



Technical Memorandum

03 February 2023

To	Mark Tatchell (VoT)	Contact No.	+1 604 248-3662
Copy to		Email	RoseMarie.Rocca@ghd.com
From	Kathleen Hasler, Rose Marie Rocca/ra/1	Project No.	11218464
Project Name	2022 Groundwater and Surface Water Monitoring and Reporting Services, Drinking Water Wellhead Protection		
Subject	Fall 2022 Monitoring Event Village of Tahsis Tahsis, British Columbia		

1. Introduction

Environmental monitoring was completed at the Village of Tahsis (VoT) by GHD staff on November 15 and December 7, 2022 (Monitoring Event). Groundwater samples were collected from six monitoring locations as part of the Wellhead Protection Plan (WPP) to assess potential landfill derived alteration to the aquifer, which currently supplies drinking water to the VoT. Two surface water samples were collected from two monitoring locations as part of the WPP to characterize the potential for seasonal variation in water quality. The Site plan and monitoring locations are illustrated on Figure 1.

This memorandum (memo) has been prepared as part of the scope of work described in the GHD's letter entitled 2022 Groundwater and Surface Water Monitoring and Reporting Services dated April 19, 2022 (Proposal).

1.1 Scope and Limitations

This technical memorandum has been prepared by GHD for Village of Tahsis. It is not prepared as, and is not represented to be, a deliverable suitable for reliance by any person for any purpose. It is not intended for circulation or incorporation into other documents. The matters discussed in this memorandum are limited to those specifically detailed in the memorandum and are subject to any limitations or assumptions specially set out.

2. Environmental Monitoring Program Description

The environmental monitoring program includes:

- Semi-annual sample collection at four groundwater wells (MW1S, MW1D, MW2S, MW2D) installed within the capture zone of the VoT's drinking water Production Well. These wells are located 1,500 to 1,650 metres (m) downgradient of a historical landfill area containing waste originating from the operation of a sawmill in the village and upgradient of the Production Well.

This Technical Memorandum is provided as an interim output under our agreement with Village of Tahsis. It is provided to foster discussion in relation to technical matters associated with the project and should not be relied upon in any way.

- Semi-annual sample collection at the Production Well installed near the intersection of McKelvie Road and Jewitt Street, which is located 1,750 m downgradient of the historical landfill.
- Annual sample collection at Test Well #2 installed at the intersection of Boston Street and Jewitt Drive, downgradient of the Production Well.
- Semi-annual sample collection at surface water monitoring location in McKelvie Creek (SW01-21)
- Annual sample collection at surface water monitoring location in the Tahsis River (SW02 21).

3. Monitoring Event Summary

The following tasks were completed during the Monitoring Event:

- Water level monitoring, field parameter measurement, sample collection, and analytical testing of groundwater at MW1D, MW1S, MW2D, MW2S, Production Well, and Test Well #2.
- Field parameter measurement, sample collection, and analytical testing of surface water at SW01-21 and SW02-21.
- Due to field and laboratory error, E. Coli and total coliform analysis was not completed for the groundwater and surface water samples collected November 15, 2022. Re-sampling for e. Coli and total coliform analysis was completed on December 7, 2022.
- Analytical testing of a field blank as part of the quality assurance/quality control (QA/QC) program.
- Field sample key (FSK) preparation and environmental database updates.
- Verification of the analytical data by a qualified chemist as part of the QA/QC program.

4. Analytical Services and Data Validation

Analytical services were provided by Bureau Veritas (BV) of Burnaby, BC, with results provided directly to GHD. The FSK and laboratory reports generated for the Monitoring Events are included in Attachment 1.

A qualified chemist completed a data verification to assess laboratory and field QA/QC measures. The QA/QC memo presented in Attachment 2 reports that the data exhibited acceptable levels of accuracy with the qualifications noted.

5. Water Quality

5.1 Groundwater Quality Results

Groundwater analytical results have been assessed to the BC Contaminated Site Regulation, Schedule 3.2 Generic Numerical Water Standards (CSR) for drinking water (DW) and freshwater aquatic life (FAW). The CSR DW and FAW standards are appropriate for evaluating groundwater quality based on the following rationale:

- Protocol 21 for Contaminated Sites: Water Use Determination (ENV, October 31, 2017) states that both current and future drinking water use must be considered when determining whether CSR DW standards apply. Currently the VoT obtains drinking water from the Production Well; therefore, the drinking water exposure pathway is applicable and DW standards apply.

- Protocol 21 also states that CSR FAW standards apply to sites located within 500 m of an aquatic receiving environment (i.e., a surface water body containing aquatic life) unless it can be demonstrated that groundwater does not flow to that receiving environment. The CSR FAW standards are applicable due to the proximity of the Tahsis River west of select monitoring wells (i.e., MW1 and MW2 are located approximately 250 m from the high-water mark of the Tahsis River).

The groundwater analytical results assessed to the applicable CSR FAW and DW standards are presented in Table 1 and Table 2.

The groundwater concentrations of samples collected from MW1D, MW1S, MW2D, MW2S, the Production Well and Test Well #2 were less than the applicable CSR standards. These results indicate that there are no discernible landfill contaminants present in groundwater at these locations and the VoT drinking water is protective of human and aquatic health.

The groundwater concentrations of samples collected at Test Well #2 were less than the applicable CSR standards, with the exception of:

- Salinity (BC CSR FAW)

Due to the location of Test Well #2 being downgradient of the Production Well, the source of salinity is not landfill derived. In addition, Test Well #2 is outside of the Production Well capture zone indicating groundwater from the vicinity of this well will not impact the VoT's drinking water quality.

5.2 Surface Water Quality Results

Surface water analytical results have been assessed to the BC Water Quality Guidelines (WQGs) for DW and FAW and are presented in Table 3 and Table 4.

WQGs include both short-term maximum (STM) and long-term average (LTA) guidelines and may apply to dissolved or total parameter concentrations. The LTA guidelines are generally more stringent than the STM guidelines. WQGs are also often dependent on background conditions, hardness, chloride, calcium pH, and/or temperature. Surface water quality results have been assessed to the most stringent guideline available for each parameter.

Surface water concentrations of the sample collected from SW01-21 and SW02-21 were less than the applicable BC WQGs during the Monitoring Event. The potential for seasonal variability in water quality cannot be assessed at this time, a more comprehensive data set is required.

6. Recommendations

Continue the long-term monitoring program, as described in the WPP.

If you have any questions or require further clarification, please do not hesitate to contact GHD.

Regards



Kathleen Hasler
Hydrogeologist in Training, GIT



Rose Marie Rocca
Project Manager, P.Geo

Tables

Table 3
Surface Water Locations Compared to WQGs
2022 Fall Monitoring Event
Widge of Taxis
Tahsis, British Columbia

Sample Location: Sample ID: Sample Date:	BC WQG		SW01-21 WS-11218464-151122-CXW-01 11/19/2022	SW02-21 WS-11218464-151122-CXW-02 11/15/2022
	DW ^a a	FAW ^b b		
Field Parameters				
Dissolved Oxygen, Field	mg/L	>5	17.70	15.39
ORP, Field	millivolts	--	185	193
pH, Field	s.u.	6.5-9.0	7.60	7.61
Specific Conductance, Field	uS/cm	--	29	58
Temperature, Field	Deg C	15 AO	6.16	7.92
Total dissolved solids, field (TDS)	mg/L	--	18 (12 spring/field) (c) (STM)	--
Turbidity, Field	NTU	(c)	(c)	0.0
General Chemistry				
Alkalinity (as CaCO3 pH=8.3)	mg/L	--	ND (1.0)	ND (1.0)
Alkalinity, total (as CaCO3)	mg/L	--	13	31
Chloride (dissolved)	mg/L	250 AO	150 LTA	2.2
Conductivity	uS/cm	--	38	67
Escherichia coli	cfu/100mL	--	--	--
Fluoride (dissolved)	mg/L	--	ND (0.050)	ND (0.050)
Hardness (dissolved)	mg/L	--	13.8	29.6
Hydroxide (as CaCO3)	mg/L	--	ND (1.0)	ND (1.0)
Dissolved Sulphate (as SO4)	mg/L	500 AO	[b]	1.3
Total coliform bacteria	cfu/100mL	--	--	--
Turbidity	NTU	--	0.34	0.15
Nutrients				
Ammonia-N	mg/L	--	[e]	ND (0.015)
Bicarbonate (as CaCO3)	mg/L	--	15	38
Carbonate (as CaCO3)	mg/L	--	ND (1.0)	ND (1.0)
Nitrate (as N)	mg/L	10	3.0	0.121
Nitrite (as N)	mg/L	1	[c]	ND (0.0050)
Nitrite/Nitrate	mg/L	--	0.121	0.163
Dissolved Metals				
Aluminum (dissolved)	ug/L	--	[a]	7.6
Antimony (dissolved)	ug/L	--	ND (0.50)	ND (0.50)
Arsenic (dissolved)	ug/L	--	ND (0.10)	ND (0.10)
Barium (dissolved)	ug/L	--	ND (1.0)	ND (1.0)
Beryllium (dissolved)	ug/L	--	ND (0.10)	ND (0.10)
Bismuth (dissolved)	ug/L	--	ND (1.0)	ND (1.0)
Boron (dissolved)	ug/L	--	ND (50)	ND (50)
Cadmium (dissolved)	ug/L	--	[b]	ND (0.010)
Calcium (dissolved)	ug/L	--	4210	10000
Chromium (dissolved)	ug/L	--	ND (1.0)	ND (1.0)
Cobalt (dissolved)	ug/L	--	ND (0.20)	ND (0.20)
Copper (dissolved)	ug/L	--	0.25	0.22
Iron (dissolved)	ug/L	--	350 (STM)	ND (5.0)
Lead (dissolved)	ug/L	--	ND (0.20)	ND (0.20)
Lithium (dissolved)	ug/L	--	ND (2.0)	ND (2.0)
Magnesium (dissolved)	ug/L	--	802	1110
Manganese (dissolved)	ug/L	--	ND (1.0)	ND (1.0)
Mercury (dissolved)	ug/L	--	ND (0.0019)	ND (0.0019)
Molybdenum (dissolved)	ug/L	--	ND (1.0)	ND (1.0)
Nickel (dissolved)	ug/L	--	ND (1.0)	ND (1.0)
Phosphorus (dissolved)	ug/L	--	ND (10)	ND (10)
Potassium (dissolved)	ug/L	--	ND (50)	55
Selenium (dissolved)	ug/L	--	ND (0.10)	ND (0.10)
Silicon (dissolved)	ug/L	--	2190	2140
Silver (dissolved)	ug/L	--	ND (0.020)	ND (0.020)
Sodium (dissolved)	ug/L	--	898	886
Strontium (dissolved)	ug/L	--	7.8	20.5
Sulfur (dissolved)	ug/L	--	ND (3000)	ND (3000)
Thallium (dissolved)	ug/L	--	ND (0.010)	ND (0.010)
Tin (dissolved)	ug/L	--	ND (5.0)	ND (5.0)
Titanium (dissolved)	ug/L	--	ND (5.0)	ND (5.0)
Uranium (dissolved)	ug/L	--	ND (0.10)	ND (0.10)
Vanadium (dissolved)	ug/L	--	ND (5.0)	ND (5.0)
Zinc (dissolved)	ug/L	--	ND (5.0)	ND (5.0)
Zirconium (dissolved)	ug/L	--	ND (0.10)	ND (0.10)
Total Metals				
Aluminum	ug/L	9500	--	16.4
Antimony	ug/L	6	--	ND (0.50)
Arsenic	ug/L	10	--	ND (0.10)
Barium	ug/L	--	1000 w	ND (1.0)
Beryllium	ug/L	--	0.13 w	ND (0.10)
Bismuth	ug/L	--	--	ND (1.0)
Boron	ug/L	5000	1200	ND (50)
Cadmium	ug/L	5	--	ND (0.010)
Calcium	ug/L	--	--	4320
Chromium	ug/L	--	--	ND (1.0)
Cobalt	ug/L	--	--	ND (0.20)
Copper	ug/L	1000 AO	[b]	ND (0.50)
Iron	ug/L	300 AO	1000 (STM)	12
Lead	ug/L	5	[b]	ND (0.20)
Lithium	ug/L	--	--	ND (2.0)
Magnesium	ug/L	--	--	821
Manganese	ug/L	20 AO	[b]	ND (1.0)
Mercury	ug/L	1	[f]	ND (0.0019)
Molybdenum	ug/L	88	7000	ND (1.0)
Nickel	ug/L	80	[b] w	ND (1.0)
Phosphorus	ug/L	10 AO for lakes	5	ND (10) ^g
Potassium	ug/L	--	--	ND (50)
Selenium	ug/L	10	2	ND (0.10)
Silicon	ug/L	--	--	2230
Silver	ug/L	--	[b]	ND (0.020)
Sodium	ug/L	--	--	909
Strontium	ug/L	7000	--	8.3
Sulphur	ug/L	--	--	ND (3000)
Thallium	ug/L	--	0.8 w SS	ND (0.010)
Tin	ug/L	--	--	ND (5.0)
Titanium	ug/L	--	--	ND (5.0)
Uranium	ug/L	20	8.5 w	ND (0.10)
Vanadium	ug/L	--	--	ND (5.0)
Zinc	ug/L	3000 MAC	[b]	ND (5.0)
Zirconium	ug/L	--	--	ND (0.10)

Notes:
1 - British Columbia Water Quality Guidelines (Drinking Water)
2 - British Columbia Contaminated Water Quality Guidelines (Freshwater Aquatic Life (Short Term Acute))
^a Exceeds Drinking Water (DW) Guideline.
^b Exceeds Freshwater Aquatic Life (FAW) Guideline.
All BC WQGs listed are short term maximum guidelines unless otherwise indicated.
w - Working Water Quality Guidelines
AO - Aesthetic Objective
MAC - Maximum Acceptable Concentration
SS - Site Specific objective for the Lower Columbia River, BC.
-- Currently no standard
ND - Not detected at the associated reporting limit.
ND (0.02) - Laboratory detection limit exceeds guideline
J - Estimated concentration
0.111^g Exceeds indicated standard or guideline
[a] - Limit varies with pH.
[b] - Limit varies with Hardness.
[c] - Limit varies with Chloride (mg/L).
[d] - Limit vs 8464
[e] - Limit varies with Dissolved Calcium.
[f] - Limit varies with Methyl Mercury.
[g] - Criteria for dissolved copper (FAW) is calculated using the BC BLM calc: EXP(1.6-3.327pH+0.402)*pH² mg/L calc: EXP(0.736*LN(Hardness)-4.943) ug/L calc: 3.31*(EXP(1.273*LOG(Hardness)-4.704)) ug/L



Attachments

Attachment 1

FSK and Laboratory Reports

Location	Date Time	Sample Name	Matrix	Type	Sampler	Site Name	Facility ID	Field pH (u.s.)	Conductivity	Conductivity Unit	Sample Temperature	Sample Temperature Unit	Turbidity (NTU)	ORP	ORP Unit	Dissolved Oxygen (DO)	DO Unit	Volume of Water Purged	Volume Purged Units	Flow Rate Units	Event Name	Sampling Company	Sample Observation
Production Well	12/07/2022 06:05:00	WG-11218464-071222-CW-01	WGS	N	MR	Village of Tahsis	2000000720 6.83	160	uS/cm	5.91	deg C	4.4	476 millivolts	7.04	mg/L	20	L	ml/min	2022Q4-WG	GHD	Just grabbing E. coli sample. Water clear and no odour. Purged line before sampling		
MW20-015	12/07/2022 09:25:00	WG-11218464-071222-CW-03	WGS	N	MR	Village of Tahsis	2000000720 8.22	94	uS/cm	7.53	deg C	0.7	300 millivolts	110.3	mg/L	5	L	ml/min	2022Q4-WG	GHD	Clear, no odour		
MW20-02D	12/07/2022 09:40:00	WG-11218464-071222-CW-06	WGS	N	MR	Village of Tahsis	2000000720 7.54	74	uS/cm	9.18	deg C	0.3	158 millivolts	8.01	mg/L	5	L	ml/min	2022Q4-WG	GHD	Sulphur-like odour when pulling up water level, after purge		
MW20-01D	12/07/2022 09:30:00	WG-11218464-071222-CW-02	WGS	N	MR	Village of Tahsis	2000000720 8.14	116	uS/cm	7.26	deg C	1.3	327 millivolts	7.73	mg/L	10	L	ml/min	2022Q4-WG	GHD	Clear, no odour		
MW20-01S	12/07/2022 09:25:00	WG-11218464-071222-CW-03	WGS	N	MR	Village of Tahsis	2000000720 8.22	94	uS/cm	7.53	deg C	0.7	300 millivolts	110.3	mg/L	5	L	ml/min	2022Q4-WG	GHD	Clear, no odour		
Test Well 2	12/07/2022 08:55:00	WG-11218464-071222-CW-04	WGS	N	MR	Village of Tahsis	2000000720 8.57	147	uS/cm	9.39	deg C	19.4	24 millivolts	2.45	mg/L	5	L	ml/min	2022Q4-WG	GHD	Clear, no odour		
MW20-02S	12/07/2022 09:25:00	WG-11218464-071222-CW-05	WGS	N	MR	Village of Tahsis	2000000720 7.61	47	uS/cm	8.39	deg C	12.8	151 millivolts	2.06	mg/L	1	L	ml/min	2022Q4-WG	GHD	Clear, no odour		
EW01-01		WG-11218464-071222-CW-01	WGS	N	MR	Village of Tahsis	2000000720 7.83	34	uS/cm	6.71	deg C	0.7	159 millivolts	11.81	mg/L	0	L	ml/min	2022Q4-WG	GHD	Clear, no odour		

