L		06/03/24 14:00	06/04/24 20:55	1

Method: EPA 245.1 Rev. - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/31/24 06:00	05/31/24 11:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM-Online 4500 H+ B-2000)	7.5	HF	0.1	0.1	SU			05/31/24 15:33	1
Temperature (SM-Online 4500 H+ B-2000)	20.5	HF !	0.1	0.1	Degrees C			05/31/24 15:33	1
Sulfide (SM 4500 S2 F-2011)	ND		3.0	1.3	mg/L			05/30/24 18:18	1
Total Organic Carbon - Quad (SM 5310 C-2014)	2.8		1.0	0.51	mg/L			06/04/24 14:16	1
Methylene Blue Active Substances (SM 5540C - 2011)	0.093		0.050	0.049	mg/l LAS MW 340			05/29/24 15:36	1
HEM (Oil & Grease) (EPA 1664B)	ND		4.9	4.2	mg/L		06/03/24 07:27	06/03/24 09:22	1
Ammonia (EPA 350.1)	ND		0.10	0.088	mg/L			06/03/24 13:20	1
Nitrate Nitrite as N (EPA 353.2)	ND		0.10	0.065	mg/L			06/03/24 09:22	1
Chemical Oxygen Demand (MCAWW EPA 410.4)	13		10	9.1	mg/L		05/31/24 12:22	05/31/24 15:26	1
Color, Apparent (SM 2120B)	30		5.0	5.0	Color Units			05/30/24 08:17	1
Color, True (SM 2120B)	15		5.0	5.0	Color Units			05/30/24 08:17	1
pH at time of analysis (SM 2120B)	7.6	!	0.10	0.10	SU			05/30/24 08:17	1
Total Dissolved Solids (SM 2540C)	310		10	10	mg/L			05/30/24 14:30	1
Total Suspended Solids (SM 2540D)	30		0.50	0.50	mg/L			05/30/24 09:19	1
Biochemical Oxygen Demand (SM 5210B)	2.2	cn	2.0	2.0	mg/L			05/30/24 11:58	1
Nitrogen, Kjeldahl (EPA TKN_TPhos)	0.66		0.50	0.12	mg/L as N		05/31/24 06:25	06/03/24 06:59	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Client Sample ID: 019

Lab Sample ID: 180-174639-2

Date Collected: 05/28/24 12:09

Matrix: Water

Date Received: 05/28/24 17:04

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus, Total (EPA TKN_TPhos)	0.23		0.10	0.040	mg/L as P		05/31/24 06:25	06/03/24 06:59	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SM 3500-Cr B-2011)	ND		0.010	0.0060	mg/L			05/29/24 10:04	1

Client Sample ID: TRIP BLANK

Lab Sample ID: 180-174639-3

Date Collected: 05/28/24 00:00

Matrix: Water

Date Received: 05/28/24 17:04

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			05/30/24 04:41	1
Acrylonitrile	ND		0.020	0.0078	mg/L			05/30/24 04:41	1
Benzene	ND		0.0010	0.00060	mg/L			05/30/24 04:41	1
Bromoform	ND		0.0010	0.00098	mg/L			05/30/24 04:41	1
Bromomethane	ND		0.0010	0.00089	mg/L			05/30/24 04:41	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			05/30/24 04:41	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			05/30/24 04:41	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			05/30/24 04:41	1
Chloroethane	ND		0.0010	0.00090	mg/L			05/30/24 04:41	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			05/30/24 04:41	1
Chloroform	ND		0.0010	0.00060	mg/L			05/30/24 04:41	1
Chloromethane	ND		0.0010	0.00090	mg/L			05/30/24 04:41	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			05/30/24 04:41	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			05/30/24 04:41	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			05/30/24 04:41	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			05/30/24 04:41	1
1,1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			05/30/24 04:41	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			05/30/24 04:41	1
1,4-Dioxane	ND	+	0.20	0.043	mg/L			05/30/24 04:41	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			05/30/24 04:41	1
Methylene Chloride	0.0037		0.0010	0.00089	mg/L			05/30/24 04:41	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			05/30/24 04:41	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			05/30/24 04:41	1
Toluene	ND		0.0010	0.00046	mg/L			05/30/24 04:41	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			05/30/24 04:41	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			05/30/24 04:41	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			05/30/24 04:41	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			05/30/24 04:41	1
Trichloroethene	ND		0.0010	0.00069	mg/L			05/30/24 04:41	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			05/30/24 04:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		47 - 122		05/30/24 04:41	1
Dibromofluoromethane (Surr)	95		52 - 138		05/30/24 04:41	1
1,2-Dichloroethane-d4 (Surr)	87		24 - 145		05/30/24 04:41	1
Toluene-d8 (Surr)	86		65 - 143		05/30/24 04:41	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

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

Lab Sample ID: MB 180-470086/5

Matrix: Water

Analysis Batch: 470086

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			05/29/24 20:10	1
Acrylonitrile	ND		0.020	0.0078	mg/L			05/29/24 20:10	1
Benzene	ND		0.0010	0.00060	mg/L			05/29/24 20:10	1
Bromoform	ND		0.0010	0.00098	mg/L			05/29/24 20:10	1
Bromomethane	ND		0.0010	0.00089	mg/L			05/29/24 20:10	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			05/29/24 20:10	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			05/29/24 20:10	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			05/29/24 20:10	1
Chloroethane	ND		0.0010	0.00090	mg/L			05/29/24 20:10	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			05/29/24 20:10	1
Chloroform	ND		0.0010	0.00060	mg/L			05/29/24 20:10	1
Chloromethane	ND		0.0010	0.00090	mg/L			05/29/24 20:10	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			05/29/24 20:10	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			05/29/24 20:10	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			05/29/24 20:10	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			05/29/24 20:10	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			05/29/24 20:10	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			05/29/24 20:10	1
1,4-Dioxane	ND		0.20	0.043	mg/L			05/29/24 20:10	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			05/29/24 20:10	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			05/29/24 20:10	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			05/29/24 20:10	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			05/29/24 20:10	1
Toluene	ND		0.0010	0.00046	mg/L			05/29/24 20:10	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			05/29/24 20:10	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			05/29/24 20:10	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			05/29/24 20:10	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			05/29/24 20:10	1
Trichloroethene	ND		0.0010	0.00069	mg/L			05/29/24 20:10	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			05/29/24 20:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		47 - 122		05/29/24 20:10	1
Dibromofluoromethane (Surr)	107		52 - 138		05/29/24 20:10	1
1,2-Dichloroethane-d4 (Surr)	93		24 - 145		05/29/24 20:10	1
Toluene-d8 (Surr)	89		65 - 143		05/29/24 20:10	1

Lab Sample ID: LCS 180-470086/14

Matrix: Water

Analysis Batch: 470086

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acrolein	0.0100	ND		mg/L		83	60 - 140
Acrylonitrile	0.100	0.108		mg/L		108	60 - 140
Benzene	0.0100	0.00995		mg/L		99	65 - 135
Bromoform	0.0100	0.0106		mg/L		106	70 - 130
Bromomethane	0.0100	0.0108		mg/L		108	15 - 170
Carbon tetrachloride	0.0100	0.00875		mg/L		87	70 - 130

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

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

Lab Sample ID: LCS 180-470086/14

Matrix: Water

Analysis Batch: 470086

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorobenzene	0.0100	0.0100		mg/L		100	65 - 135
Chlorodibromomethane	0.0100	0.00970		mg/L		97	70 - 135
Chloroethane	0.0100	0.0103		mg/L		103	40 - 160
2-Chloroethyl vinyl ether	0.0200	0.00624		mg/L		31	10 - 170
Chloroform	0.0100	0.00988		mg/L		99	70 - 135
Chloromethane	0.0100	0.00971		mg/L		97	10 - 170
cis-1,3-Dichloropropene	0.0100	0.00911		mg/L		91	25 - 170
Dichlorobromomethane	0.0100	0.00950		mg/L		95	65 - 135
1,1-Dichloroethane	0.0100	0.00981		mg/L		98	70 - 130
1,2-Dichloroethane	0.0100	0.00974		mg/L		97	70 - 130
1,1-Dichloroethene	0.0100	0.00883		mg/L		88	50 - 150
1,2-Dichloropropane	0.0100	0.0102		mg/L		102	35 - 165
1,4-Dioxane	0.200	0.368	++	mg/L		184	10 - 152
Ethylbenzene	0.0100	0.00935		mg/L		94	60 - 140
Methylene Chloride	0.0100	0.0104		mg/L		104	60 - 140
1,1,2,2-Tetrachloroethane	0.0100	0.0103		mg/L		103	60 - 140
Tetrachloroethene	0.0100	0.00939		mg/L		94	70 - 130
Toluene	0.0100	0.00942		mg/L		94	70 - 130
trans-1,2-Dichloroethene	0.0100	0.0100		mg/L		100	70 - 130
trans-1,3-Dichloropropene	0.0100	0.00811		mg/L		81	50 - 150
1,1,1-Trichloroethane	0.0100	0.00874		mg/L		87	70 - 130
1,1,2-Trichloroethane	0.0100	0.0103		mg/L		103	70 - 130
Trichloroethene	0.0100	0.00997		mg/L		100	65 - 135
Vinyl chloride	0.0100	0.00886		mg/L		89	10 - 170

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		47 - 122
Dibromofluoromethane (Surr)	111		52 - 138
1,2-Dichloroethane-d4 (Surr)	94		24 - 145
Toluene-d8 (Surr)	90		65 - 143

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 180-470299/1-A

Matrix: Water

Analysis Batch: 470839

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 470299

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.0010	0.00024	mg/L		05/31/24 11:22	06/07/24 11:44	1
1,2-Dichlorobenzene	ND		0.0010	0.00021	mg/L		05/31/24 11:22	06/07/24 11:44	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.0010	0.00020	mg/L		05/31/24 11:22	06/07/24 11:44	1
1,3-Dinitrobenzene	ND		0.0010	0.00046	mg/L		05/31/24 11:22	06/07/24 11:44	1
1,4-Dichlorobenzene	ND		0.0010	0.00024	mg/L		05/31/24 11:22	06/07/24 11:44	1
2,2'-oxybis[1-chloropropane]	ND		0.00019	0.000058	mg/L		05/31/24 11:22	06/07/24 11:44	1
2,4,6-Trichlorophenol	ND		0.0010	0.00022	mg/L		05/31/24 11:22	06/07/24 11:44	1
2,4-Dichlorophenol	ND		0.00019	0.000051	mg/L		05/31/24 11:22	06/07/24 11:44	1
2,4-Dimethylphenol	ND		0.0010	0.00059	mg/L		05/31/24 11:22	06/07/24 11:44	1
2,4-Dinitrophenol	ND		0.010	0.0033	mg/L		05/31/24 11:22	06/07/24 11:44	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-470299/1-A

Matrix: Water

Analysis Batch: 470839

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 470299

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		0.0010	0.00035	mg/L		05/31/24 11:22	06/07/24 11:44	1
2,6-Dinitrotoluene	ND		0.0010	0.00017	mg/L		05/31/24 11:22	06/07/24 11:44	1
2-Chloronaphthalene	ND		0.00019	0.000059	mg/L		05/31/24 11:22	06/07/24 11:44	1
2-Chlorophenol	ND		0.0010	0.00023	mg/L		05/31/24 11:22	06/07/24 11:44	1
2-Nitrophenol	ND		0.0010	0.00019	mg/L		05/31/24 11:22	06/07/24 11:44	1
3,3'-Dichlorobenzidine	ND		0.0010	0.00058	mg/L		05/31/24 11:22	06/07/24 11:44	1
4,6-Dinitro-2-methylphenol	ND		0.0050	0.0015	mg/L		05/31/24 11:22	06/07/24 11:44	1
4-Bromophenyl phenyl ether	ND		0.0010	0.00032	mg/L		05/31/24 11:22	06/07/24 11:44	1
4-Chloro-3-methylphenol	ND		0.0010	0.00044	mg/L		05/31/24 11:22	06/07/24 11:44	1
4-Chlorophenyl phenyl ether	ND		0.0010	0.00022	mg/L		05/31/24 11:22	06/07/24 11:44	1
4-Nitrophenol	ND		0.0050	0.00094	mg/L		05/31/24 11:22	06/07/24 11:44	1
Acenaphthene	ND		0.00019	0.000065	mg/L		05/31/24 11:22	06/07/24 11:44	1
Acenaphthylene	ND		0.00019	0.000065	mg/L		05/31/24 11:22	06/07/24 11:44	1
Acrylamide	ND		0.050	0.021	mg/L		05/31/24 11:22	06/07/24 11:44	1
Anthracene	ND		0.00019	0.000049	mg/L		05/31/24 11:22	06/07/24 11:44	1
Benzidine	ND		0.020	0.0091	mg/L		05/31/24 11:22	06/07/24 11:44	1
Benzo[a]anthracene	ND		0.00019	0.000075	mg/L		05/31/24 11:22	06/07/24 11:44	1
Benzo[a]pyrene	ND		0.00019	0.000053	mg/L		05/31/24 11:22	06/07/24 11:44	1
Benzo[b]fluoranthene	ND		0.00019	0.000097	mg/L		05/31/24 11:22	06/07/24 11:44	1
Benzo[g,h,i]perylene	ND		0.00019	0.000069	mg/L		05/31/24 11:22	06/07/24 11:44	1
Benzo[k]fluoranthene	ND		0.00019	0.000088	mg/L		05/31/24 11:22	06/07/24 11:44	1
Bis(2-chloroethoxy)methane	ND		0.0010	0.00015	mg/L		05/31/24 11:22	06/07/24 11:44	1
Bis(2-chloroethyl)ether	ND		0.00019	0.000040	mg/L		05/31/24 11:22	06/07/24 11:44	1
Bis(2-ethylhexyl) phthalate	ND		0.010	0.0062	mg/L		05/31/24 11:22	06/07/24 11:44	1
Butyl benzyl phthalate	ND		0.0020	0.00094	mg/L		05/31/24 11:22	06/07/24 11:44	1
Chrysene	ND		0.00019	0.000081	mg/L		05/31/24 11:22	06/07/24 11:44	1
Dibenz(a,h)anthracene	ND		0.00019	0.000072	mg/L		05/31/24 11:22	06/07/24 11:44	1
Diethyl phthalate	ND		0.0010	0.00057	mg/L		05/31/24 11:22	06/07/24 11:44	1
Dimethyl phthalate	ND		0.0020	0.00020	mg/L		05/31/24 11:22	06/07/24 11:44	1
Di-n-butyl phthalate	ND		0.010	0.0049	mg/L		05/31/24 11:22	06/07/24 11:44	1
Di-n-octyl phthalate	ND		0.0010	0.00069	mg/L		05/31/24 11:22	06/07/24 11:44	1
Fluoranthene	ND		0.00019	0.000060	mg/L		05/31/24 11:22	06/07/24 11:44	1
Fluorene	ND		0.00019	0.000069	mg/L		05/31/24 11:22	06/07/24 11:44	1
Hexachlorobenzene	ND		0.00019	0.000056	mg/L		05/31/24 11:22	06/07/24 11:44	1
Hexachlorobutadiene	ND		0.00019	0.000069	mg/L		05/31/24 11:22	06/07/24 11:44	1
Hexachlorocyclopentadiene	ND		0.0010	0.00050	mg/L		05/31/24 11:22	06/07/24 11:44	1
Hexachloroethane	ND		0.0010	0.00013	mg/L		05/31/24 11:22	06/07/24 11:44	1
Indeno[1,2,3-cd]pyrene	ND		0.00019	0.000085	mg/L		05/31/24 11:22	06/07/24 11:44	1
Isophorone	ND		0.0010	0.00019	mg/L		05/31/24 11:22	06/07/24 11:44	1
Naphthalene	ND		0.00019	0.000059	mg/L		05/31/24 11:22	06/07/24 11:44	1
Nitrobenzene	ND		0.0020	0.00050	mg/L		05/31/24 11:22	06/07/24 11:44	1
N-Nitrosodimethylamine	ND		0.0010	0.00026	mg/L		05/31/24 11:22	06/07/24 11:44	1
N-Nitrosodi-n-propylamine	ND		0.00019	0.000071	mg/L		05/31/24 11:22	06/07/24 11:44	1
N-Nitrosodiphenylamine	ND		0.0010	0.00012	mg/L		05/31/24 11:22	06/07/24 11:44	1
Pentachlorophenol	ND		0.0050	0.00085	mg/L		05/31/24 11:22	06/07/24 11:44	1
Phenanthrene	ND		0.00019	0.00016	mg/L		05/31/24 11:22	06/07/24 11:44	1
Phenol	ND		0.0010	0.00049	mg/L		05/31/24 11:22	06/07/24 11:44	1
Pyrene	ND		0.00019	0.000054	mg/L		05/31/24 11:22	06/07/24 11:44	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-470299/1-A

Matrix: Water

Analysis Batch: 470839

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 470299

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	58		42 - 115	05/31/24 11:22	06/07/24 11:44	1
2-Fluorobiphenyl	93		47 - 107	05/31/24 11:22	06/07/24 11:44	1
2-Fluorophenol (Surr)	85		54 - 109	05/31/24 11:22	06/07/24 11:44	1
Nitrobenzene-d5 (Surr)	91		47 - 110	05/31/24 11:22	06/07/24 11:44	1
Phenol-d5 (Surr)	87		37 - 110	05/31/24 11:22	06/07/24 11:44	1
Terphenyl-d14 (Surr)	93		32 - 115	05/31/24 11:22	06/07/24 11:44	1

Lab Sample ID: LCS 180-470299/2-A

Matrix: Water

Analysis Batch: 470839

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 470299

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	0.0100	0.00648		mg/L		65	52 - 142
1,2-Dichlorobenzene	0.0100	0.00730		mg/L		73	50 - 100
1,2-Diphenylhydrazine(as Azobenzene)	0.0100	0.00785		mg/L		79	40 - 116
1,3-Dinitrobenzene	0.0100	0.0111	*+	mg/L		111	54 - 100
1,4-Dichlorobenzene	0.0100	0.00846		mg/L		85	57 - 100
2,2'-oxybis[1-chloropropane]	0.0100	0.00769		mg/L		77	36 - 150
2,4,6-Trichlorophenol	0.0100	0.00957		mg/L		96	37 - 144
2,4-Dichlorophenol	0.0100	0.00695		mg/L		69	39 - 135
2,4-Dimethylphenol	0.0100	0.00767		mg/L		77	32 - 120
2,4-Dinitrophenol	0.0200	0.0158		mg/L		79	10 - 150
2,4-Dinitrotoluene	0.0100	0.00890		mg/L		89	39 - 139
2,6-Dinitrotoluene	0.0100	0.00875		mg/L		87	50 - 150
2-Chloronaphthalene	0.0100	0.00858		mg/L		86	60 - 120
2-Chlorophenol	0.0100	0.00730		mg/L		73	23 - 134
2-Nitrophenol	0.0100	0.00698		mg/L		70	57 - 150
3,3'-Dichlorobenzidine	0.0100	0.00882		mg/L		88	44 - 150
4,6-Dinitro-2-methylphenol	0.0200	0.0164		mg/L		82	43 - 150
4-Bromophenyl phenyl ether	0.0100	0.00787		mg/L		79	53 - 127
4-Chloro-3-methylphenol	0.0100	0.00777		mg/L		78	54 - 147
4-Chlorophenyl phenyl ether	0.0100	0.00989		mg/L		99	25 - 150
4-Nitrophenol	0.0200	0.0150		mg/L		75	10 - 132
Acenaphthene	0.0100	0.00823		mg/L		82	47 - 145
Acenaphthylene	0.0100	0.00876		mg/L		88	33 - 145
Anthracene	0.0100	0.00738		mg/L		74	27 - 133
Benzidine	0.0100	ND		mg/L		77	5 - 100
Benzo[a]anthracene	0.0100	0.00836		mg/L		84	33 - 143
Benzo[a]pyrene	0.0100	0.00798		mg/L		80	17 - 150
Benzo[b]fluoranthene	0.0100	0.00770		mg/L		77	24 - 150
Benzo[g,h,i]perylene	0.0100	0.00792		mg/L		79	10 - 150
Benzo[k]fluoranthene	0.0100	0.00750		mg/L		75	11 - 150
Bis(2-chloroethoxy)methane	0.0100	0.00665		mg/L		67	33 - 150
Bis(2-chloroethyl)ether	0.0100	0.00733		mg/L		73	12 - 150
Bis(2-ethylhexyl) phthalate	0.0100	0.00881	J	mg/L		88	10 - 150
Butyl benzyl phthalate	0.0100	0.00816		mg/L		82	10 - 150
Chrysene	0.0100	0.00802		mg/L		80	17 - 150
Dibenz(a,h)anthracene	0.0100	0.00864		mg/L		86	10 - 150

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-470299/2-A

Matrix: Water

Analysis Batch: 470839

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 470299

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diethyl phthalate	0.0100	0.0103		mg/L		103	10 - 120
Dimethyl phthalate	0.0100	0.00829		mg/L		83	10 - 120
Di-n-butyl phthalate	0.0100	0.00747	J	mg/L		75	10 - 120
Di-n-octyl phthalate	0.0100	0.00944		mg/L		94	10 - 146
Fluoranthene	0.0100	0.00769		mg/L		77	26 - 137
Fluorene	0.0100	0.00944		mg/L		94	59 - 121
Hexachlorobenzene	0.0100	0.00835		mg/L		84	10 - 150
Hexachlorobutadiene	0.0100	0.00797		mg/L		80	24 - 120
Hexachlorocyclopentadiene	0.0100	0.0100		mg/L		100	37 - 121
Hexachloroethane	0.0100	0.00714		mg/L		71	40 - 120
Indeno[1,2,3-cd]pyrene	0.0100	0.00834		mg/L		83	10 - 150
Isophorone	0.0100	0.00626		mg/L		63	21 - 150
Naphthalene	0.0100	0.00774		mg/L		77	21 - 133
Nitrobenzene	0.0100	0.00696		mg/L		70	35 - 150
N-Nitrosodimethylamine	0.0100	0.00681		mg/L		68	50 - 109
N-Nitrosodi-n-propylamine	0.0100	0.00693		mg/L		69	10 - 150
N-Nitrosodiphenylamine	0.0100	0.00818		mg/L		82	51 - 100
Pentachlorophenol	0.0200	0.0131		mg/L		65	14 - 150
Phenanthrene	0.0100	0.00762		mg/L		76	54 - 120
Phenol	0.0100	0.00700		mg/L		70	10 - 120
Pyrene	0.0100	0.00754		mg/L		75	52 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	78		42 - 115
2-Fluorobiphenyl	92		47 - 107
2-Fluorophenol (Surr)	70		54 - 109
Nitrobenzene-d5 (Surr)	67		47 - 110
Phenol-d5 (Surr)	74		37 - 110
Terphenyl-d14 (Surr)	65		32 - 115

Lab Sample ID: LCSD 180-470299/3-A

Matrix: Water

Analysis Batch: 470839

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 470299

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	0.0100	0.00839	*1	mg/L		84	52 - 142	26	16
1,2-Dichlorobenzene	0.0100	0.00903	*1	mg/L		90	50 - 100	21	15
1,2-Diphenylhydrazine(as Azobenzene)	0.0100	0.00794		mg/L		79	40 - 116	1	19
1,3-Dinitrobenzene	0.0100	0.00889	*1	mg/L		89	54 - 100	22	15
1,4-Dichlorobenzene	0.0100	0.00893		mg/L		89	57 - 100	5	15
2,2'-oxybis[1-chloropropane]	0.0100	0.00905		mg/L		90	36 - 150	16	35
2,4,6-Trichlorophenol	0.0100	0.00822		mg/L		82	37 - 144	15	35
2,4-Dichlorophenol	0.0100	0.00863		mg/L		86	39 - 135	22	35
2,4-Dimethylphenol	0.0100	0.00875		mg/L		88	32 - 120	13	35
2,4-Dinitrophenol	0.0200	0.0145		mg/L		73	10 - 150	8	35
2,4-Dinitrotoluene	0.0100	0.00845		mg/L		84	39 - 139	5	35
2,6-Dinitrotoluene	0.0100	0.00806		mg/L		81	50 - 150	8	35
2-Chloronaphthalene	0.0100	0.00786		mg/L		79	60 - 120	9	24

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 180-470299/3-A

Matrix: Water

Analysis Batch: 470839

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 470299

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Chlorophenol	0.0100	0.00905		mg/L		91	23 - 134	21	34
2-Nitrophenol	0.0100	0.00855	*1	mg/L		86	57 - 150	20	17
3,3'-Dichlorobenzidine	0.0100	0.00864		mg/L		86	44 - 150	2	19
4,6-Dinitro-2-methylphenol	0.0200	0.0165		mg/L		83	43 - 150	1	21
4-Bromophenyl phenyl ether	0.0100	0.00837		mg/L		84	53 - 127	6	20
4-Chloro-3-methylphenol	0.0100	0.00891		mg/L		89	54 - 147	14	35
4-Chlorophenyl phenyl ether	0.0100	0.00815		mg/L		81	25 - 150	19	35
4-Nitrophenol	0.0200	0.0167		mg/L		84	10 - 132	11	35
Acenaphthene	0.0100	0.00742		mg/L		74	47 - 145	10	35
Acenaphthylene	0.0100	0.00809		mg/L		81	33 - 145	8	35
Anthracene	0.0100	0.00790		mg/L		79	27 - 133	7	35
Benzidine	0.0100	ND		mg/L		85	5 - 100	10	35
Benzo[a]anthracene	0.0100	0.00829		mg/L		83	33 - 143	1	35
Benzo[a]pyrene	0.0100	0.00806		mg/L		81	17 - 150	1	35
Benzo[b]fluoranthene	0.0100	0.00844		mg/L		84	24 - 150	9	35
Benzo[g,h,i]perylene	0.0100	0.00752		mg/L		75	10 - 150	5	35
Benzo[k]fluoranthene	0.0100	0.00737		mg/L		74	11 - 150	2	35
Bis(2-chloroethoxy)methane	0.0100	0.00811		mg/L		81	33 - 150	20	35
Bis(2-chloroethyl)ether	0.0100	0.00823		mg/L		82	12 - 150	12	35
Bis(2-ethylhexyl) phthalate	0.0100	0.00888	J	mg/L		89	10 - 150	1	35
Butyl benzyl phthalate	0.0100	0.00932		mg/L		93	10 - 150	13	35
Chrysene	0.0100	0.00775		mg/L		77	17 - 150	3	35
Dibenz(a,h)anthracene	0.0100	0.00784		mg/L		78	10 - 150	10	35
Diethyl phthalate	0.0100	0.00822		mg/L		82	10 - 120	22	35
Dimethyl phthalate	0.0100	0.00800		mg/L		80	10 - 120	4	35
Di-n-butyl phthalate	0.0100	0.00839	J	mg/L		84	10 - 120	12	35
Di-n-octyl phthalate	0.0100	0.00946		mg/L		95	10 - 146	0	35
Fluoranthene	0.0100	0.00851		mg/L		85	26 - 137	10	35
Fluorene	0.0100	0.00788		mg/L		79	59 - 121	18	35
Hexachlorobenzene	0.0100	0.00790		mg/L		79	10 - 150	6	35
Hexachlorobutadiene	0.0100	0.00932		mg/L		93	24 - 120	16	35
Hexachlorocyclopentadiene	0.0100	0.00803	*1	mg/L		80	37 - 121	22	15
Hexachloroethane	0.0100	0.00907		mg/L		91	40 - 120	24	35
Indeno[1,2,3-cd]pyrene	0.0100	0.00773		mg/L		77	10 - 150	8	35
Isophorone	0.0100	0.00799		mg/L		80	21 - 150	24	35
Naphthalene	0.0100	0.00836		mg/L		84	21 - 133	8	35
Nitrobenzene	0.0100	0.00805		mg/L		81	35 - 150	15	35
N-Nitrosodimethylamine	0.0100	0.00773		mg/L		77	50 - 109	13	19
N-Nitrosodi-n-propylamine	0.0100	0.00929		mg/L		93	10 - 150	29	35
N-Nitrosodiphenylamine	0.0100	0.00797		mg/L		80	51 - 100	3	20
Pentachlorophenol	0.0200	0.0142		mg/L		71	14 - 150	8	35
Phenanthrene	0.0100	0.00777		mg/L		78	54 - 120	2	35
Phenol	0.0100	0.00872		mg/L		87	10 - 120	22	35
Pyrene	0.0100	0.00799		mg/L		80	52 - 120	6	35

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2,4,6-Tribromophenol (Surr)	82		42 - 115
2-Fluorobiphenyl	80		47 - 107

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 180-470299/3-A

Matrix: Water

Analysis Batch: 470839

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 470299

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorophenol (Surr)	87		54 - 109
Nitrobenzene-d5 (Surr)	85		47 - 110
Phenol-d5 (Surr)	85		37 - 110
Terphenyl-d14 (Surr)	72		32 - 115

Method: EPA 608.3 - Organochlorine Pesticides in Water

Lab Sample ID: MB 180-470106/1-A

Matrix: Water

Analysis Batch: 470236

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 470106

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 07:20	1
alpha-BHC	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 07:20	1
beta-BHC	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 07:20	1
gamma-BHC (Lindane)	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 07:20	1
delta-BHC	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 07:20	1
Chlordane (technical)	ND		0.000013	0.0000073	mg/L		05/30/24 05:43	05/31/24 07:20	1
4,4'-DDD	ND		0.0000013	0.0000005	mg/L		05/30/24 05:43	05/31/24 07:20	1
4,4'-DDE	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 07:20	1
4,4'-DDT	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 07:20	1
Dieldrin	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 07:20	1
Endosulfan I	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 07:20	1
Endosulfan II	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 07:20	1
Endosulfan sulfate	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 07:20	1
Endrin	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 07:20	1
Endrin aldehyde	ND		0.0000013	0.0000005	mg/L		05/30/24 05:43	05/31/24 07:20	1
Heptachlor	ND		0.0000013	0.0000004	mg/L		05/30/24 05:43	05/31/24 07:20	1
Heptachlor epoxide	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 07:20	1
Toxaphene	ND		0.00010	0.000049	mg/L		05/30/24 05:43	05/31/24 07:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	99		20 - 138	05/30/24 05:43	05/31/24 07:20	1
Tetrachloro-m-xylene (Surr)	103		20 - 138	05/30/24 05:43	05/31/24 07:20	1
DCB Decachlorobiphenyl (Surr)	100		43 - 143	05/30/24 05:43	05/31/24 07:20	1
DCB Decachlorobiphenyl (Surr)	99		43 - 143	05/30/24 05:43	05/31/24 07:20	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Method: EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: LCS 180-470106/2-A

Matrix: Water

Analysis Batch: 470236

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 470106

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aldrin	0.0000250	0.0000226		mg/L		90	42 - 140
alpha-BHC	0.0000250	0.0000222		mg/L		89	37 - 140
beta-BHC	0.0000250	0.0000238		mg/L		95	17 - 147
gamma-BHC (Lindane)	0.0000250	0.0000235		mg/L		94	32 - 140
delta-BHC	0.0000250	0.0000129		mg/L		52	19 - 140
4,4'-DDD	0.0000250	0.0000228		mg/L		91	31 - 141
4,4'-DDE	0.0000250	0.0000247		mg/L		99	30 - 145
4,4'-DDT	0.0000250	0.0000244		mg/L		98	25 - 150
Dieldrin	0.0000250	0.0000233		mg/L		93	36 - 146
Endosulfan I	0.0000250	0.0000222		mg/L		89	45 - 150
Endosulfan II	0.0000250	0.0000235		mg/L		94	10 - 150
Endosulfan sulfate	0.0000250	0.0000208		mg/L		83	26 - 144
Endrin	0.0000250	0.0000245		mg/L		98	30 - 147
Endrin aldehyde	0.0000250	0.0000260		mg/L		104	51 - 113
Heptachlor	0.0000250	0.0000232		mg/L		93	34 - 140
Heptachlor epoxide	0.0000250	0.0000225		mg/L		90	37 - 142

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene (Surr)	104		20 - 138
Tetrachloro-m-xylene (Surr)	103		20 - 138
DCB Decachlorobiphenyl (Surr)	104		43 - 143
DCB Decachlorobiphenyl (Surr)	100		43 - 143

Lab Sample ID: LCSD 180-470106/3-A

Matrix: Water

Analysis Batch: 470236

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 470106

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Aldrin	0.0000250	0.0000220		mg/L		88	42 - 140	2	35
alpha-BHC	0.0000250	0.0000214		mg/L		86	37 - 140	3	35
beta-BHC	0.0000250	0.0000232		mg/L		93	17 - 147	2	35
gamma-BHC (Lindane)	0.0000250	0.0000229		mg/L		92	32 - 140	2	35
delta-BHC	0.0000250	0.0000123		mg/L		49	19 - 140	4	35
4,4'-DDD	0.0000250	0.0000223		mg/L		89	31 - 141	2	35
4,4'-DDE	0.0000250	0.0000244		mg/L		98	30 - 145	1	35
4,4'-DDT	0.0000250	0.0000237		mg/L		95	25 - 150	3	35
Dieldrin	0.0000250	0.0000231		mg/L		92	36 - 146	1	35
Endosulfan I	0.0000250	0.0000222		mg/L		89	45 - 150	0	28
Endosulfan II	0.0000250	0.0000233		mg/L		93	10 - 150	1	35
Endosulfan sulfate	0.0000250	0.0000201		mg/L		80	26 - 144	3	35
Endrin	0.0000250	0.0000240		mg/L		96	30 - 147	2	35
Endrin aldehyde	0.0000250	0.0000255		mg/L		102	51 - 113	2	26
Heptachlor	0.0000250	0.0000227		mg/L		91	34 - 140	2	35
Heptachlor epoxide	0.0000250	0.0000220		mg/L		88	37 - 142	2	26

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene (Surr)	97		20 - 138
Tetrachloro-m-xylene (Surr)	100		20 - 138

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Method: EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: LCSD 180-470106/3-A

Matrix: Water

Analysis Batch: 470236

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 470106

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	101		43 - 143
DCB Decachlorobiphenyl (Surr)	100		43 - 143

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

Lab Sample ID: MB 180-470106/1-A

Matrix: Water

Analysis Batch: 470233

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 470106

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Result	Qualifier								
PCB-1016	ND		0.000010	0.0000048	mg/L		05/30/24 05:43	05/31/24 08:12	1
PCB-1221	ND		0.000010	0.0000057	mg/L		05/30/24 05:43	05/31/24 08:12	1
PCB-1232	ND		0.000010	0.0000052	mg/L		05/30/24 05:43	05/31/24 08:12	1
PCB-1242	ND		0.000010	0.0000091	mg/L		05/30/24 05:43	05/31/24 08:12	1
PCB-1248	ND		0.000010	0.0000030	mg/L		05/30/24 05:43	05/31/24 08:12	1
PCB-1254	ND		0.000010	0.0000095	mg/L		05/30/24 05:43	05/31/24 08:12	1
PCB-1260	ND		0.000010	0.0000039	mg/L		05/30/24 05:43	05/31/24 08:12	1

	MB	MB					Prepared	Analyzed	Dil Fac
Surrogate	%Recovery	Qualifier	Limits						
Tetrachloro-m-xylene (Surr)	101		20 - 138				05/30/24 05:43	05/31/24 08:12	1
Tetrachloro-m-xylene (Surr)	104		20 - 138				05/30/24 05:43	05/31/24 08:12	1
DCB Decachlorobiphenyl (Surr)	100		43 - 143				05/30/24 05:43	05/31/24 08:12	1
DCB Decachlorobiphenyl (Surr)	103		43 - 143				05/30/24 05:43	05/31/24 08:12	1

Lab Sample ID: LCS 180-470106/4-A

Matrix: Water

Analysis Batch: 470233

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 470106

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	Limits
Added	Result	Qualifier						
PCB-1016	0.00100	0.000906		mg/L		91		50 - 140
PCB-1260	0.00100	0.000909		mg/L		91		10 - 140

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene (Surr)	99		20 - 138
Tetrachloro-m-xylene (Surr)	99		20 - 138
DCB Decachlorobiphenyl (Surr)	96		43 - 143
DCB Decachlorobiphenyl (Surr)	100		43 - 143

Lab Sample ID: LCSD 180-470106/5-A

Matrix: Water

Analysis Batch: 470233

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 470106

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	RPD
Added	Result	Qualifier						Limit	
PCB-1016	0.00100	0.000910		mg/L		91		50 - 140	35
PCB-1260	0.00100	0.000931		mg/L		93		10 - 140	2 35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene (Surr)	100		20 - 138

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

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

Lab Sample ID: LCSD 180-470106/5-A

Matrix: Water

Analysis Batch: 470233

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 470106

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene (Surr)	98		20 - 138
DCB Decachlorobiphenyl (Surr)	94		43 - 143
DCB Decachlorobiphenyl (Surr)	103		43 - 143

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-470170/46

Matrix: Water

Analysis Batch: 470170

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			05/31/24 00:15	1
Chloride	ND		1.00	0.712	mg/L			05/31/24 00:15	1
Fluoride	ND		0.100	0.0260	mg/L			05/31/24 00:15	1
Sulfate	ND		1.00	0.756	mg/L			05/31/24 00:15	1

Lab Sample ID: LCS 180-470170/47

Matrix: Water

Analysis Batch: 470170

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	10.0	10.38		mg/L		104	90 - 110
Chloride	50.0	49.97		mg/L		100	90 - 110
Fluoride	2.50	2.558		mg/L		102	90 - 110
Sulfate	50.0	49.68		mg/L		99	90 - 110

Lab Sample ID: 180-174639-1 MS

Matrix: Water

Analysis Batch: 470170

Client Sample ID: 017

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	ND		10.0	10.45		mg/L		105	90 - 110
Chloride	18.0		50.0	67.12		mg/L		98	90 - 110
Fluoride	0.173		2.50	2.712		mg/L		102	90 - 110
Sulfate	49.1		50.0	96.23		mg/L		94	90 - 110

Lab Sample ID: 180-174639-1 MSD

Matrix: Water

Analysis Batch: 470170

Client Sample ID: 017

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	ND		10.0	10.41		mg/L		104	90 - 110	0	20
Chloride	18.0		50.0	66.95		mg/L		98	90 - 110	0	20
Fluoride	0.173		2.50	2.695		mg/L		101	90 - 110	1	20
Sulfate	49.1		50.0	95.46		mg/L		93	90 - 110	1	20

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Method: 200.8-1994 R5.4 - Metals (ICP/MS)

