APPENDIX E

Laboratory Certificates of Analysis and Data Quality Review Checklists



Your P.O. #: 22525414-1100-1104 Your Project #: 22525414-1000 Site Location: CAMP FAREWELL, NT Your C.O.C. #: 1 of 1

Attention: Aurelie Bellavance

GOLDER ASSOCIATES LTD. 2800, 700 -2nd Street SW CALGARY, AB CANADA T2P 2W2

> Report Date: 2022/08/19 Report #: R3218837 Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C259075 Received: 2022/08/09, 11:45

Sample Matrix: Soil # Samples Received: 8

		Date	Date				
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method		
Boron (Hot Water Soluble) (1)	4	2022/08/11	2022/08/11	AB SOP-00034 / AB SOP- 00042	EPA 6010d R5 m		
Boron (Hot Water Soluble) (1)	2	2022/08/12	2022/08/12	AB SOP-00034 / AB SOP- 00042	EPA 6010d R5 m		
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1, 2)	8	N/A	2022/08/11	AB SOP-00039	CCME CWS/EPA 8260d m		
F1-BTEX (1)	8	N/A	2022/08/11		Auto Calc		
Cation/EC Ratio (1)	1	N/A	2022/08/11		Auto Calc		
Cation/EC Ratio (1)	5	N/A	2022/08/12		Auto Calc		
Chloride (Soluble) (1)	4	2022/08/11	2022/08/11	AB SOP-00033 / AB SOP- 00020	SM 23-4500-Cl-E m		
Chloride (Soluble) (1)	2	2022/08/12	2022/08/12	AB SOP-00033 / AB SOP- 00020	SM 23-4500-Cl-E m		
Hexavalent Chromium (1, 3)	6	2022/08/11	2022/08/11	AB SOP-00063	SM 23 3500-Cr B m		
Conductivity @25C (Soluble) (1)	4	2022/08/11	2022/08/11	AB SOP-00033 / AB SOP- 00004	SM 23 2510 B m		
Conductivity @25C (Soluble) (1)	2	2022/08/12	2022/08/12	AB SOP-00033 / AB SOP- 00004	SM 23 2510 B m		
CCME Hydrocarbons (F2-F4 in soil) (1, 4)	8	2022/08/10	2022/08/11	AB SOP-00036	CCME PHC-CWS m		
Elements by ICPMS - Soils (1)	1	2022/08/11	2022/08/11	AB SOP-00001 / AB SOP- 00043	EPA 6020b R2 m		
Elements by ICPMS - Soils (1)	3	2022/08/11	2022/08/12	AB SOP-00001 / AB SOP- 00043	EPA 6020b R2 m		
Elements by ICPMS - Soils (1)	2	2022/08/12	2022/08/12	AB SOP-00001 / AB SOP- 00043	EPA 6020b R2 m		
Sum of Cations, Anions (1)	1	N/A	2022/08/11		Auto Calc		
Sum of Cations, Anions (1)	5	N/A	2022/08/12		Auto Calc		
Moisture (1)	8	N/A	2022/08/11	AB SOP-00002	CCME PHC-CWS m		
Benzo[a]pyrene Equivalency (1)	6	N/A	2022/08/11		Auto Calc		
PAH in Soil by GC/MS (1)	6	2022/08/10	2022/08/11	AB SOP-00036 / AB SOP- 00003	EPA 3540C/8270E m		
pH @25C (1:2 Calcium Chloride Extract) (1)	4	2022/08/11	2022/08/11	AB SOP-00033 / AB SOP- 00006	SM 23 4500 H+B m		



Your P.O. #: 22525414-1100-1104 Your Project #: 22525414-1000 Site Location: CAMP FAREWELL, NT Your C.O.C. #: 1 of 1

Attention: Aurelie Bellavance

GOLDER ASSOCIATES LTD. 2800, 700 -2nd Street SW CALGARY, AB CANADA T2P 2W2

> Report Date: 2022/08/19 Report #: R3218837 Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C259075 Received: 2022/08/09, 11:45

Sample Matrix: Soil # Samples Received: 8

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
pH @25C (1:2 Calcium Chloride Extract) (1)	2	2022/08/12	2022/08/12	AB SOP-00033 / AB SOP- 00006	SM 23 4500 H+B m
Sodium Adsorption Ratio (1)	1	N/A	2022/08/11		Auto Calc
Sodium Adsorption Ratio (1)	5	N/A	2022/08/12		Auto Calc
Soluble lons (1)	4	2022/08/11	2022/08/11	AB SOP-00033 / AB SOP- 00042	EPA 6010d R5 m
Soluble lons (1)	2	2022/08/12	2022/08/12	AB SOP-00033 / AB SOP- 00042	EPA 6010d R5 m
Soluble Paste (1)	4	2022/08/11	2022/08/11	AB SOP-00033	Carter 2nd ed 15.2 m
Soluble Paste (1)	2	2022/08/12	2022/08/12	AB SOP-00033	Carter 2nd ed 15.2 m
Soluble Ions Calculation (1)	6	N/A	2022/08/11		Auto Calc
Theoretical Gypsum Requirement (1, 5)	1	N/A	2022/08/11		Auto Calc
Theoretical Gypsum Requirement (1, 5)	5	N/A	2022/08/12		Auto Calc

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.

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.



Your P.O. #: 22525414-1100-1104 Your Project #: 22525414-1000 Site Location: CAMP FAREWELL, NT Your C.O.C. #: 1 of 1

Attention: Aurelie Bellavance

GOLDER ASSOCIATES LTD. 2800, 700 -2nd Street SW CALGARY, AB CANADA T2P 2W2

> Report Date: 2022/08/19 Report #: R3218837 Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C259075

Received: 2022/08/09, 11:45

* 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) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is date sampled unless otherwise stated.