Location	Date Time	Sample Name	Matrix	Type	Sampler	Site Name	Facility ID	Field pH (s.u.)	Conductivity	Conductivity Unit	Sample Temperature	Sample Temperature Unit	Turbidity (NTU)	ORP	ORP Units	Dissolved Oxygen (DO)	DO Units	Volume of Water Purged	Volume Purged Unit	Flow Rate Unit	Event Name	Sampling Company	Sample Observation
MW20-01D	11/15/2022 10:08:00	WG-11218464-151122-CXW-01	WG	N	CKW	Village of Tahsis	2000000720	8.15	108	uS/cm	6.72	deg C	0.0	188	millivolts	17.75	mg/L	10	L	ml/min	202211-Q4WVG GHD		Clear, no odour
MW20-01S	11/15/2022 10:50:00	WG-11218464-151122-CXW-02	WG	N	CKW	Village of Tahsis	2000000720	7.51	86	uS/cm	7.01	deg C	0.3	293	millivolts	8.28	mg/L	0	L	ml/min	202211-Q4WVG GHD		Clear, no odour
MW20-02D	11/15/2022 12:02:00	WG-11218464-151122-CXW-04	WG	N	CKW	Village of Tahsis	2000000720	8.04	66	uS/cm	8.80	deg C	0.3	266	millivolts	12.23	mg/L	20	L	ml/min	202211-Q4WVG GHD		Clear, no odour
MW20-02S	11/15/2022 12:00:00	WG-11218464-151122-CXW-03	WG	N	CKW	Village of Tahsis	2000000720	6.09	36	uS/cm	8.22	deg C	0.0	218	millivolts	11.16	mg/L	5	L	ml/min	202211-Q4WVG GHD		Clear, no odour
Test Well 2	11/15/2022 15:10:00	WG-11218464-151122-CXW-06	WG	N	CKW	Village of Tahsis	2000000720	8.15	200	uS/cm	10.11	deg C	26.3	222	millivolts	1355	mg/L	20	L	ml/min	202211-Q4WVG		Slightly turbid, no odour, tiny particles in sample
SW02-21	11/15/2022 14:00:00	WG-11218464-151122-CXW-01	WS	N	CKW	Village of Tahsis	2000000720	7.69	29	uS/cm	6.46	deg C	0.0	185	millivolts	17.79	mg/L	0	L	ml/min	202211-Q4WVG GHD		Clear, no odour, flow
SW02-21	11/15/2022 14:45:00	WG-11218464-151122-CXW-02	WS	N	CKW	Village of Tahsis	2000000720	7.61	58	uS/cm	7.92	deg C	0.0	193	millivolts	15.39	mg/L	0	L	ml/min	202211-Q4WVG		Clear, no odour, flow
Production Well	11/15/2022 13:25:00	WG-11218464-151122-CXW-05	WG	N	CKW	Village of Tahsis	2000000720	7.20	82	uS/cm	8.81	deg C	0.0	199	millivolts	7.81	mg/L	0	L	ml/min	202211-Q4WVG GHD		Clear, no odour, flow
Field Blank	11/15/2022 15:30:00	WG-11218464-151122-CXW-07	WQ	FB	CKW	Village of Tahsis	2000000720			uS/cm		deg C			millivolts		mg/L		L	ml/min	202211-Q4WVG		



Your P.O. #: 735-003380
 Your Project #: 11218464
 Site Location: VILLAGE OF TAHSIS
 Your C.O.C. #: 678913-01-01

Attention: Aïresse MacPhee

GHD Limited
 455 PHILLIP STREET
 WATERLOO, ON
 CANADA N2L 3X2

Report Date: 2023/01/20
 Report #: R3291039
 Version: 9 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C290929

Received: 2022/11/17, 08:30

Sample Matrix: Water
 # Samples Received: 7

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
Alkalinity @25C (pp, total), CO ₃ ,HCO ₃ ,OH	5	N/A	2022/11/19	BBY6SOP-00026	SM 23 2320 B m
Chloride/Sulphate by Auto Colourimetry	4	N/A	2022/11/18	BBY6SOP-00011 / BBY6SOP-00017	SM23-4500-Cl/SO ₄ -E m
Chloride/Sulphate by Auto Colourimetry	1	N/A	2022/11/19	BBY6SOP-00011 / BBY6SOP-00017	SM23-4500-Cl/SO ₄ -E m
Conductivity @25C	5	N/A	2022/11/19	BBY6SOP-00026	SM 23 2510 B m
Fluoride	5	N/A	2022/11/22	BBY6SOP-00048	SM 23 4500-F C m
Hardness (calculated as CaCO ₃)	5	N/A	2022/11/22	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO ₃)	1	N/A	2023/01/05	BBY WI-00033	Auto Calc
Mercury (Dissolved) by CV (3)	5	2022/11/23	2022/11/23	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Dissolved) by CV (3)	1	2023/01/06	2023/01/06	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Total) by CV	5	2022/11/23	2022/11/23	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Total) by CV	1	2023/01/06	2023/01/06	AB SOP-00084	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	5	N/A	2022/11/22	BBY WI-00033	Auto Calc
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2023/01/05	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (dissolved) (3)	5	N/A	2022/11/21	BBY7SOP-00002	EPA 6020b R2 m
Elements by CRC ICPMS (dissolved) (3)	1	N/A	2023/01/05	BBY7SOP-00002	EPA 6020b R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	5	2022/11/17	2022/11/23	BBY WI-00033	Auto Calc
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	2023/01/05	2023/01/05	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (total)	5	2022/11/22	2022/11/23	BBY7SOP-00003 / BBY7SOP-00002	EPA 6020b R2 m
Elements by CRC ICPMS (total)	1	2023/01/05	2023/01/05	BBY7SOP-00003 / BBY7SOP-00002	EPA 6020b R2 m
Ammonia-N (Total)	7	N/A	2022/11/18	AB SOP-00007	SM 23 4500 NH3 A G m
Nitrate + Nitrite (N)	6	N/A	2022/11/18	BBY6SOP-00010	SM 23 4500-NO ₃ - I m
Nitrate + Nitrite (N)	1	N/A	2022/12/22	BBY6SOP-00010	SM 23 4500-NO ₃ - I m
Nitrite (N) by CFA	6	N/A	2022/11/18	BBY6SOP-00010	SM 23 4500-NO ₃ - I m
Nitrite (N) by CFA	1	N/A	2022/12/22	BBY6SOP-00010	SM 23 4500-NO ₃ - I m
Nitrogen - Nitrate (as N)	6	N/A	2022/11/18	BBY WI-00033	Auto Calc
Nitrogen - Nitrate (as N)	1	N/A	2022/12/22	BBY WI-00033	Auto Calc
PAH in Water by GC/MS (SIM)	2	2022/11/21	2022/11/21	BBY8SOP-00021	BCMOE BCLM Jul2017m
PAH in Water by GC/MS (SIM)	3	2022/11/21	2022/11/22	BBY8SOP-00021	BCMOE BCLM Jul2017m



Your P.O. #: 735-003380
 Your Project #: 11218464
 Site Location: VILLAGE OF TAHSIS
 Your C.O.C. #: 678913-01-01

Attention: Aïresse MacPhee

GHD Limited
 455 PHILLIP STREET
 WATERLOO, ON
 CANADA N2L 3X2

Report Date: 2023/01/20
 Report #: R3291039
 Version: 9 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C290929

Received: 2022/11/17, 08:30

Sample Matrix: Water
 # Samples Received: 7

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Total LMW, HMW, Total PAH Calc (4)	5	N/A	2022/11/22	BBY WI-00033	Auto Calc
Polychlorinated Biphenyls in Water (1)	5	2022/11/22	2022/11/22	CAL SOP-00149	EPA 8082A R1 m
Total PCBs in Water (1)	5	N/A	2022/11/23		Auto Calc
Filter and HNO3 Preserve for Metals	5	N/A	2022/11/17	BBY7 WI-00004	SM 23 3030B m
Resin and Fatty Acids (1)	5	2022/11/22	2022/11/24	CAL SOP-00099	AE129.0
Salinity by Conductivity Method	1	N/A	2023/01/19	BBY6SOP-00026	SM 23 2520 B m
Total Dissolved Solids (Filt. Residue)	1	2023/01/16	2023/01/17	BBY6SOP-00033	SM 23 2540 C m
Turbidity	4	N/A	2022/11/18	BBY6SOP-00027	SM 23 2130 B m
Turbidity	1	N/A	2022/11/19	BBY6SOP-00027	SM 23 2130 B m
OC Pesticides (Selected) & PCB (2, 5)	5	2022/11/26	2022/11/27	CAM SOP-00307	EPA 8081A/ 8082B m
OC Pesticides Summed Parameters (2)	5	N/A	2022/11/23	CAM SOP-00307	EPA 8081A/8082B m
GC/MS Analysis of OP Pesticides (2)	2	2022/11/22	2022/11/22	CAM SOP-00301	EPA 8270 m
GC/MS Analysis of OP Pesticides (2)	3	2022/11/22	2022/11/23	CAM SOP-00301	EPA 8270 m
Phenoxy Acid Herbicides (2)	5	2022/11/22	2022/11/28	CAM SOP-00330	EPA 8270 m
Triazine Herbicides (2)	5	2022/11/22	2022/11/26	CAM SOP-00301	EPA 8270 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.



Your P.O. #: 735-003380
Your Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your C.O.C. #: 678913-01-01

Attention: Aïresse MacPhee

GHD Limited
455 PHILLIP STREET
WATERLOO, ON
CANADA N2L 3X2

Report Date: 2023/01/20
Report #: R3291039
Version: 9 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C290929

Received: 2022/11/17, 08:30

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested. This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

- (1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
- (2) This test was performed by Bureau Veritas Campobello, 6740 Campobello Road , Mississauga, ON, L5N 2L8
- (3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (4) Total PAHs in Water include: Quinoline, Naphthalene, 1-Methylnaphthalene, 2-Methylnaphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Acridine, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b&j)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, and Benzo(g,h,i)perylene.
- (5) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Brody Andersen, B.Sc., B.Sc., Program Specialist–Emergency Spill Response
Email: Brody.Andersen@bureauveritas.com
Phone# (780)577-7120

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Raphael Kwan, Senior Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BHE574	BHE574	BHE575			
Sampling Date		2022/11/15 10:08	2022/11/15 10:08	2022/11/15 10:50			
COC Number		678913-01-01	678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-01	WG-11218464-151122 -CXW-01 Lab-Dup	WG-11218464-151122 -CXW-02	RDL	MDL	QC Batch

ANIONS							
Nitrite (N)	mg/L	<0.0050	N/A	<0.0050	0.0050	0.0050	A802805
Calculated Parameters							
Filter and HNO3 Preservation	N/A	FIELD	N/A	FIELD	N/A	N/A	ONSITE
Nitrate (N)	mg/L	0.053	N/A	0.061	0.020	N/A	A800672
Misc. Inorganics							
Conductivity	uS/cm	120	N/A	97	2.0	N/A	A804623
Anions							
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	<1.0	1.0	N/A	A804620
Alkalinity (Total as CaCO3)	mg/L	56	N/A	46	1.0	N/A	A804620
Bicarbonate (HCO3)	mg/L	69	N/A	56	1.0	N/A	A804620
Carbonate (CO3)	mg/L	<1.0	N/A	<1.0	1.0	N/A	A804620
Dissolved Fluoride (F)	mg/L	<0.050	<0.050	<0.050	0.050	N/A	A805935
Hydroxide (OH)	mg/L	<1.0	N/A	<1.0	1.0	N/A	A804620
Chloride (Cl)	mg/L	2.2	N/A	1.4	1.0	N/A	A802652
Sulphate (SO4)	mg/L	2.8	N/A	2.2	1.0	N/A	A802652
Nutrients							
Total Ammonia (N)	mg/L	<0.015	<0.015	<0.015	0.015	0.0040	A802818
Nitrate plus Nitrite (N)	mg/L	0.053	N/A	0.061	0.020	0.020	A802793
Pesticides & Herbicides							
Prometon	ug/L	<0.5	N/A	<0.5	0.5	N/A	A813433
Simazine	ug/L	<3	N/A	<3	3	N/A	A813433
Atrazine	ug/L	<1	N/A	<1	1	N/A	A813433
Propazine	ug/L	<3	N/A	<3	3	N/A	A813433
Metribuzin (Sencor)	ug/L	<3	N/A	<3	3	N/A	A813433
Simetryn	ug/L	<0.5	N/A	<0.5	0.5	N/A	A813433
Ametryn	ug/L	<3	N/A	<3	3	N/A	A813433
Prometryn	ug/L	<3	N/A	<3	3	N/A	A813433
Terbutryne	ug/L	<0.5	N/A	<0.5	0.5	N/A	A813433
Cyanazine (Bladex)	ug/L	<3	N/A	<3	3	N/A	A813433
RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate N/A = Not Applicable							



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BHE574	BHE574	BHE575			
Sampling Date		2022/11/15 10:08	2022/11/15 10:08	2022/11/15 10:50			
COC Number		678913-01-01	678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-01	WG-11218464-151122 -CXW-01 Lab-Dup	WG-11218464-151122 -CXW-02	RDL	MDL	QC Batch

Physical Properties							
Turbidity	NTU	0.30	N/A	0.33	0.10	N/A	A802560
Surrogate Recovery (%)							
2-Fluorobiphenyl	%	83	N/A	75	N/A	N/A	A813433
D14-Terphenyl (FS)	%	108	N/A	106	N/A	N/A	A813433
D5-NITROBENZENE (sur.)	%	80	N/A	83	N/A	N/A	A813433

RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate
 N/A = Not Applicable



BUREAU VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BHE575		BHE576	BHE576			
Sampling Date		2022/11/15 10:50		2022/11/15 12:00	2022/11/15 12:00			
COC Number		678913-01-01		678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-02 Lab-Dup	QC Batch	WG-11218464-151122 -CXW-03	WG-11218464-151122 -CXW-03 Lab-Dup	RDL	MDL	QC Batch

ANIONS								
Nitrite (N)	mg/L	N/A	A802805	<0.0050	N/A	0.0050	0.0050	A802805

Calculated Parameters								
Filter and HNO3 Preservation	N/A	N/A	ONSITE	FIELD	N/A	N/A	N/A	ONSITE
Nitrate (N)	mg/L	N/A	A800672	0.109	N/A	0.020	N/A	A800672

Misc. Inorganics								
Conductivity	uS/cm	N/A	A804623	41	N/A	2.0	N/A	A804623

Anions								
Alkalinity (PP as CaCO3)	mg/L	N/A	A804620	<1.0	N/A	1.0	N/A	A804620
Alkalinity (Total as CaCO3)	mg/L	N/A	A804620	15	N/A	1.0	N/A	A804620
Bicarbonate (HCO3)	mg/L	N/A	A804620	18	N/A	1.0	N/A	A804620
Carbonate (CO3)	mg/L	N/A	A804620	<1.0	N/A	1.0	N/A	A804620
Dissolved Fluoride (F)	mg/L	N/A	A805935	<0.050	N/A	0.050	N/A	A805935
Hydroxide (OH)	mg/L	N/A	A804620	<1.0	N/A	1.0	N/A	A804620
Chloride (Cl)	mg/L	1.1	A802652	2.3	N/A	1.0	N/A	A802652
Sulphate (SO4)	mg/L	2.2	A802652	<1.0	N/A	1.0	N/A	A802652

Nutrients								
Total Ammonia (N)	mg/L	N/A	A802818	<0.015	<0.015	0.015	0.0040	A802945
Nitrate plus Nitrite (N)	mg/L	N/A	A802793	0.109	N/A	0.020	0.020	A802793

Pesticides & Herbicides								
Prometon	ug/L	N/A	A813433	<0.5	N/A	0.5	N/A	A813433
Simazine	ug/L	N/A	A813433	<3	N/A	3	N/A	A813433
Atrazine	ug/L	N/A	A813433	<1	N/A	1	N/A	A813433
Propazine	ug/L	N/A	A813433	<3	N/A	3	N/A	A813433
Metribuzin (Sencor)	ug/L	N/A	A813433	<3	N/A	3	N/A	A813433
Simetryn	ug/L	N/A	A813433	<0.5	N/A	0.5	N/A	A813433
Ametryn	ug/L	N/A	A813433	<3	N/A	3	N/A	A813433
Prometryn	ug/L	N/A	A813433	<3	N/A	3	N/A	A813433
Terbutryne	ug/L	N/A	A813433	<0.5	N/A	0.5	N/A	A813433
Cyanazine (Bladex)	ug/L	N/A	A813433	<3	N/A	3	N/A	A813433

RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate
 N/A = Not Applicable



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BHE575		BHE576	BHE576			
Sampling Date		2022/11/15 10:50		2022/11/15 12:00	2022/11/15 12:00			
COC Number		678913-01-01		678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-02 Lab-Dup	QC Batch	WG-11218464-151122 -CXW-03	WG-11218464-151122 -CXW-03 Lab-Dup	RDL	MDL	QC Batch

Physical Properties								
Turbidity	NTU	N/A	A802560	1.3	N/A	0.10	N/A	A802560

Surrogate Recovery (%)								
2-Fluorobiphenyl	%	N/A	A813433	85	N/A	N/A	N/A	A813433
D14-Terphenyl (FS)	%	N/A	A813433	97	N/A	N/A	N/A	A813433
D5-NITROBENZENE (sur.)	%	N/A	A813433	83	N/A	N/A	N/A	A813433

RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate
 N/A = Not Applicable



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BHE577	BHE577		BHE578			
Sampling Date		2022/11/15 12:02	2022/11/15 12:02		2022/11/15 13:25			
COC Number		678913-01-01	678913-01-01		678913-01-01			
	UNITS	WG-11218464-151122 -CXW-04	WG-11218464-151122 -CXW-04 Lab-Dup	QC Batch	WG-11218464-151122 -CXW-05	RDL	MDL	QC Batch

ANIONS

Nitrite (N)	mg/L	<0.0050	N/A	A802805	<0.0050	0.0050	0.0050	A802805
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Calculated Parameters

Filter and HNO3 Preservation	N/A	FIELD	N/A	ONSITE	FIELD	N/A	N/A	ONSITE
Nitrate (N)	mg/L	0.066	N/A	A800672	0.057	0.020	N/A	A800672

Misc. Inorganics

Conductivity	uS/cm	76	N/A	A804623	93	2.0	N/A	A804623
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Anions

Alkalinity (PP as CaCO3)	mg/L	<1.0	<1.0	A804620	<1.0	1.0	N/A	A804620
Alkalinity (Total as CaCO3)	mg/L	37	36	A804620	43	1.0	N/A	A804620
Bicarbonate (HCO3)	mg/L	45	44	A804620	53	1.0	N/A	A804620
Carbonate (CO3)	mg/L	<1.0	<1.0	A804620	<1.0	1.0	N/A	A804620
Dissolved Fluoride (F)	mg/L	<0.050	N/A	A805940	<0.050	0.050	N/A	A805935
Hydroxide (OH)	mg/L	<1.0	<1.0	A804620	<1.0	1.0	N/A	A804620
Chloride (Cl)	mg/L	2.2	N/A	A802655	1.7	1.0	N/A	A802652
Sulphate (SO4)	mg/L	1.8	N/A	A802655	2.8	1.0	N/A	A802652