Lab Sample ID: MB 240-615260/1-A
Matrix: Water
Analysis Batch: 615494

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 615260

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.053	ug/L		06/03/24 14:00	06/04/24 20:29	1
Aluminum	ND		50	34	ug/L		06/03/24 14:00	06/04/24 20:29	1
Arsenic	ND		5.0	0.75	ug/L		06/03/24 14:00	06/04/24 20:29	1
Barium	ND		5.0	2.2	ug/L		06/03/24 14:00	06/04/24 20:29	1
Beryllium	ND		1.0	0.62	ug/L		06/03/24 14:00	06/04/24 20:29	1
Calcium	ND		1000	250	ug/L		06/03/24 14:00	06/04/24 20:29	1
Cadmium	ND		1.0	0.20	ug/L		06/03/24 14:00	06/04/24 20:29	1
Cobalt	ND		1.0	0.19	ug/L		06/03/24 14:00	06/04/24 20:29	1
Chromium	ND		5.0	1.2	ug/L		06/03/24 14:00	06/04/24 20:29	1
Copper	ND		2.0	1.7	ug/L		06/03/24 14:00	06/04/24 20:29	1
Magnesium	ND		1000	61	ug/L		06/03/24 14:00	06/04/24 20:29	1
Manganese	ND		5.0	3.5	ug/L		06/03/24 14:00	06/04/24 20:29	1
Molybdenum	ND		5.0	1.1	ug/L		06/03/24 14:00	06/04/24 20:29	1
Nickel	ND		2.0	1.5	ug/L		06/03/24 14:00	06/04/24 20:29	1
Lead	ND		1.0	0.45	ug/L		06/03/24 14:00	06/04/24 20:29	1
Antimony	ND		2.0	0.57	ug/L		06/03/24 14:00	06/04/24 20:29	1
Selenium	ND		5.0	0.89	ug/L		06/03/24 14:00	06/04/24 20:29	1
Thallium	ND		1.0	0.20	ug/L		06/03/24 14:00	06/04/24 20:29	1
Zinc	ND		20	15	ug/L		06/03/24 14:00	06/04/24 20:29	1

Lab Sample ID: MB 240-615260/1-A
Matrix: Water
Analysis Batch: 615659

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 615260

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		20	16	ug/L		06/03/24 14:00	06/05/24 10:39	1
Iron	ND		100	47	ug/L		06/03/24 14:00	06/05/24 10:39	1

Lab Sample ID: LCS 240-615260/2-A
Matrix: Water
Analysis Batch: 615494

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 615260

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	100	96.8		ug/L		97	85 - 115
Aluminum	5000	4330		ug/L		87	85 - 115
Arsenic	1000	893		ug/L		89	85 - 115
Barium	1000	954		ug/L		95	85 - 115
Beryllium	500	436		ug/L		87	85 - 115
Calcium	25000	23900		ug/L		95	85 - 115
Cadmium	500	484		ug/L		97	85 - 115
Cobalt	500	451		ug/L		90	85 - 115
Chromium	500	496		ug/L		99	85 - 115
Copper	500	456		ug/L		91	85 - 115
Magnesium	25000	24200		ug/L		97	85 - 115
Manganese	500	491		ug/L		98	85 - 115
Molybdenum	500	466		ug/L		93	85 - 115
Nickel	500	451		ug/L		90	85 - 115
Lead	500	494		ug/L		99	85 - 115
Antimony	100	97.1		ug/L		97	85 - 115

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Method: 200.8-1994 R5.4 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-615260/2-A
Matrix: Water
Analysis Batch: 615494

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 615260

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Selenium	1000	880		ug/L		88	85 - 115
Thallium	1000	1020		ug/L		102	85 - 115
Zinc	500	442		ug/L		88	85 - 115

Lab Sample ID: LCS 240-615260/2-A
Matrix: Water
Analysis Batch: 615659

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 615260

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	100	96.5		ug/L		97	85 - 115
Iron	5000	4930		ug/L		99	85 - 115

Method: EPA 245.1 Rev. - Mercury (CVAA)

Lab Sample ID: MB 180-470201/1-A
Matrix: Water
Analysis Batch: 470316

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 470201

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/31/24 06:00	05/31/24 11:22	1

Lab Sample ID: LCS 180-470201/2-A
Matrix: Water
Analysis Batch: 470316

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 470201

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00250	0.00255		mg/L		102	85 - 115

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

Lab Sample ID: MB 180-470191/12
Matrix: Water
Analysis Batch: 470191

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0060	mg/L			05/29/24 10:02	1

Lab Sample ID: LCS 180-470191/13
Matrix: Water
Analysis Batch: 470191

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	0.500	0.537		mg/L		107	85 - 115

Lab Sample ID: 180-174639-2 MS
Matrix: Water
Analysis Batch: 470191

Client Sample ID: 019
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	ND		0.500	0.454		mg/L		91	85 - 115

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

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

Lab Sample ID: 180-174639-2 MSD

Matrix: Water

Analysis Batch: 470191

Client Sample ID: 019

Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cr (VI)	ND		0.500	0.452		mg/L		90	85 - 115	0	20

Method: 4500 H+ B-2000 - pH - SM Online, 2011

Lab Sample ID: LCS 180-470334/1

Matrix: Water

Analysis Batch: 470334

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-470334/24

Matrix: Water

Analysis Batch: 470334

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: 180-174639-1 DU

Matrix: Water

Analysis Batch: 470334

Client Sample ID: 017

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.8	HF	7.8		SU		0.6	2
Temperature	20.7	HF !	20.6		Degrees C		0.5	5

Method: 4500 S2 F-2011 - Sulfide, Total

Lab Sample ID: MB 180-470227/4

Matrix: Water

Analysis Batch: 470227

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		3.0	1.3	mg/L			05/30/24 17:42	1

Lab Sample ID: LCS 180-470227/3

Matrix: Water

Analysis Batch: 470227

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	16.9	16.8		mg/L		99	90 - 110

Method: 5310 C-2014 - Total Organic Carbon/Persulfate - Ultrav

Lab Sample ID: MB 180-470672/5

Matrix: Water

Analysis Batch: 470672

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Quad	ND		1.0	0.51	mg/L			06/04/24 13:05	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Method: 5310 C-2014 - Total Organic Carbon/Persulfate - Ultrav (Continued)

Lab Sample ID: LCS 180-470672/4

Matrix: Water

Analysis Batch: 470672

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon - Quad	20.0	19.8		mg/L		99	85 - 115

Lab Sample ID: 180-174639-1 MS

Matrix: Water

Analysis Batch: 470672

Client Sample ID: 017

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon - Quad	4.4	FL	10.0	5.56	FL	mg/L		11	85 - 115

Lab Sample ID: 180-174639-2 DU

Matrix: Water

Analysis Batch: 470672

Client Sample ID: 019

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon - Quad	2.8		2.76		mg/L		1	15

Method: 5540C - 2011 - Methylene Blue Active Substant (MBAS)

Lab Sample ID: MB 180-470141/2

Matrix: Water

Analysis Batch: 470141

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Blue Active Substances	ND		0.050	0.049	mg/l LAS MW 340			05/29/24 15:18	1

Lab Sample ID: LCS 180-470141/3

Matrix: Water

Analysis Batch: 470141

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methylene Blue Active Substances	0.500	0.506		mg/l LAS MW 340		101	90 - 110

Method: EPA 1664B - HEM and SGT-HEM

Lab Sample ID: MB 180-470395/1-A

Matrix: Water

Analysis Batch: 470420

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 470395

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		5.0	4.3	mg/L		06/03/24 07:27	06/03/24 09:22	1

Lab Sample ID: LCS 180-470395/2-A

Matrix: Water

Analysis Batch: 470420

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 470395

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HEM (Oil & Grease)	40.1	33.2		mg/L		83	78 - 114

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

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

Lab Sample ID: LCSD 180-470395/3-A

Matrix: Water

Analysis Batch: 470420

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 470395

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HEM (Oil & Grease)	40.1	33.1		mg/L		83	78 - 114	0	18

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-470476/49

Matrix: Water

Analysis Batch: 470476

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.10	0.088	mg/L			06/03/24 13:04	1

Lab Sample ID: LCS 180-470476/53

Matrix: Water

Analysis Batch: 470476

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Ammonia	0.500	0.538		mg/L		108	90 - 110		

Lab Sample ID: 180-174639-1 MS

Matrix: Water

Analysis Batch: 470476

Client Sample ID: 017

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Ammonia	0.16	FL	0.500	0.552	FL	mg/L		79	90 - 110		

Lab Sample ID: 180-174639-1 MSD

Matrix: Water

Analysis Batch: 470476

Client Sample ID: 017

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia	0.16	FL	0.500	0.552	FL	mg/L		79	90 - 110	0	20

Method: EPA 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 180-470450/20

Matrix: Water

Analysis Batch: 470450

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.10	0.065	mg/L			06/03/24 08:59	1

Lab Sample ID: LCS 180-470450/21

Matrix: Water

Analysis Batch: 470450

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrate Nitrite as N	2.00	2.00		mg/L		100	90 - 110		

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Method: EPA 410.4 - COD

Lab Sample ID: MB 180-470317/36-A
Matrix: Water
Analysis Batch: 470339

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 470317

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	9.1	mg/L		05/31/24 12:22	05/31/24 15:23	1

Lab Sample ID: LCS 180-470317/35-A
Matrix: Water
Analysis Batch: 470339

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 470317

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	75.0	69.8		mg/L		93	90 - 110

Method: SM 2120B - Color, Colorimetric

Lab Sample ID: MB 180-470224/1
Matrix: Water
Analysis Batch: 470224

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Color, Apparent	ND		5.0	5.0	Color Units			05/30/24 08:07	1
Color, True	ND		5.0	5.0	Color Units			05/30/24 08:07	1
pH at time of analysis	NA		0.10	0.10	SU			05/30/24 08:07	1

Lab Sample ID: LCS 180-470224/2
Matrix: Water
Analysis Batch: 470224

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Color, Apparent	40.0	40.0		Color Units		100	90 - 110
Color, True	40.0	40.0		Color Units		100	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-470218/1
Matrix: Water
Analysis Batch: 470218

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			05/30/24 14:30	1

Lab Sample ID: LCS 180-470218/2
Matrix: Water
Analysis Batch: 470218

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	417	406		mg/L		97	85 - 115

Lab Sample ID: 180-174639-1 DU
Matrix: Water
Analysis Batch: 470218

Client Sample ID: 017
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	230		212		mg/L		10	10

Eurofins Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

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

Lab Sample ID: MB 180-470164/2

Matrix: Water

Analysis Batch: 470164

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		0.50	0.50	mg/L			05/30/24 09:19	1

Lab Sample ID: LCS 180-470164/1

Matrix: Water

Analysis Batch: 470164

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	49.0	54.0		mg/L		110	85 - 115

Method: SM 5210B - 5 Day BOD test

Lab Sample ID: USB 180-470447/1

Matrix: Water

Analysis Batch: 470447

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	ND		2.0	2.0	mg/L			05/29/24 13:06	1

Lab Sample ID: LCS 180-470447/2

Matrix: Water

Analysis Batch: 470447

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	198	185		mg/L		93	85 - 115

Lab Sample ID: USB 180-470529/1

Matrix: Water

Analysis Batch: 470529

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	ND		20	20	mg/L			05/30/24 11:27	1

Lab Sample ID: LCS 180-470529/2

Matrix: Water

Analysis Batch: 470529

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	198	182		mg/L		92	85 - 115

Method: TKN_TPhos - EPA 351.2 1993 R2/365.4 1974

Lab Sample ID: MB 180-470241/7-A

Matrix: Water

Analysis Batch: 470414

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 470241

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	ND		0.50	0.12	mg/L as N		05/31/24 06:25	06/03/24 06:38	1
Phosphorus, Total	ND		0.10	0.040	mg/L as P		05/31/24 06:25	06/03/24 06:38	1

Eurofins Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

Method: TKN_TPhos - EPA 351.2 1993 R2/365.4 1974 (Continued)

Lab Sample ID: LCS 180-470241/8-A
Matrix: Water
Analysis Batch: 470414

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 470241

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	2.50	2.64		mg/L as N		105	90 - 110
Phosphorus, Total	2.50	2.28		mg/L as P		91	90 - 110

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

GC/MS VOA

Analysis Batch: 470086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	EPA 624.1	
180-174639-2	019	Total/NA	Water	EPA 624.1	
180-174639-3	TRIP BLANK	Total/NA	Water	EPA 624.1	
MB 180-470086/5	Method Blank	Total/NA	Water	EPA 624.1	
LCS 180-470086/14	Lab Control Sample	Total/NA	Water	EPA 624.1	

GC/MS Semi VOA

Prep Batch: 470299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	625	
180-174639-2	019	Total/NA	Water	625	
MB 180-470299/1-A	Method Blank	Total/NA	Water	625	
LCS 180-470299/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 180-470299/3-A	Lab Control Sample Dup	Total/NA	Water	625	

Analysis Batch: 470839

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	EPA 625.1	470299
180-174639-2	019	Total/NA	Water	EPA 625.1	470299
MB 180-470299/1-A	Method Blank	Total/NA	Water	EPA 625.1	470299
LCS 180-470299/2-A	Lab Control Sample	Total/NA	Water	EPA 625.1	470299
LCSD 180-470299/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 625.1	470299

GC Semi VOA

Prep Batch: 470106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	608	
180-174639-2	019	Total/NA	Water	608	
MB 180-470106/1-A	Method Blank	Total/NA	Water	608	
LCS 180-470106/2-A	Lab Control Sample	Total/NA	Water	608	
LCS 180-470106/4-A	Lab Control Sample	Total/NA	Water	608	
LCSD 180-470106/3-A	Lab Control Sample Dup	Total/NA	Water	608	
LCSD 180-470106/5-A	Lab Control Sample Dup	Total/NA	Water	608	

Analysis Batch: 470233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	EPA 608.3	470106
180-174639-2	019	Total/NA	Water	EPA 608.3	470106
MB 180-470106/1-A	Method Blank	Total/NA	Water	EPA 608.3	470106
LCS 180-470106/4-A	Lab Control Sample	Total/NA	Water	EPA 608.3	470106
LCSD 180-470106/5-A	Lab Control Sample Dup	Total/NA	Water	EPA 608.3	470106

Analysis Batch: 470236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	EPA 608.3	470106
180-174639-2	019	Total/NA	Water	EPA 608.3	470106
MB 180-470106/1-A	Method Blank	Total/NA	Water	EPA 608.3	470106
LCS 180-470106/2-A	Lab Control Sample	Total/NA	Water	EPA 608.3	470106
LCSD 180-470106/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 608.3	470106

Eurofins Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

HPLC/IC

Analysis Batch: 470170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	EPA 300.0 R2.1	
180-174639-2	019	Total/NA	Water	EPA 300.0 R2.1	
MB 180-470170/46	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-470170/47	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-174639-1 MS	017	Total/NA	Water	EPA 300.0 R2.1	
180-174639-1 MSD	017	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 470201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	245.1	
180-174639-2	019	Total/NA	Water	245.1	
MB 180-470201/1-A	Method Blank	Total/NA	Water	245.1	
LCS 180-470201/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 470316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	EPA 245.1 Rev.	470201
180-174639-2	019	Total/NA	Water	EPA 245.1 Rev.	470201
MB 180-470201/1-A	Method Blank	Total/NA	Water	EPA 245.1 Rev.	470201
LCS 180-470201/2-A	Lab Control Sample	Total/NA	Water	EPA 245.1 Rev.	470201

Prep Batch: 615260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total Recoverable	Water	200.8-1994 R5.4	
180-174639-2	019	Total Recoverable	Water	200.8-1994 R5.4	
MB 240-615260/1-A	Method Blank	Total Recoverable	Water	200.8-1994 R5.4	
LCS 240-615260/2-A	Lab Control Sample	Total Recoverable	Water	200.8-1994 R5.4	

Analysis Batch: 615494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total Recoverable	Water	200.8-1994 R5.4	615260
180-174639-2	019	Total Recoverable	Water	200.8-1994 R5.4	615260
MB 240-615260/1-A	Method Blank	Total Recoverable	Water	200.8-1994 R5.4	615260
LCS 240-615260/2-A	Lab Control Sample	Total Recoverable	Water	200.8-1994 R5.4	615260

Analysis Batch: 615659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total Recoverable	Water	200.8-1994 R5.4	615260
180-174639-2	019	Total Recoverable	Water	200.8-1994 R5.4	615260
MB 240-615260/1-A	Method Blank	Total Recoverable	Water	200.8-1994 R5.4	615260
LCS 240-615260/2-A	Lab Control Sample	Total Recoverable	Water	200.8-1994 R5.4	615260

General Chemistry

Analysis Batch: 470141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	5540C - 2011	
180-174639-2	019	Total/NA	Water	5540C - 2011	
MB 180-470141/2	Method Blank	Total/NA	Water	5540C - 2011	
LCS 180-470141/3	Lab Control Sample	Total/NA	Water	5540C - 2011	

Eurofins Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

General Chemistry

Analysis Batch: 470164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	SM 2540D	
180-174639-2	019	Total/NA	Water	SM 2540D	
MB 180-470164/2	Method Blank	Total/NA	Water	SM 2540D	
LCS 180-470164/1	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 470191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Dissolved	Water	3500-Cr B-2011	
180-174639-2	019	Dissolved	Water	3500-Cr B-2011	
MB 180-470191/12	Method Blank	Total/NA	Water	3500-Cr B-2011	
LCS 180-470191/13	Lab Control Sample	Total/NA	Water	3500-Cr B-2011	
180-174639-2 MS	019	Dissolved	Water	3500-Cr B-2011	
180-174639-2 MSD	019	Dissolved	Water	3500-Cr B-2011	

Analysis Batch: 470218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	SM 2540C	
180-174639-2	019	Total/NA	Water	SM 2540C	
MB 180-470218/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-470218/2	Lab Control Sample	Total/NA	Water	SM 2540C	
180-174639-1 DU	017	Total/NA	Water	SM 2540C	

Analysis Batch: 470224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	SM 2120B	
180-174639-2	019	Total/NA	Water	SM 2120B	
MB 180-470224/1	Method Blank	Total/NA	Water	SM 2120B	
LCS 180-470224/2	Lab Control Sample	Total/NA	Water	SM 2120B	

Analysis Batch: 470227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	4500 S2 F-2011	
180-174639-2	019	Total/NA	Water	4500 S2 F-2011	
MB 180-470227/4	Method Blank	Total/NA	Water	4500 S2 F-2011	
LCS 180-470227/3	Lab Control Sample	Total/NA	Water	4500 S2 F-2011	

Prep Batch: 470241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	TKN/TPhos Prep	
180-174639-2	019	Total/NA	Water	TKN/TPhos Prep	
MB 180-470241/7-A	Method Blank	Total/NA	Water	TKN/TPhos Prep	
LCS 180-470241/8-A	Lab Control Sample	Total/NA	Water	TKN/TPhos Prep	

Prep Batch: 470317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	410.4	
180-174639-2	019	Total/NA	Water	410.4	
MB 180-470317/36-A	Method Blank	Total/NA	Water	410.4	
LCS 180-470317/35-A	Lab Control Sample	Total/NA	Water	410.4	

Eurofins Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

General Chemistry

Analysis Batch: 470334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	4500 H+ B-2000	
180-174639-2	019	Total/NA	Water	4500 H+ B-2000	
LCS 180-470334/1	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	
LCS 180-470334/24	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	
180-174639-1 DU	017	Total/NA	Water	4500 H+ B-2000	

Analysis Batch: 470339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	EPA 410.4	470317
180-174639-2	019	Total/NA	Water	EPA 410.4	470317
MB 180-470317/36-A	Method Blank	Total/NA	Water	EPA 410.4	470317
LCS 180-470317/35-A	Lab Control Sample	Total/NA	Water	EPA 410.4	470317

Prep Batch: 470395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	1664B	
180-174639-2	019	Total/NA	Water	1664B	
MB 180-470395/1-A	Method Blank	Total/NA	Water	1664B	
LCS 180-470395/2-A	Lab Control Sample	Total/NA	Water	1664B	
LCSD 180-470395/3-A	Lab Control Sample Dup	Total/NA	Water	1664B	

Analysis Batch: 470414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	TKN_TPhos	470241
180-174639-2	019	Total/NA	Water	TKN_TPhos	470241
MB 180-470241/7-A	Method Blank	Total/NA	Water	TKN_TPhos	470241
LCS 180-470241/8-A	Lab Control Sample	Total/NA	Water	TKN_TPhos	470241

Analysis Batch: 470420

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	EPA 1664B	470395
180-174639-2	019	Total/NA	Water	EPA 1664B	470395
MB 180-470395/1-A	Method Blank	Total/NA	Water	EPA 1664B	470395
LCS 180-470395/2-A	Lab Control Sample	Total/NA	Water	EPA 1664B	470395
LCSD 180-470395/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 1664B	470395

Analysis Batch: 470447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	SM 5210B	
USB 180-470447/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 180-470447/2	Lab Control Sample	Total/NA	Water	SM 5210B	

Analysis Batch: 470450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	EPA 353.2	
180-174639-2	019	Total/NA	Water	EPA 353.2	
MB 180-470450/20	Method Blank	Total/NA	Water	EPA 353.2	
LCS 180-470450/21	Lab Control Sample	Total/NA	Water	EPA 353.2	

Eurofins Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174639-1

General Chemistry

Analysis Batch: 470476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	EPA 350.1	
180-174639-2	019	Total/NA	Water	EPA 350.1	
MB 180-470476/49	Method Blank	Total/NA	Water	EPA 350.1	
LCS 180-470476/53	Lab Control Sample	Total/NA	Water	EPA 350.1	
180-174639-1 MS	017	Total/NA	Water	EPA 350.1	
180-174639-1 MSD	017	Total/NA	Water	EPA 350.1	

Analysis Batch: 470529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-2	019	Total/NA	Water	SM 5210B	
USB 180-470529/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 180-470529/2	Lab Control Sample	Total/NA	Water	SM 5210B	

Analysis Batch: 470672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174639-1	017	Total/NA	Water	5310 C-2014	
180-174639-2	019	Total/NA	Water	5310 C-2014	
MB 180-470672/5	Method Blank	Total/NA	Water	5310 C-2014	
LCS 180-470672/4	Lab Control Sample	Total/NA	Water	5310 C-2014	
180-174639-1 MS	017	Total/NA	Water	5310 C-2014	
180-174639-2 DU	019	Total/NA	Water	5310 C-2014	



Microbac Laboratories Inc., Pittsburgh Division

CERTIFICATE OF ANALYSIS

A4E2421

Eurofins Test America - Pittsburgh

Project Name: 18026655

Jill Colussy
5102 LaRoche AVE
Savannah, GA 31404

Project / PO Number: US0543365068 (2024)
Received: 05/28/2024
Reported: 05/29/2024

Analytical Testing Parameters

Client Sample ID:	017	Collected By:	Client
Sample Matrix:	Aqueous	Collection Date:	05/28/2024 11:39
Lab Sample ID:	A4E2421-01		

Analyses Performed by: Microbac Laboratories Inc., Pittsburgh Division

Microbiology	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Colilert-18 (Fecal Coliforms)								
Fecal Coliforms	> 2420	1	MPN/100mL	1		05/28/24 1708	05/29/24 1155	BNS

Client Sample ID:	019	Collected By:	Client
Sample Matrix:	Aqueous	Collection Date:	05/28/2024 12:09
Lab Sample ID:	A4E2421-02		

Analyses Performed by: Microbac Laboratories Inc., Pittsburgh Division

Microbiology	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Colilert-18 (Fecal Coliforms)								
Fecal Coliforms	2420	1	MPN/100mL	1		05/28/24 1708	05/29/24 1155	BNS

Definitions

MPN/100mL Most Probable Number per 100 Milliliters
RL: Reporting Limit

Project Requested Certification(s)

Microbac Laboratories Inc., Pittsburgh Division
02-00257

Pennsylvania Department of Environmental Protection
Pennsylvania Department of Environmental Protection - PARULE

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

Caroline Keefe
Customer Relationship Coordinator
Reported: 05/29/2024 12:21

Chain of Custody Record

[illegible]

Ver: 01/16/2019

Client Information					
Lab PM Colussy, Jill L		Carrier Tracking No(s)		COC No 180-100735-18182.6	
E-Mail Jill.Colussy@et.eurofinsus.com		State of Origin		Page Page 6 of 4	
PWSID		Analysis Requested		Job #	
Due Date Requested:				Preservation Codes:	
TAT Requested (days):				Total Number of containers	
Compliance Project: Δ Yes Δ No				Other:	
PO # 4501508098					
WO #					
Project #: 18026655					
SSOW#					
Matrix (W=water, S=solid, G=wastabil, BT=tissue, A=air)					
Sample Type (C=comp, G=grab)					
Sample Time					
Sample Date					
Preservation Code:					
Perform MS/MSD (Yes or No)					
Fecal Coliform					
Field Filtered Sample (Yes or No)					
Special Instructions/Note:					
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:					
Method of Shipment.					
Received by:					
Date/Time					
Company					
Received by:					
Date/Time					
Company					
Received by:					
Date/Time					
Company					
Cooler Temperature(s) °C and Other Remarks					

$$2.5/4.0$$


Environment Testing

Phone: 412-933-7030 Fax: 412-933-2400		Sampler		Lab PM: Colussy Jill L		Carrier Tracking No(s):		COC No: 180-515980.1	
Client Information (Sub Contract Lab)		Client Contact: Shipping/Receiving		Phone:		E-Mail: Jill.Colussy@et.eurofinsus.com		State of Origin: Pennsylvania	
Company: Eurofins Environment Testing North Centr		Address: 180 S. Van Buren Avenue, City: Barberton State, Zip: OH, 44203		Due Date Requested: 6/10/2024		Accreditations Required (See note): NELAP Pennsylvania		Job #: 180-174639-1	
Phone: 330-497-9396(Tel) 330-497-0772(Fax)		Email:		PO #:		TAT Requested (days):		Preservation Codes:	
Project Name: GHD Shell Monaca		Site:		Project #: 18026655		SSOW#:		Other:	
Sample Identification Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/sl)	
						Preservation Code:		Field Filtered Sample (Yes or No)	
017 (180-174639-1)		5/28/24		11:39 Eastern		Water		Perform MS/MSD (Yes or No)	
019 (180-174639-2)		5/28/24		12:09 Eastern		Water		200.8/200.8_P TR Total Metals	
								Total Number of Containers	
								M59	
								Special Instructions/Note:	
Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.									
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
Unconfirmed					☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months				
Deliverable Requested: I II III, IV Other (specify)					Primary Deliverable Rank: 2				
					Special Instructions/QC Requirements:				
Empty Kit Relinquished by:			Date:		Time:		Method of Shipment:		
Relinquished by: [Signature]			Date/Time: 5-30-24 1700		Company: EETNL		Received by: JESSICA RIGDON		
Relinquished by:			Date/Time:		Company:		Received by:		
Relinquished by:			Date/Time:		Company:		Received by:		
Custody Seals Intact: Δ Yes Δ No			Custody Seal No.		Cooler Temperature(s) °C and Other Remarks:				

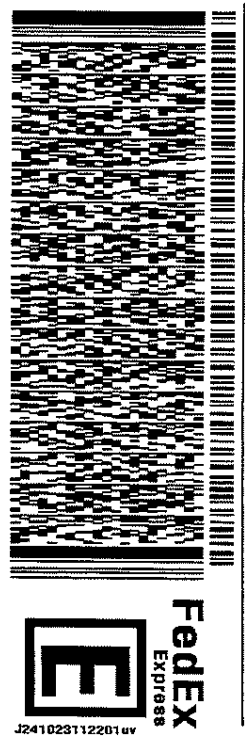
Eurofins - Cleveland Sample Receipt Form/Narrative		Login # : _____	
Barberton Facility			
Client <u>Eurofins - Pitt</u>	Site Name _____	Cooler unpacked by <u>QMG</u>	
Cooler Received on <u>5-31-24</u>	Opened on <u>5-31-24</u>		
FedEx 1 st Grd <u>(Exp)</u> UPS FAS Waypoint	Client Drop Off	Eurofins Courier	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> Bubble Wrap Foam Plastic Bag None Other _____			
COOLANT: <u>(Wet Ice)</u> Wet Ice Blue Ice Dry Ice Water <u>(None)</u> None			
1 Cooler temperature upon receipt <u>14</u> (C/F) <u>50.2</u> (°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp _____ °C IR GUN # _____			
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>1 ea</u> 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 ☐ NA ☐			
4 Did custody papers accompany the sample(s)? Yes ☒ No ☐ NA ☐			
5 Were the custody papers relinquished & signed in the appropriate place? Yes ☒ No ☐ NA ☐			
6 Was/were the person(s) who collected the samples clearly identified on the COC? Yes ☒ No ☐ NA ☐			
7 Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐ NA ☐			
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC? 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)? Yes ☒ No ☐ NA ☐			
10 Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐ NA ☐			
11 Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐ NA ☐			
12. Are these work share samples and all listed on the COC? 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 ☒ No ☐ NA ☐ pH Strip Lot# HC339814			
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 _____			

139378547/43585
Part # 159469-434 MTW EXP 02/25 ..

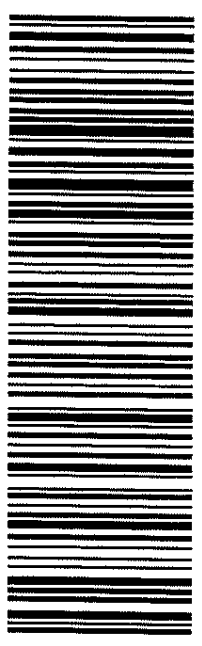
ORIGIN 1521AGCA (412) 983-7530 SHIP LE RECEIVING DEPARTMENT EUROFINS ENVYING TESTING PLTT N E 301 ALPHA DRIVE PITTSBURGH, PA 152362907 UNITED STATES US	SHIP DATE 30MAY24 ACTIMGT 20 00 LB HAN CNO 0522321/CPE33608 BILL SENDER

TO SHIPPING/RECEIVING
EUROFINS ENVIRONMENT TESTING NORTH
180 S. VAN BUREN AVENUE

BARBERTON OH 44203
(330) 497-9898 REF: 8180-102913
P.O. YES



1 of 2
TRK# 7224 1467 1310
0201
MASTER ##
64 CAKA
44203
OH-US CLE
FRI - 31 MAY 10:30A
PRIORITY OVERNIGHT



Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 180-174639-1

Login Number: 174639

List Source: Eurofins Pittsburgh

List Number: 1

Creator: Abernathy, Eric L

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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	
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?	True	
There are no discrepancies between the containers received and the COC.	False	Received Trip Blank(s) not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
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	



ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Angela Bown
GHD Services Inc.
2055 Niagara Falls Boulevard
Niagara Falls, New York 14304

Generated 6/12/2024 2:40:32 PM

JOB DESCRIPTION

GHD Shell Monaca

JOB NUMBER

180-174716-1

Eurofins Pittsburgh

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.

PA Lab ID: 02-00416

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 Pittsburgh Project Manager.

Authorization



Authorized for release by
Jill Colussy, Project Manager I
Jill.Colussy@et.eurofinsus.com
(412)963-2444

Generated
6/12/2024 2:40:32 PM



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Case Narrative

Client: GHD Services Inc.
Project: GHD Shell Monaca

Job ID: 180-174716-1

Job ID: 180-174716-1

Eurofins Pittsburgh

Job Narrative 180-174716-1

Receipt

The samples were received on 5/29/2024 3:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 2.3° C, 2.4° C, 2.6° C and 2.6° C.

The container labels for the following sample did not match the information listed on the Chain-of-Custody (COC): 006 (180-174716-3). The container labels lists 06, while the COC lists 006. The identification was logged in off of the chain of custody.

GC/MS VOA

The laboratory control sample (LCS) for analytical batch 180-470254 recovered outside control limits for the following analytes: 1,4-Dioxane, Acrylonitrile, Bromoform and Chlorodibromomethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

GC/MS Semi VOA

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

Pesticides

Sample 002 9(180-174716-1) had surrogate Decachlorobiphenyl recover below the control limits on one column. Evidence of matrix interference present; therefore, all data was reported.

The continuing calibration verification (CCV) associated with 180-470236 recovered high and outside the control limits for Chlordane on one column. Results are confirmed on both columns and reported from the passing column.

PCBs

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

IC

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

Metals

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

General Chemistry

The Sulfide containers were received with head space.

The correction factor for the BOD Seeded Control Blank (SCB) for batch 180-470529 was below the method range of 0.6 to 1.0 mg/L at 0.58093 mg/L. Thus, the samples are biased high.

Subcontract Work

Method Fecal Coliform: This method was subcontracted to Microbac Laboratories, Inc. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

Eurofins Pittsburgh

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
!	Laboratory is not accredited for this parameter.
cn	Refer to Case Narrative for further detail
FH	MS and/or MSD recovery above control limits.
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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

Eurofins Pittsburgh

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Laboratory: Eurofins Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	02-00416	04-30-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
4500 H+ B-2000		Water	Temperature
SM 2120B		Water	pH at time of analysis

Laboratory: Eurofins Cleveland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	68-00340	08-31-24

Sample Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-174716-1	002	Water	05/29/24 11:04	05/29/24 15:00
180-174716-2	013	Water	05/29/24 11:35	05/29/24 15:00
180-174716-3	006	Water	05/29/24 12:02	05/29/24 15:00
180-174716-4	TRIP BLANK	Water	05/29/24 00:01	05/29/24 15:00

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

Method Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Method	Method Description	Protocol	Laboratory
EPA 624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	EET PIT
EPA 625.1	Semivolatile Organic Compounds (GC/MS)	40 CFR 761	EET PIT
EPA 608.3	Organochlorine Pesticides in Water	40CFR136A	EET PIT
EPA 608.3	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	EET PIT
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	EET PIT
200.8-1994 R5.4	Metals (ICP/MS)	EPA	EET CLE
EPA 245.1 Rev.	Mercury (CVAA)	EPA	EET PIT
3500-Cr B-2011	Chromium, Hexavalent	SM	EET PIT
4500 H+ B-2000	pH - SM Online, 2011	SM-Online	EET PIT
4500 S2 F-2011	Sulfide, Total	SM	EET PIT
5310 C-2014	Total Organic Carbon/Persulfate - Ultrav	SM	EET PIT
5540C - 2011	Methylene Blue Active Substant (MBAS)	SM	EET PIT
EPA 1664B	HEM and SGT-HEM	EPA	EET PIT
EPA 350.1	Nitrogen, Ammonia	EPA	EET PIT
EPA 353.2	Nitrogen, Nitrate-Nitrite	EPA	EET PIT
EPA 410.4	COD	MCAWW	EET PIT
SM 2120B	Color, Colorimetric	SM	EET PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET PIT
SM 2540D	Solids, Total Suspended (TSS)	SM	EET PIT
SM 5210B	5 Day BOD test	SM	EET PIT
TKN_TPhos	EPA 351.2 1993 R2/365.4 1974	EPA	EET PIT
Subcontract	Fecal Coliform	None	Warrendale
1664B	HEM and SGT-HEM (SPE)	1664B	EET PIT
200.8-1994 R5.4	Preparation, Total Recoverable Metals	EPA	EET CLE
245.1	Preparation, Mercury	EPA	EET PIT
410.4	COD	EPA	EET PIT
608	Liquid-Liquid Extraction (Separatory Funnel)	EPA	EET PIT
625	Liquid-Liquid Extraction	EPA	EET PIT
TKN/TPhos Prep	Preparation, 351.2 1993 R2/365.4 1974	EPA	EET PIT

Protocol References:

1664B = EPA-821-98-002

40 CFR 761 = Toxic Substances Control Act (TSCA)

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

EPA = US Environmental Protection Agency

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

None = None

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

SM-Online = Standard Methods Online

Laboratory References:

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

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Warrendale = Microbac - Warrendale, PA, 100 Marshall Drive, Warrendale, PA 15086, TEL (724)772-0610

Eurofins Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Client Sample ID: 002

Lab Sample ID: 180-174716-1

Date Collected: 05/29/24 11:04

Matrix: Water

Date Received: 05/29/24 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 624.1		1	5 mL	5 mL	470254	05/31/24 16:24	J1T	EET PIT
		Instrument ID: CHHP5								
Total/NA	Prep	625			240 mL	250 uL	470598	06/04/24 16:57	BJT	EET PIT
Total/NA	Analysis	EPA 625.1		1	1 mL	1 mL	471019	06/10/24 16:47	VVP	EET PIT
		Instrument ID: CHMSD7								
Total/NA	Prep	608			1020 mL	1.0 mL	470106	05/30/24 05:43	DPD	EET PIT
Total/NA	Analysis	EPA 608.3		1			470236	05/31/24 09:02	JMO	EET PIT
		Instrument ID: CHGC17								
Total/NA	Prep	608			1020 mL	1.0 mL	470106	05/30/24 05:43	DPD	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 mL	1 mL	470233	05/31/24 09:05	JMO	EET PIT
		Instrument ID: CHGC20								
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1 mL	470273	06/01/24 02:49	M1D	EET PIT
		Instrument ID: INTEGRION								
Total Recoverable	Prep	200.8-1994 R5.4			50 mL	50 mL	615252	06/03/24 14:00	BN	EET CLE
Total Recoverable	Analysis	200.8-1994 R5.4		1			615494	06/04/24 14:53	RKT	EET CLE
		Instrument ID: I14								
Total/NA	Prep	245.1			25 mL	25 mL	470201	05/31/24 06:00	MTW	EET PIT
Total/NA	Analysis	EPA 245.1 Rev.		1			470316	05/31/24 11:44	MTW	EET PIT
		Instrument ID: HGZ								
Dissolved	Analysis	3500-Cr B-2011		1	4 mL	4 mL	470192	05/30/24 10:37	CMC	EET PIT
		Instrument ID: RAPID-T								
Total/NA	Analysis	4500 H+ B-2000		1			470360	06/01/24 10:40	BAB	EET PIT
		Instrument ID: OZ								
Total/NA	Analysis	4500 S2 F-2011		1	50 mL	50 mL	470227	05/30/24 18:48	CMR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	5310 C-2014		1	40 mL	40 mL	470672	06/04/24 20:39	ELS	EET PIT
		Instrument ID: SAM								
Total/NA	Analysis	5540C - 2011		1	100 mL	100 mL	470226	05/30/24 15:28	SNR	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Prep	1664B			990 mL	1000 mL	470505	06/04/24 07:22	A1K	EET PIT
Total/NA	Analysis	EPA 1664B		1			470570	06/04/24 12:24	A1K	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	EPA 350.1		1			470476	06/03/24 14:06	SNR	EET PIT
		Instrument ID: BLUE-ASTORIA								
Total/NA	Analysis	EPA 353.2		1			470450	06/03/24 10:03	RSK	EET PIT
		Instrument ID: ASTORIA2								
Total/NA	Prep	410.4			1 mL	1 mL	470565	06/04/24 11:10	ELS	EET PIT
Total/NA	Analysis	EPA 410.4		1	1 mL	1 mL	470685	06/04/24 15:34	ELS	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Analysis	SM 2120B		1	50 mL	50 mL	470307	05/31/24 11:01	SNR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470511	06/04/24 07:49	EBA	EET PIT
		Instrument ID: NOEQUIP								