(3) Some soil samples may react with the Cr(VI) spike reducing it to Cr(III). These samples are highly unlikely to contain native hexavalent chromium. Thus a failed spike recovery does not invalidate a negative result on the native sample.

(4) All CCME results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil, Validation of Performance-Based Alternative Methods September 2003. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

(5) TGR calculation is based on a theoretical SAR of 4. Salt Contamination and Assessment and remediation guideline 2001 recommended SAR is ranging 4-8. TGR is reported in tonnes/ha.



Please direct all questions regarding this Certificate of Analysis to your Project Manager. Cynny Hagen, Key Account Specialist Email: Cynny.HAGEN@bureauveritas.com

Phone# (403)735-2273

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 Signature Page.



AT1 BTEX AND F1-F4 IN SOIL (VIALS)

Bureau Veritas ID		AZF954	AZF954			AZF955		AZF956		
Sampling Date		2022/08/06	2022/08/06			2022/08/06		2022/08/06		
		14:50	14:50			14:55		16:10		
COC Number		1 of 1	1 of 1			1 of 1		1 of 1		
	UNITS	BH22-42-01	BH22-42-01 Lab-Dup	RDL	QC Batch	BH22-42-02	RDL	BH22-44-01	RDL	QC Batch
Ext. Pet. Hydrocarbon										
F2 (C10-C16 Hydrocarbons)	mg/kg	<28 (1)	N/A	28	A676506	11	10	28 (1)	23	A676506
F3 (C16-C34 Hydrocarbons)	mg/kg	370 (1)	N/A	140	A676506	140	50	370 (1)	120	A676506
F4 (C34-C50 Hydrocarbons)	mg/kg	<140 (1)	N/A	140	A676506	<50	50	<120 (1)	120	A676506
Reached Baseline at C50	mg/kg	Yes	N/A	N/A	A676506	Yes	N/A	Yes	N/A	A676506
Physical Properties	•									
Moisture	%	64	N/A	0.30	A676508	29	0.30	57	0.30	A676514
Volatiles										
Xylenes (Total)	mg/kg	<0.25	N/A	0.25	A676395	<0.045	0.045	<0.23	0.23	A676395
F1 (C6-C10) - BTEX	mg/kg	<36	N/A	36	A676395	<10	10	<33	33	A676395
Field Preserved Volatiles										
Benzene	mg/kg	<0.028 (2)	<0.028	0.028	A676666	<0.0050	0.0050	<0.026 (2)	0.026	A676666
Toluene	mg/kg	<0.050 (3)	<0.050 (3)	0.050	A676666	<0.050	0.050	<0.050 (3)	0.050	A676666
Ethylbenzene	mg/kg	<0.057 (2)	<0.057	0.057	A676666	<0.010	0.010	<0.052 (2)	0.052	A676666
m & p-Xylene	mg/kg	<0.23 (4)	<0.23	0.23	A676666	<0.040	0.040	<0.21 (2)	0.21	A676666
o-Xylene	mg/kg	<0.11 (2)	<0.11	0.11	A676666	<0.020	0.020	<0.10 (2)	0.10	A676666
F1 (C6-C10)	mg/kg	<36 (3)	<36 (3)	36	A676666	<10	10	<33 (3)	33	A676666
Surrogate Recovery (%)										
1,4-Difluorobenzene (sur.)	%	97	95	N/A	A676666	122	N/A	96	N/A	A676666
4-Bromofluorobenzene (sur.)	%	90	81	N/A	A676666	90	N/A	86	N/A	A676666
D10-o-Xylene (sur.)	%	106	96	N/A	A676666	99	N/A	104	N/A	A676666
D4-1,2-Dichloroethane (sur.)	%	95	87	N/A	A676666	115	N/A	87	N/A	A676666
O-TERPHENYL (sur.)	%	101	N/A	N/A	A676506	97	N/A	101	N/A	A676506

RDL = Reportable Detection Limit

Lab-Dup = Laboratory Initiated Duplicate

N/A = Not Applicable

(1) Detection limits raised due to high moisture content, sample contains => 50% moisture.

(2) Detection limits raised based on sample weight used for analysis.

(3) Detection limit reported based on MDL and sample weight used for analysis.

(4) Qualifying ion outside of acceptance criteria. Results are tentatively identified and potentially biased high. Detection limits raised based on sample weight used for analysis.



AT1 BTEX AND F1-F4 IN SOIL (VIALS)