Nutrients

Total Ammonia (N)	mg/L	<0.015	N/A	A802945	<0.015	0.015	0.0040	A802945
Nitrate plus Nitrite (N)	mg/L	0.066	N/A	A802793	0.057	0.020	0.020	A802793

Pesticides & Herbicides

Prometon	ug/L	<0.5	N/A	A813433	<0.5	0.5	N/A	A813433
Simazine	ug/L	<3	N/A	A813433	<3	3	N/A	A813433
Atrazine	ug/L	<1	N/A	A813433	<1	1	N/A	A813433
Propazine	ug/L	<3	N/A	A813433	<3	3	N/A	A813433
Metribuzin (Sencor)	ug/L	<3	N/A	A813433	<3	3	N/A	A813433
Simetryn	ug/L	<0.5	N/A	A813433	<0.5	0.5	N/A	A813433
Ametryn	ug/L	<3	N/A	A813433	<3	3	N/A	A813433
Prometryn	ug/L	<3	N/A	A813433	<3	3	N/A	A813433
Terbutryne	ug/L	<0.5	N/A	A813433	<0.5	0.5	N/A	A813433
Cyanazine (Bladex)	ug/L	<3	N/A	A813433	<3	3	N/A	A813433

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BHE577	BHE577		BHE578			
Sampling Date		2022/11/15 12:02	2022/11/15 12:02		2022/11/15 13:25			
COC Number		678913-01-01	678913-01-01		678913-01-01			
	UNITS	WG-11218464-151122 -CXW-04	WG-11218464-151122 -CXW-04 Lab-Dup	QC Batch	WG-11218464-151122 -CXW-05	RDL	MDL	QC Batch

Physical Properties								
Turbidity	NTU	<0.10	N/A	A802560	<0.10	0.10	N/A	A803420
Surrogate Recovery (%)								
2-Fluorobiphenyl	%	77	N/A	A813433	80	N/A	N/A	A813433
D14-Terphenyl (FS)	%	103	N/A	A813433	102	N/A	N/A	A813433
D5-NITROBENZENE (sur.)	%	84	N/A	A813433	85	N/A	N/A	A813433
RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate N/A = Not Applicable								

Bureau Veritas ID		BHE579		BHE580			
Sampling Date		2022/11/15 15:10		2022/11/15 15:30			
COC Number		678913-01-01		678913-01-01			
	UNITS	WG-11218464-151122 -CXW-07	QC Batch	WG-11218464-151122 -CXW-06	RDL	MDL	QC Batch

ANIONS							
Nitrite (N)	mg/L	<0.0050	A839487	<0.0050	0.0050	0.0050	A802805
Calculated Parameters							
Nitrate (N)	mg/L	<0.020	A839092	0.060	0.020	N/A	A800672
Misc. Inorganics							
Salinity	g/L	N/A	N/A	0.111	0.010	0.010	A858774
Total Dissolved Solids	mg/L	N/A	N/A	120	10	N/A	A854801
Nutrients							
Total Ammonia (N)	mg/L	<0.015	A802945	0.067	0.015	0.0040	A802945
Nitrate plus Nitrite (N)	mg/L	<0.020	A839485	0.060	0.020	0.020	A802793
RDL = Reportable Detection Limit N/A = Not Applicable							



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER)

Bureau Veritas ID		BHE574	BHE575	BHE576			
Sampling Date		2022/11/15 10:08	2022/11/15 10:50	2022/11/15 12:00			
COC Number		678913-01-01	678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-01	WG-11218464-151122 -CXW-02	WG-11218464-151122 -CXW-03	RDL	MDL	QC Batch
Polychlorinated Biphenyls							
Aroclor 1016	ug/L	<0.090	<0.090	<0.090	0.090	N/A	A803998
Aroclor 1221	ug/L	<0.090	<0.090	<0.090	0.090	N/A	A803998
Aroclor 1232	ug/L	<0.090	<0.090	<0.090	0.090	N/A	A803998
Aroclor 1242	ug/L	<0.090	<0.090	<0.090	0.090	N/A	A803998
Aroclor 1248	ug/L	<0.090	<0.090	<0.090	0.090	N/A	A803998
Aroclor 1254	ug/L	<0.090	<0.090	<0.090	0.090	N/A	A803998
Aroclor 1260	ug/L	<0.090	<0.090	<0.090	0.090	N/A	A803998
Aroclor 1262	ug/L	<0.090	<0.090	<0.090	0.090	N/A	A803998
Aroclor 1268	ug/L	<0.090	<0.090	<0.090	0.090	N/A	A803998
Total PCB	mg/L	<0.000090	<0.000090	<0.000090	0.000090	N/A	A800772
Surrogate Recovery (%)							
NONACHLOROBIPHENYL (sur.)	%	117	97	104	N/A	N/A	A803998
RDL = Reportable Detection Limit N/A = Not Applicable							

Bureau Veritas ID		BHE577	BHE578			
Sampling Date		2022/11/15 12:02	2022/11/15 13:25			
COC Number		678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-04	WG-11218464-151122 -CXW-05	RDL	MDL	QC Batch
Polychlorinated Biphenyls						
Aroclor 1016	ug/L	<0.090	<0.090	0.090	N/A	A803998
Aroclor 1221	ug/L	<0.090	<0.090	0.090	N/A	A803998
Aroclor 1232	ug/L	<0.090	<0.090	0.090	N/A	A803998
Aroclor 1242	ug/L	<0.090	<0.090	0.090	N/A	A803998
Aroclor 1248	ug/L	<0.090	<0.090	0.090	N/A	A803998
Aroclor 1254	ug/L	<0.090	<0.090	0.090	N/A	A803998
Aroclor 1260	ug/L	<0.090	<0.090	0.090	N/A	A803998
Aroclor 1262	ug/L	<0.090	<0.090	0.090	N/A	A803998
Aroclor 1268	ug/L	<0.090	<0.090	0.090	N/A	A803998
Total PCB	mg/L	<0.000090	<0.000090	0.000090	N/A	A800772
Surrogate Recovery (%)						
NONACHLOROBIPHENYL (sur.)	%	111	105	N/A	N/A	A803998
RDL = Reportable Detection Limit N/A = Not Applicable						



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

PESTICIDES BY GC-MS (WATER)

Bureau Veritas ID		BHE574	BHE575	BHE576	BHE577			
Sampling Date		2022/11/15 10:08	2022/11/15 10:50	2022/11/15 12:00	2022/11/15 12:02			
COC Number		678913-01-01	678913-01-01	678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-01	WG-11218464-151122 -CXW-02	WG-11218464-151122 -CXW-03	WG-11218464-151122 -CXW-04	RDL	MDL	QC Batch

Pesticides & Herbicides								
Aldicarb	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	N/A	A813431
Bendiocarb	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	N/A	A813431
Carbaryl	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	N/A	A813431
Carbofuran	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	N/A	A813431
Chlorpyrifos (Dursban)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	N/A	A813431
Demeton-S	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	N/A	A813431
Diazinon	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	N/A	A813431
Dichlorvos	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	N/A	A813431
Dimethoate	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	N/A	A813431
Ethion	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	N/A	A813431
Fenchlorphos (Ronnel)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	N/A	A813431
Fenthion	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	N/A	A813431
Fonofos	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	N/A	A813431
Guthion (Azinphos-methyl)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	N/A	A813431
Malathion	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	N/A	A813431
Metolachlor	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	N/A	A813431
Mevinphos (Phosdrin)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	N/A	A813431
Parathion Ethyl	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	N/A	A813431
Parathion methyl	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	N/A	A813431
Phorate (Thimet)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	N/A	A813431
Phosmet	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	N/A	A813431
Terbufos	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	N/A	A813431
Triallate	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	N/A	A813431
Trifluralin	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	N/A	A813431

Surrogate Recovery (%)								
2-Fluorobiphenyl	%	74	71	76	41	N/A	N/A	A813431
D14-Terphenyl (FS)	%	90	89	88	79	N/A	N/A	A813431
D5-NITROBENZENE (sur.)	%	87	84	90	51	N/A	N/A	A813431

RDL = Reportable Detection Limit
N/A = Not Applicable



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

PESTICIDES BY GC-MS (WATER)

Bureau Veritas ID		BHE578			
Sampling Date		2022/11/15 13:25			
COC Number		678913-01-01			
	UNITS	WG-11218464-151122 -CXW-05	RDL	MDL	QC Batch
Pesticides & Herbicides					
Aldicarb	ug/L	<5.0	5.0	N/A	A813431
Bendiocarb	ug/L	<2.0	2.0	N/A	A813431
Carbaryl	ug/L	<5.0	5.0	N/A	A813431
Carbofuran	ug/L	<5.0	5.0	N/A	A813431
Chlorpyrifos (Dursban)	ug/L	<2.0	2.0	N/A	A813431
Demeton-S	ug/L	<2.0	2.0	N/A	A813431
Diazinon	ug/L	<2.0	2.0	N/A	A813431
Dichlorvos	ug/L	<2.0	2.0	N/A	A813431
Dimethoate	ug/L	<2.0	2.0	N/A	A813431
Ethion	ug/L	<1.0	1.0	N/A	A813431
Fenclorophos (Ronnel)	ug/L	<2.0	2.0	N/A	A813431
Fenthion	ug/L	<1.0	1.0	N/A	A813431
Fonofos	ug/L	<2.0	2.0	N/A	A813431
Guthion (Azinphos-methyl)	ug/L	<1.0	1.0	N/A	A813431
Malathion	ug/L	<2.0	2.0	N/A	A813431
Metolachlor	ug/L	<5.0	5.0	N/A	A813431
Mevinphos (Phosdrin)	ug/L	<2.0	2.0	N/A	A813431
Parathion Ethyl	ug/L	<2.0	2.0	N/A	A813431
Parathion methyl	ug/L	<2.0	2.0	N/A	A813431
Phorate (Thimet)	ug/L	<1.0	1.0	N/A	A813431
Phosmet	ug/L	<2.0	2.0	N/A	A813431
Terbufos	ug/L	<1.0	1.0	N/A	A813431
Triallate	ug/L	<5.0	5.0	N/A	A813431
Trifluralin	ug/L	<5.0	5.0	N/A	A813431
Surrogate Recovery (%)					
2-Fluorobiphenyl	%	75	N/A	N/A	A813431
D14-Terphenyl (FS)	%	91	N/A	N/A	A813431
D5-NITROBENZENE (sur.)	%	90	N/A	N/A	A813431
RDL = Reportable Detection Limit N/A = Not Applicable					



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

PHENOXYALKYL ACID PESTICIDES/HERBICIDES (WATER)

Bureau Veritas ID		BHE574	BHE575	BHE576			
Sampling Date		2022/11/15 10:08	2022/11/15 10:50	2022/11/15 12:00			
COC Number		678913-01-01	678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-01	WG-11218464-151122 -CXW-02	WG-11218464-151122 -CXW-03	RDL	MDL	QC Batch
Pesticides & Herbicides							
2,4-D (BEE)	ug/L	<0.50	<0.50	<0.50	0.50	N/A	A813432
Dicamba	ug/L	<0.50	<0.50	<0.50	0.50	N/A	A813432
MCPP	ug/L	<0.50	<0.50	<0.50	0.50	N/A	A813432
MCPA	ug/L	<0.50	<0.50	<0.50	0.50	N/A	A813432
Dichlorprop	ug/L	<0.50	<0.50	<0.50	0.50	N/A	A813432
2,4-D	ug/L	<0.50	<0.50	<0.50	0.50	N/A	A813432
2,4,5-TP	ug/L	<0.50	<0.50	<0.50	0.50	N/A	A813432
2,4,5-T	ug/L	<0.50	<0.50	<0.50	0.50	N/A	A813432
2,4-DB	ug/L	<0.50	<0.50	<0.50	0.50	N/A	A813432
Picloram	ug/L	<0.50	<0.50	<0.50	0.50	N/A	A813432
Surrogate Recovery (%)							
2,4-Dichlorophenyl Acetic Acid	%	115	111	123	N/A	N/A	A813432
2,5-Dibromobenzoic Acid	%	96	92	100	N/A	N/A	A813432
4,4-Dibromobiphenyl	%	93	93	96	N/A	N/A	A813432
RDL = Reportable Detection Limit N/A = Not Applicable							



PHENOXYALKYL ACID PESTICIDES/HERBICIDES (WATER)

Bureau Veritas ID		BHE577	BHE578			
Sampling Date		2022/11/15 12:02	2022/11/15 13:25			
COC Number		678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-04	WG-11218464-151122 -CXW-05	RDL	MDL	QC Batch
Pesticides & Herbicides						
2,4-D (BEE)	ug/L	<0.50	<0.50	0.50	N/A	A813432
Dicamba	ug/L	<0.50	<0.50	0.50	N/A	A813432
MCPP	ug/L	<0.50	<0.50	0.50	N/A	A813432
MCPA	ug/L	<0.50	<0.50	0.50	N/A	A813432
Dichlorprop	ug/L	<0.50	<0.50	0.50	N/A	A813432
2,4-D	ug/L	<0.50	<0.50	0.50	N/A	A813432
2,4,5-TP	ug/L	<0.50	<0.50	0.50	N/A	A813432
2,4,5-T	ug/L	<0.50	<0.50	0.50	N/A	A813432
2,4-DB	ug/L	<0.50	<0.50	0.50	N/A	A813432
Picloram	ug/L	<0.50	<0.50	0.50	N/A	A813432
Surrogate Recovery (%)						
2,4-Dichlorophenyl Acetic Acid	%	119	110	N/A	N/A	A813432
2,5-Dibromobenzoic Acid	%	98	87	N/A	N/A	A813432
4,4-Dibromobiphenyl	%	94	91	N/A	N/A	A813432
RDL = Reportable Detection Limit N/A = Not Applicable						



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

ORGANOCHLORINATED PESTICIDES BY GC-ECD (WATER)

Bureau Veritas ID		BHE574	BHE575	BHE576			
Sampling Date		2022/11/15 10:08	2022/11/15 10:50	2022/11/15 12:00			
COC Number		678913-01-01	678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-01	WG-11218464-151122 -CXW-02	WG-11218464-151122 -CXW-03	RDL	MDL	QC Batch
Calculated Parameters							
Aldrin + Dieldrin	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A813430
Chlordane (Total)	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A813430
DDT + Metabolites	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A813430
Heptachlor + Heptachlor epoxide	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A813430
o,p-DDD + p,p-DDD	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A813430
o,p-DDE + p,p-DDE	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A813430
o,p-DDT + p,p-DDT	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A813430
Total Endosulfan	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A813430
Pesticides & Herbicides							
a-BHC	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
a-Chlordane	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
b-BHC	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
d-BHC	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
Endosulfan I	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
Endosulfan II	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
Endosulfan Sulfate	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
Endrin	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
Endrin Aldehyde	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
Endrin ketone	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
Hexachlorobenzene	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
Mirex	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
o,p'-DDT	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
Octachlorostyrene	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
Toxaphene	ug/L	<0.2	<0.2	<0.2	0.2	N/A	A812189
Lindane	ug/L	<0.003	<0.003	<0.003	0.003	N/A	A812189
Heptachlor	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
Aldrin	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
Heptachlor Epoxide	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
Oxychlordane	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
g-Chlordane	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
RDL = Reportable Detection Limit N/A = Not Applicable							



ORGANOCHLORINATED PESTICIDES BY GC-ECD (WATER)

Bureau Veritas ID		BHE574	BHE575	BHE576			
Sampling Date		2022/11/15 10:08	2022/11/15 10:50	2022/11/15 12:00			
COC Number		678913-01-01	678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-01	WG-11218464-151122 -CXW-02	WG-11218464-151122 -CXW-03	RDL	MDL	QC Batch
Dieldrin	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
o,p'-DDE	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
p,p'-DDE	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
o,p'-DDD	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
p,p'-DDD	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
p,p'-DDT	ug/L	<0.005	<0.005	<0.005	0.005	N/A	A812189
Methoxychlor	ug/L	<0.01	<0.01	<0.01	0.01	N/A	A812189
Surrogate Recovery (%)							
2,4,5,6-Tetrachloro-m-xylene	%	64	60	59	N/A	N/A	A812189
Decachlorobiphenyl	%	86	83	82	N/A	N/A	A812189
RDL = Reportable Detection Limit N/A = Not Applicable							



BUREAU
VERITAS

Bureau Veritas Job #: C290929

Report Date: 2023/01/20

GHD Limited

Client Project #: 11218464

Site Location: VILLAGE OF TAHSIS

Your P.O. #: 735-003380

Sampler Initials: CXW

ORGANOCHLORINATED PESTICIDES BY GC-ECD (WATER)