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Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Client Sample ID: 002

Lab Sample ID: 180-174716-1

Date Collected: 05/29/24 11:04

Matrix: Water

Date Received: 05/29/24 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	470172	05/30/24 09:40	JMA	EET PIT
Total/NA	Analysis	SM 5210B		1	300 mL	300 mL	470529	05/30/24 13:42	ELS	EET PIT
		Instrument ID: BOD2								
Total/NA	Prep	TKN/TPhos Prep			25 mL	25 mL	470243	05/31/24 06:29	RSK	EET PIT
Total/NA	Analysis	TKN_TPhos		1			470414	06/03/24 07:34	RSK	EET PIT
		Instrument ID: ASTORIA1								

Client Sample ID: 013

Lab Sample ID: 180-174716-2

Date Collected: 05/29/24 11:35

Matrix: Water

Date Received: 05/29/24 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 624.1		1	5 mL	5 mL	470254	05/31/24 16:47	J1T	EET PIT
		Instrument ID: CHHP5								
Total/NA	Prep	625			240 mL	250 uL	470598	06/04/24 16:57	BJT	EET PIT
Total/NA	Analysis	EPA 625.1		1	1 mL	1 mL	471019	06/10/24 17:09	VVP	EET PIT
		Instrument ID: CHMSD7								
Total/NA	Prep	608			1040 mL	1.0 mL	470106	05/30/24 05:43	DPD	EET PIT
Total/NA	Analysis	EPA 608.3		1			470236	05/31/24 09:19	JMO	EET PIT
		Instrument ID: CHGC17								
Total/NA	Prep	608			1040 mL	1.0 mL	470106	05/30/24 05:43	DPD	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 mL	1 mL	470233	05/31/24 09:22	JMO	EET PIT
		Instrument ID: CHGC20								
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1 mL	470273	05/31/24 21:54	M1D	EET PIT
		Instrument ID: INTEGRION								
Total Recoverable	Prep	200.8-1994 R5.4			50 mL	50 mL	615252	06/03/24 14:00	BN	EET CLE
Total Recoverable	Analysis	200.8-1994 R5.4		1			615494	06/04/24 14:56	RKT	EET CLE
		Instrument ID: I14								
Total/NA	Prep	245.1			25 mL	25 mL	470201	05/31/24 06:00	MTW	EET PIT
Total/NA	Analysis	EPA 245.1 Rev.		1			470316	05/31/24 11:45	MTW	EET PIT
		Instrument ID: HGZ								
Dissolved	Analysis	3500-Cr B-2011		1	4 mL	4 mL	470192	05/30/24 10:32	CMC	EET PIT
		Instrument ID: RAPID-T								
Total/NA	Analysis	4500 H+ B-2000		1			470360	06/01/24 10:50	BAB	EET PIT
		Instrument ID: OZ								
Total/NA	Analysis	4500 S2 F-2011		1	50 mL	50 mL	470227	05/30/24 18:50	CMR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	5310 C-2014		1	40 mL	40 mL	470672	06/04/24 21:02	ELS	EET PIT
		Instrument ID: SAM								
Total/NA	Analysis	5540C - 2011		1	100 mL	100 mL	470226	05/30/24 15:29	SNR	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Prep	1664B			1010 mL	1000 mL	470505	06/04/24 07:22	A1K	EET PIT
Total/NA	Analysis	EPA 1664B		1			470570	06/04/24 12:24	A1K	EET PIT
		Instrument ID: NOEQUIP								

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Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Client Sample ID: 013

Lab Sample ID: 180-174716-2

Date Collected: 05/29/24 11:35

Matrix: Water

Date Received: 05/29/24 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 350.1		1			470476	06/03/24 14:08	SNR	EET PIT
Total/NA	Analysis	EPA 353.2		1			470450	06/03/24 10:04	RSK	EET PIT
		Instrument ID: ASTORIA2								
Total/NA	Prep	410.4			1 mL	1 mL	470565	06/04/24 11:10	ELS	EET PIT
Total/NA	Analysis	EPA 410.4		1	1 mL	1 mL	470685	06/04/24 15:35	ELS	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Analysis	SM 2120B		1	50 mL	50 mL	470307	05/31/24 11:05	SNR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470511	06/04/24 07:49	EBA	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	470172	05/30/24 09:40	JMA	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 5210B		1	300 mL	300 mL	470529	05/30/24 13:42	ELS	EET PIT
		Instrument ID: BOD2								
Total/NA	Prep	TKN/TPhos Prep			25 mL	25 mL	470243	05/31/24 06:29	RSK	EET PIT
Total/NA	Analysis	TKN_TPhos		1			470414	06/03/24 07:38	RSK	EET PIT
		Instrument ID: ASTORIA1								

Client Sample ID: 006

Lab Sample ID: 180-174716-3

Date Collected: 05/29/24 12:02

Matrix: Water

Date Received: 05/29/24 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 624.1		1	5 mL	5 mL	470254	05/31/24 16:01	J1T	EET PIT
		Instrument ID: CHHP5								
Total/NA	Prep	625			250 mL	250 uL	470598	06/04/24 16:57	BJT	EET PIT
Total/NA	Analysis	EPA 625.1		1	1 mL	1 mL	471019	06/10/24 17:31	VVP	EET PIT
		Instrument ID: CHMSD7								
Total/NA	Prep	608			1000 mL	1.0 mL	470106	05/30/24 05:43	DPD	EET PIT
Total/NA	Analysis	EPA 608.3		1			470236	05/31/24 09:35	JMO	EET PIT
		Instrument ID: CHGC17								
Total/NA	Prep	608			1000 mL	1.0 mL	470106	05/30/24 05:43	DPD	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 mL	1 mL	470233	05/31/24 09:40	JMO	EET PIT
		Instrument ID: CHGC20								
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1 mL	470273	06/01/24 03:45	M1D	EET PIT
		Instrument ID: INTEGRION								
Total Recoverable	Prep	200.8-1994 R5.4			50 mL	50 mL	615252	06/03/24 14:00	BN	EET CLE
Total Recoverable	Analysis	200.8-1994 R5.4		1			615494	06/04/24 15:06	RKT	EET CLE
		Instrument ID: I14								
Total/NA	Prep	245.1			25 mL	25 mL	470201	05/31/24 06:00	MTW	EET PIT
Total/NA	Analysis	EPA 245.1 Rev.		1			470316	05/31/24 11:48	MTW	EET PIT
		Instrument ID: HGZ								
Dissolved	Analysis	3500-Cr B-2011		1	4 mL	4 mL	470192	05/30/24 10:36	CMC	EET PIT
		Instrument ID: RAPID-T								

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Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Client Sample ID: 006

Lab Sample ID: 180-174716-3

Date Collected: 05/29/24 12:02

Matrix: Water

Date Received: 05/29/24 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	4500 H+ B-2000		1			470360	06/01/24 10:55	BAB	EET PIT
Total/NA	Analysis	4500 S2 F-2011		1	50 mL	50 mL	470227	05/30/24 18:57	CMR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	5310 C-2014		1	40 mL	40 mL	471072	06/08/24 07:31	ELS	EET PIT
		Instrument ID: TOC1030								
Total/NA	Analysis	5540C - 2011		1	100 mL	100 mL	470226	05/30/24 15:30	SNR	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Prep	1664B			1030 mL	1000 mL	470505	06/04/24 07:22	A1K	EET PIT
Total/NA	Analysis	EPA 1664B		1			470570	06/04/24 12:24	A1K	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	EPA 350.1		1			470476	06/03/24 14:10	SNR	EET PIT
		Instrument ID: BLUE-ASTORIA								
Total/NA	Analysis	EPA 353.2		1			470450	06/03/24 10:06	RSK	EET PIT
		Instrument ID: ASTORIA2								
Total/NA	Prep	410.4			1 mL	1 mL	470565	06/04/24 11:10	ELS	EET PIT
Total/NA	Analysis	EPA 410.4		1	1 mL	1 mL	470685	06/04/24 15:36	ELS	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Analysis	SM 2120B		1	50 mL	50 mL	470307	05/31/24 11:07	SNR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470511	06/04/24 07:49	EBA	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	470172	05/30/24 09:40	JMA	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 5210B		1	300 mL	300 mL	470529	05/30/24 13:42	ELS	EET PIT
		Instrument ID: BOD2								
Total/NA	Prep	TKN/TPhos Prep			25 mL	25 mL	470243	05/31/24 06:29	RSK	EET PIT
Total/NA	Analysis	TKN_TPhos		1			470414	06/03/24 07:40	RSK	EET PIT
		Instrument ID: ASTORIA1								

Client Sample ID: TRIP BLANK

Lab Sample ID: 180-174716-4

Date Collected: 05/29/24 00:01

Matrix: Water

Date Received: 05/29/24 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 624.1		1	5 mL	5 mL	470254	05/31/24 13:18	J1T	EET PIT
		Instrument ID: CHHP5								

Laboratory References:

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

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Warrendale = Microbac - Warrendale, PA, 100 Marshall Drive, Warrendale, PA 15086, TEL (724)772-0610

Eurofins Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Analyst References:

- Lab: EET CLE
- Batch Type: Prep
 - BN = Benjamin Norman
 - Batch Type: Analysis
 - RKT = Roger Toth
- Lab: EET PIT
- Batch Type: Prep
 - A1K = Agnes Komlos
 - BJT = Bill Trout
 - DPD = Declan Donley
 - ELS = Edwin Shireman
 - MTW = Michael Wesoloski
 - RSK = Robert Kurtz
 - Batch Type: Analysis
 - A1K = Agnes Komlos
 - BAB = Brooke Batyi
 - CMC = Candace California
 - CMR = Carl Reagle
 - EBA = Elizabeth Arbster
 - ELS = Edwin Shireman
 - J1T = Jianwu Tang
 - JMA = Justin Adametz
 - JMO = John Oravec
 - M1D = Maureen Donlin
 - MTW = Michael Wesoloski
 - RSK = Robert Kurtz
 - SNR = Sabra Richart
 - VVP = Vincent Piccolino

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Client Sample ID: 002

Lab Sample ID: 180-174716-1

Date Collected: 05/29/24 11:04

Matrix: Water

Date Received: 05/29/24 15:00

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			05/31/24 16:24	1
Acrylonitrile	ND	*+	0.020	0.0078	mg/L			05/31/24 16:24	1
Benzene	ND		0.0010	0.00060	mg/L			05/31/24 16:24	1
Bromoform	ND	*+	0.0010	0.00098	mg/L			05/31/24 16:24	1
Bromomethane	ND		0.0010	0.00089	mg/L			05/31/24 16:24	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			05/31/24 16:24	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			05/31/24 16:24	1
Chlorodibromomethane	ND	*+	0.0010	0.00084	mg/L			05/31/24 16:24	1
Chloroethane	ND		0.0010	0.00090	mg/L			05/31/24 16:24	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			05/31/24 16:24	1
Chloroform	ND		0.0010	0.00060	mg/L			05/31/24 16:24	1
Chloromethane	ND		0.0010	0.00090	mg/L			05/31/24 16:24	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			05/31/24 16:24	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			05/31/24 16:24	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			05/31/24 16:24	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			05/31/24 16:24	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			05/31/24 16:24	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			05/31/24 16:24	1
1,4-Dioxane	ND	*+	0.20	0.043	mg/L			05/31/24 16:24	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			05/31/24 16:24	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			05/31/24 16:24	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			05/31/24 16:24	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			05/31/24 16:24	1
Toluene	ND		0.0010	0.00046	mg/L			05/31/24 16:24	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			05/31/24 16:24	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			05/31/24 16:24	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			05/31/24 16:24	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			05/31/24 16:24	1
Trichloroethene	ND		0.0010	0.00069	mg/L			05/31/24 16:24	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			05/31/24 16:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		47 - 122		05/31/24 16:24	1
Dibromofluoromethane (Surr)	110		52 - 138		05/31/24 16:24	1
1,2-Dichloroethane-d4 (Surr)	90		24 - 145		05/31/24 16:24	1
Toluene-d8 (Surr)	97		65 - 143		05/31/24 16:24	1

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.0010	0.00025	mg/L		06/04/24 16:57	06/10/24 16:47	1
1,2-Dichlorobenzene	ND		0.0010	0.00022	mg/L		06/04/24 16:57	06/10/24 16:47	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.0010	0.00020	mg/L		06/04/24 16:57	06/10/24 16:47	1
1,3-Dinitrobenzene	ND		0.0010	0.00048	mg/L		06/04/24 16:57	06/10/24 16:47	1
1,4-Dichlorobenzene	ND		0.0010	0.00025	mg/L		06/04/24 16:57	06/10/24 16:47	1
2,2'-oxybis[1-chloropropane]	ND		0.00020	0.000060	mg/L		06/04/24 16:57	06/10/24 16:47	1
2,4,6-Trichlorophenol	ND		0.0010	0.00023	mg/L		06/04/24 16:57	06/10/24 16:47	1
2,4-Dichlorophenol	ND		0.00020	0.000053	mg/L		06/04/24 16:57	06/10/24 16:47	1
2,4-Dimethylphenol	ND		0.0010	0.00061	mg/L		06/04/24 16:57	06/10/24 16:47	1
2,4-Dinitrophenol	ND		0.010	0.0034	mg/L		06/04/24 16:57	06/10/24 16:47	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Client Sample ID: 002

Lab Sample ID: 180-174716-1

Date Collected: 05/29/24 11:04

Matrix: Water

Date Received: 05/29/24 15:00

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		0.0010	0.00037	mg/L		06/04/24 16:57	06/10/24 16:47	1
2,6-Dinitrotoluene	ND		0.0010	0.00018	mg/L		06/04/24 16:57	06/10/24 16:47	1
2-Chloronaphthalene	ND		0.00020	0.000061	mg/L		06/04/24 16:57	06/10/24 16:47	1
2-Chlorophenol	ND		0.0010	0.00023	mg/L		06/04/24 16:57	06/10/24 16:47	1
2-Nitrophenol	ND		0.0010	0.00020	mg/L		06/04/24 16:57	06/10/24 16:47	1
3,3'-Dichlorobenzidine	ND		0.0010	0.00061	mg/L		06/04/24 16:57	06/10/24 16:47	1
4,6-Dinitro-2-methylphenol	ND		0.0052	0.0015	mg/L		06/04/24 16:57	06/10/24 16:47	1
4-Bromophenyl phenyl ether	ND		0.0010	0.00033	mg/L		06/04/24 16:57	06/10/24 16:47	1
4-Chloro-3-methylphenol	ND		0.0010	0.00045	mg/L		06/04/24 16:57	06/10/24 16:47	1
4-Chlorophenyl phenyl ether	ND		0.0010	0.00023	mg/L		06/04/24 16:57	06/10/24 16:47	1
4-Nitrophenol	ND		0.0052	0.00098	mg/L		06/04/24 16:57	06/10/24 16:47	1
Acenaphthene	ND		0.00020	0.000068	mg/L		06/04/24 16:57	06/10/24 16:47	1
Acenaphthylene	ND		0.00020	0.000068	mg/L		06/04/24 16:57	06/10/24 16:47	1
Acrylamide	ND		0.052	0.021	mg/L		06/04/24 16:57	06/10/24 16:47	1
Anthracene	ND		0.00020	0.000051	mg/L		06/04/24 16:57	06/10/24 16:47	1
Benzidine	ND		0.021	0.0095	mg/L		06/04/24 16:57	06/10/24 16:47	1
Benzo[a]anthracene	ND		0.00020	0.000078	mg/L		06/04/24 16:57	06/10/24 16:47	1
Benzo[a]pyrene	ND		0.00020	0.000055	mg/L		06/04/24 16:57	06/10/24 16:47	1
Benzo[b]fluoranthene	ND		0.00020	0.00010	mg/L		06/04/24 16:57	06/10/24 16:47	1
Benzo[g,h,i]perylene	ND		0.00020	0.000072	mg/L		06/04/24 16:57	06/10/24 16:47	1
Benzo[k]fluoranthene	ND		0.00020	0.000092	mg/L		06/04/24 16:57	06/10/24 16:47	1
Bis(2-chloroethoxy)methane	ND		0.0010	0.00016	mg/L		06/04/24 16:57	06/10/24 16:47	1
Bis(2-chloroethyl)ether	ND		0.00020	0.000042	mg/L		06/04/24 16:57	06/10/24 16:47	1
Bis(2-ethylhexyl) phthalate	ND		0.010	0.0065	mg/L		06/04/24 16:57	06/10/24 16:47	1
Butyl benzyl phthalate	ND		0.0021	0.00098	mg/L		06/04/24 16:57	06/10/24 16:47	1
Chrysene	ND		0.00020	0.000084	mg/L		06/04/24 16:57	06/10/24 16:47	1
Dibenz(a,h)anthracene	ND		0.00020	0.000075	mg/L		06/04/24 16:57	06/10/24 16:47	1
Diethyl phthalate	ND		0.0010	0.00059	mg/L		06/04/24 16:57	06/10/24 16:47	1
Dimethyl phthalate	ND		0.0021	0.00021	mg/L		06/04/24 16:57	06/10/24 16:47	1
Di-n-butyl phthalate	0.0059	J	0.010	0.0051	mg/L		06/04/24 16:57	06/10/24 16:47	1
Di-n-octyl phthalate	ND		0.0010	0.00071	mg/L		06/04/24 16:57	06/10/24 16:47	1
Fluoranthene	ND		0.00020	0.000063	mg/L		06/04/24 16:57	06/10/24 16:47	1
Fluorene	ND		0.00020	0.000072	mg/L		06/04/24 16:57	06/10/24 16:47	1
Hexachlorobenzene	ND		0.00020	0.000058	mg/L		06/04/24 16:57	06/10/24 16:47	1
Hexachlorobutadiene	ND		0.00020	0.000072	mg/L		06/04/24 16:57	06/10/24 16:47	1
Hexachlorocyclopentadiene	ND		0.0010	0.00052	mg/L		06/04/24 16:57	06/10/24 16:47	1
Hexachloroethane	ND		0.0010	0.00014	mg/L		06/04/24 16:57	06/10/24 16:47	1
Indeno[1,2,3-cd]pyrene	ND		0.00020	0.000089	mg/L		06/04/24 16:57	06/10/24 16:47	1
Isophorone	ND		0.0010	0.00020	mg/L		06/04/24 16:57	06/10/24 16:47	1
Naphthalene	ND		0.00020	0.000061	mg/L		06/04/24 16:57	06/10/24 16:47	1
Nitrobenzene	ND		0.0021	0.00052	mg/L		06/04/24 16:57	06/10/24 16:47	1
N-Nitrosodimethylamine	ND		0.0010	0.00027	mg/L		06/04/24 16:57	06/10/24 16:47	1
N-Nitrosodi-n-propylamine	ND		0.00020	0.000074	mg/L		06/04/24 16:57	06/10/24 16:47	1
N-Nitrosodiphenylamine	ND		0.0010	0.00012	mg/L		06/04/24 16:57	06/10/24 16:47	1
Pentachlorophenol	ND		0.0052	0.00088	mg/L		06/04/24 16:57	06/10/24 16:47	1
Phenanthrene	ND		0.00020	0.00016	mg/L		06/04/24 16:57	06/10/24 16:47	1
Phenol	ND		0.0010	0.00051	mg/L		06/04/24 16:57	06/10/24 16:47	1
Pyrene	ND		0.00020	0.000056	mg/L		06/04/24 16:57	06/10/24 16:47	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Client Sample ID: 002

Lab Sample ID: 180-174716-1

Date Collected: 05/29/24 11:04

Matrix: Water

Date Received: 05/29/24 15:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	77		42 - 115	06/04/24 16:57	06/10/24 16:47	1
2-Fluorobiphenyl	78		47 - 107	06/04/24 16:57	06/10/24 16:47	1
2-Fluorophenol (Surr)	69		54 - 109	06/04/24 16:57	06/10/24 16:47	1
Nitrobenzene-d5 (Surr)	70		47 - 110	06/04/24 16:57	06/10/24 16:47	1
Phenol-d5 (Surr)	64		37 - 110	06/04/24 16:57	06/10/24 16:47	1
Terphenyl-d14 (Surr)	76		32 - 115	06/04/24 16:57	06/10/24 16:47	1

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 09:02	1
alpha-BHC	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 09:02	1
beta-BHC	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 09:02	1
gamma-BHC (Lindane)	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 09:02	1
delta-BHC	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 09:02	1
Chlordane (technical)	ND		0.000013	0.0000071	mg/L		05/30/24 05:43	05/31/24 09:02	1
4,4'-DDD	0.00000084	J	0.0000013	0.0000005	mg/L		05/30/24 05:43	05/31/24 09:02	1
4,4'-DDE	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 09:02	1
4,4'-DDT	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 09:02	1
Dieldrin	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 09:02	1
Endosulfan I	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 09:02	1
Endosulfan II	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 09:02	1
Endosulfan sulfate	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 09:02	1
Endrin	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 09:02	1
Endrin aldehyde	ND		0.0000013	0.0000005	mg/L		05/30/24 05:43	05/31/24 09:02	1
Heptachlor	ND		0.0000013	0.0000004	mg/L		05/30/24 05:43	05/31/24 09:02	1
Heptachlor epoxide	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 09:02	1
Toxaphene	ND		0.000098	0.000048	mg/L		05/30/24 05:43	05/31/24 09:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	71		20 - 138				05/30/24 05:43	05/31/24 09:02	1
Tetrachloro-m-xylene (Surr)	72		20 - 138				05/30/24 05:43	05/31/24 09:02	1
DCB Decachlorobiphenyl (Surr)	40	S1-	43 - 143				05/30/24 05:43	05/31/24 09:02	1
DCB Decachlorobiphenyl (Surr)	88		43 - 143				05/30/24 05:43	05/31/24 09:02	1

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.0000098	0.0000047	mg/L		05/30/24 05:43	05/31/24 09:05	1
PCB-1221	ND		0.0000098	0.0000056	mg/L		05/30/24 05:43	05/31/24 09:05	1
PCB-1232	ND		0.0000098	0.0000051	mg/L		05/30/24 05:43	05/31/24 09:05	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Client Sample ID: 002

Lab Sample ID: 180-174716-1

Date Collected: 05/29/24 11:04

Matrix: Water

Date Received: 05/29/24 15:00

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1242	ND		0.0000098	0.0000090	mg/L		05/30/24 05:43	05/31/24 09:05	1
PCB-1248	ND		0.0000098	0.0000029	mg/L		05/30/24 05:43	05/31/24 09:05	1
PCB-1254	ND		0.0000098	0.0000093	mg/L		05/30/24 05:43	05/31/24 09:05	1
PCB-1260	ND		0.0000098	0.0000038	mg/L		05/30/24 05:43	05/31/24 09:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	70		20 - 138				05/30/24 05:43	05/31/24 09:05	1
Tetrachloro-m-xylene (Surr)	77		20 - 138				05/30/24 05:43	05/31/24 09:05	1
DCB Decachlorobiphenyl (Surr)	100		43 - 143				05/30/24 05:43	05/31/24 09:05	1
DCB Decachlorobiphenyl (Surr)	81		43 - 143				05/30/24 05:43	05/31/24 09:05	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			06/01/24 02:49	1
Chloride	13.9		1.00	0.712	mg/L			06/01/24 02:49	1
Fluoride	0.433		0.100	0.0260	mg/L			06/01/24 02:49	1
Sulfate	67.4		1.00	0.756	mg/L			06/01/24 02:49	1

Method: EPA 200.8-1994 R5.4 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.053	ug/L		06/03/24 14:00	06/04/24 14:53	1
Aluminum	910		50	34	ug/L		06/03/24 14:00	06/04/24 14:53	1
Arsenic	1.3	J	5.0	0.75	ug/L		06/03/24 14:00	06/04/24 14:53	1
Boron	16	J	20	16	ug/L		06/03/24 14:00	06/04/24 14:53	1
Barium	100		5.0	2.2	ug/L		06/03/24 14:00	06/04/24 14:53	1
Beryllium	ND		1.0	0.62	ug/L		06/03/24 14:00	06/04/24 14:53	1
Calcium	30000		1000	250	ug/L		06/03/24 14:00	06/04/24 14:53	1
Cadmium	0.26	J	1.0	0.20	ug/L		06/03/24 14:00	06/04/24 14:53	1
Cobalt	0.44	J	1.0	0.19	ug/L		06/03/24 14:00	06/04/24 14:53	1
Chromium	1.3	J	5.0	1.2	ug/L		06/03/24 14:00	06/04/24 14:53	1
Copper	4.6		2.0	1.7	ug/L		06/03/24 14:00	06/04/24 14:53	1
Iron	740		100	47	ug/L		06/03/24 14:00	06/04/24 14:53	1
Magnesium	6900		1000	61	ug/L		06/03/24 14:00	06/04/24 14:53	1
Manganese	15		5.0	3.5	ug/L		06/03/24 14:00	06/04/24 14:53	1
Molybdenum	3.0	J	5.0	1.1	ug/L		06/03/24 14:00	06/04/24 14:53	1
Nickel	2.6		2.0	1.5	ug/L		06/03/24 14:00	06/04/24 14:53	1
Lead	3.0		1.0	0.45	ug/L		06/03/24 14:00	06/04/24 14:53	1
Antimony	0.59	J	2.0	0.57	ug/L		06/03/24 14:00	06/04/24 14:53	1
Selenium	ND		5.0	0.89	ug/L		06/03/24 14:00	06/04/24 14:53	1
Thallium	ND		1.0	0.20	ug/L		06/03/24 14:00	06/04/24 14:53	1
Zinc	61		20	15	ug/L		06/03/24 14:00	06/04/24 14:53	1

Method: EPA 245.1 Rev. - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/31/24 06:00	05/31/24 11:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM-Online 4500 H+ B-2000)	8.1	HF	0.1	0.1	SU			06/01/24 10:40	1
Temperature (SM-Online 4500 H+ B-2000)	21.0	HF !	0.1	0.1	Degrees C			06/01/24 10:40	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Client Sample ID: 002

Lab Sample ID: 180-174716-1

Date Collected: 05/29/24 11:04

Matrix: Water

Date Received: 05/29/24 15:00

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide (SM 4500 S2 F-2011)	ND	cn	3.0	1.3	mg/L			05/30/24 18:48	1
Total Organic Carbon - Quad (SM 5310 C-2014)	2.1		1.0	0.51	mg/L			06/04/24 20:39	1
Methylene Blue Active Substances (SM 5540C - 2011)	0.10		0.050	0.049	mg/l LAS MW 340			05/30/24 15:28	1
HEM (Oil & Grease) (EPA 1664B)	ND		5.1	4.4	mg/L		06/04/24 07:22	06/04/24 12:24	1
Ammonia (EPA 350.1)	ND		0.10	0.088	mg/L			06/03/24 14:06	1
Nitrate Nitrite as N (EPA 353.2)	0.15		0.10	0.065	mg/L			06/03/24 10:03	1
Chemical Oxygen Demand (MCAWW EPA 410.4)	ND		10	9.1	mg/L		06/04/24 11:10	06/04/24 15:34	1
Color, Apparent (SM 2120B)	15		5.0	5.0	Color Units			05/31/24 11:01	1
Color, True (SM 2120B)	5.0		5.0	5.0	Color Units			05/31/24 11:01	1
pH at time of analysis (SM 2120B)	7.7	!	0.10	0.10	SU			05/31/24 11:01	1
Total Dissolved Solids (SM 2540C)	170		10	10	mg/L			06/04/24 07:49	1
Total Suspended Solids (SM 2540D)	15		0.50	0.50	mg/L			05/30/24 09:40	1
Biochemical Oxygen Demand (SM 5210B)	ND	cn	2.0	2.0	mg/L			05/30/24 13:42	1
Nitrogen, Kjeldahl (EPA TKN_TPhos)	0.13	J FH	0.50	0.12	mg/L as N		05/31/24 06:29	06/03/24 07:34	1
Phosphorus, Total (EPA TKN_TPhos)	0.041	J	0.10	0.040	mg/L as P		05/31/24 06:29	06/03/24 07:34	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SM 3500-Cr B-2011)	ND		0.010	0.0060	mg/L			05/30/24 10:37	1

Client Sample ID: 013

Lab Sample ID: 180-174716-2

Date Collected: 05/29/24 11:35

Matrix: Water

Date Received: 05/29/24 15:00

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			05/31/24 16:47	1
Acrylonitrile	ND	*+	0.020	0.0078	mg/L			05/31/24 16:47	1
Benzene	ND		0.0010	0.00060	mg/L			05/31/24 16:47	1
Bromoform	ND	*+	0.0010	0.00098	mg/L			05/31/24 16:47	1
Bromomethane	ND		0.0010	0.00089	mg/L			05/31/24 16:47	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			05/31/24 16:47	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			05/31/24 16:47	1
Chlorodibromomethane	ND	*+	0.0010	0.00084	mg/L			05/31/24 16:47	1
Chloroethane	ND		0.0010	0.00090	mg/L			05/31/24 16:47	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			05/31/24 16:47	1
Chloroform	ND		0.0010	0.00060	mg/L			05/31/24 16:47	1
Chloromethane	ND		0.0010	0.00090	mg/L			05/31/24 16:47	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			05/31/24 16:47	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			05/31/24 16:47	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			05/31/24 16:47	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			05/31/24 16:47	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			05/31/24 16:47	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			05/31/24 16:47	1
1,4-Dioxane	ND	*+	0.20	0.043	mg/L			05/31/24 16:47	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Client Sample ID: 013

Lab Sample ID: 180-174716-2

Date Collected: 05/29/24 11:35

Matrix: Water

Date Received: 05/29/24 15:00

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.0010	0.00051	mg/L			05/31/24 16:47	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			05/31/24 16:47	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			05/31/24 16:47	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			05/31/24 16:47	1
Toluene	ND		0.0010	0.00046	mg/L			05/31/24 16:47	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			05/31/24 16:47	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			05/31/24 16:47	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			05/31/24 16:47	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			05/31/24 16:47	1
Trichloroethene	ND		0.0010	0.00069	mg/L			05/31/24 16:47	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			05/31/24 16:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76		47 - 122		05/31/24 16:47	1
Dibromofluoromethane (Surr)	102		52 - 138		05/31/24 16:47	1
1,2-Dichloroethane-d4 (Surr)	80		24 - 145		05/31/24 16:47	1
Toluene-d8 (Surr)	90		65 - 143		05/31/24 16:47	1

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.0010	0.00025	mg/L		06/04/24 16:57	06/10/24 17:09	1
1,2-Dichlorobenzene	ND		0.0010	0.00022	mg/L		06/04/24 16:57	06/10/24 17:09	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.0010	0.00020	mg/L		06/04/24 16:57	06/10/24 17:09	1
1,3-Dinitrobenzene	ND		0.0010	0.00048	mg/L		06/04/24 16:57	06/10/24 17:09	1
1,4-Dichlorobenzene	ND		0.0010	0.00025	mg/L		06/04/24 16:57	06/10/24 17:09	1
2,2'-oxybis[1-chloropropane]	ND		0.00020	0.000060	mg/L		06/04/24 16:57	06/10/24 17:09	1
2,4,6-Trichlorophenol	ND		0.0010	0.00023	mg/L		06/04/24 16:57	06/10/24 17:09	1
2,4-Dichlorophenol	ND		0.00020	0.000053	mg/L		06/04/24 16:57	06/10/24 17:09	1
2,4-Dimethylphenol	ND		0.0010	0.00061	mg/L		06/04/24 16:57	06/10/24 17:09	1
2,4-Dinitrophenol	ND		0.010	0.0034	mg/L		06/04/24 16:57	06/10/24 17:09	1
2,4-Dinitrotoluene	ND		0.0010	0.00037	mg/L		06/04/24 16:57	06/10/24 17:09	1
2,6-Dinitrotoluene	ND		0.0010	0.00018	mg/L		06/04/24 16:57	06/10/24 17:09	1
2-Chloronaphthalene	ND		0.00020	0.000061	mg/L		06/04/24 16:57	06/10/24 17:09	1
2-Chlorophenol	ND		0.0010	0.00023	mg/L		06/04/24 16:57	06/10/24 17:09	1
2-Nitrophenol	ND		0.0010	0.00020	mg/L		06/04/24 16:57	06/10/24 17:09	1
3,3'-Dichlorobenzidine	ND		0.0010	0.00061	mg/L		06/04/24 16:57	06/10/24 17:09	1
4,6-Dinitro-2-methylphenol	ND		0.0052	0.0015	mg/L		06/04/24 16:57	06/10/24 17:09	1
4-Bromophenyl phenyl ether	ND		0.0010	0.00033	mg/L		06/04/24 16:57	06/10/24 17:09	1
4-Chloro-3-methylphenol	ND		0.0010	0.00045	mg/L		06/04/24 16:57	06/10/24 17:09	1
4-Chlorophenyl phenyl ether	ND		0.0010	0.00023	mg/L		06/04/24 16:57	06/10/24 17:09	1
4-Nitrophenol	ND		0.0052	0.00098	mg/L		06/04/24 16:57	06/10/24 17:09	1
Acenaphthene	ND		0.00020	0.000068	mg/L		06/04/24 16:57	06/10/24 17:09	1
Acenaphthylene	ND		0.00020	0.000068	mg/L		06/04/24 16:57	06/10/24 17:09	1
Acrylamide	ND		0.052	0.021	mg/L		06/04/24 16:57	06/10/24 17:09	1
Anthracene	ND		0.00020	0.000051	mg/L		06/04/24 16:57	06/10/24 17:09	1
Benzidine	ND		0.021	0.0095	mg/L		06/04/24 16:57	06/10/24 17:09	1
Benzo[a]anthracene	ND		0.00020	0.000078	mg/L		06/04/24 16:57	06/10/24 17:09	1
Benzo[a]pyrene	ND		0.00020	0.000055	mg/L		06/04/24 16:57	06/10/24 17:09	1
Benzo[b]fluoranthene	ND		0.00020	0.00010	mg/L		06/04/24 16:57	06/10/24 17:09	1

Eurofins Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Client Sample ID: 013

Lab Sample ID: 180-174716-2

Date Collected: 05/29/24 11:35

Matrix: Water

Date Received: 05/29/24 15:00

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		0.00020	0.000072	mg/L		06/04/24 16:57	06/10/24 17:09	1
Benzo[k]fluoranthene	ND		0.00020	0.000092	mg/L		06/04/24 16:57	06/10/24 17:09	1
Bis(2-chloroethoxy)methane	ND		0.0010	0.00016	mg/L		06/04/24 16:57	06/10/24 17:09	1
Bis(2-chloroethyl)ether	ND		0.00020	0.000042	mg/L		06/04/24 16:57	06/10/24 17:09	1
Bis(2-ethylhexyl) phthalate	ND		0.010	0.0065	mg/L		06/04/24 16:57	06/10/24 17:09	1
Butyl benzyl phthalate	ND		0.0021	0.00098	mg/L		06/04/24 16:57	06/10/24 17:09	1
Chrysene	ND		0.00020	0.000084	mg/L		06/04/24 16:57	06/10/24 17:09	1
Dibenz(a,h)anthracene	ND		0.00020	0.000075	mg/L		06/04/24 16:57	06/10/24 17:09	1
Diethyl phthalate	ND		0.0010	0.00059	mg/L		06/04/24 16:57	06/10/24 17:09	1
Dimethyl phthalate	0.00035	J	0.0021	0.00021	mg/L		06/04/24 16:57	06/10/24 17:09	1
Di-n-butyl phthalate	0.0072	J	0.010	0.0051	mg/L		06/04/24 16:57	06/10/24 17:09	1
Di-n-octyl phthalate	ND		0.0010	0.00071	mg/L		06/04/24 16:57	06/10/24 17:09	1
Fluoranthene	ND		0.00020	0.000063	mg/L		06/04/24 16:57	06/10/24 17:09	1
Fluorene	ND		0.00020	0.000072	mg/L		06/04/24 16:57	06/10/24 17:09	1
Hexachlorobenzene	ND		0.00020	0.000058	mg/L		06/04/24 16:57	06/10/24 17:09	1
Hexachlorobutadiene	ND		0.00020	0.000072	mg/L		06/04/24 16:57	06/10/24 17:09	1
Hexachlorocyclopentadiene	ND		0.0010	0.00052	mg/L		06/04/24 16:57	06/10/24 17:09	1
Hexachloroethane	ND		0.0010	0.00014	mg/L		06/04/24 16:57	06/10/24 17:09	1
Indeno[1,2,3-cd]pyrene	ND		0.00020	0.000089	mg/L		06/04/24 16:57	06/10/24 17:09	1
Isophorone	ND		0.0010	0.00020	mg/L		06/04/24 16:57	06/10/24 17:09	1
Naphthalene	ND		0.00020	0.000061	mg/L		06/04/24 16:57	06/10/24 17:09	1
Nitrobenzene	ND		0.0021	0.00052	mg/L		06/04/24 16:57	06/10/24 17:09	1
N-Nitrosodimethylamine	ND		0.0010	0.00027	mg/L		06/04/24 16:57	06/10/24 17:09	1
N-Nitrosodi-n-propylamine	ND		0.00020	0.000074	mg/L		06/04/24 16:57	06/10/24 17:09	1
N-Nitrosodiphenylamine	ND		0.0010	0.00012	mg/L		06/04/24 16:57	06/10/24 17:09	1
Pentachlorophenol	ND		0.0052	0.00088	mg/L		06/04/24 16:57	06/10/24 17:09	1
Phenanthrene	ND		0.00020	0.00016	mg/L		06/04/24 16:57	06/10/24 17:09	1
Phenol	ND		0.0010	0.00051	mg/L		06/04/24 16:57	06/10/24 17:09	1
Pyrene	ND		0.00020	0.000056	mg/L		06/04/24 16:57	06/10/24 17:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	97		42 - 115	06/04/24 16:57	06/10/24 17:09	1
2-Fluorobiphenyl	90		47 - 107	06/04/24 16:57	06/10/24 17:09	1
2-Fluorophenol (Surr)	80		54 - 109	06/04/24 16:57	06/10/24 17:09	1
Nitrobenzene-d5 (Surr)	86		47 - 110	06/04/24 16:57	06/10/24 17:09	1
Phenol-d5 (Surr)	82		37 - 110	06/04/24 16:57	06/10/24 17:09	1
Terphenyl-d14 (Surr)	96		32 - 115	06/04/24 16:57	06/10/24 17:09	1