-											-	
Bureau Veritas ID		AZF957		AZF958		AZF959		AZF960		AZF961		
Sampling Date		2022/08/06		2022/08/06		2022/08/07		2022/08/06		2022/08/06		
		15:35		16:20		08:40		14:10		14:10		
COC Number		1 of 1		1 of 1		1 of 1		1 of 1		1 of 1		
	UNITS	MW22-43-01	RDL	BH22-45-01	RDL	BH22-46-01	RDL	BH22-41-01	RDL	DUP A	RDL	QC Batch
Ext. Pet. Hydrocarbon												
F2 (C10-C16 Hydrocarbons)	mg/kg	14	10	120 (1)	23	340 (1)	34	<21 (1)	21	29	10	A676506
F3 (C16-C34 Hydrocarbons)	mg/kg	300	50	2100 (1)	110	2900 (1)	170	360 (1)	100	410	50	A676506
F4 (C34-C50 Hydrocarbons)	mg/kg	86	50	650 (1)	110	930 (1)	170	120 (1)	100	93	50	A676506
Reached Baseline at C50	mg/kg	Yes	N/A	Yes	N/A	Yes	N/A	Yes	N/A	Yes	N/A	A676506
Physical Properties												
Moisture	%	34	0.30	56	0.30	71	0.30	52	0.30	47	0.30	A676514
Volatiles	•										-	
Xylenes (Total)	mg/kg	<0.045	0.045	<0.14	0.14	<0.28	0.28	<0.14	0.14	<0.12	0.12	A676395
F1 (C6-C10) - BTEX	mg/kg	<10	10	<24	24	<40	40	<24	24	<24	24	A676395
Field Preserved Volatiles		•								•		
Benzene	mg/kg	<0.0050	0.0050	<0.016 (2)	0.016	<0.032 (2)	0.032	<0.016 (2)	0.016	<0.013 (2)	0.013	A676666
Toluene	mg/kg	<0.050	0.050	<0.050 (3)	0.050	<0.050 (3)	0.050	<0.050 (3)	0.050	<0.050 (3)	0.050	A676666
Ethylbenzene	mg/kg	<0.010	0.010	<0.032 (2)	0.032	<0.064 (2)	0.064	<0.031 (2)	0.031	<0.026 (2)	0.026	A676666
m & p-Xylene	mg/kg	<0.040	0.040	<0.13 (2)	0.13	<0.26 (2)	0.26	<0.13 (2)	0.13	<0.11 (2)	0.11	A676666
o-Xylene	mg/kg	<0.020	0.020	<0.065 (2)	0.065	<0.13 (2)	0.13	<0.063 (2)	0.063	<0.052 (2)	0.052	A676666
F1 (C6-C10)	mg/kg	<10	10	<24 (3)	24	<40 (3)	40	<24 (3)	24	<24 (3)	24	A676666
Surrogate Recovery (%)	•										-	
1,4-Difluorobenzene (sur.)	%	116	N/A	135	N/A	103	N/A	93	N/A	124	N/A	A676666
4-Bromofluorobenzene (sur.)	%	86	N/A	91	N/A	91	N/A	87	N/A	91	N/A	A676666
D10-o-Xylene (sur.)	%	107	N/A	107	N/A	114	N/A	104	N/A	111	N/A	A676666
D4-1,2-Dichloroethane (sur.)	%	109	N/A	124	N/A	101	N/A	89	N/A	116	N/A	A676666
O-TERPHENYL (sur.)	%	98	N/A	107	N/A	101	N/A	98	N/A	103	N/A	A676506
PDI - Poportable Detection Liv	mit	•	•			•		•		•	•	

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Detection limits raised due to high moisture content, sample contains => 50% moisture.

(2) Detection limits raised based on sample weight used for analysis.

(3) Detection limit reported based on MDL and sample weight used for analysis.



SOIL SALINITY 4 (SOIL)

Bureau Veritas ID		AZF954		AZF955		AZF956			AZF957		
Sampling Date		2022/08/06 14:50		2022/08/06 14:55		2022/08/06 16:10			2022/08/06 15:35		
COC Number		1 of 1		1 of 1		1 of 1			1 of 1		
	UNITS	BH22-42-01	RDL	BH22-42-02	RDL	BH22-44-01	RDL	QC Batch	MW22-43-01	RDL	QC Batch
Calculated Parameters											
Anion Sum	meq/L	0.70	N/A	0.80	N/A	0.54	N/A	A676224	0.92	N/A	A676224
Cation Sum	meq/L	3.8	N/A	4.8	N/A	2.3	N/A	A676224	4.6	N/A	A676224
Cation/EC Ratio	N/A	16	0.10	18	0.10	13	0.10	A676346	16	0.10	A676346
Calculated Calcium (Ca)	mg/kg	29	1.2	39	1.2	39	2.9	A676399	35	1.2	A676399
Calculated Magnesium (Mg)	mg/kg	11	0.81	11	0.82	13	1.9	A676399	13	0.82	A676399
Calculated Sodium (Na)	mg/kg	17	2.0	23	2.0	32	4.8	A676399	21	2.0	A676399
Calculated Potassium (K)	mg/kg	2.7	1.1	1.1	1.1	4.3	2.5	A676399	1.7	1.1	A676399
Calculated Chloride (Cl)	mg/kg	12	8.1	12	8.2	21	19	A676399	11	8.2	A676399
Calculated Sulphate (SO4)	mg/kg	11	4.1	15	4.1	22	9.7	A676399	21	4.1	A676399
Soluble Parameters	•		,						•		
Soluble Chloride (Cl)	mg/L	14	10	15	10	11	10	A677413	13	10	A677512
Soluble Conductivity	dS/m	0.23	0.020	0.27	0.020	0.18	0.020	A677437	0.29	0.020	A677416
Soluble (CaCl2) pH	рН	6.71 (1)	N/A	6.98 (1)	N/A	6.43 (1)	N/A	A676771	6.77	N/A	A676662
Sodium Adsorption Ratio	N/A	0.76	0.10	0.93	0.10	0.80	0.10	A676396	0.86	0.10	A676396
Soluble Calcium (Ca)	mg/L	35	1.5	48	1.5	20	1.5	A677260	43	1.5	A677396
Soluble Magnesium (Mg)	mg/L	13	1.0	14	1.0	7.0	1.0	A677260	16	1.0	A677396
Soluble Sodium (Na)	mg/L	21	2.5	28	2.5	16	2.5	A677260	26	2.5	A677396
Soluble Potassium (K)	mg/L	3.4	1.3	1.4	1.3	2.2	1.3	A677260	2.0	1.3	A677396
Saturation %	%	81	N/A	82	N/A	190	N/A	A676768	82	N/A	A676660
Soluble Sulphate (SO4)	mg/L	14	5.0	18	5.0	12	5.0	A677260	26	5.0	A677396
Theoretical Gypsum Requirement	tonnes/ha	<0.20	0.20	<0.20	0.20	<0.20	0.20	A676350	<0.20	0.20	A676350
RDL = Reportable Detection Limit						· · · · · · · · · · · · · · · · · · ·					

N/A = Not Applicable

(1) pH was done on a 10:1 Calcium Chloride to soil ratio due to the matrix of the sample.