Bureau Veritas ID		BHE577	BHE578			
Sampling Date		2022/11/15 12:02	2022/11/15 13:25			
COC Number		678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-04	WG-11218464-151122 -CXW-05	RDL	MDL	QC Batch
Calculated Parameters						
Aldrin + Dieldrin	ug/L	<0.005	<0.005	0.005	N/A	A813430
Chlordane (Total)	ug/L	<0.005	<0.005	0.005	N/A	A813430
DDT + Metabolites	ug/L	<0.005	<0.005	0.005	N/A	A813430
Heptachlor + Heptachlor epoxide	ug/L	<0.005	<0.005	0.005	N/A	A813430
o,p-DDD + p,p-DDD	ug/L	<0.005	<0.005	0.005	N/A	A813430
o,p-DDE + p,p-DDE	ug/L	<0.005	<0.005	0.005	N/A	A813430
o,p-DDT + p,p-DDT	ug/L	<0.005	<0.005	0.005	N/A	A813430
Total Endosulfan	ug/L	<0.005	<0.005	0.005	N/A	A813430
Pesticides & Herbicides						
a-BHC	ug/L	<0.005	<0.005	0.005	N/A	A812189
a-Chlordane	ug/L	<0.005	<0.005	0.005	N/A	A812189
b-BHC	ug/L	<0.005	<0.005	0.005	N/A	A812189
d-BHC	ug/L	<0.005	<0.005	0.005	N/A	A812189
Endosulfan I	ug/L	<0.005	<0.005	0.005	N/A	A812189
Endosulfan II	ug/L	<0.005	<0.005	0.005	N/A	A812189
Endosulfan Sulfate	ug/L	<0.005	<0.005	0.005	N/A	A812189
Endrin	ug/L	<0.005	<0.005	0.005	N/A	A812189
Endrin Aldehyde	ug/L	<0.005	<0.005	0.005	N/A	A812189
Endrin ketone	ug/L	<0.005	<0.005	0.005	N/A	A812189
Hexachlorobenzene	ug/L	<0.005	<0.005	0.005	N/A	A812189
Mirex	ug/L	<0.005	<0.005	0.005	N/A	A812189
o,p'-DDT	ug/L	<0.005	<0.005	0.005	N/A	A812189
Octachlorostyrene	ug/L	<0.005	<0.005	0.005	N/A	A812189
Toxaphene	ug/L	<0.2	<0.2	0.2	N/A	A812189
Lindane	ug/L	<0.003	<0.003	0.003	N/A	A812189
Heptachlor	ug/L	<0.005	<0.005	0.005	N/A	A812189
Aldrin	ug/L	<0.005	<0.005	0.005	N/A	A812189
Heptachlor Epoxide	ug/L	<0.005	<0.005	0.005	N/A	A812189
Oxychlordane	ug/L	<0.005	<0.005	0.005	N/A	A812189
g-Chlordane	ug/L	<0.005	<0.005	0.005	N/A	A812189
RDL = Reportable Detection Limit N/A = Not Applicable						



ORGANOCHLORINATED PESTICIDES BY GC-ECD (WATER)

Bureau Veritas ID		BHE577	BHE578			
Sampling Date		2022/11/15 12:02	2022/11/15 13:25			
COC Number		678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-04	WG-11218464-151122 -CXW-05	RDL	MDL	QC Batch
Dieldrin	ug/L	<0.005	<0.005	0.005	N/A	A812189
o,p'-DDE	ug/L	<0.005	<0.005	0.005	N/A	A812189
p,p'-DDE	ug/L	<0.005	<0.005	0.005	N/A	A812189
o,p'-DDD	ug/L	<0.005	<0.005	0.005	N/A	A812189
p,p'-DDD	ug/L	<0.005	<0.005	0.005	N/A	A812189
p,p'-DDT	ug/L	<0.005	<0.005	0.005	N/A	A812189
Methoxychlor	ug/L	<0.01	<0.01	0.01	N/A	A812189
Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	57	66	N/A	N/A	A812189
Decachlorobiphenyl	%	72	86	N/A	N/A	A812189
RDL = Reportable Detection Limit N/A = Not Applicable						



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

RESIN AND FATTY ACIDS BY GC-MS (WATER)

Bureau Veritas ID		BHE574	BHE575	BHE576			
Sampling Date		2022/11/15 10:08	2022/11/15 10:50	2022/11/15 12:00			
COC Number		678913-01-01	678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-01	WG-11218464-151122 -CXW-02	WG-11218464-151122 -CXW-03	RDL	MDL	QC Batch
Misc. Organics							
Decanoic acid (C10)	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
Undecanoic acid (C11)	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
Dodecanoic acid (C12)	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
Tetradecanoic acid (C14)	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
Hexadecanoic acid (C16)	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
Octadecanoic acid (C18)	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
Oleic acid (C18:1)	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
Linoleic acid (C18:2)	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
Linolenic acid (C18:3)	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
Eicosanoic acid (C20)	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
Docosanoic acid (C22)	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
9,10-dichlorostearic acid (C18)	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
Pimaric acid	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
Sandaracopimaric acid	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
Isopimaric acid	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
Palustric acid	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
Dehydroabietic acid	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
Abietic acid	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
Neoabietic acid	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
14-chlorodehydroabietic acid	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
12-chlorodehydroabietic acid	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
12,14-dichlorodehydroabietic acid	mg/L	<0.0060	<0.0060	<0.0060	0.0060	N/A	A806024
* Total of Resin Acids Detected	mg/L	<0.060	<0.060	<0.060	0.060	N/A	A806024
* Total of Fatty Acids Detected	mg/L	<0.072	<0.072	<0.072	0.072	N/A	A806024
Surrogate Recovery (%)							
HEPTADECANOIC ACID (sur.)	%	96	95	98	N/A	N/A	A806024
O-METHYLPODOCARPIC ACID (sur.)	%	111	112	117	N/A	N/A	A806024
RDL = Reportable Detection Limit N/A = Not Applicable							



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

RESIN AND FATTY ACIDS BY GC-MS (WATER)

Bureau Veritas ID		BHE577	BHE578			
Sampling Date		2022/11/15 12:02	2022/11/15 13:25			
COC Number		678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-04	WG-11218464-151122 -CXW-05	RDL	MDL	QC Batch
Misc. Organics						
Decanoic acid (C10)	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
Undecanoic acid (C11)	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
Dodecanoic acid (C12)	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
Tetradecanoic acid (C14)	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
Hexadecanoic acid (C16)	mg/L	<0.0060	0.0061	0.0060	N/A	A806024
Octadecanoic acid (C18)	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
Oleic acid (C18:1)	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
Linoleic acid (C18:2)	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
Linolenic acid (C18:3)	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
Eicosanoic acid (C20)	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
Docosanoic acid (C22)	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
9,10-dichlorostearic acid (C18)	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
Pimaric acid	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
Sandaracopimaric acid	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
Isopimaric acid	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
Palustric acid	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
Dehydroabietic acid	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
Abietic acid	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
Neoabietic acid	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
14-chlorodehydroabietic acid	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
12-chlorodehydroabietic acid	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
12,14-dichlorodehydroabietic acid	mg/L	<0.0060	<0.0060	0.0060	N/A	A806024
* Total of Resin Acids Detected	mg/L	<0.060	<0.060	0.060	N/A	A806024
* Total of Fatty Acids Detected	mg/L	<0.072	<0.072	0.072	N/A	A806024
Surrogate Recovery (%)						
HEPTADECANOIC ACID (sur.)	%	91	96	N/A	N/A	A806024
O-METHYLPODOCARPIC ACID (sur.)	%	110	118	N/A	N/A	A806024
RDL = Reportable Detection Limit N/A = Not Applicable						



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

CSR DISSOLVED METALS IN WATER WITH CV HG (WATER)

Bureau Veritas ID		BHE574	BHE574	BHE575			
Sampling Date		2022/11/15 10:08	2022/11/15 10:08	2022/11/15 10:50			
COC Number		678913-01-01	678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-01	WG-11218464-151122 -CXW-01 Lab-Dup	WG-11218464-151122 -CXW-02	RDL	MDL	QC Batch

Calculated Parameters							
Dissolved Hardness (CaCO3)	mg/L	56.3	N/A	44.7	0.50	0.50	A800530
Elements							
Dissolved Mercury (Hg)	ug/L	<0.0019	<0.0019	<0.0019	0.0019	0.0019	A807592
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	ug/L	8.3	N/A	4.0	3.0	0.030	A803006
Dissolved Antimony (Sb)	ug/L	<0.50	N/A	<0.50	0.50	0.0020	A803006
Dissolved Arsenic (As)	ug/L	0.30	N/A	0.30	0.10	0.010	A803006
Dissolved Barium (Ba)	ug/L	<1.0	N/A	<1.0	1.0	0.0020	A803006
Dissolved Beryllium (Be)	ug/L	<0.10	N/A	<0.10	0.10	0.0030	A803006
Dissolved Bismuth (Bi)	ug/L	<1.0	N/A	<1.0	1.0	0.0010	A803006
Dissolved Boron (B)	ug/L	<50	N/A	<50	50	50	A803006
Dissolved Cadmium (Cd)	ug/L	<0.010	N/A	<0.010	0.010	0.0020	A803006
Dissolved Chromium (Cr)	ug/L	<1.0	N/A	<1.0	1.0	0.020	A803006
Dissolved Cobalt (Co)	ug/L	<0.20	N/A	<0.20	0.20	0.20	A803006
Dissolved Copper (Cu)	ug/L	<0.20	N/A	<0.20	0.20	0.010	A803006
Dissolved Iron (Fe)	ug/L	<5.0	N/A	<5.0	5.0	0.040	A803006
Dissolved Lead (Pb)	ug/L	<0.20	N/A	<0.20	0.20	0.0010	A803006
Dissolved Lithium (Li)	ug/L	<2.0	N/A	<2.0	2.0	2.0	A803006
Dissolved Manganese (Mn)	ug/L	<1.0	N/A	<1.0	1.0	0.030	A803006
Dissolved Molybdenum (Mo)	ug/L	<1.0	N/A	<1.0	1.0	0.0020	A803006
Dissolved Nickel (Ni)	ug/L	<1.0	N/A	<1.0	1.0	0.010	A803006
Dissolved Phosphorus (P)	ug/L	11	N/A	<10	10	1.0	A803006
Dissolved Selenium (Se)	ug/L	<0.10	N/A	<0.10	0.10	0.0060	A803006
Dissolved Silicon (Si)	ug/L	2550	N/A	2910	100	0.30	A803006
Dissolved Silver (Ag)	ug/L	<0.020	N/A	<0.020	0.020	0.0020	A803006
Dissolved Strontium (Sr)	ug/L	31.9	N/A	24.7	1.0	0.0020	A803006
Dissolved Thallium (Tl)	ug/L	<0.010	N/A	<0.010	0.010	0.010	A803006
Dissolved Tin (Sn)	ug/L	<5.0	N/A	<5.0	5.0	0.0050	A803006
Dissolved Titanium (Ti)	ug/L	<5.0	N/A	<5.0	5.0	0.30	A803006

RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate
 N/A = Not Applicable



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

CSR DISSOLVED METALS IN WATER WITH CV HG (WATER)

Bureau Veritas ID		BHE574	BHE574	BHE575			
Sampling Date		2022/11/15 10:08	2022/11/15 10:08	2022/11/15 10:50			
COC Number		678913-01-01	678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-01	WG-11218464-151122 -CXW-01 Lab-Dup	WG-11218464-151122 -CXW-02	RDL	MDL	QC Batch
Dissolved Uranium (U)	ug/L	0.14	N/A	<0.10	0.10	0.0010	A803006
Dissolved Vanadium (V)	ug/L	<5.0	N/A	<5.0	5.0	0.020	A803006
Dissolved Zinc (Zn)	ug/L	<5.0	N/A	<5.0	5.0	0.050	A803006
Dissolved Zirconium (Zr)	ug/L	<0.10	N/A	<0.10	0.10	0.0080	A803006
Dissolved Calcium (Ca)	mg/L	18.9	N/A	14.8	0.050	0.0010	A800596
Dissolved Magnesium (Mg)	mg/L	2.22	N/A	1.88	0.050	0.00050	A800596
Dissolved Potassium (K)	mg/L	0.119	N/A	0.108	0.050	0.0020	A800596
Dissolved Sodium (Na)	mg/L	1.47	N/A	1.47	0.050	0.0010	A800596
Dissolved Sulphur (S)	mg/L	<3.0	N/A	<3.0	3.0	1.0	A800596

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

CSR DISSOLVED METALS IN WATER WITH CV HG (WATER)

Bureau Veritas ID		BHE576	BHE577	BHE578			
Sampling Date		2022/11/15 12:00	2022/11/15 12:02	2022/11/15 13:25			
COC Number		678913-01-01	678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-03	WG-11218464-151122 -CXW-04	WG-11218464-151122 -CXW-05	RDL	MDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO3)	mg/L	16.1	34.5	42.9	0.50	0.50	A800530
Elements							
Dissolved Mercury (Hg)	ug/L	<0.0019	<0.0019	<0.0019	0.0019	0.0019	A807592
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	ug/L	31.9	5.2	<3.0	3.0	0.030	A803006
Dissolved Antimony (Sb)	ug/L	<0.50	<0.50	<0.50	0.50	0.0020	A803006
Dissolved Arsenic (As)	ug/L	<0.10	0.42	<0.10	0.10	0.010	A803006
Dissolved Barium (Ba)	ug/L	<1.0	<1.0	1.2	1.0	0.0020	A803006
Dissolved Beryllium (Be)	ug/L	<0.10	<0.10	<0.10	0.10	0.0030	A803006
Dissolved Bismuth (Bi)	ug/L	<1.0	<1.0	<1.0	1.0	0.0010	A803006
Dissolved Boron (B)	ug/L	<50	<50	<50	50	50	A803006
Dissolved Cadmium (Cd)	ug/L	<0.010	<0.010	<0.010	0.010	0.0020	A803006
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	1.0	0.020	A803006
Dissolved Cobalt (Co)	ug/L	0.28	<0.20	<0.20	0.20	0.20	A803006
Dissolved Copper (Cu)	ug/L	0.66	<0.20	0.85	0.20	0.010	A803006
Dissolved Iron (Fe)	ug/L	29.3	<5.0	<5.0	5.0	0.040	A803006
Dissolved Lead (Pb)	ug/L	<0.20	<0.20	<0.20	0.20	0.0010	A803006
Dissolved Lithium (Li)	ug/L	<2.0	<2.0	<2.0	2.0	2.0	A803006
Dissolved Manganese (Mn)	ug/L	23.9	<1.0	<1.0	1.0	0.030	A803006
Dissolved Molybdenum (Mo)	ug/L	<1.0	<1.0	<1.0	1.0	0.0020	A803006
Dissolved Nickel (Ni)	ug/L	<1.0	<1.0	<1.0	1.0	0.010	A803006
Dissolved Phosphorus (P)	ug/L	<10	<10	<10	10	1.0	A803006
Dissolved Selenium (Se)	ug/L	<0.10	<0.10	<0.10	0.10	0.0060	A803006
Dissolved Silicon (Si)	ug/L	3260	3370	3220	100	0.30	A803006
Dissolved Silver (Ag)	ug/L	<0.020	<0.020	<0.020	0.020	0.0020	A803006
Dissolved Strontium (Sr)	ug/L	8.6	17.8	25.3	1.0	0.0020	A803006
Dissolved Thallium (Tl)	ug/L	<0.010	<0.010	<0.010	0.010	0.010	A803006
Dissolved Tin (Sn)	ug/L	<5.0	<5.0	<5.0	5.0	0.0050	A803006
Dissolved Titanium (Ti)	ug/L	<5.0	<5.0	<5.0	5.0	0.30	A803006
Dissolved Uranium (U)	ug/L	<0.10	<0.10	<0.10	0.10	0.0010	A803006
Dissolved Vanadium (V)	ug/L	<5.0	<5.0	<5.0	5.0	0.020	A803006
RDL = Reportable Detection Limit							



CSR DISSOLVED METALS IN WATER WITH CV HG (WATER)

Bureau Veritas ID		BHE576	BHE577	BHE578			
Sampling Date		2022/11/15 12:00	2022/11/15 12:02	2022/11/15 13:25			
COC Number		678913-01-01	678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-03	WG-11218464-151122 -CXW-04	WG-11218464-151122 -CXW-05	RDL	MDL	QC Batch
Dissolved Zinc (Zn)	ug/L	<5.0	<5.0	<5.0	5.0	0.050	A803006
Dissolved Zirconium (Zr)	ug/L	<0.10	<0.10	<0.10	0.10	0.0080	A803006
Dissolved Calcium (Ca)	mg/L	4.87	11.3	14.0	0.050	0.0010	A800596
Dissolved Magnesium (Mg)	mg/L	0.948	1.53	1.94	0.050	0.00050	A800596
Dissolved Potassium (K)	mg/L	0.073	0.090	0.115	0.050	0.0020	A800596
Dissolved Sodium (Na)	mg/L	1.31	1.19	1.56	0.050	0.0010	A800596
Dissolved Sulphur (S)	mg/L	<3.0	<3.0	<3.0	3.0	1.0	A800596
RDL = Reportable Detection Limit							



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

CSR DISSOLVED METALS IN WATER WITH CV HG (WATER)

Bureau Veritas ID		BHE579	BHE579			
Sampling Date		2022/11/15 15:10	2022/11/15 15:10			
COC Number		678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-07	WG-11218464-151122 -CXW-07 Lab-Dup	RDL	MDL	QC Batch

Calculated Parameters

Dissolved Hardness (CaCO3)	mg/L	<0.50	N/A	0.50	0.50	A846308
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Elements

Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	0.0019	0.0019	A847193
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Dissolved Metals by ICPMS

Dissolved Aluminum (Al)	ug/L	<3.0	<3.0	3.0	0.030	A846414
Dissolved Antimony (Sb)	ug/L	<0.50	<0.50	0.50	0.0020	A846414
Dissolved Arsenic (As)	ug/L	<0.10	<0.10	0.10	0.010	A846414
Dissolved Barium (Ba)	ug/L	<1.0	<1.0	1.0	0.0020	A846414
Dissolved Beryllium (Be)	ug/L	<0.10	<0.10	0.10	0.0030	A846414
Dissolved Bismuth (Bi)	ug/L	<1.0	<1.0	1.0	0.0010	A846414
Dissolved Boron (B)	ug/L	<50	<50	50	50	A846414
Dissolved Cadmium (Cd)	ug/L	<0.010	<0.010	0.010	0.0020	A846414
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	1.0	0.020	A846414
Dissolved Cobalt (Co)	ug/L	<0.20	<0.20	0.20	0.20	A846414
Dissolved Copper (Cu)	ug/L	<0.20	<0.20	0.20	0.010	A846414
Dissolved Iron (Fe)	ug/L	<5.0	<5.0	5.0	0.040	A846414
Dissolved Lead (Pb)	ug/L	<0.20	<0.20	0.20	0.0010	A846414
Dissolved Lithium (Li)	ug/L	<2.0	<2.0	2.0	2.0	A846414
Dissolved Manganese (Mn)	ug/L	<1.0	<1.0	1.0	0.030	A846414
Dissolved Molybdenum (Mo)	ug/L	<1.0	<1.0	1.0	0.0020	A846414
Dissolved Nickel (Ni)	ug/L	<1.0	<1.0	1.0	0.010	A846414
Dissolved Phosphorus (P)	ug/L	<10	<10	10	1.0	A846414
Dissolved Selenium (Se)	ug/L	<0.10	<0.10	0.10	0.0060	A846414
Dissolved Silicon (Si)	ug/L	<100	<100	100	0.30	A846414
Dissolved Silver (Ag)	ug/L	<0.020	<0.020	0.020	0.0020	A846414
Dissolved Strontium (Sr)	ug/L	<1.0	<1.0	1.0	0.0020	A846414
Dissolved Thallium (Tl)	ug/L	<0.010	<0.010	0.010	0.010	A846414
Dissolved Tin (Sn)	ug/L	<5.0	<5.0	5.0	0.0050	A846414
Dissolved Titanium (Ti)	ug/L	<5.0	<5.0	5.0	0.30	A846414

RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate
 N/A = Not Applicable



CSR DISSOLVED METALS IN WATER WITH CV HG (WATER)

Bureau Veritas ID		BHE579	BHE579			
Sampling Date		2022/11/15 15:10	2022/11/15 15:10			
COC Number		678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-07	WG-11218464-151122 -CXW-07 Lab-Dup	RDL	MDL	QC Batch
Dissolved Uranium (U)	ug/L	<0.10	<0.10	0.10	0.0010	A846414
Dissolved Vanadium (V)	ug/L	<5.0	<5.0	5.0	0.020	A846414
Dissolved Zinc (Zn)	ug/L	<5.0	<5.0	5.0	0.050	A846414
Dissolved Zirconium (Zr)	ug/L	<0.10	<0.10	0.10	0.0080	A846414
Dissolved Calcium (Ca)	mg/L	<0.050	N/A	0.050	0.0010	A846309
Dissolved Magnesium (Mg)	mg/L	<0.050	N/A	0.050	0.00050	A846309
Dissolved Potassium (K)	mg/L	<0.050	N/A	0.050	0.0020	A846309
Dissolved Sodium (Na)	mg/L	<0.050	N/A	0.050	0.0010	A846309
Dissolved Sulphur (S)	mg/L	<3.0	N/A	3.0	1.0	A846309
RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate N/A = Not Applicable						



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

CSR TOTAL METALS IN WATER WITH CV HG (WATER)

Bureau Veritas ID		BHE574	BHE575	BHE576			
Sampling Date		2022/11/15 10:08	2022/11/15 10:50	2022/11/15 12:00			
COC Number		678913-01-01	678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-01	WG-11218464-151122 -CXW-02	WG-11218464-151122 -CXW-03	RDL	MDL	QC Batch
Elements							
Total Mercury (Hg)	ug/L	<0.0019	<0.0019	<0.0019	0.0019	0.0019	A807578
Total Metals by ICPMS							
Total Aluminum (Al)	ug/L	13.6	15.4	73.9	3.0	0.030	A805606
Total Antimony (Sb)	ug/L	<0.50	<0.50	<0.50	0.50	0.0020	A805606
Total Arsenic (As)	ug/L	0.31	0.31	<0.10	0.10	0.010	A805606
Total Barium (Ba)	ug/L	<1.0	<1.0	<1.0	1.0	0.0020	A805606
Total Beryllium (Be)	ug/L	<0.10	<0.10	<0.10	0.10	0.0030	A805606
Total Bismuth (Bi)	ug/L	<1.0	<1.0	<1.0	1.0	0.0010	A805606
Total Boron (B)	ug/L	<50	<50	<50	50	50	A805606
Total Cadmium (Cd)	ug/L	<0.010	<0.010	<0.010	0.010	0.0020	A805606
Total Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	1.0	0.020	A805606
Total Cobalt (Co)	ug/L	<0.20	<0.20	0.30	0.20	0.20	A805606
Total Copper (Cu)	ug/L	<0.50	<0.50	0.81	0.50	0.030	A805606
Total Iron (Fe)	ug/L	10	19	145	10	0.70	A805606
Total Lead (Pb)	ug/L	<0.20	<0.20	<0.20	0.20	0.0010	A805606
Total Lithium (Li)	ug/L	<2.0	<2.0	<2.0	2.0	2.0	A805606
Total Manganese (Mn)	ug/L	<1.0	<1.0	26.0	1.0	0.030	A805606
Total Molybdenum (Mo)	ug/L	<1.0	<1.0	<1.0	1.0	0.0020	A805606
Total Nickel (Ni)	ug/L	<1.0	<1.0	<1.0	1.0	0.010	A805606
Total Phosphorus (P)	ug/L	15	14	10	10	1.0	A805606
Total Selenium (Se)	ug/L	<0.10	<0.10	<0.10	0.10	0.0060	A805606
Total Silicon (Si)	ug/L	2960	3430	3710	100	0.30	A805606
Total Silver (Ag)	ug/L	<0.020	<0.020	<0.020	0.020	0.0020	A805606
Total Strontium (Sr)	ug/L	31.6	25.6	8.8	1.0	0.0020	A805606
Total Thallium (Tl)	ug/L	<0.010	<0.010	<0.010	0.010	0.010	A805606
Total Tin (Sn)	ug/L	<5.0	<5.0	<5.0	5.0	0.0050	A805606
Total Titanium (Ti)	ug/L	<5.0	<5.0	<5.0	5.0	0.30	A805606
Total Uranium (U)	ug/L	0.15	<0.10	<0.10	0.10	0.0010	A805606
Total Vanadium (V)	ug/L	<5.0	<5.0	<5.0	5.0	0.020	A805606
Total Zinc (Zn)	ug/L	<5.0	<5.0	<5.0	5.0	0.050	A805606
Total Zirconium (Zr)	ug/L	<0.10	<0.10	<0.10	0.10	0.0080	A805606
RDL = Reportable Detection Limit							



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

CSR TOTAL METALS IN WATER WITH CV HG (WATER)

Bureau Veritas ID		BHE574	BHE575	BHE576			
Sampling Date		2022/11/15 10:08	2022/11/15 10:50	2022/11/15 12:00			
COC Number		678913-01-01	678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-01	WG-11218464-151122 -CXW-02	WG-11218464-151122 -CXW-03	RDL	MDL	QC Batch
Total Calcium (Ca)	mg/L	19.6	15.3	4.83	0.050	0.0010	A800498
Total Magnesium (Mg)	mg/L	2.26	2.01	1.03	0.050	0.00050	A800498
Total Potassium (K)	mg/L	0.123	0.109	0.080	0.050	0.0020	A800498
Total Sodium (Na)	mg/L	1.57	1.44	1.33	0.050	0.0010	A800498
Total Sulphur (S)	mg/L	<3.0	<3.0	<3.0	3.0	1.0	A800498
RDL = Reportable Detection Limit							



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

CSR TOTAL METALS IN WATER WITH CV HG (WATER)

Bureau Veritas ID		BHE577	BHE578		BHE579			
Sampling Date		2022/11/15 12:02	2022/11/15 13:25		2022/11/15 15:10			
COC Number		678913-01-01	678913-01-01		678913-01-01			
	UNITS	WG-11218464-151122 -CXW-04	WG-11218464-151122 -CXW-05	QC Batch	WG-11218464-151122 -CXW-07	RDL	MDL	QC Batch

Elements								
Total Mercury (Hg)	ug/L	<0.0019	<0.0019	A807578	<0.0019	0.0019	0.0019	A847195
Total Metals by ICPMS								
Total Aluminum (Al)	ug/L	8.6	<3.0	A805606	<3.0	3.0	0.030	A846078
Total Antimony (Sb)	ug/L	<0.50	<0.50	A805606	<0.50	0.50	0.0020	A846078
Total Arsenic (As)	ug/L	0.46	<0.10	A805606	<0.10	0.10	0.010	A846078
Total Barium (Ba)	ug/L	<1.0	<1.0	A805606	<1.0	1.0	0.0020	A846078
Total Beryllium (Be)	ug/L	<0.10	<0.10	A805606	<0.10	0.10	0.0030	A846078
Total Bismuth (Bi)	ug/L	<1.0	<1.0	A805606	<1.0	1.0	0.0010	A846078
Total Boron (B)	ug/L	<50	<50	A805606	<50	50	50	A846078
Total Cadmium (Cd)	ug/L	<0.010	<0.010	A805606	<0.010	0.010	0.0020	A846078
Total Chromium (Cr)	ug/L	<1.0	<1.0	A805606	<1.0	1.0	0.020	A846078
Total Cobalt (Co)	ug/L	<0.20	<0.20	A805606	<0.20	0.20	0.20	A846078
Total Copper (Cu)	ug/L	<0.50	1.62	A805606	<0.50	0.50	0.030	A846078
Total Iron (Fe)	ug/L	<10	<10	A805606	<10	10	0.70	A846078
Total Lead (Pb)	ug/L	<0.20	<0.20	A805606	<0.20	0.20	0.0010	A846078
Total Lithium (Li)	ug/L	<2.0	<2.0	A805606	<2.0	2.0	2.0	A846078
Total Manganese (Mn)	ug/L	2.4	<1.0	A805606	<1.0	1.0	0.030	A846078
Total Molybdenum (Mo)	ug/L	<1.0	<1.0	A805606	<1.0	1.0	0.0020	A846078
Total Nickel (Ni)	ug/L	<1.0	<1.0	A805606	<1.0	1.0	0.010	A846078
Total Phosphorus (P)	ug/L	11	11	A805606	<10	10	1.0	A846078
Total Selenium (Se)	ug/L	<0.10	<0.10	A805606	<0.10	0.10	0.0060	A846078
Total Silicon (Si)	ug/L	3660	3710	A805606	<100	100	0.30	A846078
Total Silver (Ag)	ug/L	<0.020	<0.020	A805606	<0.020	0.020	0.0020	A846078
Total Strontium (Sr)	ug/L	17.8	24.5	A805606	<1.0	1.0	0.0020	A846078
Total Thallium (Tl)	ug/L	<0.010	<0.010	A805606	<0.010	0.010	0.010	A846078
Total Tin (Sn)	ug/L	<5.0	<5.0	A805606	<5.0	5.0	0.0050	A846078
Total Titanium (Ti)	ug/L	<5.0	<5.0	A805606	<5.0	5.0	0.30	A846078
Total Uranium (U)	ug/L	<0.10	<0.10	A805606	<0.10	0.10	0.0010	A846078
Total Vanadium (V)	ug/L	<5.0	<5.0	A805606	<5.0	5.0	0.020	A846078
Total Zinc (Zn)	ug/L	<5.0	6.2	A805606	<5.0	5.0	0.050	A846078
Total Zirconium (Zr)	ug/L	<0.10	<0.10	A805606	<0.10	0.10	0.0080	A846078

RDL = Reportable Detection Limit



BUREAU
VERITAS

Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

CSR TOTAL METALS IN WATER WITH CV HG (WATER)

Bureau Veritas ID		BHE577	BHE578		BHE579			
Sampling Date		2022/11/15 12:02	2022/11/15 13:25		2022/11/15 15:10			
COC Number		678913-01-01	678913-01-01		678913-01-01			
	UNITS	WG-11218464-151122 -CXW-04	WG-11218464-151122 -CXW-05	QC Batch	WG-11218464-151122 -CXW-07	RDL	MDL	QC Batch
Total Calcium (Ca)	mg/L	11.2	13.9	A800498	<0.050	0.050	0.0010	A846204
Total Magnesium (Mg)	mg/L	1.63	2.06	A800498	<0.050	0.050	0.00050	A846204
Total Potassium (K)	mg/L	0.093	0.107	A800498	<0.050	0.050	0.0020	A846204
Total Sodium (Na)	mg/L	1.18	1.34	A800498	<0.050	0.050	0.0010	A846204
Total Sulphur (S)	mg/L	<3.0	<3.0	A800498	<3.0	3.0	1.0	A846204
RDL = Reportable Detection Limit								



BUREAU
VERITAS

Bureau Veritas Job #: C290929

Report Date: 2023/01/20

GHD Limited

Client Project #: 11218464

Site Location: VILLAGE OF TAHSIS

Your P.O. #: 735-003380

Sampler Initials: CXW

CSR PAH IN WATER BY GC-MS (WATER)

Bureau Veritas ID		BHE574	BHE575	BHE576			
Sampling Date		2022/11/15 10:08	2022/11/15 10:50	2022/11/15 12:00			
COC Number		678913-01-01	678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-01	WG-11218464-151122 -CXW-02	WG-11218464-151122 -CXW-03	RDL	MDL	QC Batch
Calculated Parameters							
Low Molecular Weight PAH's	ug/L	<0.10	<0.10	<0.10	0.10	0.010	A800435
High Molecular Weight PAH's	ug/L	<0.050	<0.050	<0.050	0.050	0.020	A800435
Total PAH	ug/L	<0.10	<0.10	<0.10	0.10	0.010	A800435
Polycyclic Aromatics							
Quinoline	ug/L	<0.020	<0.020	<0.020	0.020	0.020	A804386
Naphthalene	ug/L	<0.10	<0.10	<0.10	0.10	0.050	A804386
1-Methylnaphthalene	ug/L	<0.050	<0.050	<0.050	0.050	0.050	A804386
2-Methylnaphthalene	ug/L	<0.10	<0.10	<0.10	0.10	0.050	A804386
Acenaphthylene	ug/L	<0.050	<0.050	<0.050	0.050	0.050	A804386
Acenaphthene	ug/L	<0.050	<0.050	<0.050	0.050	0.050	A804386
Fluorene	ug/L	<0.050	<0.050	<0.050	0.050	0.050	A804386
Phenanthrene	ug/L	<0.050	<0.050	<0.050	0.050	0.050	A804386
Anthracene	ug/L	<0.010	<0.010	<0.010	0.010	0.010	A804386
Acridine	ug/L	<0.050	<0.050	<0.050	0.050	0.050	A804386
Fluoranthene	ug/L	<0.020	<0.020	<0.020	0.020	0.020	A804386
Pyrene	ug/L	<0.020	<0.020	<0.020	0.020	0.020	A804386
Benzo(a)anthracene	ug/L	<0.010	<0.010	<0.010	0.010	0.010	A804386
Chrysene	ug/L	<0.020	<0.020	<0.020	0.020	0.020	A804386
Benzo(b&j)fluoranthene	ug/L	<0.030	<0.030	<0.030	0.030	0.030	A804386
Benzo(k)fluoranthene	ug/L	<0.050	<0.050	<0.050	0.050	0.050	A804386
Benzo(a)pyrene	ug/L	<0.0050	<0.0050	<0.0050	0.0050	0.0050	A804386
Indeno(1,2,3-cd)pyrene	ug/L	<0.050	<0.050	<0.050	0.050	0.050	A804386
Dibenz(a,h)anthracene	ug/L	<0.0030	<0.0030	<0.0030	0.0030	0.0030	A804386
Benzo(g,h,i)perylene	ug/L	<0.050	<0.050	<0.050	0.050	0.050	A804386
Surrogate Recovery (%)							
D10-ANTHRACENE (sur.)	%	94	98	93	N/A	N/A	A804386
D8-ACENAPHTHYLENE (sur.)	%	92	97	95	N/A	N/A	A804386
D8-NAPHTHALENE (sur.)	%	93	97	94	N/A	N/A	A804386
TERPHENYL-D14 (sur.)	%	81	84	83	N/A	N/A	A804386
RDL = Reportable Detection Limit N/A = Not Applicable							



BUREAU
VERITAS

Bureau Veritas Job #: C290929

Report Date: 2023/01/20

GHD Limited

Client Project #: 11218464

Site Location: VILLAGE OF TAHSIS

Your P.O. #: 735-003380

Sampler Initials: CXW

CSR PAH IN WATER BY GC-MS (WATER)

Bureau Veritas ID		BHE577	BHE578			
Sampling Date		2022/11/15 12:02	2022/11/15 13:25			
COC Number		678913-01-01	678913-01-01			
	UNITS	WG-11218464-151122 -CXW-04	WG-11218464-151122 -CXW-05	RDL	MDL	QC Batch
Calculated Parameters						
Low Molecular Weight PAH's	ug/L	<0.10	<0.10	0.10	0.010	A800435
High Molecular Weight PAH's	ug/L	<0.050	<0.050	0.050	0.020	A800435
Total PAH	ug/L	<0.10	<0.10	0.10	0.010	A800435
Polycyclic Aromatics						
Quinoline	ug/L	<0.020	<0.020	0.020	0.020	A804386
Naphthalene	ug/L	<0.10	<0.10	0.10	0.050	A804386
1-Methylnaphthalene	ug/L	<0.050	<0.050	0.050	0.050	A804386
2-Methylnaphthalene	ug/L	<0.10	<0.10	0.10	0.050	A804386
Acenaphthylene	ug/L	<0.050	<0.050	0.050	0.050	A804386
Acenaphthene	ug/L	<0.050	<0.050	0.050	0.050	A804386
Fluorene	ug/L	<0.050	<0.050	0.050	0.050	A804386
Phenanthrene	ug/L	<0.050	<0.050	0.050	0.050	A804386
Anthracene	ug/L	<0.010	<0.010	0.010	0.010	A804386
Acridine	ug/L	<0.050	<0.050	0.050	0.050	A804386
Fluoranthene	ug/L	<0.020	<0.020	0.020	0.020	A804386
Pyrene	ug/L	<0.020	<0.020	0.020	0.020	A804386
Benzo(a)anthracene	ug/L	<0.010	<0.010	0.010	0.010	A804386
Chrysene	ug/L	<0.020	<0.020	0.020	0.020	A804386
Benzo(b&j)fluoranthene	ug/L	<0.030	<0.030	0.030	0.030	A804386
Benzo(k)fluoranthene	ug/L	<0.050	<0.050	0.050	0.050	A804386
Benzo(a)pyrene	ug/L	<0.0050	<0.0050	0.0050	0.0050	A804386
Indeno(1,2,3-cd)pyrene	ug/L	<0.050	<0.050	0.050	0.050	A804386
Dibenz(a,h)anthracene	ug/L	<0.0030	<0.0030	0.0030	0.0030	A804386
Benzo(g,h,i)perylene	ug/L	<0.050	<0.050	0.050	0.050	A804386
Surrogate Recovery (%)						
D10-ANTHRACENE (sur.)	%	94	94	N/A	N/A	A804386
D8-ACENAPHTHYLENE (sur.)	%	95	92	N/A	N/A	A804386
D8-NAPHTHALENE (sur.)	%	96	93	N/A	N/A	A804386
TERPHENYL-D14 (sur.)	%	85	81	N/A	N/A	A804386
RDL = Reportable Detection Limit N/A = Not Applicable						



GENERAL COMMENTS

Version #9: Report reissued to update the general comments based on modifications made to final report parameters reported as per client request on 2023/01/19.