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 09:19	1
				4					
alpha-BHC	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 09:19	1
				3					
beta-BHC	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 09:19	1
				5					
gamma-BHC (Lindane)	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 09:19	1
				8					
delta-BHC	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 09:19	1
				2					
Chlordane (technical)	ND		0.000013	0.0000070	mg/L		05/30/24 05:43	05/31/24 09:19	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Client Sample ID: 013

Lab Sample ID: 180-174716-2

Date Collected: 05/29/24 11:35

Matrix: Water

Date Received: 05/29/24 15:00

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.0000013	0.0000005	mg/L		05/30/24 05:43	05/31/24 09:19	1
				1					
4,4'-DDE	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 09:19	1
				8					
4,4'-DDT	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 09:19	1
				6					
Dieldrin	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 09:19	1
				6					
Endosulfan I	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 09:19	1
				6					
Endosulfan II	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 09:19	1
				0					
Endosulfan sulfate	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 09:19	1
				1					
Endrin	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 09:19	1
				2					
Endrin aldehyde	ND		0.0000013	0.0000005	mg/L		05/30/24 05:43	05/31/24 09:19	1
				0					
Heptachlor	ND		0.0000013	0.0000004	mg/L		05/30/24 05:43	05/31/24 09:19	1
				3					
Heptachlor epoxide	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 09:19	1
				3					
Toxaphene	ND		0.000096	0.000047	mg/L		05/30/24 05:43	05/31/24 09:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	67		20 - 138				05/30/24 05:43	05/31/24 09:19	1
Tetrachloro-m-xylene (Surr)	77		20 - 138				05/30/24 05:43	05/31/24 09:19	1
DCB Decachlorobiphenyl (Surr)	44		43 - 143				05/30/24 05:43	05/31/24 09:19	1
DCB Decachlorobiphenyl (Surr)	93		43 - 143				05/30/24 05:43	05/31/24 09:19	1

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.0000096	0.0000046	mg/L		05/30/24 05:43	05/31/24 09:22	1
PCB-1221	ND		0.0000096	0.0000055	mg/L		05/30/24 05:43	05/31/24 09:22	1
PCB-1232	ND		0.0000096	0.0000050	mg/L		05/30/24 05:43	05/31/24 09:22	1
PCB-1242	ND		0.0000096	0.0000088	mg/L		05/30/24 05:43	05/31/24 09:22	1
PCB-1248	ND		0.0000096	0.0000029	mg/L		05/30/24 05:43	05/31/24 09:22	1
PCB-1254	ND		0.0000096	0.0000092	mg/L		05/30/24 05:43	05/31/24 09:22	1
PCB-1260	ND		0.0000096	0.0000038	mg/L		05/30/24 05:43	05/31/24 09:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	72		20 - 138				05/30/24 05:43	05/31/24 09:22	1
Tetrachloro-m-xylene (Surr)	78		20 - 138				05/30/24 05:43	05/31/24 09:22	1
DCB Decachlorobiphenyl (Surr)	98		43 - 143				05/30/24 05:43	05/31/24 09:22	1
DCB Decachlorobiphenyl (Surr)	83		43 - 143				05/30/24 05:43	05/31/24 09:22	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			05/31/24 21:54	1
Chloride	56.2		1.00	0.712	mg/L			05/31/24 21:54	1
Fluoride	0.285		0.100	0.0260	mg/L			05/31/24 21:54	1
Sulfate	163		1.00	0.756	mg/L			05/31/24 21:54	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Client Sample ID: 013

Lab Sample ID: 180-174716-2

Date Collected: 05/29/24 11:35

Matrix: Water

Date Received: 05/29/24 15:00

Method: EPA 200.8-1994 R5.4 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.053	ug/L		06/03/24 14:00	06/04/24 14:56	1
Aluminum	340		50	34	ug/L		06/03/24 14:00	06/04/24 14:56	1
Arsenic	1.2	J	5.0	0.75	ug/L		06/03/24 14:00	06/04/24 14:56	1
Boron	36		20	16	ug/L		06/03/24 14:00	06/04/24 14:56	1
Barium	47		5.0	2.2	ug/L		06/03/24 14:00	06/04/24 14:56	1
Beryllium	ND		1.0	0.62	ug/L		06/03/24 14:00	06/04/24 14:56	1
Calcium	71000		1000	250	ug/L		06/03/24 14:00	06/04/24 14:56	1
Cadmium	0.41	J	1.0	0.20	ug/L		06/03/24 14:00	06/04/24 14:56	1
Cobalt	0.44	J	1.0	0.19	ug/L		06/03/24 14:00	06/04/24 14:56	1
Chromium	ND		5.0	1.2	ug/L		06/03/24 14:00	06/04/24 14:56	1
Copper	3.1		2.0	1.7	ug/L		06/03/24 14:00	06/04/24 14:56	1
Iron	440		100	47	ug/L		06/03/24 14:00	06/04/24 14:56	1
Magnesium	20000		1000	61	ug/L		06/03/24 14:00	06/04/24 14:56	1
Manganese	49		5.0	3.5	ug/L		06/03/24 14:00	06/04/24 14:56	1
Molybdenum	3.0	J	5.0	1.1	ug/L		06/03/24 14:00	06/04/24 14:56	1
Nickel	2.7		2.0	1.5	ug/L		06/03/24 14:00	06/04/24 14:56	1
Lead	1.6		1.0	0.45	ug/L		06/03/24 14:00	06/04/24 14:56	1
Antimony	0.60	J	2.0	0.57	ug/L		06/03/24 14:00	06/04/24 14:56	1
Selenium	1.5	J	5.0	0.89	ug/L		06/03/24 14:00	06/04/24 14:56	1
Thallium	ND		1.0	0.20	ug/L		06/03/24 14:00	06/04/24 14:56	1
Zinc	52		20	15	ug/L		06/03/24 14:00	06/04/24 14:56	1

Method: EPA 245.1 Rev. - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/31/24 06:00	05/31/24 11:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM-Online 4500 H+ B-2000)	8.0	HF	0.1	0.1	SU			06/01/24 10:50	1
Temperature (SM-Online 4500 H+ B-2000)	21.0	HF !	0.1	0.1	Degrees C			06/01/24 10:50	1
Sulfide (SM 4500 S2 F-2011)	ND	cn	3.0	1.3	mg/L			05/30/24 18:50	1
Total Organic Carbon - Quad (SM 5310 C-2014)	1.9		1.0	0.51	mg/L			06/04/24 21:02	1
Methylene Blue Active Substances (SM 5540C - 2011)	0.099		0.050	0.049	mg/l LAS MW 340			05/30/24 15:29	1
HEM (Oil & Grease) (EPA 1664B)	ND		5.0	4.3	mg/L		06/04/24 07:22	06/04/24 12:24	1
Ammonia (EPA 350.1)	0.17		0.10	0.088	mg/L			06/03/24 14:08	1
Nitrate Nitrite as N (EPA 353.2)	0.53		0.10	0.065	mg/L			06/03/24 10:04	1
Chemical Oxygen Demand (MCAWW EPA 410.4)	ND		10	9.1	mg/L		06/04/24 11:10	06/04/24 15:35	1
Color, Apparent (SM 2120B)	15		5.0	5.0	Color Units			05/31/24 11:05	1
Color, True (SM 2120B)	5.0		5.0	5.0	Color Units			05/31/24 11:05	1
pH at time of analysis (SM 2120B)	8.0	!	0.10	0.10	SU			05/31/24 11:05	1
Total Dissolved Solids (SM 2540C)	470		10	10	mg/L			06/04/24 07:49	1
Total Suspended Solids (SM 2540D)	12		0.50	0.50	mg/L			05/30/24 09:40	1
Biochemical Oxygen Demand (SM 5210B)	ND	cn	2.0	2.0	mg/L			05/30/24 13:42	1
Nitrogen, Kjeldahl (EPA TKN_TPhos)	0.42	J	0.50	0.12	mg/L as N		05/31/24 06:29	06/03/24 07:38	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Client Sample ID: 013

Lab Sample ID: 180-174716-2

Date Collected: 05/29/24 11:35

Matrix: Water

Date Received: 05/29/24 15:00

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus, Total (EPA TKN_TPhos)	0.041	J	0.10	0.040	mg/L as P		05/31/24 06:29	06/03/24 07:38	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SM 3500-Cr B-2011)	ND		0.010	0.0060	mg/L			05/30/24 10:32	1

Client Sample ID: 006

Lab Sample ID: 180-174716-3

Date Collected: 05/29/24 12:02

Matrix: Water

Date Received: 05/29/24 15:00

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			05/31/24 16:01	1
Acrylonitrile	ND	*+	0.020	0.0078	mg/L			05/31/24 16:01	1
Benzene	ND		0.0010	0.00060	mg/L			05/31/24 16:01	1
Bromoform	ND	*+	0.0010	0.00098	mg/L			05/31/24 16:01	1
Bromomethane	ND		0.0010	0.00089	mg/L			05/31/24 16:01	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			05/31/24 16:01	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			05/31/24 16:01	1
Chlorodibromomethane	ND	*+	0.0010	0.00084	mg/L			05/31/24 16:01	1
Chloroethane	ND		0.0010	0.00090	mg/L			05/31/24 16:01	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			05/31/24 16:01	1
Chloroform	ND		0.0010	0.00060	mg/L			05/31/24 16:01	1
Chloromethane	ND		0.0010	0.00090	mg/L			05/31/24 16:01	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			05/31/24 16:01	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			05/31/24 16:01	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			05/31/24 16:01	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			05/31/24 16:01	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			05/31/24 16:01	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			05/31/24 16:01	1
1,4-Dioxane	ND	*+	0.20	0.043	mg/L			05/31/24 16:01	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			05/31/24 16:01	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			05/31/24 16:01	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			05/31/24 16:01	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			05/31/24 16:01	1
Toluene	ND		0.0010	0.00046	mg/L			05/31/24 16:01	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			05/31/24 16:01	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			05/31/24 16:01	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			05/31/24 16:01	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			05/31/24 16:01	1
Trichloroethene	ND		0.0010	0.00069	mg/L			05/31/24 16:01	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			05/31/24 16:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		47 - 122		05/31/24 16:01	1
Dibromofluoromethane (Surr)	89		52 - 138		05/31/24 16:01	1
1,2-Dichloroethane-d4 (Surr)	61		24 - 145		05/31/24 16:01	1
Toluene-d8 (Surr)	101		65 - 143		05/31/24 16:01	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Client Sample ID: 006

Lab Sample ID: 180-174716-3

Date Collected: 05/29/24 12:02

Matrix: Water

Date Received: 05/29/24 15:00

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.0010	0.00024	mg/L		06/04/24 16:57	06/10/24 17:31	1
1,2-Dichlorobenzene	ND		0.0010	0.00021	mg/L		06/04/24 16:57	06/10/24 17:31	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.0010	0.00020	mg/L		06/04/24 16:57	06/10/24 17:31	1
1,3-Dinitrobenzene	ND		0.0010	0.00046	mg/L		06/04/24 16:57	06/10/24 17:31	1
1,4-Dichlorobenzene	ND		0.0010	0.00024	mg/L		06/04/24 16:57	06/10/24 17:31	1
2,2'-oxybis[1-chloropropane]	ND		0.00019	0.000058	mg/L		06/04/24 16:57	06/10/24 17:31	1
2,4,6-Trichlorophenol	ND		0.0010	0.00022	mg/L		06/04/24 16:57	06/10/24 17:31	1
2,4-Dichlorophenol	ND		0.00019	0.000051	mg/L		06/04/24 16:57	06/10/24 17:31	1
2,4-Dimethylphenol	ND		0.0010	0.00059	mg/L		06/04/24 16:57	06/10/24 17:31	1
2,4-Dinitrophenol	ND		0.010	0.0033	mg/L		06/04/24 16:57	06/10/24 17:31	1
2,4-Dinitrotoluene	ND		0.0010	0.00035	mg/L		06/04/24 16:57	06/10/24 17:31	1
2,6-Dinitrotoluene	ND		0.0010	0.00017	mg/L		06/04/24 16:57	06/10/24 17:31	1
2-Chloronaphthalene	ND		0.00019	0.000059	mg/L		06/04/24 16:57	06/10/24 17:31	1
2-Chlorophenol	ND		0.0010	0.00023	mg/L		06/04/24 16:57	06/10/24 17:31	1
2-Nitrophenol	ND		0.0010	0.00019	mg/L		06/04/24 16:57	06/10/24 17:31	1
3,3'-Dichlorobenzidine	ND		0.0010	0.00058	mg/L		06/04/24 16:57	06/10/24 17:31	1
4,6-Dinitro-2-methylphenol	ND		0.0050	0.0015	mg/L		06/04/24 16:57	06/10/24 17:31	1
4-Bromophenyl phenyl ether	ND		0.0010	0.00032	mg/L		06/04/24 16:57	06/10/24 17:31	1
4-Chloro-3-methylphenol	ND		0.0010	0.00044	mg/L		06/04/24 16:57	06/10/24 17:31	1
4-Chlorophenyl phenyl ether	ND		0.0010	0.00022	mg/L		06/04/24 16:57	06/10/24 17:31	1
4-Nitrophenol	ND		0.0050	0.00094	mg/L		06/04/24 16:57	06/10/24 17:31	1
Acenaphthene	ND		0.00019	0.000065	mg/L		06/04/24 16:57	06/10/24 17:31	1
Acenaphthylene	ND		0.00019	0.000065	mg/L		06/04/24 16:57	06/10/24 17:31	1
Acrylamide	ND		0.050	0.021	mg/L		06/04/24 16:57	06/10/24 17:31	1
Anthracene	ND		0.00019	0.000049	mg/L		06/04/24 16:57	06/10/24 17:31	1
Benzidine	ND		0.020	0.0091	mg/L		06/04/24 16:57	06/10/24 17:31	1
Benzo[a]anthracene	ND		0.00019	0.000075	mg/L		06/04/24 16:57	06/10/24 17:31	1
Benzo[a]pyrene	ND		0.00019	0.000053	mg/L		06/04/24 16:57	06/10/24 17:31	1
Benzo[b]fluoranthene	ND		0.00019	0.000097	mg/L		06/04/24 16:57	06/10/24 17:31	1
Benzo[g,h,i]perylene	ND		0.00019	0.000069	mg/L		06/04/24 16:57	06/10/24 17:31	1
Benzo[k]fluoranthene	ND		0.00019	0.000088	mg/L		06/04/24 16:57	06/10/24 17:31	1
Bis(2-chloroethoxy)methane	ND		0.0010	0.00015	mg/L		06/04/24 16:57	06/10/24 17:31	1
Bis(2-chloroethyl)ether	ND		0.00019	0.000040	mg/L		06/04/24 16:57	06/10/24 17:31	1
Bis(2-ethylhexyl) phthalate	ND		0.010	0.0062	mg/L		06/04/24 16:57	06/10/24 17:31	1
Butyl benzyl phthalate	ND		0.0020	0.00094	mg/L		06/04/24 16:57	06/10/24 17:31	1
Chrysene	ND		0.00019	0.000081	mg/L		06/04/24 16:57	06/10/24 17:31	1
Dibenz(a,h)anthracene	ND		0.00019	0.000072	mg/L		06/04/24 16:57	06/10/24 17:31	1
Diethyl phthalate	ND		0.0010	0.00057	mg/L		06/04/24 16:57	06/10/24 17:31	1
Dimethyl phthalate	ND		0.0020	0.00020	mg/L		06/04/24 16:57	06/10/24 17:31	1
Di-n-butyl phthalate	0.0052	J	0.010	0.0049	mg/L		06/04/24 16:57	06/10/24 17:31	1
Di-n-octyl phthalate	ND		0.0010	0.00069	mg/L		06/04/24 16:57	06/10/24 17:31	1
Fluoranthene	ND		0.00019	0.000060	mg/L		06/04/24 16:57	06/10/24 17:31	1
Fluorene	ND		0.00019	0.000069	mg/L		06/04/24 16:57	06/10/24 17:31	1
Hexachlorobenzene	ND		0.00019	0.000056	mg/L		06/04/24 16:57	06/10/24 17:31	1
Hexachlorobutadiene	ND		0.00019	0.000069	mg/L		06/04/24 16:57	06/10/24 17:31	1
Hexachlorocyclopentadiene	ND		0.0010	0.00050	mg/L		06/04/24 16:57	06/10/24 17:31	1
Hexachloroethane	ND		0.0010	0.00013	mg/L		06/04/24 16:57	06/10/24 17:31	1
Indeno[1,2,3-cd]pyrene	ND		0.00019	0.000085	mg/L		06/04/24 16:57	06/10/24 17:31	1
Isophorone	ND		0.0010	0.00019	mg/L		06/04/24 16:57	06/10/24 17:31	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Client Sample ID: 006

Lab Sample ID: 180-174716-3

Date Collected: 05/29/24 12:02

Matrix: Water

Date Received: 05/29/24 15:00

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.00019	0.000059	mg/L		06/04/24 16:57	06/10/24 17:31	1
Nitrobenzene	ND		0.0020	0.00050	mg/L		06/04/24 16:57	06/10/24 17:31	1
N-Nitrosodimethylamine	ND		0.0010	0.00026	mg/L		06/04/24 16:57	06/10/24 17:31	1
N-Nitrosodi-n-propylamine	ND		0.00019	0.000071	mg/L		06/04/24 16:57	06/10/24 17:31	1
N-Nitrosodiphenylamine	ND		0.0010	0.00012	mg/L		06/04/24 16:57	06/10/24 17:31	1
Pentachlorophenol	ND		0.0050	0.00085	mg/L		06/04/24 16:57	06/10/24 17:31	1
Phenanthrene	ND		0.00019	0.00016	mg/L		06/04/24 16:57	06/10/24 17:31	1
Phenol	ND		0.0010	0.00049	mg/L		06/04/24 16:57	06/10/24 17:31	1
Pyrene	ND		0.00019	0.000054	mg/L		06/04/24 16:57	06/10/24 17:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	92		42 - 115	06/04/24 16:57	06/10/24 17:31	1
2-Fluorobiphenyl	88		47 - 107	06/04/24 16:57	06/10/24 17:31	1
2-Fluorophenol (Surr)	87		54 - 109	06/04/24 16:57	06/10/24 17:31	1
Nitrobenzene-d5 (Surr)	78		47 - 110	06/04/24 16:57	06/10/24 17:31	1
Phenol-d5 (Surr)	80		37 - 110	06/04/24 16:57	06/10/24 17:31	1
Terphenyl-d14 (Surr)	89		32 - 115	06/04/24 16:57	06/10/24 17:31	1

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 09:35	1
alpha-BHC	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 09:35	1
beta-BHC	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 09:35	1
gamma-BHC (Lindane)	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 09:35	1
delta-BHC	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 09:35	1
Chlordane (technical)	ND		0.000013	0.0000073	mg/L		05/30/24 05:43	05/31/24 09:35	1
4,4'-DDD	ND		0.0000013	0.0000005	mg/L		05/30/24 05:43	05/31/24 09:35	1
4,4'-DDE	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 09:35	1
4,4'-DDT	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 09:35	1
Dieldrin	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 09:35	1
Endosulfan I	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 09:35	1
Endosulfan II	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 09:35	1
Endosulfan sulfate	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 09:35	1
Endrin	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 09:35	1
Endrin aldehyde	ND		0.0000013	0.0000005	mg/L		05/30/24 05:43	05/31/24 09:35	1
Heptachlor	ND		0.0000013	0.0000004	mg/L		05/30/24 05:43	05/31/24 09:35	1
Heptachlor epoxide	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 09:35	1
Toxaphene	ND		0.00010	0.000049	mg/L		05/30/24 05:43	05/31/24 09:35	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Client Sample ID: 006

Lab Sample ID: 180-174716-3

Date Collected: 05/29/24 12:02

Matrix: Water

Date Received: 05/29/24 15:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	87		20 - 138	05/30/24 05:43	05/31/24 09:35	1
Tetrachloro-m-xylene (Surr)	79		20 - 138	05/30/24 05:43	05/31/24 09:35	1
DCB Decachlorobiphenyl (Surr)	45		43 - 143	05/30/24 05:43	05/31/24 09:35	1
DCB Decachlorobiphenyl (Surr)	92		43 - 143	05/30/24 05:43	05/31/24 09:35	1

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.000010	0.0000048	mg/L		05/30/24 05:43	05/31/24 09:40	1
PCB-1221	ND		0.000010	0.0000057	mg/L		05/30/24 05:43	05/31/24 09:40	1
PCB-1232	ND		0.000010	0.0000052	mg/L		05/30/24 05:43	05/31/24 09:40	1
PCB-1242	ND		0.000010	0.0000091	mg/L		05/30/24 05:43	05/31/24 09:40	1
PCB-1248	ND		0.000010	0.0000030	mg/L		05/30/24 05:43	05/31/24 09:40	1
PCB-1254	ND		0.000010	0.0000095	mg/L		05/30/24 05:43	05/31/24 09:40	1
PCB-1260	ND		0.000010	0.0000039	mg/L		05/30/24 05:43	05/31/24 09:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	68		20 - 138	05/30/24 05:43	05/31/24 09:40	1
Tetrachloro-m-xylene (Surr)	82		20 - 138	05/30/24 05:43	05/31/24 09:40	1
DCB Decachlorobiphenyl (Surr)	87		43 - 143	05/30/24 05:43	05/31/24 09:40	1
DCB Decachlorobiphenyl (Surr)	72		43 - 143	05/30/24 05:43	05/31/24 09:40	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			06/01/24 03:45	1
Chloride	61.6		1.00	0.712	mg/L			06/01/24 03:45	1
Fluoride	0.0930	J	0.100	0.0260	mg/L			06/01/24 03:45	1
Sulfate	101		1.00	0.756	mg/L			06/01/24 03:45	1

Method: EPA 200.8-1994 R5.4 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.053	ug/L		06/03/24 14:00	06/04/24 15:06	1
Aluminum	480		50	34	ug/L		06/03/24 14:00	06/04/24 15:06	1
Arsenic	1.0	J	5.0	0.75	ug/L		06/03/24 14:00	06/04/24 15:06	1
Boron	17	J	20	16	ug/L		06/03/24 14:00	06/04/24 15:06	1
Barium	33		5.0	2.2	ug/L		06/03/24 14:00	06/04/24 15:06	1
Beryllium	ND		1.0	0.62	ug/L		06/03/24 14:00	06/04/24 15:06	1
Calcium	52000		1000	250	ug/L		06/03/24 14:00	06/04/24 15:06	1
Cadmium	ND		1.0	0.20	ug/L		06/03/24 14:00	06/04/24 15:06	1
Cobalt	0.52	J	1.0	0.19	ug/L		06/03/24 14:00	06/04/24 15:06	1
Chromium	ND		5.0	1.2	ug/L		06/03/24 14:00	06/04/24 15:06	1
Copper	3.4		2.0	1.7	ug/L		06/03/24 14:00	06/04/24 15:06	1
Iron	550		100	47	ug/L		06/03/24 14:00	06/04/24 15:06	1
Magnesium	12000		1000	61	ug/L		06/03/24 14:00	06/04/24 15:06	1
Manganese	130		5.0	3.5	ug/L		06/03/24 14:00	06/04/24 15:06	1
Molybdenum	1.6	J	5.0	1.1	ug/L		06/03/24 14:00	06/04/24 15:06	1
Nickel	1.9	J	2.0	1.5	ug/L		06/03/24 14:00	06/04/24 15:06	1
Lead	1.2		1.0	0.45	ug/L		06/03/24 14:00	06/04/24 15:06	1
Antimony	ND		2.0	0.57	ug/L		06/03/24 14:00	06/04/24 15:06	1
Selenium	ND		5.0	0.89	ug/L		06/03/24 14:00	06/04/24 15:06	1
Thallium	ND		1.0	0.20	ug/L		06/03/24 14:00	06/04/24 15:06	1
Zinc	24		20	15	ug/L		06/03/24 14:00	06/04/24 15:06	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Client Sample ID: 006

Lab Sample ID: 180-174716-3

Date Collected: 05/29/24 12:02

Matrix: Water

Date Received: 05/29/24 15:00

Method: EPA 245.1 Rev. - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/31/24 06:00	05/31/24 11:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM-Online 4500 H+ B-2000)	7.6	HF	0.1	0.1	SU			06/01/24 10:55	1
Temperature (SM-Online 4500 H+ B-2000)	21.1	HF !	0.1	0.1	Degrees C			06/01/24 10:55	1
Sulfide (SM 4500 S2 F-2011)	ND	cn	3.0	1.3	mg/L			05/30/24 18:57	1
Total Organic Carbon - Quad (SM 5310 C-2014)	4.0		1.0	0.51	mg/L			06/08/24 07:31	1
Methylene Blue Active Substances (SM 5540C - 2011)	0.16		0.050	0.049	mg/l LAS MW 340			05/30/24 15:30	1
HEM (Oil & Grease) (EPA 1664B)	ND		4.9	4.2	mg/L		06/04/24 07:22	06/04/24 12:24	1
Ammonia (EPA 350.1)	0.15		0.10	0.088	mg/L			06/03/24 14:10	1
Nitrate Nitrite as N (EPA 353.2)	0.28		0.10	0.065	mg/L			06/03/24 10:06	1
Chemical Oxygen Demand (MCAWW EPA 410.4)	9.7	J	10	9.1	mg/L		06/04/24 11:10	06/04/24 15:36	1
Color, Apparent (SM 2120B)	25		5.0	5.0	Color Units			05/31/24 11:07	1
Color, True (SM 2120B)	5.0		5.0	5.0	Color Units			05/31/24 11:07	1
pH at time of analysis (SM 2120B)	7.7	!	0.10	0.10	SU			05/31/24 11:07	1
Total Dissolved Solids (SM 2540C)	320		10	10	mg/L			06/04/24 07:49	1
Total Suspended Solids (SM 2540D)	13		0.50	0.50	mg/L			05/30/24 09:40	1
Biochemical Oxygen Demand (SM 5210B)	2.1	cn	2.0	2.0	mg/L			05/30/24 13:42	1
Nitrogen, Kjeldahl (EPA TKN_TPhos)	0.40	J	0.50	0.12	mg/L as N		05/31/24 06:29	06/03/24 07:40	1
Phosphorus, Total (EPA TKN_TPhos)	ND		0.10	0.040	mg/L as P		05/31/24 06:29	06/03/24 07:40	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SM 3500-Cr B-2011)	ND		0.010	0.0060	mg/L			05/30/24 10:36	1

Client Sample ID: TRIP BLANK

Lab Sample ID: 180-174716-4

Date Collected: 05/29/24 00:01

Matrix: Water

Date Received: 05/29/24 15:00

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			05/31/24 13:18	1
Acrylonitrile	ND	++	0.020	0.0078	mg/L			05/31/24 13:18	1
Benzene	ND		0.0010	0.00060	mg/L			05/31/24 13:18	1
Bromoform	ND	++	0.0010	0.00098	mg/L			05/31/24 13:18	1
Bromomethane	ND		0.0010	0.00089	mg/L			05/31/24 13:18	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			05/31/24 13:18	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			05/31/24 13:18	1
Chlorodibromomethane	ND	++	0.0010	0.00084	mg/L			05/31/24 13:18	1
Chloroethane	ND		0.0010	0.00090	mg/L			05/31/24 13:18	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			05/31/24 13:18	1
Chloroform	ND		0.0010	0.00060	mg/L			05/31/24 13:18	1
Chloromethane	ND		0.0010	0.00090	mg/L			05/31/24 13:18	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			05/31/24 13:18	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 180-174716-4

Date Collected: 05/29/24 00:01

Matrix: Water

Date Received: 05/29/24 15:00

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			05/31/24 13:18	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			05/31/24 13:18	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			05/31/24 13:18	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			05/31/24 13:18	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			05/31/24 13:18	1
1,4-Dioxane	ND	*+	0.20	0.043	mg/L			05/31/24 13:18	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			05/31/24 13:18	1
Methylene Chloride	0.0023		0.0010	0.00089	mg/L			05/31/24 13:18	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			05/31/24 13:18	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			05/31/24 13:18	1
Toluene	ND		0.0010	0.00046	mg/L			05/31/24 13:18	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			05/31/24 13:18	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			05/31/24 13:18	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			05/31/24 13:18	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			05/31/24 13:18	1
Trichloroethene	ND		0.0010	0.00069	mg/L			05/31/24 13:18	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			05/31/24 13:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		47 - 122		05/31/24 13:18	1
Dibromofluoromethane (Surr)	107		52 - 138		05/31/24 13:18	1
1,2-Dichloroethane-d4 (Surr)	84		24 - 145		05/31/24 13:18	1
Toluene-d8 (Surr)	97		65 - 143		05/31/24 13:18	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

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

Lab Sample ID: MB 180-470254/6

Matrix: Water

Analysis Batch: 470254

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			05/31/24 10:11	1
Acrylonitrile	ND		0.020	0.0078	mg/L			05/31/24 10:11	1
Benzene	ND		0.0010	0.00060	mg/L			05/31/24 10:11	1
Bromoform	ND		0.0010	0.00098	mg/L			05/31/24 10:11	1
Bromomethane	ND		0.0010	0.00089	mg/L			05/31/24 10:11	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			05/31/24 10:11	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			05/31/24 10:11	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			05/31/24 10:11	1
Chloroethane	ND		0.0010	0.00090	mg/L			05/31/24 10:11	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			05/31/24 10:11	1
Chloroform	ND		0.0010	0.00060	mg/L			05/31/24 10:11	1
Chloromethane	ND		0.0010	0.00090	mg/L			05/31/24 10:11	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			05/31/24 10:11	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			05/31/24 10:11	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			05/31/24 10:11	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			05/31/24 10:11	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			05/31/24 10:11	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			05/31/24 10:11	1
1,4-Dioxane	ND		0.20	0.043	mg/L			05/31/24 10:11	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			05/31/24 10:11	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			05/31/24 10:11	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			05/31/24 10:11	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			05/31/24 10:11	1
Toluene	ND		0.0010	0.00046	mg/L			05/31/24 10:11	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			05/31/24 10:11	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			05/31/24 10:11	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			05/31/24 10:11	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			05/31/24 10:11	1
Trichloroethene	ND		0.0010	0.00069	mg/L			05/31/24 10:11	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			05/31/24 10:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	77		47 - 122		05/31/24 10:11	1
Dibromofluoromethane (Surr)	110		52 - 138		05/31/24 10:11	1
1,2-Dichloroethane-d4 (Surr)	102		24 - 145		05/31/24 10:11	1
Toluene-d8 (Surr)	85		65 - 143		05/31/24 10:11	1

Lab Sample ID: LCS 180-470254/3

Matrix: Water

Analysis Batch: 470254

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acrolein	0.0300	0.0350		mg/L		117	60 - 140
Acrylonitrile	0.100	0.141	*+	mg/L		141	60 - 140
Benzene	0.0100	0.00909		mg/L		91	65 - 135
Bromoform	0.0100	0.0217	*+	mg/L		217	70 - 130
Bromomethane	0.0100	0.0104		mg/L		104	15 - 170
Carbon tetrachloride	0.0100	0.0123		mg/L		123	70 - 130

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

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

Lab Sample ID: LCS 180-470254/3

Matrix: Water

Analysis Batch: 470254

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorobenzene	0.0100	0.00930		mg/L		93	65 - 135
Chlorodibromomethane	0.0100	0.0157	*+	mg/L		157	70 - 135
Chloroethane	0.0100	0.00969		mg/L		97	40 - 160
2-Chloroethyl vinyl ether	0.0200	0.00520		mg/L		26	10 - 170
Chloroform	0.0100	0.00963		mg/L		96	70 - 135
Chloromethane	0.0100	0.00960		mg/L		96	10 - 170
cis-1,3-Dichloropropene	0.0100	0.0106		mg/L		106	25 - 170
Dichlorobromomethane	0.0100	0.0123		mg/L		123	65 - 135
1,1-Dichloroethane	0.0100	0.00918		mg/L		92	70 - 130
1,2-Dichloroethane	0.0100	0.00953		mg/L		95	70 - 130
1,1-Dichloroethene	0.0100	0.00990		mg/L		99	50 - 150
1,2-Dichloropropane	0.0100	0.00934		mg/L		93	35 - 165
1,4-Dioxane	0.200	0.735	*+	mg/L		367	10 - 152
Ethylbenzene	0.0100	0.00868		mg/L		87	60 - 140
Methylene Chloride	0.0100	0.00984		mg/L		98	60 - 140
1,1,2,2-Tetrachloroethane	0.0100	0.0135		mg/L		135	60 - 140
Tetrachloroethene	0.0100	0.0106		mg/L		106	70 - 130
Toluene	0.0100	0.00866		mg/L		87	70 - 130
trans-1,2-Dichloroethene	0.0100	0.00977		mg/L		98	70 - 130
trans-1,3-Dichloropropene	0.0100	0.0118		mg/L		118	50 - 150
1,1,1-Trichloroethane	0.0100	0.0104		mg/L		104	70 - 130
1,1,2-Trichloroethane	0.0100	0.0111		mg/L		111	70 - 130
Trichloroethene	0.0100	0.00965		mg/L		96	65 - 135
Vinyl chloride	0.0100	0.00992		mg/L		99	10 - 170

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	89		47 - 122
Dibromofluoromethane (Surr)	116		52 - 138
1,2-Dichloroethane-d4 (Surr)	104		24 - 145
Toluene-d8 (Surr)	91		65 - 143

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 180-470598/1-A

Matrix: Water

Analysis Batch: 471019

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 470598

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.0010	0.00024	mg/L		06/04/24 16:57	06/10/24 14:33	1
1,2-Dichlorobenzene	ND		0.0010	0.00021	mg/L		06/04/24 16:57	06/10/24 14:33	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.0010	0.00020	mg/L		06/04/24 16:57	06/10/24 14:33	1
1,3-Dinitrobenzene	ND		0.0010	0.00046	mg/L		06/04/24 16:57	06/10/24 14:33	1
1,4-Dichlorobenzene	ND		0.0010	0.00024	mg/L		06/04/24 16:57	06/10/24 14:33	1
2,2'-oxybis[1-chloropropane]	ND		0.00019	0.000058	mg/L		06/04/24 16:57	06/10/24 14:33	1
2,4,6-Trichlorophenol	ND		0.0010	0.00022	mg/L		06/04/24 16:57	06/10/24 14:33	1
2,4-Dichlorophenol	ND		0.00019	0.000051	mg/L		06/04/24 16:57	06/10/24 14:33	1
2,4-Dimethylphenol	ND		0.0010	0.00059	mg/L		06/04/24 16:57	06/10/24 14:33	1
2,4-Dinitrophenol	ND		0.010	0.0033	mg/L		06/04/24 16:57	06/10/24 14:33	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-470598/1-A

Matrix: Water

Analysis Batch: 471019

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 470598

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		0.0010	0.00035	mg/L		06/04/24 16:57	06/10/24 14:33	1
2,6-Dinitrotoluene	ND		0.0010	0.00017	mg/L		06/04/24 16:57	06/10/24 14:33	1
2-Chloronaphthalene	ND		0.00019	0.000059	mg/L		06/04/24 16:57	06/10/24 14:33	1
2-Chlorophenol	ND		0.0010	0.00023	mg/L		06/04/24 16:57	06/10/24 14:33	1
2-Nitrophenol	ND		0.0010	0.00019	mg/L		06/04/24 16:57	06/10/24 14:33	1
3,3'-Dichlorobenzidine	ND		0.0010	0.00058	mg/L		06/04/24 16:57	06/10/24 14:33	1
4,6-Dinitro-2-methylphenol	ND		0.0050	0.0015	mg/L		06/04/24 16:57	06/10/24 14:33	1
4-Bromophenyl phenyl ether	ND		0.0010	0.00032	mg/L		06/04/24 16:57	06/10/24 14:33	1
4-Chloro-3-methylphenol	ND		0.0010	0.00044	mg/L		06/04/24 16:57	06/10/24 14:33	1
4-Chlorophenyl phenyl ether	ND		0.0010	0.00022	mg/L		06/04/24 16:57	06/10/24 14:33	1
4-Nitrophenol	ND		0.0050	0.00094	mg/L		06/04/24 16:57	06/10/24 14:33	1
Acenaphthene	ND		0.00019	0.000065	mg/L		06/04/24 16:57	06/10/24 14:33	1
Acenaphthylene	ND		0.00019	0.000065	mg/L		06/04/24 16:57	06/10/24 14:33	1
Acrylamide	ND		0.050	0.021	mg/L		06/04/24 16:57	06/10/24 14:33	1
Anthracene	ND		0.00019	0.000049	mg/L		06/04/24 16:57	06/10/24 14:33	1
Benzidine	ND		0.020	0.0091	mg/L		06/04/24 16:57	06/10/24 14:33	1
Benzo[a]anthracene	ND		0.00019	0.000075	mg/L		06/04/24 16:57	06/10/24 14:33	1
Benzo[a]pyrene	ND		0.00019	0.000053	mg/L		06/04/24 16:57	06/10/24 14:33	1
Benzo[b]fluoranthene	ND		0.00019	0.000097	mg/L		06/04/24 16:57	06/10/24 14:33	1
Benzo[g,h,i]perylene	ND		0.00019	0.000069	mg/L		06/04/24 16:57	06/10/24 14:33	1
Benzo[k]fluoranthene	ND		0.00019	0.000088	mg/L		06/04/24 16:57	06/10/24 14:33	1
Bis(2-chloroethoxy)methane	ND		0.0010	0.00015	mg/L		06/04/24 16:57	06/10/24 14:33	1
Bis(2-chloroethyl)ether	ND		0.00019	0.000040	mg/L		06/04/24 16:57	06/10/24 14:33	1
Bis(2-ethylhexyl) phthalate	ND		0.010	0.0062	mg/L		06/04/24 16:57	06/10/24 14:33	1
Butyl benzyl phthalate	ND		0.0020	0.00094	mg/L		06/04/24 16:57	06/10/24 14:33	1
Chrysene	ND		0.00019	0.000081	mg/L		06/04/24 16:57	06/10/24 14:33	1
Dibenz(a,h)anthracene	ND		0.00019	0.000072	mg/L		06/04/24 16:57	06/10/24 14:33	1
Diethyl phthalate	ND		0.0010	0.00057	mg/L		06/04/24 16:57	06/10/24 14:33	1
Dimethyl phthalate	ND		0.0020	0.00020	mg/L		06/04/24 16:57	06/10/24 14:33	1
Di-n-butyl phthalate	ND		0.010	0.0049	mg/L		06/04/24 16:57	06/10/24 14:33	1
Di-n-octyl phthalate	ND		0.0010	0.00069	mg/L		06/04/24 16:57	06/10/24 14:33	1
Fluoranthene	ND		0.00019	0.000060	mg/L		06/04/24 16:57	06/10/24 14:33	1
Fluorene	ND		0.00019	0.000069	mg/L		06/04/24 16:57	06/10/24 14:33	1
Hexachlorobenzene	ND		0.00019	0.000056	mg/L		06/04/24 16:57	06/10/24 14:33	1
Hexachlorobutadiene	ND		0.00019	0.000069	mg/L		06/04/24 16:57	06/10/24 14:33	1
Hexachlorocyclopentadiene	ND		0.0010	0.00050	mg/L		06/04/24 16:57	06/10/24 14:33	1
Hexachloroethane	ND		0.0010	0.00013	mg/L		06/04/24 16:57	06/10/24 14:33	1
Indeno[1,2,3-cd]pyrene	ND		0.00019	0.000085	mg/L		06/04/24 16:57	06/10/24 14:33	1
Isophorone	ND		0.0010	0.00019	mg/L		06/04/24 16:57	06/10/24 14:33	1
Naphthalene	ND		0.00019	0.000059	mg/L		06/04/24 16:57	06/10/24 14:33	1
Nitrobenzene	ND		0.0020	0.00050	mg/L		06/04/24 16:57	06/10/24 14:33	1
N-Nitrosodimethylamine	ND		0.0010	0.00026	mg/L		06/04/24 16:57	06/10/24 14:33	1
N-Nitrosodi-n-propylamine	ND		0.00019	0.000071	mg/L		06/04/24 16:57	06/10/24 14:33	1
N-Nitrosodiphenylamine	ND		0.0010	0.00012	mg/L		06/04/24 16:57	06/10/24 14:33	1
Pentachlorophenol	ND		0.0050	0.00085	mg/L		06/04/24 16:57	06/10/24 14:33	1
Phenanthrene	ND		0.00019	0.00016	mg/L		06/04/24 16:57	06/10/24 14:33	1
Phenol	ND		0.0010	0.00049	mg/L		06/04/24 16:57	06/10/24 14:33	1
Pyrene	ND		0.00019	0.000054	mg/L		06/04/24 16:57	06/10/24 14:33	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-470598/1-A