SUIL SALINITY 4 (SUIL)												
	AZF958		AZF959									
	2022/08/06		2022/08/07									
	16:20		08:40									
	1 of 1		1 of 1									
UNITS	BH22-45-01	RDL	BH22-46-01	RDL	QC Batch							
meq/L	0.25	N/A	0.28	N/A	A676224							
meq/L	2.7	N/A	2.9	N/A	A676224							
N/A	16	0.10	16	0.10	A676346							
mg/kg	37	2.3	72	4.0	A676399							
mg/kg	14	1.5	25	2.6	A676399							
mg/kg	22	3.8	40	6.6	A676399							
mg/kg	3.8	2.0	10	3.4	A676399							
mg/kg	<15	15	<26	26	A676399							
mg/kg	18	7.6	35	13	A676399							
mg/L	<10	10	<10	10	A678876							
dS/m	0.17	0.020	0.18	0.020	A678998							
рН	6.15	N/A	6.29	N/A	A677998							
N/A	0.65	0.10	0.63	0.10	A676396							
mg/L	24	1.5	28	1.5	A678849							
mg/L	9.0	1.0	9.6	1.0	A678849							
mg/L	15	2.5	15	2.5	A678849							
mg/L	2.5	1.3	3.9	1.3	A678849							
%	150	N/A	260	N/A	A677996							
mg/L	12	5.0	13	5.0	A678849							
tonnes/ha	<0.20	0.20	<0.20	0.20	A676350							
	UNITS UNITS meq/L meq/L N/A mg/kg	AZF958 2022/08/06 16:20 1 of 1 UNITS BH22-45-01 meq/L 0.25 meq/L N/A 16 mg/kg 37 mg/kg 14 mg/kg 37 mg/kg 14 mg/kg 15 mg/kg 18 mg/L 410 dS/m 0.17 pH 6.15 N/A 0.65 mg/L 24 mg/L 9.0 mg/L 15 mg/L 2.5 % 150 mg/L	AZF958 2022/08/06 16:20 1 of 1 UNITS BH22-45-01 meq/L 0.25 N/A meq/L 2.7 N/A 16 mg/kg 37 mg/kg 14 mg/kg 2.2 mg/kg 3.8 mg/kg 3.8 mg/kg 15 mg/kg 15 mg/kg 18 7.6 mg/L <10	AZF958 AZF959 2022/08/06 2022/08/07 16:20 08:40 1 of 1 1 of 1 UNITS BH22-45-01 RDL BH22-46-01 meq/L 0.25 N/A 0.28 meq/L 2.7 N/A 2.9 N/A 16 0.10 16 mg/kg 37 2.3 72 mg/kg 14 1.5 25 mg/kg 14 1.5 25 mg/kg 3.8 2.0 10 mg/kg 3.8 2.0 10 mg/kg 18 7.6 35 mg/L <10	AZF958 AZF959 2022/08/06 2022/08/07 1 of 1 1 of 1 UNITS BH22-45-01 RDL meq/L 0.25 N/A 0.28 Meq/L 2.7 N/A 2.9 N/A 16 0.10 16 0.10 mg/L 2.7 N/A 2.9 N/A N/A 16 0.10 16 0.10 mg/kg 37 2.3 72 4.0 mg/kg 14 1.5 25 2.6 mg/kg 18 2.0 10 3.4 mg/kg 18 2.0 10 3.4 mg/kg 3.8 2.0 10 3.4 mg/kg 18 7.6 35 13 mg/kg 18 7.6 35 13 mg/L <10							

SOIL SALINITY 4 (SOIL)



CCME REGULATED METALS - SOILS (SOIL)

Bureau Veritas ID		AZF954		AZF955		AZF956			AZF957		
Sampling Date		2022/08/06		2022/08/06		2022/08/06			2022/08/06		
		14:50		14:55		16:10			15:35		
COC Number		1 of 1		1 of 1		1 of 1			1 of 1		
	UNITS	BH22-42-01	RDL	BH22-42-02	RDL	BH22-44-01	RDL	QC Batch	MW22-43-01	RDL	QC Batch
Elements											
Soluble (Hot water) Boron (B)	mg/kg	<0.10	0.10	0.28	0.10	<0.40 (1)	0.40	A677176	0.16	0.10	A677176
Hex. Chromium (Cr 6+)	mg/kg	<0.22 (2)	0.22	<0.080	0.080	<0.19 (2)	0.19	A677150	<0.080	0.080	A677150
Total Antimony (Sb)	mg/kg	<0.50	0.50	<0.50	0.50	<0.50	0.50	A677124	<0.50	0.50	A676884
Total Arsenic (As)	mg/kg	4.9	1.0	4.5	1.0	6.9	1.0	A677124	5.8	1.0	A676884
Total Barium (Ba)	mg/kg	100	1.0	250	1.0	210	1.0	A677124	190	1.0	A676884
Total Beryllium (Be)	mg/kg	<0.40	0.40	<0.40	0.40	<0.40	0.40	A677124	<0.40	0.40	A676884
Total Cadmium (Cd)	mg/kg	0.083	0.050	0.17	0.050	0.10	0.050	A677124	0.079	0.050	A676884
Total Chromium (Cr)	mg/kg	5.9	1.0	7.6	1.0	8.9	1.0	A677124	10	1.0	A676884
Total Cobalt (Co)	mg/kg	3.1	0.50	4.3	0.50	2.7	0.50	A677124	3.7	0.50	A676884
Total Copper (Cu)	mg/kg	3.6	1.0	5.8	1.0	5.4	1.0	A677124	5.7	1.0	A676884
Total Lead (Pb)	mg/kg	3.0	0.50	3.7	0.50	3.4	0.50	A677124	5.1	0.50	A676884
Total Mercury (Hg)	mg/kg	<0.050	0.050	<0.050	0.050	0.053	0.050	A677124	<0.050	0.050	A676884
Total Molybdenum (Mo)	mg/kg	0.76	0.40	0.55	0.40	0.88	0.40	A677124	0.65	0.40	A676884
Total Nickel (Ni)	mg/kg	8.4	1.0	12	1.0	10	1.0	A677124	11	1.0	A676884
Total Selenium (Se)	mg/kg	<0.50	0.50	<0.50	0.50	0.55	0.50	A677124	<0.50	0.50	A676884
Total Silver (Ag)	mg/kg	<0.20	0.20	<0.20	0.20	<0.20	0.20	A677124	<0.20	0.20	A676884
Total Thallium (Tl)	mg/kg	<0.10	0.10	<0.10	0.10	<0.10	0.10	A677124	<0.10	0.10	A676884
Total Tin (Sn)	mg/kg	<1.0	1.0	<1.0	1.0	<1.0	1.0	A677124	<1.0	1.0	A676884
Total Uranium (U)	mg/kg	0.30	0.20	0.39	0.20	0.41	0.20	A677124	0.37	0.20	A676884
Total Vanadium (V)	mg/kg	11	1.0	15	1.0	14	1.0	A677124	20	1.0	A676884
Total Zinc (Zn)	mg/kg	29	10	47	10	23	10	A677124	34	10	A676884