Version #7, 8: Report reissued to amend client sample ID on BHE579 from WG-11218464-151122-CXW-06 to WG-11218464-151122-CXW-07 and BHE580 from WG-11218464-151122-CXW-07 to WG-11218464-151122-CXW-06 as per the original Chain of Custody. All analytical has been removed from samples BHE579 and BHE580 as per client request on 20230110.

Version #6: Report reissued with updated notes 20221223

Version #5: Report reissued with missing NO2/NO3 data on sample CXW-06 20221222

Version #4: Report reissued to include Dissolved Hardness as per client request received 20221221

Version #3: Report reissued to exclude results for Total coliform and Ecoli as per client request received 20221215

Sample BHE577 [WG-11218464-151122-CXW-04] : OC Pesticides, OP Pesticides, PA Herbicides and Triazine Herbicides Analyses: Sample received at the analyzing laboratory (BV Mississauga Environmental) at a temperature above 10 C.

Sample BHE578 [WG-11218464-151122-CXW-05] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

OC Pesticides, OP Pesticides, PA Herbicides and Triazine Herbicides Analyses: Sample received at the analyzing laboratory (BV Mississauga Environmental) at a temperature above 10 C.

Sample BHE579 [WG-11218464-151122-CXW-07] : Sample was analyzed past method specified hold time for Nitrate + Nitrite (N). Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Nitrite (N) by CFA. Sample was analyzed past method specified hold time for Mercury (Dissolved) by CV. Sample was analyzed past method specified hold time for Mercury (Total) by CV.

Sample BHE580 [WG-11218464-151122-CXW-06] : Sample was analyzed past method specified hold time for Total Dissolved Solids (Filt. Residue). Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER) Comments

Sample BHE574 [WG-11218464-151122-CXW-01] Polychlorinated Biphenyls in Water: Detection limit raised based on sample volume used for analysis.

Sample BHE575 [WG-11218464-151122-CXW-02] Polychlorinated Biphenyls in Water: Detection limit raised based on sample volume used for analysis.

Sample BHE576 [WG-11218464-151122-CXW-03] Polychlorinated Biphenyls in Water: Detection limit raised based on sample volume used for analysis.

Sample BHE577 [WG-11218464-151122-CXW-04] Polychlorinated Biphenyls in Water: Detection limit raised based on sample volume used for analysis.

Sample BHE578 [WG-11218464-151122-CXW-05] Polychlorinated Biphenyls in Water: Detection limit raised based on sample volume used for analysis.

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C290929

Report Date: 2023/01/20

QUALITY ASSURANCE REPORT

GHD Limited

Client Project #: 11218464

Site Location: VILLAGE OF TAHSIS

Your P.O. #: 735-003380

Sampler Initials: CXW

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A803998	NONACHLOROBIPHENYL (sur.)	2022/11/21			100	50 - 130	103	%		
A804386	D10-ANTHRACENE (sur.)	2022/11/21			97	50 - 140	93	%		
A804386	D8-ACENAPHTHYLENE (sur.)	2022/11/21			96	50 - 140	94	%		
A804386	D8-NAPHTHALENE (sur.)	2022/11/21			93	50 - 140	93	%		
A804386	TERPHENYL-D14 (sur.)	2022/11/21			86	50 - 140	81	%		
A806024	HEPTADECANOIC ACID (sur.)	2022/11/23			84	50 - 130	98	%		
A806024	O-METHYLPODOCARPIC ACID (sur.)	2022/11/23			111	50 - 130	119	%		
A812189	2,4,5,6-Tetrachloro-m-xylene	2022/11/27	70	50 - 130	63	50 - 130	60	%		
A812189	Decachlorobiphenyl	2022/11/27	80	50 - 130	77	50 - 130	89	%		
A813431	2-Fluorobiphenyl	2022/11/22			62	30 - 130	63	%		
A813431	D14-Terphenyl (FS)	2022/11/22			91	30 - 130	89	%		
A813431	D5-NITROBENZENE (sur.)	2022/11/22			89	30 - 130	82	%		
A813432	2,4-Dichlorophenyl Acetic Acid	2022/11/28			113	50 - 130	112	%		
A813432	2,5-Dibromobenzoic Acid	2022/11/28			95	10 - 130	91	%		
A813432	4,4-Dibromobiphenyl	2022/11/28			94	10 - 130	94	%		
A813433	2-Fluorobiphenyl	2022/11/26			63	30 - 130	78	%		
A813433	D14-Terphenyl (FS)	2022/11/26			104	30 - 130	107	%		
A813433	D5-NITROBENZENE (sur.)	2022/11/26			81	30 - 130	80	%		
A802560	Turbidity	2022/11/18			99	80 - 120	<0.10	NTU	NC (1)	20
A802652	Chloride (Cl)	2022/11/18	105 (2)	80 - 120	98	80 - 120	<1.0	mg/L	19 (3)	20
A802652	Sulphate (SO4)	2022/11/18	96 (2)	80 - 120	99	80 - 120	<1.0	mg/L	0.041 (3)	20
A802655	Chloride (Cl)	2022/11/19			116	80 - 120	<1.0	mg/L		
A802655	Sulphate (SO4)	2022/11/19			112	80 - 120	<1.0	mg/L		
A802793	Nitrate plus Nitrite (N)	2022/11/18	107	80 - 120	106	80 - 120	<0.020	mg/L	0.99 (1)	25
A802805	Nitrite (N)	2022/11/18	107	80 - 120	105	80 - 120	<0.0050	mg/L	NC (1)	20
A802818	Total Ammonia (N)	2022/11/18	96 (4)	80 - 120	103	80 - 120	<0.015	mg/L	NC (5)	20
A802945	Total Ammonia (N)	2022/11/18	99 (6)	80 - 120	102	80 - 120	<0.015	mg/L	NC (7)	20
A803006	Dissolved Aluminum (Al)	2022/11/21	99	80 - 120	103	80 - 120	<3.0	ug/L	NC (1)	20
A803006	Dissolved Antimony (Sb)	2022/11/21	100	80 - 120	103	80 - 120	<0.50	ug/L	NC (1)	20
A803006	Dissolved Arsenic (As)	2022/11/21	99	80 - 120	100	80 - 120	<0.10	ug/L	NC (1)	20
A803006	Dissolved Barium (Ba)	2022/11/21	95	80 - 120	97	80 - 120	<1.0	ug/L	NC (1)	20



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QUALITY ASSURANCE REPORT(CONT'D)

GHD Limited

Client Project #: 11218464

Site Location: VILLAGE OF TAHSIS

Your P.O. #: 735-003380

Sampler Initials: CXW

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A803006	Dissolved Beryllium (Be)	2022/11/21	100	80 - 120	99	80 - 120	<0.10	ug/L	NC (1)	20
A803006	Dissolved Bismuth (Bi)	2022/11/21	93	80 - 120	98	80 - 120	<1.0	ug/L	NC (1)	20
A803006	Dissolved Boron (B)	2022/11/21	105	80 - 120	104	80 - 120	<50	ug/L	NC (1)	20
A803006	Dissolved Cadmium (Cd)	2022/11/21	98	80 - 120	100	80 - 120	<0.010	ug/L	NC (1)	20
A803006	Dissolved Chromium (Cr)	2022/11/21	99	80 - 120	101	80 - 120	<1.0	ug/L	NC (1)	20
A803006	Dissolved Cobalt (Co)	2022/11/21	94	80 - 120	96	80 - 120	<0.20	ug/L	NC (1)	20
A803006	Dissolved Copper (Cu)	2022/11/21	98	80 - 120	99	80 - 120	<0.20	ug/L	2.8 (8,1)	20
A803006	Dissolved Iron (Fe)	2022/11/21	NC	80 - 120	104	80 - 120	<5.0	ug/L	NC (1)	20
A803006	Dissolved Lead (Pb)	2022/11/21	96	80 - 120	99	80 - 120	<0.20	ug/L	NC (1)	20
A803006	Dissolved Lithium (Li)	2022/11/21	97	80 - 120	97	80 - 120	<2.0	ug/L	NC (1)	20
A803006	Dissolved Manganese (Mn)	2022/11/21	94	80 - 120	97	80 - 120	<1.0	ug/L	NC (1)	20
A803006	Dissolved Molybdenum (Mo)	2022/11/21	101	80 - 120	101	80 - 120	<1.0	ug/L	NC (1)	20
A803006	Dissolved Nickel (Ni)	2022/11/21	99	80 - 120	100	80 - 120	<1.0	ug/L	NC (1)	20
A803006	Dissolved Phosphorus (P)	2022/11/21	99	80 - 120	100	80 - 120	<10	ug/L	NC (1)	20
A803006	Dissolved Selenium (Se)	2022/11/21	105	80 - 120	104	80 - 120	<0.10	ug/L	NC (1)	20
A803006	Dissolved Silicon (Si)	2022/11/21	114	80 - 120	108	80 - 120	<100	ug/L	NC (1)	20
A803006	Dissolved Silver (Ag)	2022/11/21	98	80 - 120	99	80 - 120	<0.020	ug/L	NC (1)	20
A803006	Dissolved Strontium (Sr)	2022/11/21	94	80 - 120	97	80 - 120	<1.0	ug/L	NC (1)	20
A803006	Dissolved Thallium (Tl)	2022/11/21	97	80 - 120	98	80 - 120	<0.010	ug/L	NC (1)	20
A803006	Dissolved Tin (Sn)	2022/11/21	99	80 - 120	100	80 - 120	<5.0	ug/L	NC (1)	20
A803006	Dissolved Titanium (Ti)	2022/11/21	96	80 - 120	98	80 - 120	<5.0	ug/L	NC (1)	20
A803006	Dissolved Uranium (U)	2022/11/21	98	80 - 120	101	80 - 120	<0.10	ug/L	NC (1)	20
A803006	Dissolved Vanadium (V)	2022/11/21	99	80 - 120	99	80 - 120	<5.0	ug/L	NC (1)	20
A803006	Dissolved Zinc (Zn)	2022/11/21	101	80 - 120	103	80 - 120	<5.0	ug/L	NC (1)	20
A803006	Dissolved Zirconium (Zr)	2022/11/21	95	80 - 120	97	80 - 120	<0.10	ug/L	NC (1)	20
A803420	Turbidity	2022/11/19			103	80 - 120	<0.10	NTU	1.8 (1)	20
A803998	Aroclor 1016	2022/11/21					<0.050	ug/L		
A803998	Aroclor 1221	2022/11/21					<0.050	ug/L		
A803998	Aroclor 1232	2022/11/21					<0.050	ug/L		
A803998	Aroclor 1242	2022/11/21					<0.050	ug/L		
A803998	Aroclor 1248	2022/11/21					<0.050	ug/L		



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QUALITY ASSURANCE REPORT(CONT'D)

GHD Limited

Client Project #: 11218464

Site Location: VILLAGE OF TAHSIS

Your P.O. #: 735-003380

Sampler Initials: CXW

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A803998	Aroclor 1254	2022/11/21					<0.050	ug/L		
A803998	Aroclor 1260	2022/11/21			87	50 - 130	<0.050	ug/L		
A803998	Aroclor 1262	2022/11/21					<0.050	ug/L		
A803998	Aroclor 1268	2022/11/21					<0.050	ug/L		
A804386	1-Methylnaphthalene	2022/11/21			77	50 - 140	<0.050	ug/L		
A804386	2-Methylnaphthalene	2022/11/21			78	50 - 140	<0.10	ug/L		
A804386	Acenaphthene	2022/11/21			82	50 - 140	<0.050	ug/L		
A804386	Acenaphthylene	2022/11/21			79	50 - 140	<0.050	ug/L		
A804386	Acridine	2022/11/21			91	50 - 140	<0.050	ug/L		
A804386	Anthracene	2022/11/21			81	50 - 140	<0.010	ug/L		
A804386	Benzo(a)anthracene	2022/11/21			79	50 - 140	<0.010	ug/L		
A804386	Benzo(a)pyrene	2022/11/21			98	50 - 140	<0.0050	ug/L		
A804386	Benzo(b&j)fluoranthene	2022/11/21			82	50 - 140	<0.030	ug/L		
A804386	Benzo(g,h,i)perylene	2022/11/21			85	50 - 140	<0.050	ug/L		
A804386	Benzo(k)fluoranthene	2022/11/21			82	50 - 140	<0.050	ug/L		
A804386	Chrysene	2022/11/21			81	50 - 140	<0.020	ug/L		
A804386	Dibenz(a,h)anthracene	2022/11/21			88	50 - 140	<0.0030	ug/L		
A804386	Fluoranthene	2022/11/21			67	50 - 140	<0.020	ug/L		
A804386	Fluorene	2022/11/21			83	50 - 140	<0.050	ug/L		
A804386	Indeno(1,2,3-cd)pyrene	2022/11/21			86	50 - 140	<0.050	ug/L		
A804386	Naphthalene	2022/11/21			73	50 - 140	<0.10	ug/L		
A804386	Phenanthrene	2022/11/21			83	50 - 140	<0.050	ug/L		
A804386	Pyrene	2022/11/21			69	50 - 140	<0.020	ug/L		
A804386	Quinoline	2022/11/21			93	50 - 140	<0.020	ug/L		
A804620	Alkalinity (PP as CaCO3)	2022/11/19					<1.0	mg/L	NC (10)	20
A804620	Alkalinity (Total as CaCO3)	2022/11/19	113 (9)	80 - 120	95	80 - 120	<1.0	mg/L	1.0 (10)	20
A804620	Bicarbonate (HCO3)	2022/11/19					<1.0	mg/L	1.0 (10)	20
A804620	Carbonate (CO3)	2022/11/19					<1.0	mg/L	NC (10)	20
A804620	Hydroxide (OH)	2022/11/19					<1.0	mg/L	NC (10)	20
A804623	Conductivity	2022/11/19			101	80 - 120	<2.0	uS/cm		
A805606	Total Aluminum (Al)	2022/11/23	102	80 - 120	106	80 - 120	<3.0	ug/L	3.4 (1)	20



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QUALITY ASSURANCE REPORT(CONT'D)

GHD Limited

Client Project #: 11218464

Site Location: VILLAGE OF TAHSIS

Your P.O. #: 735-003380

Sampler Initials: CXW

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A805606	Total Antimony (Sb)	2022/11/23	104	80 - 120	106	80 - 120	<0.50	ug/L	NC (1)	20
A805606	Total Arsenic (As)	2022/11/23	110	80 - 120	105	80 - 120	<0.10	ug/L	0.80 (1)	20
A805606	Total Barium (Ba)	2022/11/23	106	80 - 120	103	80 - 120	<1.0	ug/L	0.17 (1)	20
A805606	Total Beryllium (Be)	2022/11/23	98	80 - 120	103	80 - 120	<0.10	ug/L	NC (1)	20
A805606	Total Bismuth (Bi)	2022/11/23	93	80 - 120	101	80 - 120	<1.0	ug/L	NC (1)	20
A805606	Total Boron (B)	2022/11/23	100	80 - 120	107	80 - 120	<50	ug/L	NC (1)	20
A805606	Total Cadmium (Cd)	2022/11/23	96	80 - 120	102	80 - 120	<0.010	ug/L	0.42 (1)	20
A805606	Total Chromium (Cr)	2022/11/23	93	80 - 120	97	80 - 120	<1.0	ug/L	NC (1)	20
A805606	Total Cobalt (Co)	2022/11/23	97	80 - 120	96	80 - 120	<0.20	ug/L	0.55 (1)	20
A805606	Total Copper (Cu)	2022/11/23	85	80 - 120	96	80 - 120	<0.50	ug/L	0 (1)	20
A805606	Total Iron (Fe)	2022/11/23	109	80 - 120	104	80 - 120	<10	ug/L	0.10 (1)	20
A805606	Total Lead (Pb)	2022/11/23	99	80 - 120	102	80 - 120	<0.20	ug/L	NC (1)	20
A805606	Total Lithium (Li)	2022/11/23	97	80 - 120	106	80 - 120	<2.0	ug/L	0.52 (1)	20
A805606	Total Manganese (Mn)	2022/11/23	NC	80 - 120	101	80 - 120	<1.0	ug/L	0.26 (1)	20
A805606	Total Molybdenum (Mo)	2022/11/23	112	80 - 120	105	80 - 120	<1.0	ug/L	NC (1)	20
A805606	Total Nickel (Ni)	2022/11/23	NC	80 - 120	99	80 - 120	<1.0	ug/L	0.43 (1)	20
A805606	Total Phosphorus (P)	2022/11/23	111	80 - 120	102	80 - 120	<10	ug/L	1.8 (1)	20
A805606	Total Selenium (Se)	2022/11/23	58 (11)	80 - 120	98	80 - 120	<0.10	ug/L	NC (1)	20
A805606	Total Silicon (Si)	2022/11/23	NC	80 - 120	105	80 - 120	<100	ug/L	0.25 (1)	20
A805606	Total Silver (Ag)	2022/11/23	96	80 - 120	100	80 - 120	<0.020	ug/L	NC (1)	20
A805606	Total Strontium (Sr)	2022/11/23	NC	80 - 120	101	80 - 120	<1.0	ug/L	0.13 (1)	20
A805606	Total Thallium (Tl)	2022/11/23	104	80 - 120	105	80 - 120	<0.010	ug/L	5.3 (1)	20
A805606	Total Tin (Sn)	2022/11/23	103	80 - 120	103	80 - 120	<5.0	ug/L	NC (1)	20
A805606	Total Titanium (Ti)	2022/11/23	101	80 - 120	102	80 - 120	<5.0	ug/L	NC (1)	20
A805606	Total Uranium (U)	2022/11/23	106	80 - 120	104	80 - 120	<0.10	ug/L	NC (1)	20
A805606	Total Vanadium (V)	2022/11/23	100	80 - 120	102	80 - 120	<5.0	ug/L	NC (1)	20
A805606	Total Zinc (Zn)	2022/11/23	NC	80 - 120	100	80 - 120	<5.0	ug/L	0.97 (1)	20
A805606	Total Zirconium (Zr)	2022/11/23	114	80 - 120	104	80 - 120	<0.10	ug/L	NC (1)	20
A805935	Dissolved Fluoride (F)	2022/11/22	102 (12)	80 - 120	102	80 - 120	<0.050	mg/L	NC (13)	20
A805940	Dissolved Fluoride (F)	2022/11/22	76	80 - 120	102	80 - 120	<0.050	mg/L	0 (1)	20
A806024	* Total of Fatty Acids Detected	2022/11/23					<0.072	mg/L		