Matrix: Water

Analysis Batch: 471019

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 470598

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	85		42 - 115	06/04/24 16:57	06/10/24 14:33	1
2-Fluorobiphenyl	95		47 - 107	06/04/24 16:57	06/10/24 14:33	1
2-Fluorophenol (Surr)	87		54 - 109	06/04/24 16:57	06/10/24 14:33	1
Nitrobenzene-d5 (Surr)	85		47 - 110	06/04/24 16:57	06/10/24 14:33	1
Phenol-d5 (Surr)	85		37 - 110	06/04/24 16:57	06/10/24 14:33	1
Terphenyl-d14 (Surr)	88		32 - 115	06/04/24 16:57	06/10/24 14:33	1

Lab Sample ID: LCS 180-470598/2-A

Matrix: Water

Analysis Batch: 471019

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 470598

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	0.0100	0.00848		mg/L		85	52 - 142
1,2-Dichlorobenzene	0.0100	0.00867		mg/L		87	50 - 100
1,2-Diphenylhydrazine(as Azobenzene)	0.0100	0.00792		mg/L		79	40 - 116
1,3-Dinitrobenzene	0.0100	0.00913		mg/L		91	54 - 100
1,4-Dichlorobenzene	0.0100	0.00863		mg/L		86	57 - 100
2,2'-oxybis[1-chloropropane]	0.0100	0.00906		mg/L		91	36 - 150
2,4,6-Trichlorophenol	0.0100	0.00885		mg/L		89	37 - 144
2,4-Dichlorophenol	0.0100	0.00888		mg/L		89	39 - 135
2,4-Dimethylphenol	0.0100	0.00876		mg/L		88	32 - 120
2,4-Dinitrophenol	0.0200	0.0165		mg/L		83	10 - 150
2,4-Dinitrotoluene	0.0100	0.00914		mg/L		91	39 - 139
2,6-Dinitrotoluene	0.0100	0.00798		mg/L		80	50 - 150
2-Chloronaphthalene	0.0100	0.00845		mg/L		84	60 - 120
2-Chlorophenol	0.0100	0.00869		mg/L		87	23 - 134
2-Nitrophenol	0.0100	0.00883		mg/L		88	57 - 150
3,3'-Dichlorobenzidine	0.0100	0.00902		mg/L		90	44 - 150
4,6-Dinitro-2-methylphenol	0.0200	0.0166		mg/L		83	43 - 150
4-Bromophenyl phenyl ether	0.0100	0.00885		mg/L		89	53 - 127
4-Chloro-3-methylphenol	0.0100	0.00854		mg/L		85	54 - 147
4-Chlorophenyl phenyl ether	0.0100	0.00874		mg/L		87	25 - 150
4-Nitrophenol	0.0200	0.0168		mg/L		84	10 - 132
Acenaphthene	0.0100	0.00816		mg/L		82	47 - 145
Acenaphthylene	0.0100	0.00887		mg/L		89	33 - 145
Anthracene	0.0100	0.00839		mg/L		84	27 - 133
Benzidine	0.0100	ND		mg/L		82	5 - 100
Benzo[a]anthracene	0.0100	0.00845		mg/L		85	33 - 143
Benzo[a]pyrene	0.0100	0.00874		mg/L		87	17 - 150
Benzo[b]fluoranthene	0.0100	0.00816		mg/L		82	24 - 150
Benzo[g,h,i]perylene	0.0100	0.00836		mg/L		84	10 - 150
Benzo[k]fluoranthene	0.0100	0.00821		mg/L		82	11 - 150
Bis(2-chloroethoxy)methane	0.0100	0.00787		mg/L		79	33 - 150
Bis(2-chloroethyl)ether	0.0100	0.00823		mg/L		82	12 - 150
Bis(2-ethylhexyl) phthalate	0.0100	0.00870	J	mg/L		87	10 - 150
Butyl benzyl phthalate	0.0100	0.00898		mg/L		90	10 - 150
Chrysene	0.0100	0.00814		mg/L		81	17 - 150
Dibenz(a,h)anthracene	0.0100	0.00871		mg/L		87	10 - 150

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-470598/2-A

Matrix: Water

Analysis Batch: 471019

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 470598

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diethyl phthalate	0.0100	0.00883		mg/L		88	10 - 120
Dimethyl phthalate	0.0100	0.00845		mg/L		84	10 - 120
Di-n-butyl phthalate	0.0100	0.00844	J	mg/L		84	10 - 120
Di-n-octyl phthalate	0.0100	0.00911		mg/L		91	10 - 146
Fluoranthene	0.0100	0.00892		mg/L		89	26 - 137
Fluorene	0.0100	0.00842		mg/L		84	59 - 121
Hexachlorobenzene	0.0100	0.00869		mg/L		87	10 - 150
Hexachlorobutadiene	0.0100	0.00921		mg/L		92	24 - 120
Hexachlorocyclopentadiene	0.0100	0.00866		mg/L		87	37 - 121
Hexachloroethane	0.0100	0.00921		mg/L		92	40 - 120
Indeno[1,2,3-cd]pyrene	0.0100	0.00885		mg/L		89	10 - 150
Isophorone	0.0100	0.00783		mg/L		78	21 - 150
Naphthalene	0.0100	0.00805		mg/L		80	21 - 133
Nitrobenzene	0.0100	0.00740		mg/L		74	35 - 150
N-Nitrosodimethylamine	0.0100	0.00764		mg/L		76	50 - 109
N-Nitrosodi-n-propylamine	0.0100	0.00858		mg/L		86	10 - 150
N-Nitrosodiphenylamine	0.0100	0.00826		mg/L		83	51 - 100
Pentachlorophenol	0.0200	0.0164		mg/L		82	14 - 150
Phenanthrene	0.0100	0.00822		mg/L		82	54 - 120
Phenol	0.0100	0.00881		mg/L		88	10 - 120
Pyrene	0.0100	0.00827		mg/L		83	52 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	94		42 - 115
2-Fluorobiphenyl	86		47 - 107
2-Fluorophenol (Surr)	86		54 - 109
Nitrobenzene-d5 (Surr)	78		47 - 110
Phenol-d5 (Surr)	89		37 - 110
Terphenyl-d14 (Surr)	76		32 - 115

Lab Sample ID: LCSD 180-470598/3-A

Matrix: Water

Analysis Batch: 471019

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 470598

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	0.0100	0.00827		mg/L		83	52 - 142	3	16
1,2-Dichlorobenzene	0.0100	0.00848		mg/L		85	50 - 100	2	15
1,2-Diphenylhydrazine(as Azobenzene)	0.0100	0.00747		mg/L		75	40 - 116	6	19
1,3-Dinitrobenzene	0.0100	0.00788		mg/L		79	54 - 100	15	15
1,4-Dichlorobenzene	0.0100	0.00827		mg/L		83	57 - 100	4	15
2,2'-oxybis[1-chloropropane]	0.0100	0.00821		mg/L		82	36 - 150	10	35
2,4,6-Trichlorophenol	0.0100	0.00861		mg/L		86	37 - 144	3	35
2,4-Dichlorophenol	0.0100	0.00802		mg/L		80	39 - 135	10	35
2,4-Dimethylphenol	0.0100	0.00860		mg/L		86	32 - 120	2	35
2,4-Dinitrophenol	0.0200	0.0153		mg/L		76	10 - 150	8	35
2,4-Dinitrotoluene	0.0100	0.00828		mg/L		83	39 - 139	10	35
2,6-Dinitrotoluene	0.0100	0.00828		mg/L		83	50 - 150	4	35
2-Chloronaphthalene	0.0100	0.00809		mg/L		81	60 - 120	4	24

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 180-470598/3-A

Matrix: Water

Analysis Batch: 471019

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 470598

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Chlorophenol	0.0100	0.00822		mg/L		82	23 - 134	6	34
2-Nitrophenol	0.0100	0.00881		mg/L		88	57 - 150	0	17
3,3'-Dichlorobenzidine	0.0100	0.00827		mg/L		83	44 - 150	9	19
4,6-Dinitro-2-methylphenol	0.0200	0.0158		mg/L		79	43 - 150	5	21
4-Bromophenyl phenyl ether	0.0100	0.00825		mg/L		83	53 - 127	7	20
4-Chloro-3-methylphenol	0.0100	0.00838		mg/L		84	54 - 147	2	35
4-Chlorophenyl phenyl ether	0.0100	0.00828		mg/L		83	25 - 150	5	35
4-Nitrophenol	0.0200	0.0152		mg/L		76	10 - 132	10	35
Acenaphthene	0.0100	0.00791		mg/L		79	47 - 145	3	35
Acenaphthylene	0.0100	0.00837		mg/L		84	33 - 145	6	35
Anthracene	0.0100	0.00807		mg/L		81	27 - 133	4	35
Benzidine	0.0100	ND		mg/L		79	5 - 100	4	35
Benzo[a]anthracene	0.0100	0.00806		mg/L		81	33 - 143	5	35
Benzo[a]pyrene	0.0100	0.00803		mg/L		80	17 - 150	8	35
Benzo[b]fluoranthene	0.0100	0.00816		mg/L		82	24 - 150	0	35
Benzo[g,h,i]perylene	0.0100	0.00803		mg/L		80	10 - 150	4	35
Benzo[k]fluoranthene	0.0100	0.00751		mg/L		75	11 - 150	9	35
Bis(2-chloroethoxy)methane	0.0100	0.00795		mg/L		80	33 - 150	1	35
Bis(2-chloroethyl)ether	0.0100	0.00767		mg/L		77	12 - 150	7	35
Bis(2-ethylhexyl) phthalate	0.0100	0.00810	J	mg/L		81	10 - 150	7	35
Butyl benzyl phthalate	0.0100	0.00862		mg/L		86	10 - 150	4	35
Chrysene	0.0100	0.00751		mg/L		75	17 - 150	8	35
Dibenz(a,h)anthracene	0.0100	0.00813		mg/L		81	10 - 150	7	35
Diethyl phthalate	0.0100	0.00814		mg/L		81	10 - 120	8	35
Dimethyl phthalate	0.0100	0.00790		mg/L		79	10 - 120	7	35
Di-n-butyl phthalate	0.0100	0.00789	J	mg/L		79	10 - 120	7	35
Di-n-octyl phthalate	0.0100	0.00871		mg/L		87	10 - 146	4	35
Fluoranthene	0.0100	0.00812		mg/L		81	26 - 137	9	35
Fluorene	0.0100	0.00793		mg/L		79	59 - 121	6	35
Hexachlorobenzene	0.0100	0.00802		mg/L		80	10 - 150	8	35
Hexachlorobutadiene	0.0100	0.00865		mg/L		86	24 - 120	6	35
Hexachlorocyclopentadiene	0.0100	0.00797		mg/L		80	37 - 121	8	15
Hexachloroethane	0.0100	0.00803		mg/L		80	40 - 120	14	35
Indeno[1,2,3-cd]pyrene	0.0100	0.00841		mg/L		84	10 - 150	5	35
Isophorone	0.0100	0.00761		mg/L		76	21 - 150	3	35
Naphthalene	0.0100	0.00830		mg/L		83	21 - 133	3	35
Nitrobenzene	0.0100	0.00756		mg/L		76	35 - 150	2	35
N-Nitrosodimethylamine	0.0100	0.00799		mg/L		80	50 - 109	4	19
N-Nitrosodi-n-propylamine	0.0100	0.00821		mg/L		82	10 - 150	4	35
N-Nitrosodiphenylamine	0.0100	0.00798		mg/L		80	51 - 100	3	20
Pentachlorophenol	0.0200	0.0153		mg/L		77	14 - 150	7	35
Phenanthrene	0.0100	0.00781		mg/L		78	54 - 120	5	35
Phenol	0.0100	0.00837		mg/L		84	10 - 120	5	35
Pyrene	0.0100	0.00793		mg/L		79	52 - 120	4	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	86		42 - 115
2-Fluorobiphenyl	79		47 - 107

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 180-470598/3-A

Matrix: Water

Analysis Batch: 471019

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 470598

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorophenol (Surr)	77		54 - 109
Nitrobenzene-d5 (Surr)	76		47 - 110
Phenol-d5 (Surr)	82		37 - 110
Terphenyl-d14 (Surr)	69		32 - 115

Method: EPA 608.3 - Organochlorine Pesticides in Water

Lab Sample ID: MB 180-470106/1-A

Matrix: Water

Analysis Batch: 470236

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 470106

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 07:20	1
alpha-BHC	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 07:20	1
beta-BHC	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 07:20	1
gamma-BHC (Lindane)	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 07:20	1
delta-BHC	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 07:20	1
Chlordane (technical)	ND		0.000013	0.0000073	mg/L		05/30/24 05:43	05/31/24 07:20	1
4,4'-DDD	ND		0.0000013	0.0000005	mg/L		05/30/24 05:43	05/31/24 07:20	1
4,4'-DDE	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 07:20	1
4,4'-DDT	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 07:20	1
Dieldrin	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 07:20	1
Endosulfan I	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 07:20	1
Endosulfan II	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 07:20	1
Endosulfan sulfate	ND		0.0000013	0.0000006	mg/L		05/30/24 05:43	05/31/24 07:20	1
Endrin	ND		0.0000013	0.0000002	mg/L		05/30/24 05:43	05/31/24 07:20	1
Endrin aldehyde	ND		0.0000013	0.0000005	mg/L		05/30/24 05:43	05/31/24 07:20	1
Heptachlor	ND		0.0000013	0.0000004	mg/L		05/30/24 05:43	05/31/24 07:20	1
Heptachlor epoxide	ND		0.0000013	0.0000003	mg/L		05/30/24 05:43	05/31/24 07:20	1
Toxaphene	ND		0.00010	0.000049	mg/L		05/30/24 05:43	05/31/24 07:20	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	99		20 - 138				05/30/24 05:43	05/31/24 07:20	1
Tetrachloro-m-xylene (Surr)	103		20 - 138				05/30/24 05:43	05/31/24 07:20	1
DCB Decachlorobiphenyl (Surr)	100		43 - 143				05/30/24 05:43	05/31/24 07:20	1
DCB Decachlorobiphenyl (Surr)	99		43 - 143				05/30/24 05:43	05/31/24 07:20	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Method: EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: LCS 180-470106/2-A

Matrix: Water

Analysis Batch: 470236

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 470106

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aldrin	0.0000250	0.0000226		mg/L		90	42 - 140
alpha-BHC	0.0000250	0.0000222		mg/L		89	37 - 140
beta-BHC	0.0000250	0.0000238		mg/L		95	17 - 147
gamma-BHC (Lindane)	0.0000250	0.0000235		mg/L		94	32 - 140
delta-BHC	0.0000250	0.0000129		mg/L		52	19 - 140
4,4'-DDD	0.0000250	0.0000228		mg/L		91	31 - 141
4,4'-DDE	0.0000250	0.0000247		mg/L		99	30 - 145
4,4'-DDT	0.0000250	0.0000244		mg/L		98	25 - 150
Dieldrin	0.0000250	0.0000233		mg/L		93	36 - 146
Endosulfan I	0.0000250	0.0000222		mg/L		89	45 - 150
Endosulfan II	0.0000250	0.0000235		mg/L		94	10 - 150
Endosulfan sulfate	0.0000250	0.0000208		mg/L		83	26 - 144
Endrin	0.0000250	0.0000245		mg/L		98	30 - 147
Endrin aldehyde	0.0000250	0.0000260		mg/L		104	51 - 113
Heptachlor	0.0000250	0.0000232		mg/L		93	34 - 140
Heptachlor epoxide	0.0000250	0.0000225		mg/L		90	37 - 142

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene (Surr)	104		20 - 138
Tetrachloro-m-xylene (Surr)	103		20 - 138
DCB Decachlorobiphenyl (Surr)	104		43 - 143
DCB Decachlorobiphenyl (Surr)	100		43 - 143

Lab Sample ID: LCSD 180-470106/3-A

Matrix: Water

Analysis Batch: 470236

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 470106

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Aldrin	0.0000250	0.0000220		mg/L		88	42 - 140	2	35
alpha-BHC	0.0000250	0.0000214		mg/L		86	37 - 140	3	35
beta-BHC	0.0000250	0.0000232		mg/L		93	17 - 147	2	35
gamma-BHC (Lindane)	0.0000250	0.0000229		mg/L		92	32 - 140	2	35
delta-BHC	0.0000250	0.0000123		mg/L		49	19 - 140	4	35
4,4'-DDD	0.0000250	0.0000223		mg/L		89	31 - 141	2	35
4,4'-DDE	0.0000250	0.0000244		mg/L		98	30 - 145	1	35
4,4'-DDT	0.0000250	0.0000237		mg/L		95	25 - 150	3	35
Dieldrin	0.0000250	0.0000231		mg/L		92	36 - 146	1	35
Endosulfan I	0.0000250	0.0000222		mg/L		89	45 - 150	0	28
Endosulfan II	0.0000250	0.0000233		mg/L		93	10 - 150	1	35
Endosulfan sulfate	0.0000250	0.0000201		mg/L		80	26 - 144	3	35
Endrin	0.0000250	0.0000240		mg/L		96	30 - 147	2	35
Endrin aldehyde	0.0000250	0.0000255		mg/L		102	51 - 113	2	26
Heptachlor	0.0000250	0.0000227		mg/L		91	34 - 140	2	35
Heptachlor epoxide	0.0000250	0.0000220		mg/L		88	37 - 142	2	26

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene (Surr)	97		20 - 138
Tetrachloro-m-xylene (Surr)	100		20 - 138

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Method: EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: LCSD 180-470106/3-A

Matrix: Water

Analysis Batch: 470236

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 470106

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	101		43 - 143
DCB Decachlorobiphenyl (Surr)	100		43 - 143

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

Lab Sample ID: MB 180-470106/1-A

Matrix: Water

Analysis Batch: 470233

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 470106

Analyte	MB	MB								
	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
PCB-1016	ND		0.000010	0.0000048	mg/L		05/30/24 05:43	05/31/24 08:12	1	
PCB-1221	ND		0.000010	0.0000057	mg/L		05/30/24 05:43	05/31/24 08:12	1	
PCB-1232	ND		0.000010	0.0000052	mg/L		05/30/24 05:43	05/31/24 08:12	1	
PCB-1242	ND		0.000010	0.0000091	mg/L		05/30/24 05:43	05/31/24 08:12	1	
PCB-1248	ND		0.000010	0.0000030	mg/L		05/30/24 05:43	05/31/24 08:12	1	
PCB-1254	ND		0.000010	0.0000095	mg/L		05/30/24 05:43	05/31/24 08:12	1	
PCB-1260	ND		0.000010	0.0000039	mg/L		05/30/24 05:43	05/31/24 08:12	1	

	MB	MB								
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil	Fac
Tetrachloro-m-xylene (Surr)	101		20 - 138				05/30/24 05:43	05/31/24 08:12	1	
Tetrachloro-m-xylene (Surr)	104		20 - 138				05/30/24 05:43	05/31/24 08:12	1	
DCB Decachlorobiphenyl (Surr)	100		43 - 143				05/30/24 05:43	05/31/24 08:12	1	
DCB Decachlorobiphenyl (Surr)	103		43 - 143				05/30/24 05:43	05/31/24 08:12	1	

Lab Sample ID: LCS 180-470106/4-A

Matrix: Water

Analysis Batch: 470233

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 470106

Analyte	Spike	LCS	LCS							
	Added	Result	Qualifier	Unit	D	%Rec	%Rec	Limits		
PCB-1016	0.00100	0.000906		mg/L		91		50 - 140		
PCB-1260	0.00100	0.000909		mg/L		91		10 - 140		

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene (Surr)	99		20 - 138
Tetrachloro-m-xylene (Surr)	99		20 - 138
DCB Decachlorobiphenyl (Surr)	96		43 - 143
DCB Decachlorobiphenyl (Surr)	100		43 - 143

Lab Sample ID: LCSD 180-470106/5-A

Matrix: Water

Analysis Batch: 470233

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 470106

Analyte	Spike	LCSD	LCSD							
	Added	Result	Qualifier	Unit	D	%Rec	%Rec	Limits	RPD	Limit
PCB-1016	0.00100	0.000910		mg/L		91		50 - 140	0	35
PCB-1260	0.00100	0.000931		mg/L		93		10 - 140	2	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene (Surr)	100		20 - 138

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

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

Lab Sample ID: LCSD 180-470106/5-A
Matrix: Water
Analysis Batch: 470233

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 470106

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene (Surr)	98		20 - 138
DCB Decachlorobiphenyl (Surr)	94		43 - 143
DCB Decachlorobiphenyl (Surr)	103		43 - 143

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-470273/48
Matrix: Water
Analysis Batch: 470273

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			06/01/24 01:35	1
Chloride	ND		1.00	0.712	mg/L			06/01/24 01:35	1
Fluoride	ND		0.100	0.0260	mg/L			06/01/24 01:35	1
Sulfate	ND		1.00	0.756	mg/L			06/01/24 01:35	1

Lab Sample ID: MB 180-470273/6
Matrix: Water
Analysis Batch: 470273

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			05/31/24 12:39	1
Chloride	ND		1.00	0.712	mg/L			05/31/24 12:39	1
Fluoride	ND		0.100	0.0260	mg/L			05/31/24 12:39	1
Sulfate	ND		1.00	0.756	mg/L			05/31/24 12:39	1

Lab Sample ID: LCS 180-470273/49
Matrix: Water
Analysis Batch: 470273

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	10.0	10.49		mg/L		105	90 - 110
Chloride	50.0	50.44		mg/L		101	90 - 110
Fluoride	2.50	2.581		mg/L		103	90 - 110
Sulfate	50.0	50.18		mg/L		100	90 - 110

Lab Sample ID: LCS 180-470273/7
Matrix: Water
Analysis Batch: 470273

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	10.0	10.35		mg/L		104	90 - 110
Chloride	50.0	49.93		mg/L		100	90 - 110
Fluoride	2.50	2.561		mg/L		102	90 - 110
Sulfate	50.0	49.65		mg/L		99	90 - 110

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 180-174716-1 MS

Matrix: Water

Analysis Batch: 470273

Client Sample ID: 002

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	ND		10.0	10.93		mg/L		109	90 - 110
Chloride	13.9		50.0	65.12		mg/L		102	90 - 110
Fluoride	0.433		2.50	2.994		mg/L		102	90 - 110
Sulfate	67.4		50.0	115.1		mg/L		95	90 - 110

Lab Sample ID: 180-174716-1 MSD

Matrix: Water

Analysis Batch: 470273

Client Sample ID: 002

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	ND		10.0	10.91		mg/L		109	90 - 110	0	20
Chloride	13.9		50.0	65.02		mg/L		102	90 - 110	0	20
Fluoride	0.433		2.50	2.984		mg/L		102	90 - 110	0	20
Sulfate	67.4		50.0	114.5		mg/L		94	90 - 110	1	20

Method: 200.8-1994 R5.4 - Metals (ICP/MS)

Lab Sample ID: MB 240-615252/1-A

Matrix: Water

Analysis Batch: 615494

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 615252

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.053	ug/L		06/03/24 14:00	06/04/24 14:23	1
Aluminum	ND		50	34	ug/L		06/03/24 14:00	06/04/24 14:23	1
Arsenic	ND		5.0	0.75	ug/L		06/03/24 14:00	06/04/24 14:23	1
Boron	ND		20	16	ug/L		06/03/24 14:00	06/04/24 14:23	1
Barium	ND		5.0	2.2	ug/L		06/03/24 14:00	06/04/24 14:23	1
Beryllium	ND		1.0	0.62	ug/L		06/03/24 14:00	06/04/24 14:23	1
Calcium	ND		1000	250	ug/L		06/03/24 14:00	06/04/24 14:23	1
Cadmium	ND		1.0	0.20	ug/L		06/03/24 14:00	06/04/24 14:23	1
Cobalt	ND		1.0	0.19	ug/L		06/03/24 14:00	06/04/24 14:23	1
Chromium	ND		5.0	1.2	ug/L		06/03/24 14:00	06/04/24 14:23	1
Copper	ND		2.0	1.7	ug/L		06/03/24 14:00	06/04/24 14:23	1
Iron	ND		100	47	ug/L		06/03/24 14:00	06/04/24 14:23	1
Magnesium	ND		1000	61	ug/L		06/03/24 14:00	06/04/24 14:23	1
Manganese	ND		5.0	3.5	ug/L		06/03/24 14:00	06/04/24 14:23	1
Molybdenum	ND		5.0	1.1	ug/L		06/03/24 14:00	06/04/24 14:23	1
Nickel	ND		2.0	1.5	ug/L		06/03/24 14:00	06/04/24 14:23	1
Lead	ND		1.0	0.45	ug/L		06/03/24 14:00	06/04/24 14:23	1
Antimony	ND		2.0	0.57	ug/L		06/03/24 14:00	06/04/24 14:23	1
Selenium	ND		5.0	0.89	ug/L		06/03/24 14:00	06/04/24 14:23	1
Thallium	ND		1.0	0.20	ug/L		06/03/24 14:00	06/04/24 14:23	1
Zinc	ND		20	15	ug/L		06/03/24 14:00	06/04/24 14:23	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Method: 200.8-1994 R5.4 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-615252/2-A

Matrix: Water

Analysis Batch: 615494

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 615252

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	100	96.8		ug/L		97	85 - 115
Aluminum	5000	4520		ug/L		90	85 - 115
Arsenic	1000	923		ug/L		92	85 - 115
Boron	100	96.1		ug/L		96	85 - 115
Barium	1000	935		ug/L		93	85 - 115
Beryllium	500	454		ug/L		91	85 - 115
Calcium	25000	24000		ug/L		96	85 - 115
Cadmium	500	476		ug/L		95	85 - 115
Cobalt	500	459		ug/L		92	85 - 115
Chromium	500	481		ug/L		96	85 - 115
Copper	500	465		ug/L		93	85 - 115
Iron	5000	5090		ug/L		102	85 - 115
Magnesium	25000	24600		ug/L		98	85 - 115
Manganese	500	481		ug/L		96	85 - 115
Molybdenum	500	466		ug/L		93	85 - 115
Nickel	500	465		ug/L		93	85 - 115
Lead	500	482		ug/L		96	85 - 115
Antimony	100	95.7		ug/L		96	85 - 115
Selenium	1000	915		ug/L		92	85 - 115
Thallium	1000	976		ug/L		98	85 - 115
Zinc	500	459		ug/L		92	85 - 115

Method: EPA 245.1 Rev. - Mercury (CVAA)

Lab Sample ID: MB 180-470201/1-A

Matrix: Water

Analysis Batch: 470316

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 470201

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/31/24 06:00	05/31/24 11:22	1

Lab Sample ID: LCS 180-470201/2-A

Matrix: Water

Analysis Batch: 470316

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 470201

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00250	0.00255		mg/L		102	85 - 115

Lab Sample ID: 180-174716-2 MS

Matrix: Water

Analysis Batch: 470316

Client Sample ID: 013

Prep Type: Total/NA

Prep Batch: 470201

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	ND		0.00100	0.000969		mg/L		97	70 - 130

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Method: EPA 245.1 Rev. - Mercury (CVAA) (Continued)

Lab Sample ID: 180-174716-2 MSD
Matrix: Water
Analysis Batch: 470316

Client Sample ID: 013
Prep Type: Total/NA
Prep Batch: 470201

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		0.00100	0.000997		mg/L		100	70 - 130	3	20

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

Lab Sample ID: MB 180-470192/14
Matrix: Water
Analysis Batch: 470192

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0060	mg/L			05/30/24 10:30	1

Lab Sample ID: LCS 180-470192/15
Matrix: Water
Analysis Batch: 470192

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	0.500	0.548		mg/L		110	85 - 115

Lab Sample ID: 180-174716-2 MS
Matrix: Water
Analysis Batch: 470192

Client Sample ID: 013
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	ND		0.500	0.489		mg/L		98	85 - 115

Lab Sample ID: 180-174716-2 MSD
Matrix: Water
Analysis Batch: 470192

Client Sample ID: 013
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cr (VI)	ND		0.500	0.491		mg/L		98	85 - 115	0	20

Method: 4500 H+ B-2000 - pH - SM Online, 2011

Lab Sample ID: LCS 180-470360/1
Matrix: Water
Analysis Batch: 470360

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: 180-174716-1 DU
Matrix: Water
Analysis Batch: 470360

Client Sample ID: 002
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	8.1	HF	8.1		SU		0	2
Temperature	21.0	HF !	21.0		Degrees C		0	5

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Method: 4500 S2 F-2011 - Sulfide, Total

Lab Sample ID: MB 180-470227/34
Matrix: Water
Analysis Batch: 470227

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		3.0	1.3	mg/L			05/30/24 18:55	1

Lab Sample ID: MB 180-470227/4
Matrix: Water
Analysis Batch: 470227

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		3.0	1.3	mg/L			05/30/24 17:42	1

Lab Sample ID: LCS 180-470227/3
Matrix: Water
Analysis Batch: 470227

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	16.9	16.8		mg/L		99	90 - 110

Lab Sample ID: LCS 180-470227/33
Matrix: Water
Analysis Batch: 470227

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	16.9	16.7		mg/L		99	90 - 110

Lab Sample ID: 180-174716-3 MS
Matrix: Water
Analysis Batch: 470227

Client Sample ID: 006
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	ND	cn	16.9	17.6		mg/L		104	75 - 125

Lab Sample ID: 180-174716-3 MSD
Matrix: Water
Analysis Batch: 470227

Client Sample ID: 006
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	ND	cn	16.9	17.9		mg/L		106	75 - 125	2	20

Method: 5310 C-2014 - Total Organic Carbon/Persulfate - Ultrav

Lab Sample ID: MB 180-470672/5
Matrix: Water
Analysis Batch: 470672

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Quad	ND		1.0	0.51	mg/L			06/04/24 13:05	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Method: 5310 C-2014 - Total Organic Carbon/Persulfate - Ultrav (Continued)

Lab Sample ID: LCS 180-470672/4

Matrix: Water

Analysis Batch: 470672

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon - Quad	20.0	19.8		mg/L		99	85 - 115

Lab Sample ID: MB 180-471072/5

Matrix: Water

Analysis Batch: 471072

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Quad	ND		1.0	0.51	mg/L			06/07/24 21:56	1

Lab Sample ID: LCS 180-471072/4

Matrix: Water

Analysis Batch: 471072

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon - Quad	20.0	21.1		mg/L		106	85 - 115

Method: 5540C - 2011 - Methylene Blue Active Substant (MBAS)

Lab Sample ID: MB 180-470226/2

Matrix: Water

Analysis Batch: 470226

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Blue Active Substances	ND		0.050	0.049	mg/l LAS MW 340			05/30/24 10:06	1

Lab Sample ID: LCS 180-470226/3

Matrix: Water

Analysis Batch: 470226

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methylene Blue Active Substances	0.500	0.512		mg/l LAS MW 340		102	90 - 110

Method: EPA 1664B - HEM and SGT-HEM

Lab Sample ID: MB 180-470505/1-A

Matrix: Water

Analysis Batch: 470570

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 470505

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		5.0	4.3	mg/L		06/04/24 07:22	06/04/24 12:24	1

Lab Sample ID: LCS 180-470505/2-A

Matrix: Water

Analysis Batch: 470570

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 470505

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HEM (Oil & Grease)	40.1	31.4		mg/L		78	78 - 114

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

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

Lab Sample ID: LCSD 180-470505/3-A
Matrix: Water
Analysis Batch: 470570

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 470505

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HEM (Oil & Grease)	40.1	32.7		mg/L		82	78 - 114	4	18

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-470476/49
Matrix: Water
Analysis Batch: 470476

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.10	0.088	mg/L			06/03/24 13:04	1

Lab Sample ID: LCS 180-470476/53
Matrix: Water
Analysis Batch: 470476

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	0.500	0.538		mg/L		108	90 - 110

Method: EPA 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 180-470450/52
Matrix: Water
Analysis Batch: 470450

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.10	0.065	mg/L			06/03/24 09:50	1

Lab Sample ID: LCS 180-470450/56
Matrix: Water
Analysis Batch: 470450

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	2.00	1.96		mg/L		98	90 - 110

Method: EPA 410.4 - COD

Lab Sample ID: MB 180-470565/12-A
Matrix: Water
Analysis Batch: 470685

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 470565

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	9.1	mg/L		06/04/24 11:10	06/04/24 15:09	1

Lab Sample ID: MB 180-470565/36-A
Matrix: Water
Analysis Batch: 470685

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 470565

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	9.1	mg/L		06/04/24 11:10	06/04/24 15:26	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Method: EPA 410.4 - COD (Continued)

Lab Sample ID: LCS 180-470565/35-A
Matrix: Water
Analysis Batch: 470685

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 470565

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	75.0	75.0		mg/L		100	90 - 110

Method: SM 2120B - Color, Colorimetric

Lab Sample ID: MB 180-470307/1
Matrix: Water
Analysis Batch: 470307

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Color, Apparent	ND		5.0	5.0	Color Units			05/31/24 10:58	1
Color, True	ND		5.0	5.0	Color Units			05/31/24 10:58	1
pH at time of analysis	NA		0.10	0.10	SU			05/31/24 10:58	1

Lab Sample ID: LCS 180-470307/2
Matrix: Water
Analysis Batch: 470307

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Color, Apparent	40.0	40.0		Color Units		100	90 - 110
Color, True	40.0	40.0		Color Units		100	90 - 110

Lab Sample ID: 180-174716-1 DU
Matrix: Water
Analysis Batch: 470307

Client Sample ID: 002
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Color, Apparent	15		15.0		Color Units		0	20
Color, True	5.0		5.00		Color Units		0	20
pH at time of analysis	7.7	!	7.74		SU		0	

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-470511/1
Matrix: Water
Analysis Batch: 470511

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			06/04/24 07:49	1

Lab Sample ID: LCS 180-470511/2
Matrix: Water
Analysis Batch: 470511

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	417	394		mg/L		94	85 - 115

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

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

Lab Sample ID: MB 180-470172/2
Matrix: Water
Analysis Batch: 470172

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		0.50	0.50	mg/L			05/30/24 09:40	1

Lab Sample ID: LCS 180-470172/1
Matrix: Water
Analysis Batch: 470172

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	49.0	46.0		mg/L		94	85 - 115

Method: SM 5210B - 5 Day BOD test

Lab Sample ID: USB 180-470529/1
Matrix: Water
Analysis Batch: 470529

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

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	ND		20	20	mg/L			05/30/24 11:27	1

Lab Sample ID: LCS 180-470529/2
Matrix: Water
Analysis Batch: 470529

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	198	182		mg/L		92	85 - 115

Method: TKN_TPhos - EPA 351.2 1993 R2/365.4 1974

Lab Sample ID: MB 180-470243/7-A
Matrix: Water
Analysis Batch: 470414

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 470243

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	ND		0.50	0.12	mg/L as N		05/31/24 06:29	06/03/24 07:26	1
Phosphorus, Total	ND		0.10	0.040	mg/L as P		05/31/24 06:29	06/03/24 07:26	1

Lab Sample ID: LCS 180-470243/8-A
Matrix: Water
Analysis Batch: 470414

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 470243

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	2.50	2.65		mg/L as N		106	90 - 110
Phosphorus, Total	2.50	2.39		mg/L as P		96	90 - 110

Lab Sample ID: 180-174716-1 MS
Matrix: Water
Analysis Batch: 470414

Client Sample ID: 002
Prep Type: Total/NA
Prep Batch: 470243

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	0.13	J FH	2.50	2.94	FH	mg/L as N		113	90 - 110
Phosphorus, Total	0.041	J	2.50	2.59		mg/L as P		102	90 - 110

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Method: TKN_TPhos - EPA 351.2 1993 R2/365.4 1974 (Continued)

Lab Sample ID: 180-174716-1 MSD
Matrix: Water
Analysis Batch: 470414

Client Sample ID: 002
Prep Type: Total/NA
Prep Batch: 470243

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrogen, Kjeldahl	0.13	J FH	2.50	2.96	FH	mg/L as N		113	90 - 110	0	20
Phosphorus, Total	0.041	J	2.50	2.59		mg/L as P		102	90 - 110	0	20

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

GC/MS VOA

Analysis Batch: 470254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	EPA 624.1	
180-174716-2	013	Total/NA	Water	EPA 624.1	
180-174716-3	006	Total/NA	Water	EPA 624.1	
180-174716-4	TRIP BLANK	Total/NA	Water	EPA 624.1	
MB 180-470254/6	Method Blank	Total/NA	Water	EPA 624.1	
LCS 180-470254/3	Lab Control Sample	Total/NA	Water	EPA 624.1	