RDL = Reportable Detection Limit

(1) Detection limits raised based on sample weight used for analysis.

(2) Detection limits raised due to high moisture content, samples contain => 50% moisture.



CCME REGULATED METALS - SOILS (SOIL)

Bureau Veritas ID		AZF957			AZF958		AZF959	AZF959		
Sampling Date		2022/08/06			2022/08/06		2022/08/07	2022/08/07		
		15:35			16:20		08:40	08:40		
COC Number		1 of 1			1 of 1		1 of 1	1 of 1		
	UNITS	MW22-43-01 Lab-Dup	RDL	QC Batch	BH22-45-01	RDL	BH22-46-01	BH22-46-01 Lab-Dup	RDL	QC Batch
Elements										
Soluble (Hot water) Boron (B)	mg/kg	N/A	0.10	A677176	1.0 (1)	0.30	1.6 (1)	1.6	0.30	A678625
Hex. Chromium (Cr 6+)	mg/kg	<0.080	0.080	A677150	<0.18 (2)	0.18	<0.27 (2)	N/A	0.27	A677150
Total Antimony (Sb)	mg/kg	N/A	0.50	A676884	<1.0	1.0	<1.0	<1.0	1.0	A678276
Total Arsenic (As)	mg/kg	N/A	1.0	A676884	3.5	2.0	2.6	2.7	2.0	A678276
Total Barium (Ba)	mg/kg	N/A	1.0	A676884	230	2.0	250	260	2.0	A678276
Total Beryllium (Be)	mg/kg	N/A	0.40	A676884	<0.80	0.80	<0.80	<0.80	0.80	A678276
Total Cadmium (Cd)	mg/kg	N/A	0.050	A676884	0.12	0.10	0.18	0.18	0.10	A678276
Total Chromium (Cr)	mg/kg	N/A	1.0	A676884	8.6	2.0	9.0	11	2.0	A678276
Total Cobalt (Co)	mg/kg	N/A	0.50	A676884	3.0	1.0	2.3	2.4	1.0	A678276
Total Copper (Cu)	mg/kg	N/A	1.0	A676884	5.4	2.0	6.2	7.2	2.0	A678276
Total Lead (Pb)	mg/kg	N/A	0.50	A676884	4.0	1.0	3.0	3.1	1.0	A678276
Total Mercury (Hg)	mg/kg	N/A	0.050	A676884	<0.10	0.10	<0.10	<0.10	0.10	A678276
Total Molybdenum (Mo)	mg/kg	N/A	0.40	A676884	<0.80	0.80	0.91	1.0	0.80	A678276
Total Nickel (Ni)	mg/kg	N/A	1.0	A676884	9.7	2.0	9.0	11	2.0	A678276
Total Selenium (Se)	mg/kg	N/A	0.50	A676884	<1.0	1.0	<1.0	<1.0	1.0	A678276
Total Silver (Ag)	mg/kg	N/A	0.20	A676884	<0.40	0.40	<0.40	<0.40	0.40	A678276
Total Thallium (Tl)	mg/kg	N/A	0.10	A676884	<0.20	0.20	<0.20	<0.20	0.20	A678276
Total Tin (Sn)	mg/kg	N/A	1.0	A676884	<2.0	2.0	<2.0	<2.0	2.0	A678276
Total Uranium (U)	mg/kg	N/A	0.20	A676884	<0.40	0.40	<0.40	0.41	0.40	A678276
Total Vanadium (V)	mg/kg	N/A	1.0	A676884	15	2.0	11	12	2.0	A678276
Total Zinc (Zn)	mg/kg	N/A	10	A676884	<20	20	49	52	20	A678276

RDL = Reportable Detection Limit

Lab-Dup = Laboratory Initiated Duplicate

N/A = Not Applicable

(1) Detection limits raised based on sample weight used for analysis.

(2) Detection limits raised due to high moisture content, samples contain => 50% moisture.