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QUALITY ASSURANCE REPORT(CONT'D)

GHD Limited

Client Project #: 11218464

Site Location: VILLAGE OF TAHSIS

Your P.O. #: 735-003380

Sampler Initials: CXW

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A806024	* Total of Resin Acids Detected	2022/11/23					<0.060	mg/L		
A806024	12,14-dichlorodehydroabietic acid	2022/11/23			130	50 - 130	<0.0060	mg/L		
A806024	12-chlorodehydroabietic acid	2022/11/23			113	50 - 130	<0.0060	mg/L		
A806024	14-chlorodehydroabietic acid	2022/11/23			117	50 - 130	<0.0060	mg/L		
A806024	9,10-dichlorostearic acid (C18)	2022/11/23			91	50 - 130	<0.0060	mg/L		
A806024	Abietic acid	2022/11/23			112	50 - 130	<0.0060	mg/L		
A806024	Decanoic acid (C10)	2022/11/23			106	50 - 130	<0.0060	mg/L		
A806024	Dehydroabietic acid	2022/11/23			122	50 - 130	<0.0060	mg/L		
A806024	Docosanoic acid (C22)	2022/11/23			96	50 - 130	<0.0060	mg/L		
A806024	Dodecanoic acid (C12)	2022/11/23			102	50 - 130	<0.0060	mg/L		
A806024	Eicosanoic acid (C20)	2022/11/23			100	50 - 130	<0.0060	mg/L		
A806024	Hexadecanoic acid (C16)	2022/11/23			116	50 - 130	<0.0060	mg/L		
A806024	Isopimaric acid	2022/11/23			86	50 - 130	<0.0060	mg/L		
A806024	Linoleic acid (C18:2)	2022/11/23			95	50 - 130	<0.0060	mg/L		
A806024	Linolenic acid (C18:3)	2022/11/23			84	50 - 130	<0.0060	mg/L		
A806024	Neoabietic acid	2022/11/23			111	50 - 130	<0.0060	mg/L		
A806024	Octadecanoic acid (C18)	2022/11/23			116	50 - 130	<0.0060	mg/L		
A806024	Oleic acid (C18:1)	2022/11/23			114	50 - 130	<0.0060	mg/L		
A806024	Palustric acid	2022/11/23			113	50 - 130	<0.0060	mg/L		
A806024	Pimaric acid	2022/11/23			112	50 - 130	<0.0060	mg/L		
A806024	Sandaracopimaric acid	2022/11/23			126	50 - 130	<0.0060	mg/L		
A806024	Tetradecanoic acid (C14)	2022/11/23			104	50 - 130	<0.0060	mg/L		
A806024	Undecanoic acid (C11)	2022/11/23			106	50 - 130	<0.0060	mg/L		
A807578	Total Mercury (Hg)	2022/11/23	116	80 - 120	104	80 - 120	<0.0019	ug/L	NC (1)	20
A807592	Dissolved Mercury (Hg)	2022/11/23	116 (14)	80 - 120	102	80 - 120	<0.0019	ug/L	NC (15)	20
A812189	a-BHC	2022/11/27	97	30 - 130	101	30 - 130	<0.005	ug/L	6.8 (1)	40
A812189	a-Chlordane	2022/11/27	96	50 - 130	101	50 - 130	<0.005	ug/L	8.1 (1)	30
A812189	Aldrin	2022/11/27	84	50 - 130	85	50 - 130	<0.005	ug/L	8.5 (1)	30
A812189	b-BHC	2022/11/27	101	30 - 130	103	30 - 130	<0.005	ug/L	8.1 (1)	40
A812189	d-BHC	2022/11/27	94	30 - 130	95	30 - 130	<0.005	ug/L	7.2 (1)	40
A812189	Dieldrin	2022/11/27	111	50 - 130	111	50 - 130	<0.005	ug/L	11 (1)	30



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QUALITY ASSURANCE REPORT(CONT'D)

GHD Limited

Client Project #: 11218464

Site Location: VILLAGE OF TAHSIS

Your P.O. #: 735-003380

Sampler Initials: CXW

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A812189	Endosulfan I	2022/11/27	89	50 - 130	111	50 - 130	<0.005	ug/L	4.9 (1)	30
A812189	Endosulfan II	2022/11/27	100	50 - 130	101	50 - 130	<0.005	ug/L	12 (1)	30
A812189	Endosulfan Sulfate	2022/11/27	111	30 - 130	112	30 - 130	<0.005	ug/L	12 (1)	40
A812189	Endrin Aldehyde	2022/11/27	89	30 - 130	88	30 - 130	<0.005	ug/L	12 (1)	40
A812189	Endrin ketone	2022/11/27	113	30 - 130	117	30 - 130	<0.005	ug/L	8.4 (1)	40
A812189	Endrin	2022/11/27	121	50 - 130	114	50 - 130	<0.005	ug/L	9.9 (1)	30
A812189	g-Chlordane	2022/11/27	96	50 - 130	102	50 - 130	<0.005	ug/L	9.4 (1)	30
A812189	Heptachlor Epoxide	2022/11/27	100	50 - 130	106	50 - 130	<0.005	ug/L	8.0 (1)	30
A812189	Heptachlor	2022/11/27	114	50 - 130	112	50 - 130	<0.005	ug/L	5.3 (1)	30
A812189	Hexachlorobenzene	2022/11/27	90	50 - 130	85	50 - 130	<0.005	ug/L	11 (1)	30
A812189	Lindane	2022/11/27	99	50 - 130	100	50 - 130	<0.003	ug/L	9.7 (1)	30
A812189	Methoxychlor	2022/11/27	81	50 - 130	93	50 - 130	<0.01	ug/L	4.7 (1)	30
A812189	Mirex	2022/11/27	100	30 - 130	87	30 - 130	<0.005	ug/L	25 (1)	40
A812189	o,p'-DDD	2022/11/27	122	50 - 130	112	50 - 130	<0.005	ug/L	8.1 (1)	30
A812189	o,p'-DDE	2022/11/27	93	50 - 130	97	50 - 130	<0.005	ug/L	8.0 (1)	30
A812189	o,p'-DDT	2022/11/27	130	50 - 130	112	50 - 130	<0.005	ug/L	14 (1)	30
A812189	Octachlorostyrene	2022/11/27	92	30 - 130	97	30 - 130	<0.005	ug/L	7.0 (1)	40
A812189	Oxychlordane	2022/11/27	93	30 - 130	99	30 - 130	<0.005	ug/L	7.1 (1)	30
A812189	p,p'-DDD	2022/11/27	125	50 - 130	119	50 - 130	<0.005	ug/L	4.7 (1)	30
A812189	p,p'-DDE	2022/11/27	97	50 - 130	108	50 - 130	<0.005	ug/L	5.9 (1)	30
A812189	p,p'-DDT	2022/11/27	119	50 - 130	109	50 - 130	<0.005	ug/L	15 (1)	30
A812189	Toxaphene	2022/11/27					<0.2	ug/L		
A813431	Aldicarb	2022/11/22			101	30 - 130	<5.0	ug/L	0.96 (1)	40
A813431	Bendiocarb	2022/11/22			111	30 - 130	<2.0	ug/L	1.0 (1)	40
A813431	Carbaryl	2022/11/22			113	30 - 130	<5.0	ug/L	0.78 (1)	40
A813431	Carbofuran	2022/11/22			111	30 - 130	<5.0	ug/L	0.37 (1)	40
A813431	Chlorpyrifos (Dursban)	2022/11/22			103	30 - 130	<2.0	ug/L	0.13 (1)	40
A813431	Demeton-S	2022/11/22			99	30 - 130	<2.0	ug/L	0.75 (1)	40
A813431	Diazinon	2022/11/22			108	30 - 130	<2.0	ug/L	1.1 (1)	40
A813431	Dichlorvos	2022/11/22			95	30 - 130	<2.0	ug/L	0.56 (1)	40
A813431	Dimethoate	2022/11/22			94	30 - 130	<2.0	ug/L	0.41 (1)	40



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QUALITY ASSURANCE REPORT(CONT'D)

GHD Limited

Client Project #: 11218464

Site Location: VILLAGE OF TAHSIS

Your P.O. #: 735-003380

Sampler Initials: CXW

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A813431	Ethion	2022/11/22			100	30 - 130	<1.0	ug/L	0.80 (1)	40
A813431	Fenchlorphos (Ronnel)	2022/11/22			103	30 - 130	<2.0	ug/L	2.0 (1)	40
A813431	Fenthion	2022/11/22			106	30 - 130	<1.0	ug/L	0.28 (1)	40
A813431	Fonofos	2022/11/22			102	30 - 130	<2.0	ug/L	1.3 (1)	40
A813431	Guthion (Azinphos-methyl)	2022/11/22			148 (16)	30 - 130	<1.0	ug/L	0.73 (16,1)	40
A813431	Malathion	2022/11/22			102	30 - 130	<2.0	ug/L	1.6 (1)	40
A813431	Metolachlor	2022/11/22			104	30 - 130	<5.0	ug/L	0.15 (1)	40
A813431	Mevinphos (Phosdrin)	2022/11/22			100	30 - 130	<2.0	ug/L	0.78 (1)	40
A813431	Parathion Ethyl	2022/11/22			105	30 - 130	<2.0	ug/L	0.67 (1)	40
A813431	Parathion methyl	2022/11/22			101	30 - 130	<2.0	ug/L	0.43 (1)	40
A813431	Phorate (Thimet)	2022/11/22			97	30 - 130	<1.0	ug/L	1.1 (1)	40
A813431	Phosmet	2022/11/22			106	30 - 130	<2.0	ug/L	1.3 (1)	40
A813431	Terbufos	2022/11/22			105	30 - 130	<1.0	ug/L	1.1 (1)	40
A813431	Triallate	2022/11/22			98	30 - 130	<5.0	ug/L	1.4 (1)	40
A813431	Trifluralin	2022/11/22			109	30 - 130	<5.0	ug/L	1.4 (1)	40
A813432	2,4,5-T	2022/11/28			97	10 - 130	<0.50	ug/L	1.0 (1)	40
A813432	2,4,5-TP	2022/11/28			98	10 - 130	<0.50	ug/L	3.6 (1)	40
A813432	2,4-D (BEE)	2022/11/28			102	10 - 130	<0.50	ug/L	0.47 (1)	40
A813432	2,4-D	2022/11/28			90	10 - 130	<0.50	ug/L	1.6 (1)	40
A813432	2,4-DB	2022/11/28			101	10 - 130	<0.50	ug/L	0.75 (1)	40
A813432	Dicamba	2022/11/28			97	10 - 130	<0.50	ug/L	3.6 (1)	40
A813432	Dichlorprop	2022/11/28			97	10 - 130	<0.50	ug/L	1.7 (1)	40
A813432	MCPA	2022/11/28			98	10 - 130	<0.50	ug/L	2.6 (1)	40
A813432	MCPP	2022/11/28			107	10 - 130	<0.50	ug/L	0.42 (1)	40
A813432	Picloram	2022/11/28			73	10 - 130	<0.50	ug/L	20 (1)	40
A813433	Ametryn	2022/11/26			108	40 - 130	<3	ug/L	0.074 (1)	50
A813433	Atrazine	2022/11/26			102	40 - 130	<1	ug/L	0.14 (1)	50
A813433	Cyanazine (Bladex)	2022/11/26			102	40 - 130	<3	ug/L	2.9 (1)	50
A813433	Metribuzin (Sencor)	2022/11/26			83	40 - 130	<3	ug/L	2.5 (1)	50
A813433	Prometon	2022/11/26			108	40 - 130	<0.5	ug/L	2.3 (1)	50
A813433	Prometryn	2022/11/26			112	40 - 130	<3	ug/L	2.6 (1)	50



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Bureau Veritas Job #: C290929

Report Date: 2023/01/20

QUALITY ASSURANCE REPORT(CONT'D)

GHD Limited

Client Project #: 11218464

Site Location: VILLAGE OF TAHSIS

Your P.O. #: 735-003380

Sampler Initials: CXW

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A813433	Propazine	2022/11/26			122	40 - 130	<3	ug/L	3.0 (1)	50
A813433	Simazine	2022/11/26			100	40 - 130	<3	ug/L	0.91 (1)	50
A813433	Simetryn	2022/11/26			100	40 - 130	<0.5	ug/L	0.040 (1)	50
A813433	Terbutryne	2022/11/26			109	40 - 130	<0.5	ug/L	0.18 (1)	50
A839485	Nitrate plus Nitrite (N)	2022/12/22	112	80 - 120	105	80 - 120	<0.020	mg/L	NC (1)	25
A839487	Nitrite (N)	2022/12/22	108	80 - 120	100	80 - 120	<0.0050	mg/L	NC (1)	20
A846078	Total Aluminum (Al)	2023/01/05	101	80 - 120	102	80 - 120	<3.0	ug/L	0.022 (1)	20
A846078	Total Antimony (Sb)	2023/01/05	106	80 - 120	105	80 - 120	<0.50	ug/L	1.9 (1)	20
A846078	Total Arsenic (As)	2023/01/05	106	80 - 120	103	80 - 120	<0.10	ug/L	0.80 (1)	20
A846078	Total Barium (Ba)	2023/01/05	101	80 - 120	102	80 - 120	<1.0	ug/L	0.44 (1)	20
A846078	Total Beryllium (Be)	2023/01/05	98	80 - 120	100	80 - 120	<0.10	ug/L	NC (1)	20
A846078	Total Bismuth (Bi)	2023/01/05	97	80 - 120	102	80 - 120	<1.0	ug/L	NC (1)	20
A846078	Total Boron (B)	2023/01/05	118	80 - 120	118	80 - 120	<50	ug/L	NC (1)	20
A846078	Total Cadmium (Cd)	2023/01/05	100	80 - 120	102	80 - 120	<0.010	ug/L	NC (1)	20
A846078	Total Chromium (Cr)	2023/01/05	97	80 - 120	100	80 - 120	<1.0	ug/L	1.8 (1)	20
A846078	Total Cobalt (Co)	2023/01/05	99	80 - 120	104	80 - 120	<0.20	ug/L	NC (1)	20
A846078	Total Copper (Cu)	2023/01/05	92	80 - 120	98	80 - 120	<0.50	ug/L	0.12 (1)	20
A846078	Total Iron (Fe)	2023/01/05	108	80 - 120	106	80 - 120	<10	ug/L	0.86 (1)	20
A846078	Total Lead (Pb)	2023/01/05	99	80 - 120	102	80 - 120	<0.20	ug/L	NC (1)	20
A846078	Total Lithium (Li)	2023/01/05	93	80 - 120	94	80 - 120	<2.0	ug/L	NC (1)	20
A846078	Total Manganese (Mn)	2023/01/05	112	80 - 120	103	80 - 120	<1.0	ug/L	0.78 (1)	20
A846078	Total Molybdenum (Mo)	2023/01/05	NC	80 - 120	106	80 - 120	<1.0	ug/L	3.4 (1)	20
A846078	Total Nickel (Ni)	2023/01/05	97	80 - 120	102	80 - 120	<1.0	ug/L	NC (1)	20
A846078	Total Phosphorus (P)	2023/01/05	104	80 - 120	99	80 - 120	<10	ug/L	NC (1)	20
A846078	Total Selenium (Se)	2023/01/05	101	80 - 120	102	80 - 120	<0.10	ug/L	5.2 (1)	20
A846078	Total Silicon (Si)	2023/01/05	NC	80 - 120	113	80 - 120	<100	ug/L	0.096 (1)	20
A846078	Total Silver (Ag)	2023/01/05	101	80 - 120	103	80 - 120	<0.020	ug/L	NC (1)	20
A846078	Total Strontium (Sr)	2023/01/05	NC	80 - 120	97	80 - 120	<1.0	ug/L	2.0 (1)	20
A846078	Total Thallium (Tl)	2023/01/05	102	80 - 120	102	80 - 120	<0.010	ug/L	NC (1)	20
A846078	Total Tin (Sn)	2023/01/05	104	80 - 120	104	80 - 120	<5.0	ug/L	NC (1)	20
A846078	Total Titanium (Ti)	2023/01/05	102	80 - 120	103	80 - 120	<5.0	ug/L	NC (1)	20



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Bureau Veritas Job #: C290929

Report Date: 2023/01/20

QUALITY ASSURANCE REPORT(CONT'D)