GC/MS Semi VOA

Prep Batch: 470598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	625	
180-174716-2	013	Total/NA	Water	625	
180-174716-3	006	Total/NA	Water	625	
MB 180-470598/1-A	Method Blank	Total/NA	Water	625	
LCS 180-470598/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 180-470598/3-A	Lab Control Sample Dup	Total/NA	Water	625	

Analysis Batch: 471019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	EPA 625.1	470598
180-174716-2	013	Total/NA	Water	EPA 625.1	470598
180-174716-3	006	Total/NA	Water	EPA 625.1	470598
MB 180-470598/1-A	Method Blank	Total/NA	Water	EPA 625.1	470598
LCS 180-470598/2-A	Lab Control Sample	Total/NA	Water	EPA 625.1	470598
LCSD 180-470598/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 625.1	470598

GC Semi VOA

Prep Batch: 470106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	608	
180-174716-2	013	Total/NA	Water	608	
180-174716-3	006	Total/NA	Water	608	
MB 180-470106/1-A	Method Blank	Total/NA	Water	608	
LCS 180-470106/2-A	Lab Control Sample	Total/NA	Water	608	
LCS 180-470106/4-A	Lab Control Sample	Total/NA	Water	608	
LCSD 180-470106/3-A	Lab Control Sample Dup	Total/NA	Water	608	
LCSD 180-470106/5-A	Lab Control Sample Dup	Total/NA	Water	608	

Analysis Batch: 470233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	EPA 608.3	470106
180-174716-2	013	Total/NA	Water	EPA 608.3	470106
180-174716-3	006	Total/NA	Water	EPA 608.3	470106
MB 180-470106/1-A	Method Blank	Total/NA	Water	EPA 608.3	470106
LCS 180-470106/4-A	Lab Control Sample	Total/NA	Water	EPA 608.3	470106
LCSD 180-470106/5-A	Lab Control Sample Dup	Total/NA	Water	EPA 608.3	470106

Analysis Batch: 470236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	EPA 608.3	470106

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QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

GC Semi VOA (Continued)

Analysis Batch: 470236 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-2	013	Total/NA	Water	EPA 608.3	470106
180-174716-3	006	Total/NA	Water	EPA 608.3	470106
MB 180-470106/1-A	Method Blank	Total/NA	Water	EPA 608.3	470106
LCS 180-470106/2-A	Lab Control Sample	Total/NA	Water	EPA 608.3	470106
LCSD 180-470106/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 608.3	470106

HPLC/IC

Analysis Batch: 470273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	EPA 300.0 R2.1	
180-174716-2	013	Total/NA	Water	EPA 300.0 R2.1	
180-174716-3	006	Total/NA	Water	EPA 300.0 R2.1	
MB 180-470273/48	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
MB 180-470273/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-470273/49	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-470273/7	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-174716-1 MS	002	Total/NA	Water	EPA 300.0 R2.1	
180-174716-1 MSD	002	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 470201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	245.1	
180-174716-2	013	Total/NA	Water	245.1	
180-174716-3	006	Total/NA	Water	245.1	
MB 180-470201/1-A	Method Blank	Total/NA	Water	245.1	
LCS 180-470201/2-A	Lab Control Sample	Total/NA	Water	245.1	
180-174716-2 MS	013	Total/NA	Water	245.1	
180-174716-2 MSD	013	Total/NA	Water	245.1	

Analysis Batch: 470316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	EPA 245.1 Rev.	470201
180-174716-2	013	Total/NA	Water	EPA 245.1 Rev.	470201
180-174716-3	006	Total/NA	Water	EPA 245.1 Rev.	470201
MB 180-470201/1-A	Method Blank	Total/NA	Water	EPA 245.1 Rev.	470201
LCS 180-470201/2-A	Lab Control Sample	Total/NA	Water	EPA 245.1 Rev.	470201
180-174716-2 MS	013	Total/NA	Water	EPA 245.1 Rev.	470201
180-174716-2 MSD	013	Total/NA	Water	EPA 245.1 Rev.	470201

Prep Batch: 615252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total Recoverable	Water	200.8-1994 R5.4	
180-174716-2	013	Total Recoverable	Water	200.8-1994 R5.4	
180-174716-3	006	Total Recoverable	Water	200.8-1994 R5.4	
MB 240-615252/1-A	Method Blank	Total Recoverable	Water	200.8-1994 R5.4	
LCS 240-615252/2-A	Lab Control Sample	Total Recoverable	Water	200.8-1994 R5.4	

Eurofins Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

Metals

Analysis Batch: 615494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total Recoverable	Water	200.8-1994 R5.4	615252
180-174716-2	013	Total Recoverable	Water	200.8-1994 R5.4	615252
180-174716-3	006	Total Recoverable	Water	200.8-1994 R5.4	615252
MB 240-615252/1-A	Method Blank	Total Recoverable	Water	200.8-1994 R5.4	615252
LCS 240-615252/2-A	Lab Control Sample	Total Recoverable	Water	200.8-1994 R5.4	615252

General Chemistry

Analysis Batch: 470172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	SM 2540D	
180-174716-2	013	Total/NA	Water	SM 2540D	
180-174716-3	006	Total/NA	Water	SM 2540D	
MB 180-470172/2	Method Blank	Total/NA	Water	SM 2540D	
LCS 180-470172/1	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 470192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Dissolved	Water	3500-Cr B-2011	
180-174716-2	013	Dissolved	Water	3500-Cr B-2011	
180-174716-3	006	Dissolved	Water	3500-Cr B-2011	
MB 180-470192/14	Method Blank	Total/NA	Water	3500-Cr B-2011	
LCS 180-470192/15	Lab Control Sample	Total/NA	Water	3500-Cr B-2011	
180-174716-2 MS	013	Dissolved	Water	3500-Cr B-2011	
180-174716-2 MSD	013	Dissolved	Water	3500-Cr B-2011	

Analysis Batch: 470226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	5540C - 2011	
180-174716-2	013	Total/NA	Water	5540C - 2011	
180-174716-3	006	Total/NA	Water	5540C - 2011	
MB 180-470226/2	Method Blank	Total/NA	Water	5540C - 2011	
LCS 180-470226/3	Lab Control Sample	Total/NA	Water	5540C - 2011	

Analysis Batch: 470227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	4500 S2 F-2011	
180-174716-2	013	Total/NA	Water	4500 S2 F-2011	
180-174716-3	006	Total/NA	Water	4500 S2 F-2011	
MB 180-470227/34	Method Blank	Total/NA	Water	4500 S2 F-2011	
MB 180-470227/4	Method Blank	Total/NA	Water	4500 S2 F-2011	
LCS 180-470227/3	Lab Control Sample	Total/NA	Water	4500 S2 F-2011	
LCS 180-470227/33	Lab Control Sample	Total/NA	Water	4500 S2 F-2011	
180-174716-3 MS	006	Total/NA	Water	4500 S2 F-2011	
180-174716-3 MSD	006	Total/NA	Water	4500 S2 F-2011	

Prep Batch: 470243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	TKN/TPhos Prep	
180-174716-2	013	Total/NA	Water	TKN/TPhos Prep	
180-174716-3	006	Total/NA	Water	TKN/TPhos Prep	

Eurofins Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

General Chemistry (Continued)

Prep Batch: 470243 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-470243/7-A	Method Blank	Total/NA	Water	TKN/TPhos Prep	
LCS 180-470243/8-A	Lab Control Sample	Total/NA	Water	TKN/TPhos Prep	
180-174716-1 MS	002	Total/NA	Water	TKN/TPhos Prep	
180-174716-1 MSD	002	Total/NA	Water	TKN/TPhos Prep	

Analysis Batch: 470307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	SM 2120B	
180-174716-2	013	Total/NA	Water	SM 2120B	
180-174716-3	006	Total/NA	Water	SM 2120B	
MB 180-470307/1	Method Blank	Total/NA	Water	SM 2120B	
LCS 180-470307/2	Lab Control Sample	Total/NA	Water	SM 2120B	
180-174716-1 DU	002	Total/NA	Water	SM 2120B	

Analysis Batch: 470360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	4500 H+ B-2000	
180-174716-2	013	Total/NA	Water	4500 H+ B-2000	
180-174716-3	006	Total/NA	Water	4500 H+ B-2000	
LCS 180-470360/1	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	
180-174716-1 DU	002	Total/NA	Water	4500 H+ B-2000	

Analysis Batch: 470414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	TKN_TPhos	470243
180-174716-2	013	Total/NA	Water	TKN_TPhos	470243
180-174716-3	006	Total/NA	Water	TKN_TPhos	470243
MB 180-470243/7-A	Method Blank	Total/NA	Water	TKN_TPhos	470243
LCS 180-470243/8-A	Lab Control Sample	Total/NA	Water	TKN_TPhos	470243
180-174716-1 MS	002	Total/NA	Water	TKN_TPhos	470243
180-174716-1 MSD	002	Total/NA	Water	TKN_TPhos	470243

Analysis Batch: 470450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	EPA 353.2	
180-174716-2	013	Total/NA	Water	EPA 353.2	
180-174716-3	006	Total/NA	Water	EPA 353.2	
MB 180-470450/52	Method Blank	Total/NA	Water	EPA 353.2	
LCS 180-470450/56	Lab Control Sample	Total/NA	Water	EPA 353.2	

Analysis Batch: 470476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	EPA 350.1	
180-174716-2	013	Total/NA	Water	EPA 350.1	
180-174716-3	006	Total/NA	Water	EPA 350.1	
MB 180-470476/49	Method Blank	Total/NA	Water	EPA 350.1	
LCS 180-470476/53	Lab Control Sample	Total/NA	Water	EPA 350.1	

Prep Batch: 470505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	1664B	

Eurofins Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

General Chemistry (Continued)

Prep Batch: 470505 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-2	013	Total/NA	Water	1664B	
180-174716-3	006	Total/NA	Water	1664B	
MB 180-470505/1-A	Method Blank	Total/NA	Water	1664B	
LCS 180-470505/2-A	Lab Control Sample	Total/NA	Water	1664B	
LCSD 180-470505/3-A	Lab Control Sample Dup	Total/NA	Water	1664B	

Analysis Batch: 470511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	SM 2540C	
180-174716-2	013	Total/NA	Water	SM 2540C	
180-174716-3	006	Total/NA	Water	SM 2540C	
MB 180-470511/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-470511/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 470529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	SM 5210B	
180-174716-2	013	Total/NA	Water	SM 5210B	
180-174716-3	006	Total/NA	Water	SM 5210B	
USB 180-470529/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 180-470529/2	Lab Control Sample	Total/NA	Water	SM 5210B	

Prep Batch: 470565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	410.4	
180-174716-2	013	Total/NA	Water	410.4	
180-174716-3	006	Total/NA	Water	410.4	
MB 180-470565/12-A	Method Blank	Total/NA	Water	410.4	
MB 180-470565/36-A	Method Blank	Total/NA	Water	410.4	
LCS 180-470565/35-A	Lab Control Sample	Total/NA	Water	410.4	

Analysis Batch: 470570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	EPA 1664B	470505
180-174716-2	013	Total/NA	Water	EPA 1664B	470505
180-174716-3	006	Total/NA	Water	EPA 1664B	470505
MB 180-470505/1-A	Method Blank	Total/NA	Water	EPA 1664B	470505
LCS 180-470505/2-A	Lab Control Sample	Total/NA	Water	EPA 1664B	470505
LCSD 180-470505/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 1664B	470505

Analysis Batch: 470672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	5310 C-2014	
180-174716-2	013	Total/NA	Water	5310 C-2014	
MB 180-470672/5	Method Blank	Total/NA	Water	5310 C-2014	
LCS 180-470672/4	Lab Control Sample	Total/NA	Water	5310 C-2014	

Analysis Batch: 470685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-1	002	Total/NA	Water	EPA 410.4	470565
180-174716-2	013	Total/NA	Water	EPA 410.4	470565

Eurofins Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-174716-1

General Chemistry (Continued)

Analysis Batch: 470685 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-3	006	Total/NA	Water	EPA 410.4	470565
MB 180-470565/12-A	Method Blank	Total/NA	Water	EPA 410.4	470565
MB 180-470565/36-A	Method Blank	Total/NA	Water	EPA 410.4	470565
LCS 180-470565/35-A	Lab Control Sample	Total/NA	Water	EPA 410.4	470565

Analysis Batch: 471072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174716-3	006	Total/NA	Water	5310 C-2014	
MB 180-471072/5	Method Blank	Total/NA	Water	5310 C-2014	
LCS 180-471072/4	Lab Control Sample	Total/NA	Water	5310 C-2014	



Microbac Laboratories Inc., Pittsburgh Division

CERTIFICATE OF ANALYSIS

A4E2486

Eurofins Test America - Pittsburgh

Project Name: 18026655

Jill Colussy
5102 LaRoche AVE
Savannah, GA 31404

Project / PO Number: US0543365068 (2024)
Received: 05/29/2024
Reported: 05/30/2024

Analytical Testing Parameters

Client Sample ID:	002	Collected By:	Client
Sample Matrix:	Aqueous	Collection Date:	05/29/2024 11:04
Lab Sample ID:	A4E2486-01		

Analyses Performed by: Microbac Laboratories Inc., Pittsburgh Division

Microbiology	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Colilert-18 (Fecal Coliforms)								
Fecal Coliforms	59	1	MPN/100mL	1		05/29/24 1542	05/30/24 1037	BNS

Client Sample ID:	013	Collected By:	Client
Sample Matrix:	Aqueous	Collection Date:	05/29/2024 11:35
Lab Sample ID:	A4E2486-02		

Analyses Performed by: Microbac Laboratories Inc., Pittsburgh Division

Microbiology	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Colilert-18 (Fecal Coliforms)								
Fecal Coliforms	1986	1	MPN/100mL	1		05/29/24 1542	05/30/24 1037	BNS

Client Sample ID:	006	Collected By:	Client
Sample Matrix:	Aqueous	Collection Date:	05/29/2024 12:07
Lab Sample ID:	A4E2486-03		

Analyses Performed by: Microbac Laboratories Inc., Pittsburgh Division

Microbiology	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Colilert-18 (Fecal Coliforms)								
Fecal Coliforms	517	1	MPN/100mL	1		05/29/24 1542	05/30/24 1037	BNS

Definitions

MPN/100mL Most Probable Number per 100 Milliliters
RL: Reporting Limit

Project Requested Certification(s)

Microbac Laboratories Inc., Pittsburgh Division
02-00257

Pennsylvania Department of Environmental Protection
Pennsylvania Department of Environmental Protection - PARULE



Microbac Laboratories Inc., Pittsburgh Division

CERTIFICATE OF ANALYSIS

A4E2486

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

*The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. **The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:

Caroline Keefe

Customer Relationship Coordinator

Reported: 05/30/2024 18:54

[illegible]

$$\begin{array}{r} C18 \\ \hline 3.6 \rightarrow 2.6 \end{array}$$

#23

CF:-1.0

$$\begin{array}{r} C19 \\ \hline 3.4 \rightarrow 2.4 \end{array}$$

PMM

$$\begin{array}{r} C20 \\ \hline 3.3 \rightarrow 2.3 \end{array}$$

$$\begin{array}{r} C21 \\ \hline 3.6 \rightarrow 2.6 \end{array}$$



180-174716 Waybill

301 Alpha Drive RIDC Park
Pittsburgh PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Environment Testing

Ver: 04/02/2034 12/2024

Eurofins - Cleveland Sample Receipt Form/Narrative
Barberton Facility
Client Eurofins - Pitt Site Name _____ Login # _____
Cooler Received on 5-31-24 Opened on 5-31-24 Cooler unpacked by: DWC
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 # 14 (C/F) 10.2 °C Observed Cooler Temp _____ °C Corrected Cooler Temp _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 ea Yes Yes No No
-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)? Yes Yes No NA
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 Ship Lot# HC339814
14 Were VOAs on the COC? Yes Yes No NA
15 Were air bubbles >6 mm in any VOA vials? 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
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 #. _____

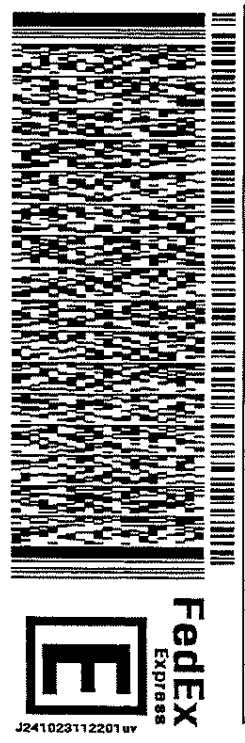
[illegible]

Part # 159469-434 MTW EXP 02/25
585C/C43585

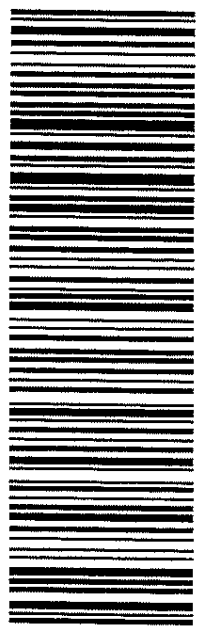
ORIGIN:AGCA (412) 963-7530 SHIP RECEIVING DEPARTMENT EUROFINS ENVIRONMENTAL TESTING PITT N E 301 ALPHA DRIVE PITTSBURGH, PA 152382907 UNITED STATES US	SHIP DATE 30MAY24 ACTUAL 20.00 LB HAN CNO 0522321/CNFE3808 BILL SENDER

TO SHIPPING/RECEIVING
EUROFINS ENVIRONMENT TESTING NORTH
180 S. VAN BUREN AVENUE

BARBERTON OH 44203
(330) 487-8386 REF: 8180-102913
PO: Y68



1 of 2
TRK# 7224 1467 1310
0201
MASTER ##
FRI - 31 MAY 10:30A
PRIORITY OVERNIGHT
64 CAKA
44203
OH-US CLE



Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 180-174716-1

Login Number: 174716

List Number: 1

Creator: Abernathy, Eric L

List Source: Eurofins Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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	
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?	True	
There are no discrepancies between the containers received and the COC.	False	
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.	True	
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").	False	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Angela Bown
GHD Services Inc.
2055 Niagara Falls Boulevard
Niagara Falls, New York 14304

Generated 7/15/2024 2:48:59 PM

JOB DESCRIPTION

GHD Shell Monaca

JOB NUMBER

180-176274-1

Eurofins Pittsburgh

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.

PA Lab ID: 02-00416

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 Pittsburgh Project Manager.

Authorization



Authorized for release by
Jill Colussy, Project Manager I
Jill.Colussy@et.eurofinsus.com
(412)963-2444

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Case Narrative

Client: GHD Services Inc.
Project: GHD Shell Monaca

Job ID: 180-176274-1

Job ID: 180-176274-1

Eurofins Pittsburgh

Job Narrative 180-176274-1

Receipt

The samples were received on 6/27/2024 2:36 PM. 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 2.9° C.

GC/MS VOA

The laboratory control sample (LCS) for batch 180-472776 recovered outside control limits for 1,4 Dioxane. 1,4 Dioxane has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

GC/MS Semi VOA

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

Pesticides

Sample 008 (180-176274-1) had surrogate Decachlorobiphenyl recover below the control limit on both columns. Evidence of matrix interference was present; therefore, all data was reported.

PCBs

Sample 008 (180-176274-1) had surrogate Decachlorobiphenyl recover below the control limit on one column. Evidence of matrix interference was present; therefore, all data was reported.

IC

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

Sample 008 (180-176274-1) was analyzed outside of the holding time for Sulfide due to analyst error. The result has been flagged with an "H" qualifier.

The BOD method blank result associated with batch 180-473257 was higher than the method-required limit of 0.2 mg/L. The result was less than the reporting limit.

Eurofins Pittsburgh

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
!	Laboratory is not accredited for this parameter.
b	Result Detected in the Unseeded Control blank (USB).
cn	Refer to Case Narrative for further detail
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

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)

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Laboratory: Eurofins Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	02-00416	04-30-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
4500 H+ B-2000		Water	Temperature
SM 2120B		Water	pH at time of analysis

Laboratory: Eurofins Cleveland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	68-00340	08-31-24

Sample Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-176274-1	008	Water	06/27/24 12:15	06/27/24 14:36
180-176274-2	TRIP BLANK	Water	06/27/24 00:00	06/27/24 14:36

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Method Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Method	Method Description	Protocol	Laboratory
EPA 624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	EET PIT
EPA 625.1	Semivolatile Organic Compounds (GC/MS)	40 CFR 761	EET PIT
EPA 608.3	Organochlorine Pesticides in Water	40CFR136A	EET PIT
EPA 608.3	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	EET PIT
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	EET PIT
200.8-1994 R5.4	Metals (ICP/MS)	EPA	EET CLE
EPA 245.1 Rev.	Mercury (CVAA)	EPA	EET PIT
3500-Cr B-2011	Chromium, Hexavalent	SM	EET PIT
4500 H+ B-2000	pH - SM Online, 2011	SM-Online	EET PIT
4500 S2 F-2011	Sulfide, Total	SM	EET PIT
5310 C-2014	Total Organic Carbon/Persulfate - Ultrav	SM	EET PIT
5540C - 2011	Methylene Blue Active Substant (MBAS)	SM	EET PIT
EPA 1664B	HEM and SGT-HEM	EPA	EET PIT
EPA 350.1	Nitrogen, Ammonia	EPA	EET PIT
EPA 353.2	Nitrogen, Nitrate-Nitrite	EPA	EET PIT
EPA 410.4	COD	MCAWW	EET PIT
SM 2120B	Color, Colorimetric	SM	EET PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET PIT
SM 2540D	Solids, Total Suspended (TSS)	SM	EET PIT
SM 5210B	5 Day BOD test	SM	EET PIT
TKN_TPhos	EPA 351.2 1993 R2/365.4 1974	EPA	EET PIT
Subcontract	Fecal Coliform	None	Warrendale
1664B	HEM and SGT-HEM (SPE)	1664B	EET PIT
200.8-1994 R5.4	Preparation, Total Recoverable Metals	EPA	EET CLE
245.1	Preparation, Mercury	EPA	EET PIT
410.4	COD	EPA	EET PIT
608	Liquid-Liquid Extraction (Separatory Funnel)	EPA	EET PIT
625	Liquid-Liquid Extraction	EPA	EET PIT
TKN/TPhos Prep	Preparation, 351.2 1993 R2/365.4 1974	EPA	EET PIT

Protocol References:

1664B = EPA-821-98-002

40 CFR 761 = Toxic Substances Control Act (TSCA)

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

EPA = US Environmental Protection Agency

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

None = None

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

SM-Online = Standard Methods Online

Laboratory References:

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

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Warrendale = Microbac - Warrendale, PA, 100 Marshall Drive, Warrendale, PA 15086, TEL (724)772-0610

Eurofins Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Client Sample ID: 008

Lab Sample ID: 180-176274-1

Date Collected: 06/27/24 12:15

Matrix: Water

Date Received: 06/27/24 14:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 624.1		1	5 mL	5 mL	472776	06/28/24 15:20	J1T	EET PIT
		Instrument ID: CHHP5								
Total/NA	Prep	625			240 mL	250 uL	472992	07/01/24 12:56	BJT	EET PIT
Total/NA	Analysis	EPA 625.1		1	1 mL	1 mL	473513	07/08/24 14:41	VVP	EET PIT
		Instrument ID: CHMSD7								
Total/NA	Prep	608			1000 mL	1.0 mL	472928	07/01/24 07:27	KAV	EET PIT
Total/NA	Analysis	EPA 608.3		1			473109	07/02/24 14:01	JMO	EET PIT
		Instrument ID: CHGC17								
Total/NA	Prep	608			1000 mL	1.0 mL	472928	07/01/24 07:27	KAV	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 mL	1 mL	473025	07/02/24 08:50	JMO	EET PIT
		Instrument ID: CHGC20								
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1 mL	472779	06/29/24 07:18	M1D	EET PIT
		Instrument ID: INTEGRION								
Total Recoverable	Prep	200.8-1994 R5.4			50 mL	50 mL	618601	07/02/24 14:00	TQ6W	EET CLE
Total Recoverable	Analysis	200.8-1994 R5.4		1			618830	07/03/24 18:54	AJC	EET CLE
		Instrument ID: I14								
Total Recoverable	Prep	200.8-1994 R5.4			50 mL	50 mL	618601	07/02/24 14:00	TQ6W	EET CLE
Total Recoverable	Analysis	200.8-1994 R5.4		1			618964	07/05/24 09:55	AJC	EET CLE
		Instrument ID: I14								
Total/NA	Prep	245.1			25 mL	25 mL	473605	07/09/24 08:38	RJR	EET PIT
Total/NA	Analysis	EPA 245.1 Rev.		1			473786	07/10/24 09:00	RJR	EET PIT
		Instrument ID: HGY								
Dissolved	Analysis	3500-Cr B-2011		1	4 mL	4 mL	472714	06/27/24 17:28	SNR	EET PIT
		Instrument ID: RAPID-T								
Total/NA	Analysis	4500 H+ B-2000		1			472840	06/28/24 13:17	BAB	EET PIT
		Instrument ID: OZ								
Total/NA	Analysis	4500 S2 F-2011		1	50 mL	50 mL	474052	07/13/24 07:28	BAB	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	5310 C-2014		1	40 mL	40 mL	473822	07/10/24 05:05	ELS	EET PIT
		Instrument ID: SAM								
Total/NA	Analysis	5540C - 2011		1	100 mL	100 mL	473386	06/28/24 16:13	SNR	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Prep	1664B			950 mL	1000 mL	473087	07/02/24 09:26	A1K	EET PIT
Total/NA	Analysis	EPA 1664B		1			473139	07/02/24 14:34	A1K	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	EPA 350.1		1			473264	07/03/24 15:27	SNR	EET PIT
		Instrument ID: BLUE-ASTORIA								
Total/NA	Analysis	EPA 353.2		1			472802	06/28/24 12:03	RSK	EET PIT
		Instrument ID: ASTORIA2								
Total/NA	Prep	410.4			1 mL	1 mL	473645	07/09/24 11:12	ELS	EET PIT
Total/NA	Analysis	EPA 410.4		1	1 mL	1 mL	473680	07/09/24 16:45	ELS	EET PIT
		Instrument ID: GENESYS10S								
Total/NA	Analysis	SM 2120B		1	50 mL	50 mL	473014	06/28/24 16:33	SNR	EET PIT
		Instrument ID: NOEQUIP								

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Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Client Sample ID: 008

Lab Sample ID: 180-176274-1

Date Collected: 06/27/24 12:15

Matrix: Water

Date Received: 06/27/24 14:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	472961	07/01/24 10:41	EBA	EET PIT
Total/NA	Analysis	SM 2540D		1	760 mL	1000 mL	472760	06/28/24 08:49	JMA	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 5210B		1	300 mL	300 mL	473257	06/28/24 16:28	ELS	EET PIT
		Instrument ID: BOD2								
Total/NA	Prep	TKN/TPhos Prep			25 mL	25 mL	472901	07/01/24 04:31	RSK	EET PIT
Total/NA	Analysis	TKN_TPhos		1			473083	07/02/24 06:37	RSK	EET PIT
		Instrument ID: ASTORIA1								

Client Sample ID: TRIP BLANK

Lab Sample ID: 180-176274-2

Date Collected: 06/27/24 00:00

Matrix: Water

Date Received: 06/27/24 14:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 624.1		1	5 mL	5 mL	472776	06/28/24 13:45	J1T	EET PIT
		Instrument ID: CHHP5								

Laboratory References:

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

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Warrendale = Microbac - Warrendale, PA, 100 Marshall Drive, Warrendale, PA 15086, TEL (724)772-0610

Lab Chronicle

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Analyst References:

- Lab: EET CLE
- Batch Type: Prep
 - TQ6W = Bryan Perelka
 - Batch Type: Analysis
 - AJC = Alexander Colosi
- Lab: EET PIT
- Batch Type: Prep
 - A1K = Agnes Komlos
 - BJT = Bill Trout
 - ELS = Edwin Shireman
 - KAV = Katelyn Voss
 - RJR = Ron Rosenbaum
 - RSK = Robert Kurtz
 - Batch Type: Analysis
 - A1K = Agnes Komlos
 - BAB = Brooke Batyi
 - EBA = Elizabeth Arbster
 - ELS = Edwin Shireman
 - J1T = Jianwu Tang
 - JMA = Justin Adametz
 - JMO = John Oravec
 - M1D = Maureen Donlin
 - RJR = Ron Rosenbaum
 - RSK = Robert Kurtz
 - SNR = Sabra Richart
 - VVP = Vincent Piccolino

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Client Sample ID: 008

Lab Sample ID: 180-176274-1

Date Collected: 06/27/24 12:15

Matrix: Water

Date Received: 06/27/24 14:36

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			06/28/24 15:20	1
Acrylonitrile	ND		0.020	0.0078	mg/L			06/28/24 15:20	1
Benzene	ND		0.0010	0.00060	mg/L			06/28/24 15:20	1
Bromoform	ND		0.0010	0.00098	mg/L			06/28/24 15:20	1
Bromomethane	ND		0.0010	0.00089	mg/L			06/28/24 15:20	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			06/28/24 15:20	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			06/28/24 15:20	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			06/28/24 15:20	1
Chloroethane	ND		0.0010	0.00090	mg/L			06/28/24 15:20	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			06/28/24 15:20	1
Chloroform	ND		0.0010	0.00060	mg/L			06/28/24 15:20	1
Chloromethane	ND		0.0010	0.00090	mg/L			06/28/24 15:20	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			06/28/24 15:20	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			06/28/24 15:20	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			06/28/24 15:20	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			06/28/24 15:20	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			06/28/24 15:20	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			06/28/24 15:20	1
1,4-Dioxane	ND	*	0.20	0.043	mg/L			06/28/24 15:20	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			06/28/24 15:20	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			06/28/24 15:20	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			06/28/24 15:20	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			06/28/24 15:20	1
Toluene	ND		0.0010	0.00046	mg/L			06/28/24 15:20	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			06/28/24 15:20	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			06/28/24 15:20	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			06/28/24 15:20	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			06/28/24 15:20	1
Trichloroethene	ND		0.0010	0.00069	mg/L			06/28/24 15:20	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			06/28/24 15:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		47 - 122		06/28/24 15:20	1
Dibromofluoromethane (Surr)	93		52 - 138		06/28/24 15:20	1
1,2-Dichloroethane-d4 (Surr)	94		24 - 145		06/28/24 15:20	1
Toluene-d8 (Surr)	103		65 - 143		06/28/24 15:20	1

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.0010	0.00025	mg/L		07/01/24 12:56	07/08/24 14:41	1
1,2-Dichlorobenzene	ND		0.0010	0.00022	mg/L		07/01/24 12:56	07/08/24 14:41	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.0010	0.00020	mg/L		07/01/24 12:56	07/08/24 14:41	1
1,3-Dinitrobenzene	ND		0.0010	0.00048	mg/L		07/01/24 12:56	07/08/24 14:41	1
1,4-Dichlorobenzene	ND		0.0010	0.00025	mg/L		07/01/24 12:56	07/08/24 14:41	1
2,2'-oxybis[1-chloropropane]	ND		0.00020	0.000060	mg/L		07/01/24 12:56	07/08/24 14:41	1
2,4,6-Trichlorophenol	ND		0.0010	0.00023	mg/L		07/01/24 12:56	07/08/24 14:41	1
2,4-Dichlorophenol	ND		0.00020	0.000053	mg/L		07/01/24 12:56	07/08/24 14:41	1
2,4-Dimethylphenol	ND		0.0010	0.00061	mg/L		07/01/24 12:56	07/08/24 14:41	1
2,4-Dinitrophenol	ND		0.010	0.0034	mg/L		07/01/24 12:56	07/08/24 14:41	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Client Sample ID: 008

Lab Sample ID: 180-176274-1

Date Collected: 06/27/24 12:15

Matrix: Water

Date Received: 06/27/24 14:36

Method: 40 CFR 761 EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		0.0010	0.00037	mg/L		07/01/24 12:56	07/08/24 14:41	1
2,6-Dinitrotoluene	ND		0.0010	0.00018	mg/L		07/01/24 12:56	07/08/24 14:41	1
2-Chloronaphthalene	ND		0.00020	0.000061	mg/L		07/01/24 12:56	07/08/24 14:41	1
2-Chlorophenol	ND		0.0010	0.00023	mg/L		07/01/24 12:56	07/08/24 14:41	1
2-Nitrophenol	ND		0.0010	0.00020	mg/L		07/01/24 12:56	07/08/24 14:41	1
3,3'-Dichlorobenzidine	ND		0.0010	0.00061	mg/L		07/01/24 12:56	07/08/24 14:41	1
4,6-Dinitro-2-methylphenol	ND		0.0052	0.0015	mg/L		07/01/24 12:56	07/08/24 14:41	1
4-Bromophenyl phenyl ether	ND		0.0010	0.00033	mg/L		07/01/24 12:56	07/08/24 14:41	1
4-Chloro-3-methylphenol	ND		0.0010	0.00045	mg/L		07/01/24 12:56	07/08/24 14:41	1
4-Chlorophenyl phenyl ether	ND		0.0010	0.00023	mg/L		07/01/24 12:56	07/08/24 14:41	1
4-Nitrophenol	ND		0.0052	0.00098	mg/L		07/01/24 12:56	07/08/24 14:41	1
Acenaphthene	ND		0.00020	0.000068	mg/L		07/01/24 12:56	07/08/24 14:41	1
Acenaphthylene	ND		0.00020	0.000068	mg/L		07/01/24 12:56	07/08/24 14:41	1
Acrylamide	ND		0.052	0.021	mg/L		07/01/24 12:56	07/08/24 14:41	1
Anthracene	ND		0.00020	0.000051	mg/L		07/01/24 12:56	07/08/24 14:41	1
Benzidine	ND		0.021	0.0095	mg/L		07/01/24 12:56	07/08/24 14:41	1
Benzo[a]anthracene	ND		0.00020	0.000078	mg/L		07/01/24 12:56	07/08/24 14:41	1
Benzo[a]pyrene	ND		0.00020	0.000055	mg/L		07/01/24 12:56	07/08/24 14:41	1
Benzo[b]fluoranthene	ND		0.00020	0.00010	mg/L		07/01/24 12:56	07/08/24 14:41	1
Benzo[g,h,i]perylene	ND		0.00020	0.000072	mg/L		07/01/24 12:56	07/08/24 14:41	1
Benzo[k]fluoranthene	ND		0.00020	0.000092	mg/L		07/01/24 12:56	07/08/24 14:41	1
Bis(2-chloroethoxy)methane	ND		0.0010	0.00016	mg/L		07/01/24 12:56	07/08/24 14:41	1
Bis(2-chloroethyl)ether	ND		0.00020	0.000042	mg/L		07/01/24 12:56	07/08/24 14:41	1
Bis(2-ethylhexyl) phthalate	ND		0.010	0.0065	mg/L		07/01/24 12:56	07/08/24 14:41	1
Butyl benzyl phthalate	ND		0.0021	0.00098	mg/L		07/01/24 12:56	07/08/24 14:41	1
Chrysene	ND		0.00020	0.000084	mg/L		07/01/24 12:56	07/08/24 14:41	1
Dibenz(a,h)anthracene	ND		0.00020	0.000075	mg/L		07/01/24 12:56	07/08/24 14:41	1
Diethyl phthalate	ND		0.0010	0.00059	mg/L		07/01/24 12:56	07/08/24 14:41	1
Dimethyl phthalate	ND		0.0021	0.00021	mg/L		07/01/24 12:56	07/08/24 14:41	1
Di-n-butyl phthalate	ND		0.010	0.0051	mg/L		07/01/24 12:56	07/08/24 14:41	1
Di-n-octyl phthalate	ND		0.0010	0.00071	mg/L		07/01/24 12:56	07/08/24 14:41	1
Fluoranthene	ND		0.00020	0.000063	mg/L		07/01/24 12:56	07/08/24 14:41	1
Fluorene	ND		0.00020	0.000072	mg/L		07/01/24 12:56	07/08/24 14:41	1
Hexachlorobenzene	ND		0.00020	0.000058	mg/L		07/01/24 12:56	07/08/24 14:41	1
Hexachlorobutadiene	ND		0.00020	0.000072	mg/L		07/01/24 12:56	07/08/24 14:41	1
Hexachlorocyclopentadiene	ND		0.0010	0.00052	mg/L		07/01/24 12:56	07/08/24 14:41	1
Hexachloroethane	ND		0.0010	0.00014	mg/L		07/01/24 12:56	07/08/24 14:41	1
Indeno[1,2,3-cd]pyrene	ND		0.00020	0.000089	mg/L		07/01/24 12:56	07/08/24 14:41	1
Isophorone	ND		0.0010	0.00020	mg/L		07/01/24 12:56	07/08/24 14:41	1
Naphthalene	0.00016	J	0.00020	0.000061	mg/L		07/01/24 12:56	07/08/24 14:41	1
Nitrobenzene	ND		0.0021	0.00052	mg/L		07/01/24 12:56	07/08/24 14:41	1
N-Nitrosodimethylamine	ND		0.0010	0.00027	mg/L		07/01/24 12:56	07/08/24 14:41	1
N-Nitrosodi-n-propylamine	ND		0.00020	0.000074	mg/L		07/01/24 12:56	07/08/24 14:41	1
N-Nitrosodiphenylamine	ND		0.0010	0.00012	mg/L		07/01/24 12:56	07/08/24 14:41	1
Pentachlorophenol	ND		0.0052	0.00088	mg/L		07/01/24 12:56	07/08/24 14:41	1
Phenanthrene	ND		0.00020	0.00016	mg/L		07/01/24 12:56	07/08/24 14:41	1
Phenol	ND		0.0010	0.00051	mg/L		07/01/24 12:56	07/08/24 14:41	1
Pyrene	ND		0.00020	0.000056	mg/L		07/01/24 12:56	07/08/24 14:41	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Client Sample ID: 008

Lab Sample ID: 180-176274-1

Date Collected: 06/27/24 12:15

Matrix: Water

Date Received: 06/27/24 14:36

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	78		42 - 115	07/01/24 12:56	07/08/24 14:41	1
2-Fluorobiphenyl	77		47 - 107	07/01/24 12:56	07/08/24 14:41	1
2-Fluorophenol (Surr)	72		54 - 109	07/01/24 12:56	07/08/24 14:41	1
Nitrobenzene-d5 (Surr)	61		47 - 110	07/01/24 12:56	07/08/24 14:41	1
Phenol-d5 (Surr)	63		37 - 110	07/01/24 12:56	07/08/24 14:41	1
Terphenyl-d14 (Surr)	67		32 - 115	07/01/24 12:56	07/08/24 14:41	1