SEMIVOLATILE ORGANICS BY GC-MS (SOIL)

	-									
Bureau Veritas ID		AZF954		AZF955		AZF956		AZF957		
Sampling Date		2022/08/06 14:50		2022/08/06 14:55		2022/08/06 16:10		2022/08/06 15:35		
COC Number		1 of 1		1 of 1		1 of 1		1 of 1		
	UNITS	BH22-42-01	RDL	BH22-42-02	RDL	BH22-44-01	RDL	MW22-43-01	RDL	QC Batch
Polycyclic Aromatics										
Acenaphthene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	<0.012 (1)	0.012	<0.0050	0.0050	A673482
B[a]P TPE Total Potency Equivalents	mg/kg	<0.019	0.019	<0.0071	0.0071	<0.016	0.016	< 0.0071	0.0071	A676126
Acenaphthylene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	<0.012 (1)	0.012	<0.0050	0.0050	A673482
Acridine	mg/kg	<0.027 (1)	0.027	0.015 (2)	0.010	0.026 (3)	0.023	<0.010	0.010	A673482
Anthracene	mg/kg	<0.011 (1)	0.011	<0.0040	0.0040	<0.0092 (1)	0.0092	<0.0040	0.0040	A673482
Benzo(a)anthracene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	<0.012 (1)	0.012	<0.0050	0.0050	A673482
Benzo(b&j)fluoranthene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	<0.012 (1)	0.012	<0.0050	0.0050	A673482
Benzo(k)fluoranthene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	<0.012 (1)	0.012	<0.0050	0.0050	A673482
Benzo(g,h,i)perylene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	<0.012 (1)	0.012	<0.0050	0.0050	A673482
Benzo(c)phenanthrene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	<0.012 (1)	0.012	<0.0050	0.0050	A673482
Benzo(a)pyrene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	<0.012 (1)	0.012	<0.0050	0.0050	A673482
Benzo(e)pyrene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	<0.012 (1)	0.012	<0.0050	0.0050	A673482
Chrysene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	<0.012 (1)	0.012	<0.0050	0.0050	A673482
Dibenz(a,h)anthracene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	<0.012 (1)	0.012	<0.0050	0.0050	A673482
Fluoranthene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	<0.012 (1)	0.012	<0.0050	0.0050	A673482
Fluorene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	0.020 (1)	0.012	0.012	0.0050	A673482
Indeno(1,2,3-cd)pyrene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	<0.012 (1)	0.012	<0.0050	0.0050	A673482
1-Methylnaphthalene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	<0.012 (1)	0.012	<0.0050	0.0050	A673482
2-Methylnaphthalene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	<0.012 (1)	0.012	<0.0050	0.0050	A673482
Naphthalene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	<0.012 (1)	0.012	<0.0050	0.0050	A673482
Phenanthrene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	0.013 (1)	0.012	<0.0050	0.0050	A673482
Perylene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	<0.012 (1)	0.012	<0.0050	0.0050	A673482
Pyrene	mg/kg	<0.014 (1)	0.014	<0.0050	0.0050	<0.012 (1)	0.012	<0.0050	0.0050	A673482
Quinoline	mg/kg	<0.027 (1)	0.027	<0.010	0.010	<0.023 (1)	0.023	<0.010	0.010	A673482
Surrogate Recovery (%)										
D10-ANTHRACENE (sur.)	%	92	N/A	89	N/A	96	N/A	94	N/A	A673482
RDI - Reportable Detection Limit	•						•	-	•	

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Detection limits raised due to high moisture content, sample contains => 50% moisture.

(2) Qualifying ion outside of acceptance criteria. Results are tentatively identified and potentially biased high.

(3) Qualifying ion outside of acceptance criteria. Results are tentatively identified and potentially biased high. In addition, detection limits raised due to high moisture content, sample contains => 50% moisture.



SEMIVOLATILE ORGANICS BY GC-MS (SOIL)

Bureau Veritas ID		AZF954		AZF955		AZF956		AZF957		
Sampling Date		2022/08/06 14:50		2022/08/06 14:55		2022/08/06 16:10		2022/08/06 15:35		
COC Number		1 of 1		1 of 1		1 of 1		1 of 1		
	UNITS	BH22-42-01	RDL	BH22-42-02	RDL	BH22-44-01	RDL	MW22-43-01	RDL	QC Batch
D8-ACENAPHTHYLENE (sur.)	%	87	N/A	85	N/A	90	N/A	90	N/A	A673482
D8-NAPHTHALENE (sur.)	%	80	N/A	76	N/A	81	N/A	81	N/A	A673482
TERPHENYL-D14 (sur.)	%	113	N/A	112	N/A	121	N/A	119	N/A	A673482



Bureau Veritas ID		AZF958			AZF959		
Sampling Date		2022/08/06			2022/08/07		
		16:20			08:40		
COC Number		1 of 1			1 of 1		
	UNITS	BH22-45-01	RDL	QC Batch	BH22-46-01	RDL	QC Batch
Polycyclic Aromatics							
Acenaphthene	mg/kg	<0.011 (1)	0.011	A673482	<0.017 (1)	0.017	A674718
B[a]P TPE Total Potency Equivalents	mg/kg	<0.016	0.016	A676126	<0.024	0.024	A676126
Acenaphthylene	mg/kg	<0.011 (1)	0.011	A673482	<0.017 (1)	0.017	A674718
Acridine	mg/kg	<0.022 (1)	0.022	A673482	<0.034 (1)	0.034	A674718
Anthracene	mg/kg	<0.0088 (1)	0.0088	A673482	<0.014 (1)	0.014	A674718
Benzo(a)anthracene	mg/kg	<0.011 (1)	0.011	A673482	<0.017 (1)	0.017	A674718
Benzo(b&j)fluoranthene	mg/kg	<0.011 (1)	0.011	A673482	<0.017 (1)	0.017	A674718
Benzo(k)fluoranthene	mg/kg	<0.011 (1)	0.011	A673482	<0.017 (1)	0.017	A674718
Benzo(g,h,i)perylene	mg/kg	0.036 (1)	0.011	A673482	0.031 (1)	0.017	A674718
Benzo(c)phenanthrene	mg/kg	<0.011 (1)	0.011	A673482	<0.017 (1)	0.017	A674718
Benzo(a)pyrene	mg/kg	<0.011 (1)	0.011	A673482	<0.017 (1)	0.017	A674718
Benzo(e)pyrene	mg/kg	<0.011 (1)	0.011	A673482	<0.017 (1)	0.017	A674718
Chrysene	mg/kg	<0.011 (1)	0.011	A673482	<0.017 (1)	0.017	A674718
Dibenz(a,h)anthracene	mg/kg	<0.011 (1)	0.011	A673482	<0.017 (1)	0.017	A674718
Fluoranthene	mg/kg	<0.011 (1)	0.011	A673482	<0.017 (1)	0.017	A674718
Fluorene	mg/kg	0.037 (1)	0.011	A673482	0.086 (1)	0.017	A674718
Indeno(1,2,3-cd)pyrene	mg/kg	<0.011 (1)	0.011	A673482	<0.017 (1)	0.017	A674718
1-Methylnaphthalene	mg/kg	<0.011 (1)	0.011	A673482	<0.017 (1)	0.017	A674718
2-Methylnaphthalene	mg/kg	<0.011 (1)	0.011	A673482	<0.017 (1)	0.017	A674718
Naphthalene	mg/kg	<0.011 (1)	0.011	A673482	<0.017 (1)	0.017	A674718
Phenanthrene	mg/kg	<0.011 (1)	0.011	A673482	<0.017 (1)	0.017	A674718
Perylene	mg/kg	<0.011 (1)	0.011	A673482	<0.017 (1)	0.017	A674718
Pyrene	mg/kg	<0.011 (1)	0.011	A673482	<0.017 (1)	0.017	A674718
Quinoline	mg/kg	<0.022 (1)	0.022	A673482	<0.034 (1)	0.034	A674718
Surrogate Recovery (%)		-					
D10-ANTHRACENE (sur.)	%	94	N/A	A673482	95	N/A	A674718
D8-ACENAPHTHYLENE (sur.)	%	89	N/A	A673482	89	N/A	A674718
D8-NAPHTHALENE (sur.)	%	89	N/A	A673482	86	N/A	A674718
RDL = Reportable Detection Limit							
N/A = Not Applicable							