GHD Limited

Client Project #: 11218464

Site Location: VILLAGE OF TAHSIS

Your P.O. #: 735-003380

Sampler Initials: CXW

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A846078	Total Uranium (U)	2023/01/05	105	80 - 120	104	80 - 120	<0.10	ug/L	0.36 (1)	20
A846078	Total Vanadium (V)	2023/01/05	97	80 - 120	97	80 - 120	<5.0	ug/L	NC (1)	20
A846078	Total Zinc (Zn)	2023/01/05	93	80 - 120	102	80 - 120	<5.0	ug/L	0.013 (1)	20
A846078	Total Zirconium (Zr)	2023/01/05	107	80 - 120	105	80 - 120	<0.10	ug/L	NC (1)	20
A846414	Dissolved Aluminum (Al)	2023/01/05	97 (17)	80 - 120	98	80 - 120	<3.0	ug/L	NC (18)	20
A846414	Dissolved Antimony (Sb)	2023/01/05	99 (17)	80 - 120	100	80 - 120	<0.50	ug/L	NC (18)	20
A846414	Dissolved Arsenic (As)	2023/01/05	99 (17)	80 - 120	99	80 - 120	<0.10	ug/L	NC (18)	20
A846414	Dissolved Barium (Ba)	2023/01/05	97 (17)	80 - 120	96	80 - 120	<1.0	ug/L	NC (18)	20
A846414	Dissolved Beryllium (Be)	2023/01/05	95 (17)	80 - 120	96	80 - 120	<0.10	ug/L	NC (18)	20
A846414	Dissolved Bismuth (Bi)	2023/01/05	98 (17)	80 - 120	98	80 - 120	<1.0	ug/L	NC (18)	20
A846414	Dissolved Boron (B)	2023/01/05	115 (17)	80 - 120	112	80 - 120	<50	ug/L	NC (18)	20
A846414	Dissolved Cadmium (Cd)	2023/01/05	98 (17)	80 - 120	98	80 - 120	<0.010	ug/L	NC (18)	20
A846414	Dissolved Chromium (Cr)	2023/01/05	95 (17)	80 - 120	95	80 - 120	<1.0	ug/L	NC (18)	20
A846414	Dissolved Cobalt (Co)	2023/01/05	99 (17)	80 - 120	97	80 - 120	<0.20	ug/L	NC (18)	20
A846414	Dissolved Copper (Cu)	2023/01/05	93 (17)	80 - 120	92	80 - 120	<0.20	ug/L	NC (18)	20
A846414	Dissolved Iron (Fe)	2023/01/05	102 (17)	80 - 120	101	80 - 120	<5.0	ug/L	NC (18)	20
A846414	Dissolved Lead (Pb)	2023/01/05	98 (17)	80 - 120	96	80 - 120	<0.20	ug/L	NC (18)	20
A846414	Dissolved Lithium (Li)	2023/01/05	90 (17)	80 - 120	90	80 - 120	<2.0	ug/L	NC (18)	20
A846414	Dissolved Manganese (Mn)	2023/01/05	98 (17)	80 - 120	98	80 - 120	<1.0	ug/L	NC (18)	20
A846414	Dissolved Molybdenum (Mo)	2023/01/05	99 (17)	80 - 120	97	80 - 120	<1.0	ug/L	NC (18)	20
A846414	Dissolved Nickel (Ni)	2023/01/05	96 (17)	80 - 120	96	80 - 120	<1.0	ug/L	NC (18)	20
A846414	Dissolved Phosphorus (P)	2023/01/05	96 (17)	80 - 120	95	80 - 120	<10	ug/L	NC (18)	20
A846414	Dissolved Selenium (Se)	2023/01/05	97 (17)	80 - 120	97	80 - 120	<0.10	ug/L	NC (18)	20
A846414	Dissolved Silicon (Si)	2023/01/05	106 (17)	80 - 120	107	80 - 120	<100	ug/L	NC (18)	20
A846414	Dissolved Silver (Ag)	2023/01/05	97 (17)	80 - 120	97	80 - 120	<0.020	ug/L	NC (18)	20
A846414	Dissolved Strontium (Sr)	2023/01/05	92 (17)	80 - 120	91	80 - 120	<1.0	ug/L	NC (18)	20
A846414	Dissolved Thallium (Tl)	2023/01/05	99 (17)	80 - 120	99	80 - 120	<0.010	ug/L	NC (18)	20
A846414	Dissolved Tin (Sn)	2023/01/05	98 (17)	80 - 120	98	80 - 120	<5.0	ug/L	NC (18)	20
A846414	Dissolved Titanium (Ti)	2023/01/05	98 (17)	80 - 120	97	80 - 120	<5.0	ug/L	NC (18)	20
A846414	Dissolved Uranium (U)	2023/01/05	100 (17)	80 - 120	99	80 - 120	<0.10	ug/L	NC (18)	20
A846414	Dissolved Vanadium (V)	2023/01/05	92 (17)	80 - 120	92	80 - 120	<5.0	ug/L	NC (18)	20



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Bureau Veritas Job #: C290929
Report Date: 2023/01/20

QUALITY ASSURANCE REPORT(CONT'D)

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A846414	Dissolved Zinc (Zn)	2023/01/05	99 (17)	80 - 120	98	80 - 120	<5.0	ug/L	NC (18)	20
A846414	Dissolved Zirconium (Zr)	2023/01/05	99 (17)	80 - 120	99	80 - 120	<0.10	ug/L	NC (18)	20
A847193	Dissolved Mercury (Hg)	2023/01/06	95	80 - 120	109	80 - 120	<0.0019	ug/L	NC (1)	20
A847195	Total Mercury (Hg)	2023/01/06	98	80 - 120	100	80 - 120	<0.0019	ug/L	NC (1)	20
A854801	Total Dissolved Solids	2023/01/17	104	80 - 120	93	80 - 120	<10	mg/L	6.6 (1)	20



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Report Date: 2023/01/20

QUALITY ASSURANCE REPORT(CONT'D)

GHD Limited

Client Project #: 11218464

Site Location: VILLAGE OF TAHSIS

Your P.O. #: 735-003380

Sampler Initials: CXW

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A858774	Salinity	2023/01/19					<0.010	g/L		

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Duplicate Parent ID

(2) Matrix Spike Parent ID [BHE575-01]

(3) Duplicate Parent ID [BHE575-01]

(4) Matrix Spike Parent ID [BHE574-08]

(5) Duplicate Parent ID [BHE574-08]

(6) Matrix Spike Parent ID [BHE576-08]

(7) Duplicate Parent ID [BHE576-08]

(8) Reanalysis confirms results.

(9) Matrix Spike Parent ID [BHE577-01]

(10) Duplicate Parent ID [BHE577-01]

(11) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(12) Matrix Spike Parent ID [BHE574-01]

(13) Duplicate Parent ID [BHE574-01]

(14) Matrix Spike Parent ID [BHE575-06]

(15) Duplicate Parent ID [BHE574-06]

(16) The recovery was above the upper control limit. This may represent a high bias in some results for flagged analytes. For results that were not detected (ND), this potential bias has no impact.

(17) Matrix Spike Parent ID [BHE579-05]

(18) Duplicate Parent ID [BHE579-05]



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Bureau Veritas Job #: C290929
Report Date: 2023/01/20

GHD Limited
Client Project #: 11218464
Site Location: VILLAGE OF TAHSIS
Your P.O. #: 735-003380
Sampler Initials: CXW

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

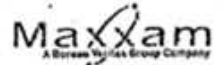
David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

Jingyuan Song, QP, Organics – Senior Analyst

Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

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C290929_ACTR

ADDITIONAL COOLER TEMPERATURE RECORD

CHAIN-OF-CUSTODY RECORD

CHAIN OF CUSTODY #	
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COOLER OBSERVATIONS:					
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	7	5
INTACT		<input checked="" type="checkbox"/>			10
ICE PRESENT	<input checked="" type="checkbox"/>				
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	4	4
INTACT		<input checked="" type="checkbox"/>			7
ICE PRESENT	<input checked="" type="checkbox"/>				
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	8	5
INTACT		<input checked="" type="checkbox"/>			3
ICE PRESENT	<input checked="" type="checkbox"/>				
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	9	4
INTACT		<input checked="" type="checkbox"/>			8
ICE PRESENT	<input checked="" type="checkbox"/>				
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	8	5
INTACT		<input checked="" type="checkbox"/>			3
ICE PRESENT	<input checked="" type="checkbox"/>				
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	10	0
INTACT		<input checked="" type="checkbox"/>			0
ICE PRESENT	<input checked="" type="checkbox"/>				
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	8	6
INTACT		<input checked="" type="checkbox"/>			6
ICE PRESENT	<input checked="" type="checkbox"/>				
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	7	9
INTACT		<input checked="" type="checkbox"/>			5
ICE PRESENT	<input checked="" type="checkbox"/>				
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	1	2
INTACT		<input checked="" type="checkbox"/>			3
ICE PRESENT	<input checked="" type="checkbox"/>				
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	1	2
INTACT		<input checked="" type="checkbox"/>			3
ICE PRESENT	<input checked="" type="checkbox"/>				

MAXXAM JOB#:					
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	1	2
INTACT		<input checked="" type="checkbox"/>			3
ICE PRESENT	<input checked="" type="checkbox"/>				
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	1	2
INTACT		<input checked="" type="checkbox"/>			3
ICE PRESENT	<input checked="" type="checkbox"/>				
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	1	2
INTACT		<input checked="" type="checkbox"/>			3
ICE PRESENT	<input checked="" type="checkbox"/>				
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	1	2
INTACT		<input checked="" type="checkbox"/>			3
ICE PRESENT	<input checked="" type="checkbox"/>				
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	1	2
INTACT		<input checked="" type="checkbox"/>			3
ICE PRESENT	<input checked="" type="checkbox"/>				
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	1	2
INTACT		<input checked="" type="checkbox"/>			3
ICE PRESENT	<input checked="" type="checkbox"/>				
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	1	2
INTACT		<input checked="" type="checkbox"/>			3
ICE PRESENT	<input checked="" type="checkbox"/>				
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	1	2
INTACT		<input checked="" type="checkbox"/>			3
ICE PRESENT	<input checked="" type="checkbox"/>				
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	1	2
INTACT		<input checked="" type="checkbox"/>			3
ICE PRESENT	<input checked="" type="checkbox"/>				
CUSTODY SEAL	YES	NO	COOLER ID		
PRESENT		<input checked="" type="checkbox"/>	TEMP	1	2
INTACT		<input checked="" type="checkbox"/>			3
ICE PRESENT	<input checked="" type="checkbox"/>				

RECEIVED BY (SIGN & PRINT)	DATE (YYYY/MM/DD)	TIME (HH:MM)
Corde R. Pilla	2009/1/17	08:30



Bureau Veritas
4009 Canada Way, Burnaby, British Columbia Canada V5G 1K3 Tel: (204) 734 7276 Toll-Free: 800-563-6296 Fax: (204) 731 2396 www.bvna.com



C290929_COC

INVOICE TO:		Report Information		Project Information		Only	
Company Name	#163 GHD Limited	Company Name	Alesse MacPhee	Quotation #	C20003	Bottle Order #	
Contact Name	AP Invoices - 735	Contact Name	Alesse MacPhee	P.O. #	735-003380		
Address	455 PHILLIP STREET WATERLOO ON N2L 3X2	Address		Project #	11218464	Chain Of Custody Record	Project Manager
Phone	(519) 884-0510	Phone		Project Name	Village of Tahsis		
Fax	(519) 725-1394	Fax		Site #			
Email	invoicing-canada@ghd.com	Email	alesse.macphee@ghd.com, NationalEDOSupport@ma	Sampled By	CXW, MR, CS	Turnaround Time (TAT) Required	

Regulatory Criteria:

CSR
 CCWC
 BC Water Quality
 Other

Special Instructions: Each cooler contains a sample set. ~~no other samples in set~~ lab did not provide labels for amber jars larger than PFF jars. these jars are unlabelled. ~~MG-11218464-151122-CXW-01 will have more bottles than necessary.~~

ANALYSIS REQUESTED (PLEASE BE SPECIFIC):

Metals Field Filtered ? (Y/N)	Alkalinity @25C	5 Anion Package (Cl, F, NO2N, NO3N, SO4)	Conductivity @25C, turbidity	Organic PAH, PCBs	CSR Dissolved Metals in Water with CV Hg, dissolved hardness	CSR Total Metals in Water with CV Hg	Ammonia-N (Total), Nitrite-N, Nitrate-N	Custom by membrane filtration	E-cool by membrane filtration in Water	Resin Fatty Acids, Pesticides, Herbicides.
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Turnaround Time (TAT) Required: Regular (Standard) TAT: (will be applied if Rush TAT is not specified). Standard TAT - 5-7 Working days for most tests. Please Note: Standard TAT for certain tests such as DOC and Dissolved Fluoride are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire substation): 1 DAY 2 Day 3 Day Date Required:

Rush Confirmation Number: (call lab for it)

SAMPLES MUST BE KEPT COOL (+ 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y/N)	Alkalinity @25C	5 Anion Package (Cl, F, NO2N, NO3N, SO4)	Conductivity @25C, turbidity	Organic PAH, PCBs	CSR Dissolved Metals in Water with CV Hg, dissolved hardness	CSR Total Metals in Water with CV Hg	Ammonia-N (Total), Nitrite-N, Nitrate-N	Custom by membrane filtration	E-cool by membrane filtration in Water	Resin Fatty Acids, Pesticides, Herbicides.	# of Entries	Comments
	MG-11218464-151122-CXW-01	NOV 15, 2022	10:08	WATER	Y	X	X	X	X	X	X	X	X	X	X	15	Analyze for (also): OC/OP/Phenox Pest + Herbicides
	-02		10:50			X	X	X	X	X	X	X	X	X	X	15	
	-03		12:00			X	X	X	X	X	X	X	X	X	X	15	
	-04		12:02			X	X	X	X	X	X	X	X	X	X	15	
	-05		13:25			X	X	X	X	X	X	X	X	X	X	15	
	-06		15:10			X	X	X	X	X	X	X	X	X	X	15	Also analyze for Salinity & TDS.
	MG-11218464-151122-CXW-07	NOV 15, 2022	15:30	WATER	Y	X	X	X	X	X	X	X	X	X	X	15	Analyze for also: OC/OP/Phenox Pest + Herbicides

RELIEVED BY: (Signature/Print)	Date: (YYMMDD)	Time	RECEIVED BY: (Signature/Print)	Date: (YYMMDD)	Time	# jars used and not submitted	Lab Use Only
<i>[Signature]</i> Carry Wong	22/11/16	0930	<i>[Signature]</i> Leah Popila	22/11/16	8:20		Temperature (°C) in Receipt: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Quality Seal (staple on cooler): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COOC-TERMS-AND-CONDITIONS.
 * IT IS THE RESPONSIBILITY OF THE RELIEVER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

ICE IN COOLERS

Attachment 2

Verification Memorandum

Technical Memorandum

January 20, 2023

To	Rose Marie Rocca, Natasha Turl, Kathleen Hasler, Melissa Jenkins, David R Barton	Tel	604-248-3661
Copy to		Email	Airesse.MacPhee@ghd.com
From	Airesse MacPhee/an/07	Ref. No.	11218464
Subject	Data Quality Assessment and Verification		

Laboratory:	Bureau Veritas Laboratories				
Lab Job No.:	C243746, C243791, C290929, C290880, C296577, C296570				
Date(s) Sampled:	June, November, and December, 2022				
Media Sampled:	Groundwater and Surface Water				
QA/QC	Criteria	Pass	Qualifiers	Fail	N/A
Holding Times	Analyte specific	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temperature	<10°C at receipt	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Preservation	Required container/preservatives	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Field Duplicate (blind)	Water: Within 20% of original/<1xRL	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Field Blank (blind)	Non detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trip Blank	Non detect	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Lab QA/QC	Within standard recoveries	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following results are qualified due to method holding time exceedances:

Lab Report #	Sample Date (mm/dd/yyyy)	Sample ID	Analyte	Result	Qualifier	Units
C243746	06/21/2022	WS-11218464-210622-NT-01	Total coliform bacteria	170	J	cfu/100mL
C290929	11/15/2022	WG-11218464-151122-CXW-06	Total dissolved solids (TDS)	120	J	mg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Turbidity	0.10	UJ	NTU

The following results are qualified due to high temperature (>10 °C) upon arrival at the laboratory:

Lab Report #	Sample Date (mm/dd/yyyy)	Sample ID	Analyte	Result	Qualifier	Units
C290929	11/15/2022	WG-11218464-151122-CXW-04	2,4'-DDD	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	2,4'-DDD	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	2,4'-DDD + 4,4'-DDD	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	2,4'-DDD + 4,4'-DDD	0.005	UJ	µg/L

Lab Report #	Sample Date (mm/dd/yyyy)	Sample ID	Analyte	Result	Qualifier	Units
C290929	11/15/2022	WG-11218464-151122-CXW-04	2,4'-DDE	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	2,4'-DDE	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	2,4'-DDE + 4,4'-DDE	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	2,4'-DDE + 4,4'-DDE	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	2,4'-DDT	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	2,4'-DDT	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	2,4'-DDT + 4,4'-DDT	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	2,4'-DDT + 4,4'-DDT	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	4,4'-DDD	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	4,4'-DDD	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	4,4'-DDE	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	4,4'-DDE	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	4,4'-DDT	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	4,4'-DDT	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Aldrin	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Aldrin	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Aldrin & Dieldrin	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Aldrin & Dieldrin	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	alpha-BHC	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	alpha-BHC	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	alpha-Chlordane	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	alpha-Chlordane	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	beta-BHC	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	beta-BHC	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Chlordane	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Chlordane	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	DDT and metabolites	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	DDT and metabolites	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	delta-BHC	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	delta-BHC	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Dieldrin	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Dieldrin	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Endosulfan	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Endosulfan	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Endosulfan I	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Endosulfan I	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Endosulfan II	0.005	UJ	µg/L

Lab Report #	Sample Date (mm/dd/yyyy)	Sample ID	Analyte	Result	Qualifier	Units
C290929	11/15/2022	WG-11218464-151122-CXW-05	Endosulfan II	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Endosulfan sulfate	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Endosulfan sulfate	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Endrin	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Endrin	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Endrin aldehyde	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Endrin aldehyde	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Endrin ketone	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Endrin ketone	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	gamma-BHC (lindane)	0.003	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	gamma-BHC (lindane)	0.003	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	gamma-Chlordane	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	gamma-Chlordane	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Heptachlor	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Heptachlor	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Heptachlor epoxide	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Heptachlor epoxide	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Heptachlor/Heptachlor epoxide	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Heptachlor/Heptachlor epoxide	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Hexachlorobenzene	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Hexachlorobenzene	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Methoxychlor	0.01	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Methoxychlor	0.01	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Mirex	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Mirex	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Octachlorostyrene	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Octachlorostyrene	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Oxychlordane	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Oxychlordane	0.005	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-04	Toxaphene	0.2	UJ	µg/L
C290929	11/15/2022	WG-11218464-151122-CXW-05	Toxaphene	0.2	UJ	µg/L

The following results are qualified due to field duplicate variability:

Lab Report #	Sample Date (mm/dd/yyyy)	Sample ID	Analyte	Result	Qualifier	Units
C243791	06/21/2022	WG-11218464-210622-NT-03	Copper	0.70	J	µg/L
C243791	06/21/2022	WG-11218464-210622-NT-04	Copper	6.82	J	µg/L

Conclusion:

Based on the assessment detailed in the foregoing, the data summarized are acceptable with the specific qualifications noted above.

Notes:

- UJ - The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
- J - The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
- RL - Reporting Limit
- N/A - Not Applicable
- QA/QC - Quality Assurance/Quality Control

Data verification reference documents:

1. "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", USEPA 540/R-94-013, September 2016.
2. "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-99-008, September 2016.
3. "British Columbia Environmental Laboratory Manual", Analysis, Reporting & Knowledge Services Knowledge Management Branch Ministry of Environment and Climate Change Strategy Province of British Columbia, April 2020.

Regards



Airesse MacPhee
Data Management - Data Validator