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000013	0.00000036	mg/L		07/01/24 07:27	07/02/24 14:01	1
alpha-BHC	ND		0.0000013	0.00000024	mg/L		07/01/24 07:27	07/02/24 14:01	1
beta-BHC	ND		0.0000013	0.00000037	mg/L		07/01/24 07:27	07/02/24 14:01	1
gamma-BHC (Lindane)	ND		0.0000013	0.00000029	mg/L		07/01/24 07:27	07/02/24 14:01	1
delta-BHC	ND		0.0000013	0.00000064	mg/L		07/01/24 07:27	07/02/24 14:01	1
Chlordane (technical)	ND		0.000013	0.0000073	mg/L		07/01/24 07:27	07/02/24 14:01	1
4,4'-DDD	ND		0.0000013	0.00000053	mg/L		07/01/24 07:27	07/02/24 14:01	1
4,4'-DDE	ND		0.0000013	0.00000030	mg/L		07/01/24 07:27	07/02/24 14:01	1
4,4'-DDT	ND		0.0000013	0.00000069	mg/L		07/01/24 07:27	07/02/24 14:01	1
Dieldrin	ND		0.0000013	0.00000027	mg/L		07/01/24 07:27	07/02/24 14:01	1
Endosulfan I	ND		0.0000013	0.00000069	mg/L		07/01/24 07:27	07/02/24 14:01	1
Endosulfan II	ND		0.0000013	0.00000032	mg/L		07/01/24 07:27	07/02/24 14:01	1
Endosulfan sulfate	ND		0.0000013	0.00000064	mg/L		07/01/24 07:27	07/02/24 14:01	1
Endrin	ND		0.0000013	0.00000023	mg/L		07/01/24 07:27	07/02/24 14:01	1
Endrin aldehyde	ND		0.0000013	0.00000052	mg/L		07/01/24 07:27	07/02/24 14:01	1
Heptachlor	ND		0.0000013	0.00000045	mg/L		07/01/24 07:27	07/02/24 14:01	1
Heptachlor epoxide	ND		0.0000013	0.00000034	mg/L		07/01/24 07:27	07/02/24 14:01	1
Toxaphene	ND		0.00010	0.000049	mg/L		07/01/24 07:27	07/02/24 14:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	28		20 - 138				07/01/24 07:27	07/02/24 14:01	1
Tetrachloro-m-xylene (Surr)	28		20 - 138				07/01/24 07:27	07/02/24 14:01	1
DCB Decachlorobiphenyl (Surr)	19	S1-	43 - 143				07/01/24 07:27	07/02/24 14:01	1
DCB Decachlorobiphenyl (Surr)	37	S1-	43 - 143				07/01/24 07:27	07/02/24 14:01	1

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.000010	0.0000048	mg/L		07/01/24 07:27	07/02/24 08:50	1
PCB-1221	ND		0.000010	0.0000057	mg/L		07/01/24 07:27	07/02/24 08:50	1
PCB-1232	ND		0.000010	0.0000052	mg/L		07/01/24 07:27	07/02/24 08:50	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Client Sample ID: 008

Lab Sample ID: 180-176274-1

Date Collected: 06/27/24 12:15

Matrix: Water

Date Received: 06/27/24 14:36

Method: 40CFR136A EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1242	ND		0.000010	0.0000091	mg/L		07/01/24 07:27	07/02/24 08:50	1
PCB-1248	ND		0.000010	0.0000030	mg/L		07/01/24 07:27	07/02/24 08:50	1
PCB-1254	ND		0.000010	0.0000095	mg/L		07/01/24 07:27	07/02/24 08:50	1
PCB-1260	ND		0.000010	0.0000039	mg/L		07/01/24 07:27	07/02/24 08:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	39		20 - 138				07/01/24 07:27	07/02/24 08:50	1
Tetrachloro-m-xylene (Surr)	39		20 - 138				07/01/24 07:27	07/02/24 08:50	1
DCB Decachlorobiphenyl (Surr)	45		43 - 143				07/01/24 07:27	07/02/24 08:50	1
DCB Decachlorobiphenyl (Surr)	37	S1-	43 - 143				07/01/24 07:27	07/02/24 08:50	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			06/29/24 07:18	1
Chloride	66.9		1.00	0.712	mg/L			06/29/24 07:18	1
Fluoride	0.130		0.100	0.0260	mg/L			06/29/24 07:18	1
Sulfate	97.4		1.00	0.756	mg/L			06/29/24 07:18	1

Method: EPA 200.8-1994 R5.4 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.053	ug/L		07/02/24 14:00	07/03/24 18:54	1
Aluminum	540		50	34	ug/L		07/02/24 14:00	07/03/24 18:54	1
Arsenic	2.6	J	5.0	0.75	ug/L		07/02/24 14:00	07/03/24 18:54	1
Boron	27		20	16	ug/L		07/02/24 14:00	07/05/24 09:55	1
Barium	69		5.0	2.2	ug/L		07/02/24 14:00	07/03/24 18:54	1
Beryllium	ND		1.0	0.62	ug/L		07/02/24 14:00	07/03/24 18:54	1
Calcium	46000		1000	250	ug/L		07/02/24 14:00	07/03/24 18:54	1
Cadmium	0.26	J	1.0	0.20	ug/L		07/02/24 14:00	07/03/24 18:54	1
Cobalt	0.65	J	1.0	0.19	ug/L		07/02/24 14:00	07/03/24 18:54	1
Chromium	ND		5.0	1.2	ug/L		07/02/24 14:00	07/03/24 18:54	1
Copper	3.9		2.0	1.7	ug/L		07/02/24 14:00	07/03/24 18:54	1
Iron	710		100	47	ug/L		07/02/24 14:00	07/03/24 18:54	1
Magnesium	7300		1000	61	ug/L		07/02/24 14:00	07/03/24 18:54	1
Manganese	67		5.0	3.5	ug/L		07/02/24 14:00	07/03/24 18:54	1
Molybdenum	2.6	J	5.0	1.1	ug/L		07/02/24 14:00	07/03/24 18:54	1
Nickel	2.7		2.0	1.5	ug/L		07/02/24 14:00	07/03/24 18:54	1
Lead	2.2		1.0	0.45	ug/L		07/02/24 14:00	07/03/24 18:54	1
Antimony	ND		2.0	0.57	ug/L		07/02/24 14:00	07/03/24 18:54	1
Selenium	0.92	J	5.0	0.89	ug/L		07/02/24 14:00	07/03/24 18:54	1
Thallium	ND		1.0	0.20	ug/L		07/02/24 14:00	07/03/24 18:54	1
Zinc	58		20	15	ug/L		07/02/24 14:00	07/03/24 18:54	1

Method: EPA 245.1 Rev. - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		07/09/24 08:38	07/10/24 09:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM-Online 4500 H+ B-2000)	8.7	HF	0.1	0.1	SU			06/28/24 13:17	1
Temperature (SM-Online 4500 H+ B-2000)	20.2	HF !	0.1	0.1	Degrees C			06/28/24 13:17	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Client Sample ID: 008

Lab Sample ID: 180-176274-1

Date Collected: 06/27/24 12:15

Matrix: Water

Date Received: 06/27/24 14:36

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide (SM 4500 S2 F-2011)	ND	H	3.0	1.3	mg/L			07/13/24 07:28	1
Total Organic Carbon - Quad (SM 5310 C-2014)	5.5		1.0	0.51	mg/L			07/10/24 05:05	1
Methylene Blue Active Substances (SM 5540C - 2011)	0.087		0.050	0.049	mg/l LAS MW 340			06/28/24 16:13	1
HEM (Oil & Grease) (EPA 1664B)	ND		5.3	4.5	mg/L		07/02/24 09:26	07/02/24 14:34	1
Ammonia (EPA 350.1)	ND		0.10	0.088	mg/L			07/03/24 15:27	1
Nitrate Nitrite as N (EPA 353.2)	0.23		0.10	0.065	mg/L			06/28/24 12:03	1
Chemical Oxygen Demand (MCAWW EPA 410.4)	ND		10	9.1	mg/L		07/09/24 11:12	07/09/24 16:45	1
Color, Apparent (SM 2120B)	20		5.0	5.0	Color Units			06/28/24 16:33	1
Color, True (SM 2120B)	10		5.0	5.0	Color Units			06/28/24 16:33	1
pH at time of analysis (SM 2120B)	8.5	!	0.10	0.10	SU			06/28/24 16:33	1
Total Dissolved Solids (SM 2540C)	240		10	10	mg/L			07/01/24 10:41	1
Total Suspended Solids (SM 2540D)	29		0.66	0.66	mg/L			06/28/24 08:49	1
Biochemical Oxygen Demand (SM 5210B)	3.5	b cn	2.0	2.0	mg/L			06/28/24 16:28	1
Nitrogen, Kjeldahl (EPA TKN_TPhos)	0.87		0.50	0.12	mg/L as N		07/01/24 04:31	07/02/24 06:37	1
Phosphorus, Total (EPA TKN_TPhos)	0.16		0.10	0.040	mg/L as P		07/01/24 04:31	07/02/24 06:37	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SM 3500-Cr B-2011)	ND		0.010	0.0060	mg/L			06/27/24 17:28	1

Client Sample ID: TRIP BLANK

Lab Sample ID: 180-176274-2

Date Collected: 06/27/24 00:00

Matrix: Water

Date Received: 06/27/24 14:36

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			06/28/24 13:45	1
Acrylonitrile	ND		0.020	0.0078	mg/L			06/28/24 13:45	1
Benzene	ND		0.0010	0.00060	mg/L			06/28/24 13:45	1
Bromoform	ND		0.0010	0.00098	mg/L			06/28/24 13:45	1
Bromomethane	ND		0.0010	0.00089	mg/L			06/28/24 13:45	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			06/28/24 13:45	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			06/28/24 13:45	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			06/28/24 13:45	1
Chloroethane	ND		0.0010	0.00090	mg/L			06/28/24 13:45	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			06/28/24 13:45	1
Chloroform	ND		0.0010	0.00060	mg/L			06/28/24 13:45	1
Chloromethane	ND		0.0010	0.00090	mg/L			06/28/24 13:45	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			06/28/24 13:45	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			06/28/24 13:45	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			06/28/24 13:45	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			06/28/24 13:45	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			06/28/24 13:45	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			06/28/24 13:45	1
1,4-Dioxane	ND	*	0.20	0.043	mg/L			06/28/24 13:45	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 180-176274-2

Date Collected: 06/27/24 00:00

Matrix: Water

Date Received: 06/27/24 14:36

Method: 40CFR136A EPA 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.0010	0.00051	mg/L			06/28/24 13:45	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			06/28/24 13:45	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			06/28/24 13:45	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			06/28/24 13:45	1
Toluene	ND		0.0010	0.00046	mg/L			06/28/24 13:45	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			06/28/24 13:45	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			06/28/24 13:45	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			06/28/24 13:45	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			06/28/24 13:45	1
Trichloroethene	ND		0.0010	0.00069	mg/L			06/28/24 13:45	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			06/28/24 13:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		47 - 122		06/28/24 13:45	1
Dibromofluoromethane (Surr)	94		52 - 138		06/28/24 13:45	1
1,2-Dichloroethane-d4 (Surr)	90		24 - 145		06/28/24 13:45	1
Toluene-d8 (Surr)	103		65 - 143		06/28/24 13:45	1

QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

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

Lab Sample ID: MB 180-472776/6

Matrix: Water

Analysis Batch: 472776

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		0.020	0.016	mg/L			06/28/24 12:11	1
Acrylonitrile	ND		0.020	0.0078	mg/L			06/28/24 12:11	1
Benzene	ND		0.0010	0.00060	mg/L			06/28/24 12:11	1
Bromoform	ND		0.0010	0.00098	mg/L			06/28/24 12:11	1
Bromomethane	ND		0.0010	0.00089	mg/L			06/28/24 12:11	1
Carbon tetrachloride	ND		0.0010	0.00088	mg/L			06/28/24 12:11	1
Chlorobenzene	ND		0.0010	0.00050	mg/L			06/28/24 12:11	1
Chlorodibromomethane	ND		0.0010	0.00084	mg/L			06/28/24 12:11	1
Chloroethane	ND		0.0010	0.00090	mg/L			06/28/24 12:11	1
2-Chloroethyl vinyl ether	ND		0.0020	0.0017	mg/L			06/28/24 12:11	1
Chloroform	ND		0.0010	0.00060	mg/L			06/28/24 12:11	1
Chloromethane	ND		0.0010	0.00090	mg/L			06/28/24 12:11	1
cis-1,3-Dichloropropene	ND		0.0010	0.00059	mg/L			06/28/24 12:11	1
Dichlorobromomethane	ND		0.0010	0.00064	mg/L			06/28/24 12:11	1
1,1-Dichloroethane	ND		0.0010	0.00063	mg/L			06/28/24 12:11	1
1,2-Dichloroethane	ND		0.0010	0.00057	mg/L			06/28/24 12:11	1
1,1-Dichloroethene	ND		0.0010	0.00055	mg/L			06/28/24 12:11	1
1,2-Dichloropropane	ND		0.0010	0.00066	mg/L			06/28/24 12:11	1
1,4-Dioxane	ND		0.20	0.043	mg/L			06/28/24 12:11	1
Ethylbenzene	ND		0.0010	0.00051	mg/L			06/28/24 12:11	1
Methylene Chloride	ND		0.0010	0.00089	mg/L			06/28/24 12:11	1
1,1,2,2-Tetrachloroethane	ND		0.0010	0.00060	mg/L			06/28/24 12:11	1
Tetrachloroethene	ND		0.0010	0.00047	mg/L			06/28/24 12:11	1
Toluene	ND		0.0010	0.00046	mg/L			06/28/24 12:11	1
trans-1,2-Dichloroethene	ND		0.0010	0.00067	mg/L			06/28/24 12:11	1
trans-1,3-Dichloropropene	ND		0.0010	0.00058	mg/L			06/28/24 12:11	1
1,1,1-Trichloroethane	ND		0.0010	0.00060	mg/L			06/28/24 12:11	1
1,1,2-Trichloroethane	ND		0.0010	0.00045	mg/L			06/28/24 12:11	1
Trichloroethene	ND		0.0010	0.00069	mg/L			06/28/24 12:11	1
Vinyl chloride	ND		0.0010	0.00041	mg/L			06/28/24 12:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		47 - 122		06/28/24 12:11	1
Dibromofluoromethane (Surr)	98		52 - 138		06/28/24 12:11	1
1,2-Dichloroethane-d4 (Surr)	98		24 - 145		06/28/24 12:11	1
Toluene-d8 (Surr)	112		65 - 143		06/28/24 12:11	1

Lab Sample ID: LCS 180-472776/3

Matrix: Water

Analysis Batch: 472776

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acrolein	0.0300	0.0284		mg/L		95	60 - 140
Acrylonitrile	0.100	0.105		mg/L		105	60 - 140
Benzene	0.0100	0.00956		mg/L		96	65 - 135
Bromoform	0.0100	0.0110		mg/L		110	70 - 130
Bromomethane	0.0100	0.0110		mg/L		110	15 - 170
Carbon tetrachloride	0.0100	0.0107		mg/L		107	70 - 130

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

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

Lab Sample ID: LCS 180-472776/3

Matrix: Water

Analysis Batch: 472776

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorobenzene	0.0100	0.00992		mg/L		99	65 - 135
Chlorodibromomethane	0.0100	0.00908		mg/L		91	70 - 135
Chloroethane	0.0100	0.00990		mg/L		99	40 - 160
2-Chloroethyl vinyl ether	0.0200	0.0233		mg/L		116	10 - 170
Chloroform	0.0100	0.0101		mg/L		101	70 - 135
Chloromethane	0.0100	0.00828		mg/L		83	10 - 170
cis-1,3-Dichloropropene	0.0100	0.00943		mg/L		94	25 - 170
Dichlorobromomethane	0.0100	0.00950		mg/L		95	65 - 135
1,1-Dichloroethane	0.0100	0.00954		mg/L		95	70 - 130
1,2-Dichloroethane	0.0100	0.00964		mg/L		96	70 - 130
1,1-Dichloroethene	0.0100	0.0101		mg/L		101	50 - 150
1,2-Dichloropropane	0.0100	0.00955		mg/L		96	35 - 165
1,4-Dioxane	0.200	ND	*	mg/L		0	10 - 152
Ethylbenzene	0.0100	0.0111		mg/L		111	60 - 140
Methylene Chloride	0.0100	0.00825		mg/L		82	60 - 140
1,1,2,2-Tetrachloroethane	0.0100	0.00895		mg/L		90	60 - 140
Tetrachloroethene	0.0100	0.00914		mg/L		91	70 - 130
Toluene	0.0100	0.00918		mg/L		92	70 - 130
trans-1,2-Dichloroethene	0.0100	0.00997		mg/L		100	70 - 130
trans-1,3-Dichloropropene	0.0100	0.00989		mg/L		99	50 - 150
1,1,1-Trichloroethane	0.0100	0.0101		mg/L		101	70 - 130
1,1,2-Trichloroethane	0.0100	0.00927		mg/L		93	70 - 130
Trichloroethene	0.0100	0.00945		mg/L		95	65 - 135
Vinyl chloride	0.0100	0.0103		mg/L		103	10 - 170

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	83		47 - 122
Dibromofluoromethane (Surr)	98		52 - 138
1,2-Dichloroethane-d4 (Surr)	99		24 - 145
Toluene-d8 (Surr)	93		65 - 143

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 180-472992/1-A

Matrix: Water

Analysis Batch: 473218

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 472992

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.0010	0.00024	mg/L		07/01/24 12:56	07/03/24 14:27	1
1,2-Dichlorobenzene	ND		0.0010	0.00021	mg/L		07/01/24 12:56	07/03/24 14:27	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		0.0010	0.00020	mg/L		07/01/24 12:56	07/03/24 14:27	1
1,3-Dinitrobenzene	ND		0.0010	0.00046	mg/L		07/01/24 12:56	07/03/24 14:27	1
1,4-Dichlorobenzene	ND		0.0010	0.00024	mg/L		07/01/24 12:56	07/03/24 14:27	1
2,2'-oxybis[1-chloropropane]	ND		0.00019	0.000058	mg/L		07/01/24 12:56	07/03/24 14:27	1
2,4,6-Trichlorophenol	ND		0.0010	0.00022	mg/L		07/01/24 12:56	07/03/24 14:27	1
2,4-Dichlorophenol	ND		0.00019	0.000051	mg/L		07/01/24 12:56	07/03/24 14:27	1
2,4-Dimethylphenol	ND		0.0010	0.00059	mg/L		07/01/24 12:56	07/03/24 14:27	1
2,4-Dinitrophenol	ND		0.010	0.0033	mg/L		07/01/24 12:56	07/03/24 14:27	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-472992/1-A

Matrix: Water

Analysis Batch: 473218

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 472992

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		0.0010	0.00035	mg/L		07/01/24 12:56	07/03/24 14:27	1
2,6-Dinitrotoluene	ND		0.0010	0.00017	mg/L		07/01/24 12:56	07/03/24 14:27	1
2-Chloronaphthalene	ND		0.00019	0.000059	mg/L		07/01/24 12:56	07/03/24 14:27	1
2-Chlorophenol	ND		0.0010	0.00023	mg/L		07/01/24 12:56	07/03/24 14:27	1
2-Nitrophenol	ND		0.0010	0.00019	mg/L		07/01/24 12:56	07/03/24 14:27	1
3,3'-Dichlorobenzidine	ND		0.0010	0.00058	mg/L		07/01/24 12:56	07/03/24 14:27	1
4,6-Dinitro-2-methylphenol	ND		0.0050	0.0015	mg/L		07/01/24 12:56	07/03/24 14:27	1
4-Bromophenyl phenyl ether	ND		0.0010	0.00032	mg/L		07/01/24 12:56	07/03/24 14:27	1
4-Chloro-3-methylphenol	ND		0.0010	0.00044	mg/L		07/01/24 12:56	07/03/24 14:27	1
4-Chlorophenyl phenyl ether	ND		0.0010	0.00022	mg/L		07/01/24 12:56	07/03/24 14:27	1
4-Nitrophenol	ND		0.0050	0.00094	mg/L		07/01/24 12:56	07/03/24 14:27	1
Acenaphthene	ND		0.00019	0.000065	mg/L		07/01/24 12:56	07/03/24 14:27	1
Acenaphthylene	ND		0.00019	0.000065	mg/L		07/01/24 12:56	07/03/24 14:27	1
Acrylamide	ND		0.050	0.021	mg/L		07/01/24 12:56	07/03/24 14:27	1
Anthracene	ND		0.00019	0.000049	mg/L		07/01/24 12:56	07/03/24 14:27	1
Benzidine	ND		0.020	0.0091	mg/L		07/01/24 12:56	07/03/24 14:27	1
Benzo[a]anthracene	ND		0.00019	0.000075	mg/L		07/01/24 12:56	07/03/24 14:27	1
Benzo[a]pyrene	ND		0.00019	0.000053	mg/L		07/01/24 12:56	07/03/24 14:27	1
Benzo[b]fluoranthene	ND		0.00019	0.000097	mg/L		07/01/24 12:56	07/03/24 14:27	1
Benzo[g,h,i]perylene	ND		0.00019	0.000069	mg/L		07/01/24 12:56	07/03/24 14:27	1
Benzo[k]fluoranthene	ND		0.00019	0.000088	mg/L		07/01/24 12:56	07/03/24 14:27	1
Bis(2-chloroethoxy)methane	ND		0.0010	0.00015	mg/L		07/01/24 12:56	07/03/24 14:27	1
Bis(2-chloroethyl)ether	ND		0.00019	0.000040	mg/L		07/01/24 12:56	07/03/24 14:27	1
Bis(2-ethylhexyl) phthalate	ND		0.010	0.0062	mg/L		07/01/24 12:56	07/03/24 14:27	1
Butyl benzyl phthalate	ND		0.0020	0.00094	mg/L		07/01/24 12:56	07/03/24 14:27	1
Chrysene	ND		0.00019	0.000081	mg/L		07/01/24 12:56	07/03/24 14:27	1
Dibenz(a,h)anthracene	ND		0.00019	0.000072	mg/L		07/01/24 12:56	07/03/24 14:27	1
Diethyl phthalate	ND		0.0010	0.00057	mg/L		07/01/24 12:56	07/03/24 14:27	1
Dimethyl phthalate	ND		0.0020	0.00020	mg/L		07/01/24 12:56	07/03/24 14:27	1
Di-n-butyl phthalate	ND		0.010	0.0049	mg/L		07/01/24 12:56	07/03/24 14:27	1
Di-n-octyl phthalate	ND		0.0010	0.00069	mg/L		07/01/24 12:56	07/03/24 14:27	1
Fluoranthene	ND		0.00019	0.000060	mg/L		07/01/24 12:56	07/03/24 14:27	1
Fluorene	ND		0.00019	0.000069	mg/L		07/01/24 12:56	07/03/24 14:27	1
Hexachlorobenzene	ND		0.00019	0.000056	mg/L		07/01/24 12:56	07/03/24 14:27	1
Hexachlorobutadiene	ND		0.00019	0.000069	mg/L		07/01/24 12:56	07/03/24 14:27	1
Hexachlorocyclopentadiene	ND		0.0010	0.00050	mg/L		07/01/24 12:56	07/03/24 14:27	1
Hexachloroethane	ND		0.0010	0.00013	mg/L		07/01/24 12:56	07/03/24 14:27	1
Indeno[1,2,3-cd]pyrene	ND		0.00019	0.000085	mg/L		07/01/24 12:56	07/03/24 14:27	1
Isophorone	ND		0.0010	0.00019	mg/L		07/01/24 12:56	07/03/24 14:27	1
Naphthalene	ND		0.00019	0.000059	mg/L		07/01/24 12:56	07/03/24 14:27	1
Nitrobenzene	ND		0.0020	0.00050	mg/L		07/01/24 12:56	07/03/24 14:27	1
N-Nitrosodimethylamine	ND		0.0010	0.00026	mg/L		07/01/24 12:56	07/03/24 14:27	1
N-Nitrosodi-n-propylamine	ND		0.00019	0.000071	mg/L		07/01/24 12:56	07/03/24 14:27	1
N-Nitrosodiphenylamine	ND		0.0010	0.00012	mg/L		07/01/24 12:56	07/03/24 14:27	1
Pentachlorophenol	ND		0.0050	0.00085	mg/L		07/01/24 12:56	07/03/24 14:27	1
Phenanthrene	ND		0.00019	0.00016	mg/L		07/01/24 12:56	07/03/24 14:27	1
Phenol	ND		0.0010	0.00049	mg/L		07/01/24 12:56	07/03/24 14:27	1
Pyrene	ND		0.00019	0.000054	mg/L		07/01/24 12:56	07/03/24 14:27	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-472992/1-A

Matrix: Water

Analysis Batch: 473218

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 472992

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	86		42 - 115	07/01/24 12:56	07/03/24 14:27	1
2-Fluorobiphenyl	89		47 - 107	07/01/24 12:56	07/03/24 14:27	1
2-Fluorophenol (Surr)	79		54 - 109	07/01/24 12:56	07/03/24 14:27	1
Nitrobenzene-d5 (Surr)	71		47 - 110	07/01/24 12:56	07/03/24 14:27	1
Phenol-d5 (Surr)	73		37 - 110	07/01/24 12:56	07/03/24 14:27	1
Terphenyl-d14 (Surr)	84		32 - 115	07/01/24 12:56	07/03/24 14:27	1

Lab Sample ID: LCS 180-472992/2-A

Matrix: Water

Analysis Batch: 473218

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 472992

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	0.0100	0.00816		mg/L		82	52 - 142
1,2-Dichlorobenzene	0.0100	0.00777		mg/L		78	50 - 100
1,2-Diphenylhydrazine(as Azobenzene)	0.0100	0.00740		mg/L		74	40 - 116
1,3-Dinitrobenzene	0.0100	0.00754		mg/L		75	54 - 100
1,4-Dichlorobenzene	0.0100	0.00776		mg/L		78	57 - 100
2,2'-oxybis[1-chloropropane]	0.0100	0.00631		mg/L		63	36 - 150
2,4,6-Trichlorophenol	0.0100	0.00822		mg/L		82	37 - 144
2,4-Dichlorophenol	0.0100	0.00809		mg/L		81	39 - 135
2,4-Dimethylphenol	0.0100	0.00778		mg/L		78	32 - 120
2,4-Dinitrophenol	0.0200	0.0119		mg/L		60	10 - 150
2,4-Dinitrotoluene	0.0100	0.00760		mg/L		76	39 - 139
2,6-Dinitrotoluene	0.0100	0.00747		mg/L		75	50 - 150
2-Chloronaphthalene	0.0100	0.00793		mg/L		79	60 - 120
2-Chlorophenol	0.0100	0.00771		mg/L		77	23 - 134
2-Nitrophenol	0.0100	0.00781		mg/L		78	57 - 150
3,3'-Dichlorobenzidine	0.0100	0.00700		mg/L		70	44 - 150
4,6-Dinitro-2-methylphenol	0.0200	0.0138		mg/L		69	43 - 150
4-Bromophenyl phenyl ether	0.0100	0.00864		mg/L		86	53 - 127
4-Chloro-3-methylphenol	0.0100	0.00768		mg/L		77	54 - 147
4-Chlorophenyl phenyl ether	0.0100	0.00832		mg/L		83	25 - 150
4-Nitrophenol	0.0200	0.0178		mg/L		89	10 - 132
Acenaphthene	0.0100	0.00713		mg/L		71	47 - 145
Acenaphthylene	0.0100	0.00753		mg/L		75	33 - 145
Anthracene	0.0100	0.00749		mg/L		75	27 - 133
Benzidine	0.0100	ND		mg/L		55	5 - 100
Benzo[a]anthracene	0.0100	0.00721		mg/L		72	33 - 143
Benzo[a]pyrene	0.0100	0.00763		mg/L		76	17 - 150
Benzo[b]fluoranthene	0.0100	0.00709		mg/L		71	24 - 150
Benzo[g,h,i]perylene	0.0100	0.00755		mg/L		76	10 - 150
Benzo[k]fluoranthene	0.0100	0.00854		mg/L		85	11 - 150
Bis(2-chloroethoxy)methane	0.0100	0.00674		mg/L		67	33 - 150
Bis(2-chloroethyl)ether	0.0100	0.00629		mg/L		63	12 - 150
Bis(2-ethylhexyl) phthalate	0.0100	0.00668	J	mg/L		67	10 - 150
Butyl benzyl phthalate	0.0100	0.00700		mg/L		70	10 - 150
Chrysene	0.0100	0.00744		mg/L		74	17 - 150
Dibenz(a,h)anthracene	0.0100	0.00718		mg/L		72	10 - 150

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-472992/2-A

Matrix: Water

Analysis Batch: 473218

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 472992

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diethyl phthalate	0.0100	0.00805		mg/L		80	10 - 120
Dimethyl phthalate	0.0100	0.00779		mg/L		78	10 - 120
Di-n-butyl phthalate	0.0100	0.00721	J	mg/L		72	10 - 120
Di-n-octyl phthalate	0.0100	0.00648		mg/L		65	10 - 146
Fluoranthene	0.0100	0.00777		mg/L		78	26 - 137
Fluorene	0.0100	0.00756		mg/L		76	59 - 121
Hexachlorobenzene	0.0100	0.00855		mg/L		86	10 - 150
Hexachlorobutadiene	0.0100	0.00945		mg/L		95	24 - 120
Hexachlorocyclopentadiene	0.0100	0.00890		mg/L		89	37 - 121
Hexachloroethane	0.0100	0.00741		mg/L		74	40 - 120
Indeno[1,2,3-cd]pyrene	0.0100	0.00766		mg/L		77	10 - 150
Isophorone	0.0100	0.00659		mg/L		66	21 - 150
Naphthalene	0.0100	0.00768		mg/L		77	21 - 133
Nitrobenzene	0.0100	0.00686		mg/L		69	35 - 150
N-Nitrosodimethylamine	0.0100	0.00650		mg/L		65	50 - 109
N-Nitrosodi-n-propylamine	0.0100	0.00688		mg/L		69	10 - 150
N-Nitrosodiphenylamine	0.0100	0.00729		mg/L		73	51 - 100
Pentachlorophenol	0.0200	0.0160		mg/L		80	14 - 150
Phenanthrene	0.0100	0.00733		mg/L		73	54 - 120
Phenol	0.0100	0.00687		mg/L		69	10 - 120
Pyrene	0.0100	0.00721		mg/L		72	52 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	97		42 - 115
2-Fluorobiphenyl	79		47 - 107
2-Fluorophenol (Surr)	76		54 - 109
Nitrobenzene-d5 (Surr)	70		47 - 110
Phenol-d5 (Surr)	68		37 - 110
Terphenyl-d14 (Surr)	66		32 - 115

Lab Sample ID: LCSD 180-472992/3-A

Matrix: Water

Analysis Batch: 473218

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 472992

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	0.0100	0.00851		mg/L		85	52 - 142	4	16
1,2-Dichlorobenzene	0.0100	0.00759		mg/L		76	50 - 100	2	15
1,2-Diphenylhydrazine(as Azobenzene)	0.0100	0.00767		mg/L		77	40 - 116	4	19
1,3-Dinitrobenzene	0.0100	0.00777		mg/L		78	54 - 100	3	15
1,4-Dichlorobenzene	0.0100	0.00782		mg/L		78	57 - 100	1	15
2,2'-oxybis[1-chloropropane]	0.0100	0.00633		mg/L		63	36 - 150	0	35
2,4,6-Trichlorophenol	0.0100	0.00838		mg/L		84	37 - 144	2	35
2,4-Dichlorophenol	0.0100	0.00823		mg/L		82	39 - 135	2	35
2,4-Dimethylphenol	0.0100	0.00819		mg/L		82	32 - 120	5	35
2,4-Dinitrophenol	0.0200	0.0125		mg/L		62	10 - 150	5	35
2,4-Dinitrotoluene	0.0100	0.00798		mg/L		80	39 - 139	5	35
2,6-Dinitrotoluene	0.0100	0.00749		mg/L		75	50 - 150	0	35
2-Chloronaphthalene	0.0100	0.00803		mg/L		80	60 - 120	1	24

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 180-472992/3-A

Matrix: Water

Analysis Batch: 473218

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 472992

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Chlorophenol	0.0100	0.00744		mg/L		74	23 - 134	4	34
2-Nitrophenol	0.0100	0.00823		mg/L		82	57 - 150	5	17
3,3'-Dichlorobenzidine	0.0100	0.00715		mg/L		72	44 - 150	2	19
4,6-Dinitro-2-methylphenol	0.0200	0.0145		mg/L		72	43 - 150	5	21
4-Bromophenyl phenyl ether	0.0100	0.00901		mg/L		90	53 - 127	4	20
4-Chloro-3-methylphenol	0.0100	0.00772		mg/L		77	54 - 147	1	35
4-Chlorophenyl phenyl ether	0.0100	0.00871		mg/L		87	25 - 150	5	35
4-Nitrophenol	0.0200	0.0183		mg/L		91	10 - 132	3	35
Acenaphthene	0.0100	0.00761		mg/L		76	47 - 145	7	35
Acenaphthylene	0.0100	0.00775		mg/L		77	33 - 145	3	35
Anthracene	0.0100	0.00785		mg/L		78	27 - 133	5	35
Benzidine	0.0100	ND		mg/L		60	5 - 100	8	35
Benzo[a]anthracene	0.0100	0.00757		mg/L		76	33 - 143	5	35
Benzo[a]pyrene	0.0100	0.00793		mg/L		79	17 - 150	4	35
Benzo[b]fluoranthene	0.0100	0.00764		mg/L		76	24 - 150	7	35
Benzo[g,h,i]perylene	0.0100	0.00763		mg/L		76	10 - 150	1	35
Benzo[k]fluoranthene	0.0100	0.00878		mg/L		88	11 - 150	3	35
Bis(2-chloroethoxy)methane	0.0100	0.00727		mg/L		73	33 - 150	8	35
Bis(2-chloroethyl)ether	0.0100	0.00635		mg/L		64	12 - 150	1	35
Bis(2-ethylhexyl) phthalate	0.0100	0.00696	J	mg/L		70	10 - 150	4	35
Butyl benzyl phthalate	0.0100	0.00718		mg/L		72	10 - 150	2	35
Chrysene	0.0100	0.00766		mg/L		77	17 - 150	3	35
Dibenz(a,h)anthracene	0.0100	0.00743		mg/L		74	10 - 150	4	35
Diethyl phthalate	0.0100	0.00847		mg/L		85	10 - 120	5	35
Dimethyl phthalate	0.0100	0.00804		mg/L		80	10 - 120	3	35
Di-n-butyl phthalate	0.0100	0.00761	J	mg/L		76	10 - 120	6	35
Di-n-octyl phthalate	0.0100	0.00673		mg/L		67	10 - 146	4	35
Fluoranthene	0.0100	0.00810		mg/L		81	26 - 137	4	35
Fluorene	0.0100	0.00780		mg/L		78	59 - 121	3	35
Hexachlorobenzene	0.0100	0.00870		mg/L		87	10 - 150	2	35
Hexachlorobutadiene	0.0100	0.00994		mg/L		99	24 - 120	5	35
Hexachlorocyclopentadiene	0.0100	0.00925		mg/L		92	37 - 121	4	15
Hexachloroethane	0.0100	0.00720		mg/L		72	40 - 120	3	35
Indeno[1,2,3-cd]pyrene	0.0100	0.00760		mg/L		76	10 - 150	1	35
Isophorone	0.0100	0.00668		mg/L		67	21 - 150	1	35
Naphthalene	0.0100	0.00788		mg/L		79	21 - 133	3	35
Nitrobenzene	0.0100	0.00724		mg/L		72	35 - 150	5	35
N-Nitrosodimethylamine	0.0100	0.00651		mg/L		65	50 - 109	0	19
N-Nitrosodi-n-propylamine	0.0100	0.00666		mg/L		67	10 - 150	3	35
N-Nitrosodiphenylamine	0.0100	0.00755		mg/L		75	51 - 100	3	20
Pentachlorophenol	0.0200	0.0160		mg/L		80	14 - 150	0	35
Phenanthrene	0.0100	0.00788		mg/L		79	54 - 120	7	35
Phenol	0.0100	0.00680		mg/L		68	10 - 120	1	35
Pyrene	0.0100	0.00735		mg/L		74	52 - 120	2	35

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2,4,6-Tribromophenol (Surr)	98		42 - 115
2-Fluorobiphenyl	80		47 - 107

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 180-472992/3-A

Matrix: Water

Analysis Batch: 473218

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 472992

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
2-Fluorophenol (Surr)	72		54 - 109
Nitrobenzene-d5 (Surr)	72		47 - 110
Phenol-d5 (Surr)	69		37 - 110
Terphenyl-d14 (Surr)	68		32 - 115

Method: EPA 608.3 - Organochlorine Pesticides in Water

Lab Sample ID: MB 180-472928/1-A

Matrix: Water

Analysis Batch: 473109

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 472928

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0000013	0.0000003	mg/L		07/01/24 07:27	07/02/24 13:10	1
alpha-BHC	ND		0.0000013	0.0000002	mg/L		07/01/24 07:27	07/02/24 13:10	1
beta-BHC	ND		0.0000013	0.0000003	mg/L		07/01/24 07:27	07/02/24 13:10	1
gamma-BHC (Lindane)	ND		0.0000013	0.0000002	mg/L		07/01/24 07:27	07/02/24 13:10	1
delta-BHC	ND		0.0000013	0.0000006	mg/L		07/01/24 07:27	07/02/24 13:10	1
Chlordane (technical)	ND		0.000013	0.0000073	mg/L		07/01/24 07:27	07/02/24 13:10	1
4,4'-DDD	ND		0.0000013	0.0000005	mg/L		07/01/24 07:27	07/02/24 13:10	1
4,4'-DDE	ND		0.0000013	0.0000003	mg/L		07/01/24 07:27	07/02/24 13:10	1
4,4'-DDT	ND		0.0000013	0.0000006	mg/L		07/01/24 07:27	07/02/24 13:10	1
Dieldrin	ND		0.0000013	0.0000002	mg/L		07/01/24 07:27	07/02/24 13:10	1
Endosulfan I	ND		0.0000013	0.0000006	mg/L		07/01/24 07:27	07/02/24 13:10	1
Endosulfan II	ND		0.0000013	0.0000003	mg/L		07/01/24 07:27	07/02/24 13:10	1
Endosulfan sulfate	ND		0.0000013	0.0000006	mg/L		07/01/24 07:27	07/02/24 13:10	1
Endrin	ND		0.0000013	0.0000002	mg/L		07/01/24 07:27	07/02/24 13:10	1
Endrin aldehyde	ND		0.0000013	0.0000005	mg/L		07/01/24 07:27	07/02/24 13:10	1
Heptachlor	ND		0.0000013	0.0000004	mg/L		07/01/24 07:27	07/02/24 13:10	1
Heptachlor epoxide	ND		0.0000013	0.0000003	mg/L		07/01/24 07:27	07/02/24 13:10	1
Toxaphene	ND		0.00010	0.000049	mg/L		07/01/24 07:27	07/02/24 13:10	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	63		20 - 138				07/01/24 07:27	07/02/24 13:10	1
Tetrachloro-m-xylene (Surr)	51		20 - 138				07/01/24 07:27	07/02/24 13:10	1
DCB Decachlorobiphenyl (Surr)	68		43 - 143				07/01/24 07:27	07/02/24 13:10	1
DCB Decachlorobiphenyl (Surr)	65		43 - 143				07/01/24 07:27	07/02/24 13:10	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Method: EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: LCS 180-472928/4-A

Matrix: Water

Analysis Batch: 473109

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 472928

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aldrin	0.0000250	0.0000163		mg/L		65	42 - 140
alpha-BHC	0.0000250	0.0000148		mg/L		59	37 - 140
beta-BHC	0.0000250	0.0000158		mg/L		63	17 - 147
gamma-BHC (Lindane)	0.0000250	0.0000181		mg/L		72	32 - 140
delta-BHC	0.0000250	0.0000140		mg/L		56	19 - 140
4,4'-DDD	0.0000250	0.0000149		mg/L		60	31 - 141
4,4'-DDE	0.0000250	0.0000153		mg/L		61	30 - 145
4,4'-DDT	0.0000250	0.0000155		mg/L		62	25 - 150
Dieldrin	0.0000250	0.0000177		mg/L		71	36 - 146
Endosulfan I	0.0000250	0.0000160		mg/L		64	45 - 150
Endosulfan II	0.0000250	0.0000169		mg/L		68	10 - 150
Endosulfan sulfate	0.0000250	0.0000141		mg/L		56	26 - 144
Endrin	0.0000250	0.0000179		mg/L		72	30 - 147
Endrin aldehyde	0.0000250	0.0000146		mg/L		58	51 - 113
Heptachlor	0.0000250	0.0000161		mg/L		64	34 - 140
Heptachlor epoxide	0.0000250	0.0000179		mg/L		72	37 - 142

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene (Surr)	80		20 - 138
Tetrachloro-m-xylene (Surr)	62		20 - 138
DCB Decachlorobiphenyl (Surr)	86		43 - 143
DCB Decachlorobiphenyl (Surr)	82		43 - 143

Lab Sample ID: LCSD 180-472928/5-A

Matrix: Water

Analysis Batch: 473109

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 472928

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Aldrin	0.0000250	0.0000159		mg/L		63	42 - 140	3	35
alpha-BHC	0.0000250	0.0000139		mg/L		55	37 - 140	6	35
beta-BHC	0.0000250	0.0000155		mg/L		62	17 - 147	2	35
gamma-BHC (Lindane)	0.0000250	0.0000176		mg/L		70	32 - 140	3	35
delta-BHC	0.0000250	0.0000140		mg/L		56	19 - 140	0	35
4,4'-DDD	0.0000250	0.0000156		mg/L		62	31 - 141	5	35
4,4'-DDE	0.0000250	0.0000162		mg/L		65	30 - 145	5	35
4,4'-DDT	0.0000250	0.0000163		mg/L		65	25 - 150	5	35
Dieldrin	0.0000250	0.0000187		mg/L		75	36 - 146	6	35
Endosulfan I	0.0000250	0.0000160		mg/L		64	45 - 150	0	28
Endosulfan II	0.0000250	0.0000165		mg/L		66	10 - 150	3	35
Endosulfan sulfate	0.0000250	0.0000129		mg/L		52	26 - 144	9	35
Endrin	0.0000250	0.0000167		mg/L		67	30 - 147	7	35
Endrin aldehyde	0.0000250	0.0000155		mg/L		62	51 - 113	6	26
Heptachlor	0.0000250	0.0000146		mg/L		59	34 - 140	9	35
Heptachlor epoxide	0.0000250	0.0000176		mg/L		71	37 - 142	1	26

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene (Surr)	65		20 - 138
Tetrachloro-m-xylene (Surr)	53		20 - 138

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Method: EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: LCSD 180-472928/5-A
Matrix: Water
Analysis Batch: 473109

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 472928

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	77		43 - 143
DCB Decachlorobiphenyl (Surr)	79		43 - 143

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

Lab Sample ID: MB 180-472928/1-A
Matrix: Water
Analysis Batch: 473025

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 472928

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.000010	0.0000048	mg/L		07/01/24 07:27	07/02/24 07:39	1
PCB-1221	ND		0.000010	0.0000057	mg/L		07/01/24 07:27	07/02/24 07:39	1
PCB-1232	ND		0.000010	0.0000052	mg/L		07/01/24 07:27	07/02/24 07:39	1
PCB-1242	ND		0.000010	0.0000091	mg/L		07/01/24 07:27	07/02/24 07:39	1
PCB-1248	ND		0.000010	0.0000030	mg/L		07/01/24 07:27	07/02/24 07:39	1
PCB-1254	ND		0.000010	0.0000095	mg/L		07/01/24 07:27	07/02/24 07:39	1
PCB-1260	ND		0.000010	0.0000039	mg/L		07/01/24 07:27	07/02/24 07:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	53		20 - 138	07/01/24 07:27	07/02/24 07:39	1
Tetrachloro-m-xylene (Surr)	56		20 - 138	07/01/24 07:27	07/02/24 07:39	1
DCB Decachlorobiphenyl (Surr)	67		43 - 143	07/01/24 07:27	07/02/24 07:39	1
DCB Decachlorobiphenyl (Surr)	63		43 - 143	07/01/24 07:27	07/02/24 07:39	1

Lab Sample ID: LCS 180-472928/2-A
Matrix: Water
Analysis Batch: 473025

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 472928

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
PCB-1016	0.00100	0.000550		mg/L		55	50 - 140
PCB-1260	0.00100	0.000550		mg/L		55	10 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene (Surr)	65		20 - 138
Tetrachloro-m-xylene (Surr)	76		20 - 138
DCB Decachlorobiphenyl (Surr)	80		43 - 143
DCB Decachlorobiphenyl (Surr)	77		43 - 143

Lab Sample ID: LCSD 180-472928/3-A
Matrix: Water
Analysis Batch: 473025

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 472928

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
PCB-1016	0.00100	0.000507		mg/L		51	50 - 140	8	35
PCB-1260	0.00100	0.000535		mg/L		53	10 - 140	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene (Surr)	53		20 - 138

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

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

Lab Sample ID: LCSD 180-472928/3-A
Matrix: Water
Analysis Batch: 473025

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 472928

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene (Surr)	59		20 - 138
DCB Decachlorobiphenyl (Surr)	70		43 - 143
DCB Decachlorobiphenyl (Surr)	69		43 - 143

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-472779/50
Matrix: Water
Analysis Batch: 472779

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.100	0.0530	mg/L			06/29/24 03:17	1
Chloride	ND		1.00	0.712	mg/L			06/29/24 03:17	1
Fluoride	ND		0.100	0.0260	mg/L			06/29/24 03:17	1
Sulfate	ND		1.00	0.756	mg/L			06/29/24 03:17	1

Lab Sample ID: LCS 180-472779/51
Matrix: Water
Analysis Batch: 472779

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	10.0	9.665		mg/L		97	90 - 110
Chloride	50.0	47.84		mg/L		96	90 - 110
Fluoride	2.50	2.444		mg/L		98	90 - 110
Sulfate	50.0	47.61		mg/L		95	90 - 110

Method: 200.8-1994 R5.4 - Metals (ICP/MS)

Lab Sample ID: MB 240-618601/1-A
Matrix: Water
Analysis Batch: 618830

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 618601

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.0	0.053	ug/L		07/02/24 14:00	07/03/24 17:46	1
Aluminum	ND		50	34	ug/L		07/02/24 14:00	07/03/24 17:46	1
Arsenic	ND		5.0	0.75	ug/L		07/02/24 14:00	07/03/24 17:46	1
Barium	ND		5.0	2.2	ug/L		07/02/24 14:00	07/03/24 17:46	1
Beryllium	ND		1.0	0.62	ug/L		07/02/24 14:00	07/03/24 17:46	1
Calcium	ND		1000	250	ug/L		07/02/24 14:00	07/03/24 17:46	1
Cadmium	ND		1.0	0.20	ug/L		07/02/24 14:00	07/03/24 17:46	1
Cobalt	ND		1.0	0.19	ug/L		07/02/24 14:00	07/03/24 17:46	1
Chromium	ND		5.0	1.2	ug/L		07/02/24 14:00	07/03/24 17:46	1
Copper	ND		2.0	1.7	ug/L		07/02/24 14:00	07/03/24 17:46	1
Iron	ND		100	47	ug/L		07/02/24 14:00	07/03/24 17:46	1
Magnesium	ND		1000	61	ug/L		07/02/24 14:00	07/03/24 17:46	1
Manganese	ND		5.0	3.5	ug/L		07/02/24 14:00	07/03/24 17:46	1
Molybdenum	ND		5.0	1.1	ug/L		07/02/24 14:00	07/03/24 17:46	1
Nickel	ND		2.0	1.5	ug/L		07/02/24 14:00	07/03/24 17:46	1
Lead	ND		1.0	0.45	ug/L		07/02/24 14:00	07/03/24 17:46	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Method: 200.8-1994 R5.4 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 240-618601/1-A
Matrix: Water
Analysis Batch: 618830

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 618601

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		07/02/24 14:00	07/03/24 17:46	1
Selenium	ND		5.0	0.89	ug/L		07/02/24 14:00	07/03/24 17:46	1
Thallium	ND		1.0	0.20	ug/L		07/02/24 14:00	07/03/24 17:46	1
Zinc	ND		20	15	ug/L		07/02/24 14:00	07/03/24 17:46	1

Lab Sample ID: MB 240-618601/1-A
Matrix: Water
Analysis Batch: 618964

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 618601

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		20	16	ug/L		07/02/24 14:00	07/05/24 09:19	1

Lab Sample ID: LCS 240-618601/2-A
Matrix: Water
Analysis Batch: 618830

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 618601

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	100	97.5		ug/L		97	85 - 115
Aluminum	5000	4860		ug/L		97	85 - 115
Arsenic	1000	954		ug/L		95	85 - 115
Barium	1000	947		ug/L		95	85 - 115
Beryllium	500	473		ug/L		95	85 - 115
Calcium	25000	24100		ug/L		96	85 - 115
Cadmium	500	478		ug/L		96	85 - 115
Cobalt	500	521		ug/L		104	85 - 115
Chromium	500	475		ug/L		95	85 - 115
Copper	500	475		ug/L		95	85 - 115
Iron	5000	4800		ug/L		96	85 - 115
Magnesium	25000	24400		ug/L		98	85 - 115
Manganese	500	463		ug/L		93	85 - 115
Molybdenum	500	478		ug/L		96	85 - 115
Nickel	500	476		ug/L		95	85 - 115
Lead	500	528		ug/L		106	85 - 115
Antimony	100	99.4		ug/L		99	85 - 115
Selenium	1000	922		ug/L		92	85 - 115
Thallium	1000	1030		ug/L		103	85 - 115
Zinc	500	490		ug/L		98	85 - 115

Lab Sample ID: LCS 240-618601/2-A
Matrix: Water
Analysis Batch: 618964

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 618601

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	100	88.0		ug/L		88	85 - 115

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Method: EPA 245.1 Rev. - Mercury (CVAA)

Lab Sample ID: MB 180-473605/1-A
Matrix: Water
Analysis Batch: 473786

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 473605

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		07/09/24 08:38	07/10/24 08:46	1

Lab Sample ID: LCS 180-473605/2-A
Matrix: Water
Analysis Batch: 473786

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473605

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00250	0.00247		mg/L		99	85 - 115

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

Lab Sample ID: MB 180-472714/12
Matrix: Water
Analysis Batch: 472714

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0060	mg/L			06/27/24 08:09	1

Lab Sample ID: LCS 180-472714/13
Matrix: Water
Analysis Batch: 472714

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	0.500	0.491		mg/L		98	85 - 115

Method: 4500 H+ B-2000 - pH - SM Online, 2011

Lab Sample ID: LCS 180-472840/24
Matrix: Water
Analysis Batch: 472840

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Method: 4500 S2 F-2011 - Sulfide, Total

Lab Sample ID: MB 180-474052/4
Matrix: Water
Analysis Batch: 474052

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		3.0	1.3	mg/L			07/13/24 07:11	1

Lab Sample ID: LCS 180-474052/3
Matrix: Water
Analysis Batch: 474052

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	16.9	16.9		mg/L		100	90 - 110

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Method: 5310 C-2014 - Total Organic Carbon/Persulfate - Ultrav

Lab Sample ID: MB 180-473822/5

Matrix: Water

Analysis Batch: 473822

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Quad	ND		1.0	0.51	mg/L			07/09/24 18:18	1

Lab Sample ID: LCS 180-473822/4

Matrix: Water

Analysis Batch: 473822

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon - Quad	20.0	21.5		mg/L		107	85 - 115

Method: 5540C - 2011 - Methylene Blue Active Substant (MBAS)

Lab Sample ID: MB 180-473386/2

Matrix: Water

Analysis Batch: 473386

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Blue Active Substances	ND		0.050	0.049	mg/l LAS MW 340			06/28/24 16:11	1

Lab Sample ID: LCS 180-473386/3

Matrix: Water

Analysis Batch: 473386

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methylene Blue Active Substances	0.500	0.530		mg/l LAS MW 340		106	90 - 110

Lab Sample ID: 180-176274-1 MS

Matrix: Water

Analysis Batch: 473386

Client Sample ID: 008

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Methylene Blue Active Substances	0.087		0.500	0.703		mg/l LAS MW 340		123	75 - 125

Lab Sample ID: 180-176274-1 DU

Matrix: Water

Analysis Batch: 473386

Client Sample ID: 008

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Methylene Blue Active Substances	0.087		0.0810		mg/l LAS MW 340		7	20

Method: EPA 1664B - HEM and SGT-HEM

Lab Sample ID: MB 180-473087/1-A

Matrix: Water

Analysis Batch: 473139

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 473087

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		5.0	4.3	mg/L		07/02/24 09:26	07/02/24 14:34	1

Eurofins Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

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

Lab Sample ID: LCS 180-473087/2-A
Matrix: Water
Analysis Batch: 473139

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473087

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HEM (Oil & Grease)	40.0	33.0		mg/L		82	78 - 114

Lab Sample ID: LCSD 180-473087/3-A
Matrix: Water
Analysis Batch: 473139

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 473087

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HEM (Oil & Grease)	40.0	33.4		mg/L		83	78 - 114	1	18

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-473264/130
Matrix: Water
Analysis Batch: 473264

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.10	0.088	mg/L			07/03/24 14:21	1

Lab Sample ID: LCS 180-473264/131
Matrix: Water
Analysis Batch: 473264

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	0.500	0.468		mg/L		94	90 - 110

Method: EPA 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 180-472802/20
Matrix: Water
Analysis Batch: 472802

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.10	0.065	mg/L			06/28/24 11:19	1

Lab Sample ID: LCS 180-472802/21
Matrix: Water
Analysis Batch: 472802

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	2.00	1.98		mg/L		99	90 - 110

Method: EPA 410.4 - COD

Lab Sample ID: MB 180-473645/60-A
Matrix: Water
Analysis Batch: 473680

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 473645

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	9.1	mg/L		07/09/24 11:12	07/09/24 16:16	1

Eurofins Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Method: EPA 410.4 - COD (Continued)

Lab Sample ID: MB 180-473645/84-A
Matrix: Water
Analysis Batch: 473680

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 473645

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	9.1	mg/L		07/09/24 11:12	07/09/24 16:32	1

Lab Sample ID: LCS 180-473645/83-A
Matrix: Water
Analysis Batch: 473680

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473645

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	75.0	74.2		mg/L		99	90 - 110

Method: SM 2120B - Color, Colorimetric

Lab Sample ID: MB 180-473014/1
Matrix: Water
Analysis Batch: 473014

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Color, Apparent	ND		5.0	5.0	Color Units			06/28/24 16:30	1
Color, True	ND		5.0	5.0	Color Units			06/28/24 16:30	1
pH at time of analysis	NA		0.10	0.10	SU			06/28/24 16:30	1

Lab Sample ID: LCS 180-473014/2
Matrix: Water
Analysis Batch: 473014

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Color, Apparent	40.0	40.0		Color Units		100	90 - 110
Color, True	40.0	40.0		Color Units		100	90 - 110

Lab Sample ID: 180-176274-1 DU
Matrix: Water
Analysis Batch: 473014

Client Sample ID: 008
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Color, Apparent	20		20.0		Color Units		0	20
Color, True	10		10.0		Color Units		0	20
pH at time of analysis	8.5	!	8.48		SU		0	

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-472961/1
Matrix: Water
Analysis Batch: 472961

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			07/01/24 10:41	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 180-472961/2
Matrix: Water
Analysis Batch: 472961

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	417	360		mg/L		86	85 - 115

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

Lab Sample ID: MB 180-472760/2
Matrix: Water
Analysis Batch: 472760

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		0.50	0.50	mg/L			06/28/24 08:49	1

Lab Sample ID: LCS 180-472760/1
Matrix: Water
Analysis Batch: 472760

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	49.0	48.0		mg/L		98	85 - 115

Method: SM 5210B - 5 Day BOD test

Lab Sample ID: USB 180-473257/1
Matrix: Water
Analysis Batch: 473257

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

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	ND		2.0	2.0	mg/L			06/28/24 15:50	1

Lab Sample ID: LCS 180-473257/2
Matrix: Water
Analysis Batch: 473257

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	198	174		mg/L		88	85 - 115

Lab Sample ID: 180-176274-1 DU
Matrix: Water
Analysis Batch: 473257

Client Sample ID: 008
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Biochemical Oxygen Demand	3.5	b cn	3.13	cn	mg/L		10	20

Method: TKN_TPhos - EPA 351.2 1993 R2/365.4 1974

Lab Sample ID: MB 180-472901/7-A
Matrix: Water
Analysis Batch: 473083

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 472901

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	ND		0.50	0.12	mg/L as N		07/01/24 04:30	07/02/24 06:27	1
Phosphorus, Total	ND		0.10	0.040	mg/L as P		07/01/24 04:30	07/02/24 06:27	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

Method: TKN_TPhos - EPA 351.2 1993 R2/365.4 1974 (Continued)

Lab Sample ID: LCS 180-472901/8-A
Matrix: Water
Analysis Batch: 473083

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 472901

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	2.50	2.69		mg/L as N		108	90 - 110
Phosphorus, Total	2.50	2.46		mg/L as P		98	90 - 110

QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

GC/MS VOA

Analysis Batch: 472776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	EPA 624.1	
180-176274-2	TRIP BLANK	Total/NA	Water	EPA 624.1	
MB 180-472776/6	Method Blank	Total/NA	Water	EPA 624.1	
LCS 180-472776/3	Lab Control Sample	Total/NA	Water	EPA 624.1	

GC/MS Semi VOA

Prep Batch: 472992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	625	
MB 180-472992/1-A	Method Blank	Total/NA	Water	625	
LCS 180-472992/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 180-472992/3-A	Lab Control Sample Dup	Total/NA	Water	625	

Analysis Batch: 473218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-472992/1-A	Method Blank	Total/NA	Water	EPA 625.1	472992
LCS 180-472992/2-A	Lab Control Sample	Total/NA	Water	EPA 625.1	472992
LCSD 180-472992/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 625.1	472992

Analysis Batch: 473513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	EPA 625.1	472992

GC Semi VOA

Prep Batch: 472928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	608	
MB 180-472928/1-A	Method Blank	Total/NA	Water	608	
LCS 180-472928/2-A	Lab Control Sample	Total/NA	Water	608	
LCS 180-472928/4-A	Lab Control Sample	Total/NA	Water	608	
LCSD 180-472928/3-A	Lab Control Sample Dup	Total/NA	Water	608	
LCSD 180-472928/5-A	Lab Control Sample Dup	Total/NA	Water	608	

Analysis Batch: 473025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	EPA 608.3	472928
MB 180-472928/1-A	Method Blank	Total/NA	Water	EPA 608.3	472928
LCS 180-472928/2-A	Lab Control Sample	Total/NA	Water	EPA 608.3	472928
LCSD 180-472928/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 608.3	472928

Analysis Batch: 473109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	EPA 608.3	472928
MB 180-472928/1-A	Method Blank	Total/NA	Water	EPA 608.3	472928
LCS 180-472928/4-A	Lab Control Sample	Total/NA	Water	EPA 608.3	472928
LCSD 180-472928/5-A	Lab Control Sample Dup	Total/NA	Water	EPA 608.3	472928

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QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

HPLC/IC

Analysis Batch: 472779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	EPA 300.0 R2.1	
MB 180-472779/50	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-472779/51	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 473605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	245.1	
MB 180-473605/1-A	Method Blank	Total/NA	Water	245.1	
LCS 180-473605/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 473786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	EPA 245.1 Rev.	473605
MB 180-473605/1-A	Method Blank	Total/NA	Water	EPA 245.1 Rev.	473605
LCS 180-473605/2-A	Lab Control Sample	Total/NA	Water	EPA 245.1 Rev.	473605

Prep Batch: 618601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total Recoverable	Water	200.8-1994 R5.4	
MB 240-618601/1-A	Method Blank	Total Recoverable	Water	200.8-1994 R5.4	
LCS 240-618601/2-A	Lab Control Sample	Total Recoverable	Water	200.8-1994 R5.4	

Analysis Batch: 618830

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total Recoverable	Water	200.8-1994 R5.4	618601
MB 240-618601/1-A	Method Blank	Total Recoverable	Water	200.8-1994 R5.4	618601
LCS 240-618601/2-A	Lab Control Sample	Total Recoverable	Water	200.8-1994 R5.4	618601

Analysis Batch: 618964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total Recoverable	Water	200.8-1994 R5.4	618601
MB 240-618601/1-A	Method Blank	Total Recoverable	Water	200.8-1994 R5.4	618601
LCS 240-618601/2-A	Lab Control Sample	Total Recoverable	Water	200.8-1994 R5.4	618601

General Chemistry

Analysis Batch: 472714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Dissolved	Water	3500-Cr B-2011	
MB 180-472714/12	Method Blank	Total/NA	Water	3500-Cr B-2011	
LCS 180-472714/13	Lab Control Sample	Total/NA	Water	3500-Cr B-2011	

Analysis Batch: 472760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	SM 2540D	
MB 180-472760/2	Method Blank	Total/NA	Water	SM 2540D	
LCS 180-472760/1	Lab Control Sample	Total/NA	Water	SM 2540D	

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QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

General Chemistry

Analysis Batch: 472802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	EPA 353.2	
MB 180-472802/20	Method Blank	Total/NA	Water	EPA 353.2	
LCS 180-472802/21	Lab Control Sample	Total/NA	Water	EPA 353.2	

Analysis Batch: 472840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	4500 H+ B-2000	
LCS 180-472840/24	Lab Control Sample	Total/NA	Water	4500 H+ B-2000	

Prep Batch: 472901

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	TKN/TPhos Prep	
MB 180-472901/7-A	Method Blank	Total/NA	Water	TKN/TPhos Prep	
LCS 180-472901/8-A	Lab Control Sample	Total/NA	Water	TKN/TPhos Prep	

Analysis Batch: 472961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	SM 2540C	
MB 180-472961/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-472961/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 473014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	SM 2120B	
MB 180-473014/1	Method Blank	Total/NA	Water	SM 2120B	
LCS 180-473014/2	Lab Control Sample	Total/NA	Water	SM 2120B	
180-176274-1 DU	008	Total/NA	Water	SM 2120B	

Analysis Batch: 473083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	TKN_TPhos	472901
MB 180-472901/7-A	Method Blank	Total/NA	Water	TKN_TPhos	472901
LCS 180-472901/8-A	Lab Control Sample	Total/NA	Water	TKN_TPhos	472901

Prep Batch: 473087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	1664B	
MB 180-473087/1-A	Method Blank	Total/NA	Water	1664B	
LCS 180-473087/2-A	Lab Control Sample	Total/NA	Water	1664B	
LCSD 180-473087/3-A	Lab Control Sample Dup	Total/NA	Water	1664B	

Analysis Batch: 473139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	EPA 1664B	473087
MB 180-473087/1-A	Method Blank	Total/NA	Water	EPA 1664B	473087
LCS 180-473087/2-A	Lab Control Sample	Total/NA	Water	EPA 1664B	473087
LCSD 180-473087/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 1664B	473087

Analysis Batch: 473257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	SM 5210B	

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QC Association Summary

Client: GHD Services Inc.
Project/Site: GHD Shell Monaca

Job ID: 180-176274-1

General Chemistry (Continued)

Analysis Batch: 473257 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
USB 180-473257/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 180-473257/2	Lab Control Sample	Total/NA	Water	SM 5210B	
180-176274-1 DU	008	Total/NA	Water	SM 5210B	

Analysis Batch: 473264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	EPA 350.1	
MB 180-473264/130	Method Blank	Total/NA	Water	EPA 350.1	
LCS 180-473264/131	Lab Control Sample	Total/NA	Water	EPA 350.1	

Analysis Batch: 473386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	5540C - 2011	
MB 180-473386/2	Method Blank	Total/NA	Water	5540C - 2011	
LCS 180-473386/3	Lab Control Sample	Total/NA	Water	5540C - 2011	
180-176274-1 MS	008	Total/NA	Water	5540C - 2011	
180-176274-1 DU	008	Total/NA	Water	5540C - 2011	

Prep Batch: 473645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	410.4	
MB 180-473645/60-A	Method Blank	Total/NA	Water	410.4	
MB 180-473645/84-A	Method Blank	Total/NA	Water	410.4	
LCS 180-473645/83-A	Lab Control Sample	Total/NA	Water	410.4	

Analysis Batch: 473680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	EPA 410.4	473645
MB 180-473645/60-A	Method Blank	Total/NA	Water	EPA 410.4	473645
MB 180-473645/84-A	Method Blank	Total/NA	Water	EPA 410.4	473645
LCS 180-473645/83-A	Lab Control Sample	Total/NA	Water	EPA 410.4	473645

Analysis Batch: 473822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	5310 C-2014	
MB 180-473822/5	Method Blank	Total/NA	Water	5310 C-2014	
LCS 180-473822/4	Lab Control Sample	Total/NA	Water	5310 C-2014	

Analysis Batch: 474052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-176274-1	008	Total/NA	Water	4500 S2 F-2011	
MB 180-474052/4	Method Blank	Total/NA	Water	4500 S2 F-2011	
LCS 180-474052/3	Lab Control Sample	Total/NA	Water	4500 S2 F-2011	



Microbac Laboratories Inc., Pittsburgh Division

CERTIFICATE OF ANALYSIS

A4F2592

Eurofins Test America - Pittsburgh

Project Name: 18026655

DAVID DUNLAP
301 ALPHA DRIVE RIDC PARK
PITTSBURGH, PA 15238

Project / PO Number: US0543365068 (2024)
Received: 06/27/2024
Reported: 06/28/2024

Analytical Testing Parameters

Client Sample ID:	008	Collected By:	Brenden Arbaugh
Sample Matrix:	Aqueous	Collection Date:	06/27/2024 12:15
Lab Sample ID:	A4F2592-01		

Microbiology	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Colilert-18 (Fecal Coliforms)								
Fecal Coliforms	>2420	1	MPN/100mL	1		06/27/24 1427	06/28/24 0942	AML

Definitions

MPN/100mL Most Probable Number per 100 Milliliters
RL: Reporting Limit

Project Requested Certification(s)

Microbac Laboratories Inc., Pittsburgh Division
02-00257

Pennsylvania Department of Environmental Protection
Pennsylvania Department of Environmental Protection - PARULE

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

Caroline Keefe
Customer Relationship Coordinator
Reported: 06/28/2024 13:55

Chain of Custody Record



Client Information Client Contact: Brenden Arbaugh Company: GHD Services Inc. Address: 4068 Mt Royal Blvd Suite 201 City: Allison Park State, Zip: PA, 15101 Phone: 513-942-4750(Tel) 513-942-8585(Fax) Email: brenden.arbaugh@ghd.com Project Name: GHD Shell Monaca Site: Shell Polynes		Sampler: BA Lab PM: Colussy, Jill L E-Mail: Jill.Colussy@et.eurofinsus.com Phone: State of Origin: PA Job #: Preservation Codes: CQC No: 180-100735-18182.6 Page: Page 6 of 4	
Analysis Requested Due Date Requested: TAT Requested (days): Compliance Project: ☐ Yes ☒ No PO #: 4501508098 WO #: Project #: 18026655 SSOW#: Matrix (W=water, S=solid, O=on-site, B=issue, A=Air) Sample Type (C=comp, G=grab) Sample Time Sample Date Preservation Code: W Field Filtered Sample (Yes or No) ☒ Perform MS/MSD (Yes or No) ☒ Recal Conform ☒ Total Number of containers ☒ Special		PWSID: Other: Barcode: A 4 F 2 5 9 2 Eurofins TestAmerica Pittsburgh PM: Caroline Keefe	
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological Deliverable Requested: I, II, III, IV, Other (specify)		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: [Signature] Relinquished by: Relinquished by:		Method of Shipment: Received by: [Signature] Received by: Received by: Date/Time: 6/27/24 13:55 Date/Time: Date/Time: Company: GAD Company: Company: Cooler Temperature(s) °C and Other Remarks: 4.4°C 7436 0.12	
Custody Seal No.: A Yes ☐ No ☐		Custody Seal No.: A Yes ☐ No ☐	

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Phone (412) 963-2468

Client Information		Lab PM		Carrier Tracking No(s)		COC No	
Client Contact:		Colussy, Jill L		180-100735-18182.6		Page	
Company:		Jill Colussy@et.eurofinsus.com		State of Origin: PA		Page 6 of 4	
GHD Services Inc.		PWSID		Analysis Requested		Job #:	
Address:		Due Date Requested:		Preservation Codes:		Other:	
4068 Mt Royal Blvd Suite 201		TAT Requested (days):		Total Number of containers		Special Instructions/Note:	
City:		Compliance Project: ☐ Yes ☒ No		Perform MS/MSD (Yes or No)		Fecal Coliform	
State, Zip		PO #:		Field Filtered Sample (Yes or No)		Matrix	
PA, 15101		4501508098		Sample Date		Sample Type	
Phone		WO #:		6/27/24		(C=comp, G=grab)	
513-942-4750(Tel) 513-942-8585(Fax)		Project #		12/15		Preservation Code:	
Email		18026655		G		W	
brenden.arbaugh@ghd.com		SSOW#		X		X	
Project Name		GHD Shell Monaca		X		X	
Site		Shell Polymes		X		X	
Sample Identification		008		X		X	
Possible Hazard Identification		Deliverable Requested		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client	
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological		Date:		Disposal By Lab		Archive For	
Empty Kit Relinquished by:		Date:		Special Instructions/QC Requirements:		Months	
Relinquished by:		Date:		Received by:		Date/Time	
Relinquished by:		Date:		Received by:		Date/Time	
Relinquished by:		Date:		Received by:		Date/Time	
Custody Seal No.:		Custody Seal No.:		Custody Seal No.:		Custody Seal No.:	
Custody Seal No.:		Custody Seal No.:		Custody Seal No.:		Custody Seal No.:	

Chain of Custody Record

[illegible]

Eurofins - Cleveland Sample Receipt Form/Narrative		Login#	
Barberton Facility			
Client <u>E. Pittsburg</u>	Site Name	Cooler unpacked by <u>[Signature]</u>	
Cooler Received on <u>7-1-24</u>	Opened on <u>7-1-24</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>EC</u>	Foam Box	Client Cooler	Box
Packing material used. Bubble Wrap		Foam Plastic Bag	None
COOLANT: <u>Wet Ice</u>		Blue Ice	Dry Ice
Cooler temperature upon receipt		Water	<u>None</u>
IR GUN # <u>17</u> (CF <u>0.20</u>)	Observed Cooler Temp.	☒ Sec Multiple Cooler Form	
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>2</u>		°C	Corrected Cooler Temp. °C
-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	pH Snrp Lot# HC339814
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. _____			

Eurofins - Cleveland Sample Receipt Multiple Cooler Form					
Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)	
<u>EC</u> Client Box Other	IR GUN #: <u>17</u>	<u>21.1</u>	<u>21.3</u>	Well Ice Blue Ice Dry Ice Water None	
EC Client Box Other	IR GUN #: _____	<u>0.9</u>	<u>1.1</u>	Well Ice Blue Ice Dry Ice Water None	
EC Client Box Other	IR GUN #: _____			Well Ice Blue Ice Dry Ice Water None	
EC Client Box Other	IR GUN #: _____			Well Ice Blue Ice Dry Ice Water None	
EC Client Box Other	IR GUN #: _____			Well Ice Blue Ice Dry Ice Water None	
EC Client Box Other	IR GUN #: _____			Well Ice Blue Ice Dry Ice Water None	
EC Client Box Other	IR GUN #: _____			Well Ice Blue Ice Dry Ice Water None	
EC Client Box Other	IR GUN #: _____			Well Ice Blue Ice Dry Ice Water None	
EC Client Box Other	IR GUN #: _____			Well Ice Blue Ice Dry Ice Water None	
EC Client Box Other	IR GUN #: _____			Well Ice Blue Ice Dry Ice Water None	
EC Client Box Other	IR GUN #: _____			Well Ice Blue Ice Dry Ice Water None	
EC Client Box Other	IR GUN #: _____			Well Ice Blue Ice Dry Ice Water None	
EC Client Box Other	IR GUN #: _____			Well Ice Blue Ice Dry Ice Water None	
EC Client Box Other	IR GUN #: _____			Well Ice Blue Ice Dry Ice Water None	
EC Client Box Other	IR GUN #: _____			Well Ice Blue Ice Dry Ice Water None	
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EC Client Box Other	IR GUN #: _____			Well Ice Blue Ice Dry Ice Water None	
EC Client Box Other	IR GUN #: _____			Well Ice Blue Ice Dry Ice Water None	
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EC Client Box Other	IR GUN #: _____			Well Ice Blue Ice Dry Ice Water None	
EC Client Box Other	IR GUN #: _____			Well Ice Blue Ice Dry Ice Water None	
EC Client Box Other	IR GUN #: _____			Well Ice Blue Ice Dry Ice Water None	
EC Client Box Other	IR GUN #: _____			Well Ice Blue Ice Dry Ice Water None	

☐ See Temperature Excursion Form

W1-MC-099 Cooler Receipt Form Page 2 - Multiple Coolers

Do not lift using this tag.

ORIGIN ID AGCA (412) 963-7530
SAMPLE RECEIVING DEPARTMENT
EUROFINS ENVIRO TESTING PITT N E
301 ALPHA DRIVE
PITTSBURGH, PA 152382807
UNITED STATES US

SHIP DATE 28 JUN24
ACTWGT 25.00 LB NPN
CAD 0522321/CAFEC3808

BILL SENDER

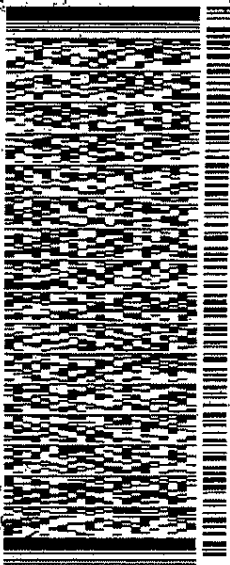
TO SHIPPING/RECEIVING

EUROFINS ENVIRONMENT TESTING NORTH
180 S. VAN BUREN AVENUE

BARBERTON OH 44203

(330) 487-8386 REF: 8180-103741
PO: YES

Part # 159469-434 MTW EXP 03/25
58355



1 of 2

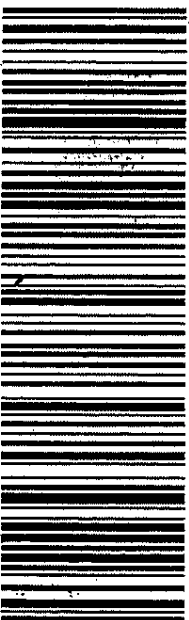
TRK# 7224 1468 9848
[0201]

MASTER

64 CAKA

44203
OH-US CLE

SATURDAY 12:00P
PRIORITY OVERNIGHT



Do not lift using this tag.

ORIGIN ID AGCA (412) 963-7530
SAMPLE RECEIVING DEPARTMENT
EUROFINS ENVIRO TESTING PITT N E
301 ALPHA DRIVE
PITTSBURGH, PA 152382807
UNITED STATES US

SHIP DATE 28 JUN24
ACTWGT 25.00 LB NPN
CAD 0522321/CAFEC3808

BILL SENDER

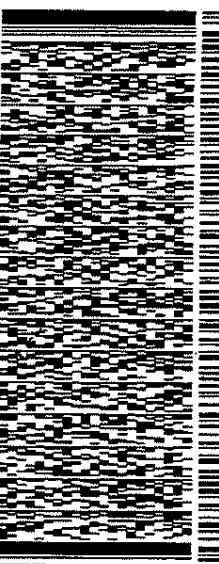
TO SHIPPING/RECEIVING

EUROFINS ENVIRONMENT TESTING NORTH
180 S. VAN BUREN AVENUE

BARBERTON OH 44203

(330) 487-8386 REF: 8180-103741
PO: YES

Part # 159469-434 MTW EXP 03/25
58355



2 of 2

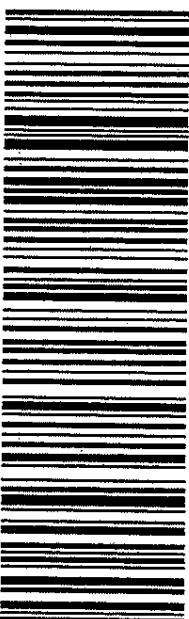
MPS# 7224 1468 9859
[0263]

Mstr# 7224 1468 9848

64 CAKA

44203
OH-US CLE

SATURDAY 12:00P
PRIORITY OVERNIGHT



Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 180-176274-1

Login Number: 176274

List Source: Eurofins Pittsburgh

List Number: 1

Creator: Kovitch, Christina M

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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	
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?	True	
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.	True	
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").	False	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	