SEMIVOLATILE ORGANICS BY GC-MS (SOIL)

N/A = Not Applicable

(1) Detection limits raised due to high moisture content, sample contains => 50% moisture.



SEMIVOLATILE ORGANICS BY GC-MS (SOIL)

Bureau Veritas ID		AZF958			AZF959		
Sampling Date		2022/08/06 16:20			2022/08/07 08:40		
COC Number		1 of 1			1 of 1		
	UNITS	BH22-45-01	RDL	QC Batch	BH22-46-01	RDL	QC Batch
TERPHENYL-D14 (sur.)	%	134 (1)	N/A	A673482	136 (1)	N/A	A674718
RDL = Reportable Detection Limit	•						•

N/A = Not Applicable

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



GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt
Package 17.3°C
Version #2: Report reissued to amend client sample ID on AZF957 from BH22-43-01 to MW22-43-01 as per the original Chain of Custody.
Version 3: Report reissued to include Chromatogram analysis on below samples as per client request received 2022/08/18. AZF958/BH22-45-01 AZF959/BH22-46-01
AZF961/DUP A
CCME REGULATED METALS - SOILS (SOIL) Comments
Sample AZF958 [BH22-45-01] Elements by ICPMS - Soils: Detection limits raised due to sample matrix.
Sample AZF959 [BH22-46-01] Elements by ICPMS - Soils: Detection limits raised due to sample matrix.
Results relate only to the items tested.



QUALITY ASSURANCE REPORT

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A673482	NK3	Matrix Spike	D10-ANTHRACENE (sur.)	2022/08/10		106	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2022/08/10		101	%	50 - 130
			D8-NAPHTHALENE (sur.)	2022/08/10		97	%	50 - 130
			TERPHENYL-D14 (sur.)	2022/08/10		134 (1)	%	50 - 130
			Acenaphthene	2022/08/10		90	%	50 - 130
			Acenaphthylene	2022/08/10		88	%	50 - 130
			Acridine	2022/08/10		66	%	50 - 130
			Anthracene	2022/08/10		91	%	50 - 130
			Benzo(a)anthracene	2022/08/10		108	%	50 - 130
			Benzo(b&j)fluoranthene	2022/08/10		105	%	50 - 130
			Benzo(k)fluoranthene	2022/08/10		98	%	50 - 130
			Benzo(g,h,i)perylene	2022/08/10		96	%	50 - 130
			Benzo(c)phenanthrene	2022/08/10		108	%	50 - 130
			Benzo(a)pyrene	2022/08/10		101	%	50 - 130
			Benzo(e)pyrene	2022/08/10		92	%	50 - 130
			Chrysene	2022/08/10		99	%	50 - 130
			Dibenz(a,h)anthracene	2022/08/10		98	%	50 - 130
			Fluoranthene	2022/08/10		99	%	50 - 130
			Fluorene	2022/08/10		95	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2022/08/10		96	%	50 - 130
			1-Methylnaphthalene	2022/08/10		74	%	50 - 130
			2-Methylnaphthalene	2022/08/10		96	%	50 - 130
			Naphthalene	2022/08/10		88	%	50 - 130
			Phenanthrene	2022/08/10		93	%	50 - 130
			Perylene	2022/08/10		85	%	50 - 130
			Pyrene	2022/08/10		98	%	50 - 130
			Quinoline	2022/08/10		82	%	50 - 130
A673482	NK3	Spiked Blank	D10-ANTHRACENE (sur.)	2022/08/10		99	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2022/08/10		95	%	50 - 130
			D8-NAPHTHALENE (sur.)	2022/08/10		93	%	50 - 130
			TERPHENYL-D14 (sur.)	2022/08/10		122	%	50 - 130
			Acenaphthene	2022/08/10		94	%	50 - 130
			Acenaphthylene	2022/08/10		92	%	50 - 130
			Acridine	2022/08/10		71	%	50 - 130
			Anthracene	2022/08/10		92	%	50 - 130
			Benzo(a)anthracene	2022/08/10		111	%	50 - 130
			Benzo(b&j)fluoranthene	2022/08/10		109	%	50 - 130
			Benzo(k)fluoranthene	2022/08/10		106	%	50 - 130
			Benzo(g,h,i)perylene	2022/08/10		102	%	50 - 130
			Benzo(c)phenanthrene	2022/08/10		112	%	50 - 130
			Benzo(a)pyrene	2022/08/10		104	%	50 - 130
			Benzo(e)pyrene	2022/08/10		95	%	50 - 130
			Chrysene	2022/08/10		103	%	50 - 130
			Dibenz(a,h)anthracene	2022/08/10		101	%	50 - 130
			Fluoranthene	2022/08/10		102	%	50 - 130
			Fluorene	2022/08/10		99	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2022/08/10		96	%	50 - 130
			1-Methylnaphthalene	2022/08/10		78	%	50 - 130
			2-Methylnaphthalene	2022/08/10		101	%	50 - 130
			Naphthalene	2022/08/10		92	%	50 - 130
			Phenanthrene	2022/08/10		98	%	50 - 130
			Perylene	2022/08/10		89	%	50 - 130



QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Pyrene	2022/08/10		101	%	50 - 130
			Quinoline	2022/08/10		90	%	50 - 130
A673482	NK3	Method Blank	D10-ANTHRACENE (sur.)	2022/08/10		99	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2022/08/10		89	%	50 - 130
			D8-NAPHTHALENE (sur.)	2022/08/10		88	%	50 - 130
			TERPHENYL-D14 (sur.)	2022/08/10		129	%	50 - 130
			Acenaphthene	2022/08/10	<0.0050		mg/kg	
			Acenaphthylene	2022/08/10	<0.0050		mg/kg	
			Acridine	2022/08/10	<0.010		mg/kg	
			Anthracene	2022/08/10	<0.0040		mg/kg	
			Benzo(a)anthracene	2022/08/10	<0.0050		mg/kg	
			Benzo(b&j)fluoranthene	2022/08/10	<0.0050		mg/kg	
			Benzo(k)fluoranthene	2022/08/10	<0.0050		mg/kg	
			Benzo(g,h,i)perylene	2022/08/10	<0.0050		mg/kg	
			Benzo(c)phenanthrene	2022/08/10	<0.0050		mg/kg	
			Benzo(a)pyrene	2022/08/10	<0.0050		mg/kg	
			Benzo(e)pyrene	2022/08/10	<0.0050		mg/kg	
			Chrysene	2022/08/10	<0.0050		mg/kg	
			Dibenz(a,h)anthracene	2022/08/10	<0.0050		mg/kg	
			Fluoranthene	2022/08/10	<0.0050		mg/kg	
			Fluorene	2022/08/10	<0.0050		mg/kg	
			Indeno(1,2,3-cd)pyrene	2022/08/10	<0.0050		mg/kg	
			1-Methylnaphthalene	2022/08/10	<0.0050		mg/kg	
			2-Methylnaphthalene	2022/08/10	<0.0050		mg/kg	
			Naphthalene	2022/08/10	<0.0050		mg/kg	
			Phenanthrene	2022/08/10	<0.0050		mg/kg	
			Perylene	2022/08/10	<0.0050		mg/kg	
			Pyrene	2022/08/10	<0.0050		mg/kg	
			Quinoline	2022/08/10	<0.010		mg/kg	
A673482	NK3	RPD	Acenaphthene	2022/08/10	NC		%	50
			Acenaphthylene	2022/08/10	NC		%	50
			Acridine	2022/08/10	NC		%	50
			Anthracene	2022/08/10	NC		%	50
			Benzo(a)anthracene	2022/08/10	NC		%	50
			Benzo(b&j)fluoranthene	2022/08/10	NC		%	50
			Benzo(k)fluoranthene	2022/08/10	NC		%	50
			Benzo(g,h,i)perylene	2022/08/10	NC		%	50
			Benzo(c)phenanthrene	2022/08/10	NC		%	50
			Benzo(a)pyrene	2022/08/10	NC		%	50
			Benzo(e)pyrene	2022/08/10	NC		%	50
			Chrysene	2022/08/10	NC		%	50
			Dibenz(a,h)anthracene	2022/08/10	NC		%	50
			Fluoranthene	2022/08/10	NC		%	50
			Fluorene	2022/08/10	NC		%	50
			Indeno(1,2,3-cd)pyrene	2022/08/10	NC		%	50
			1-Methylnaphthalene	2022/08/10	NC		%	50 50
			2-Methylnaphthalene	2022/08/10	NC		%	50
			Naphthalene	2022/08/10	NC 24		%	50
			Phenanthrene	2022/08/10	34 NC		%	50
			Perylene	2022/08/10	NC 7.5		%	50 50
			Pyrene Quinoline	2022/08/10 2022/08/10			% %	50 50
			Quinoline		NC		70	50



QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A674718	NK3	Matrix Spike	D10-ANTHRACENE (sur.)	2022/08/11		95	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2022/08/11		92	%	50 - 130
			D8-NAPHTHALENE (sur.)	2022/08/11		85	%	50 - 130
			TERPHENYL-D14 (sur.)	2022/08/11		117	%	50 - 130
			Acenaphthene	2022/08/11		77	%	50 - 130
			Acenaphthylene	2022/08/11		80	%	50 - 130
			Acridine	2022/08/11		57	%	50 - 130
			Anthracene	2022/08/11		84	%	50 - 130
			Benzo(a)anthracene	2022/08/11		85	%	50 - 130
			Benzo(b&j)fluoranthene	2022/08/11		82	%	50 - 130
			Benzo(k)fluoranthene	2022/08/11		74	%	50 - 130
			Benzo(g,h,i)perylene	2022/08/11		74	%	50 - 130
			Benzo(c)phenanthrene	2022/08/11		82	%	50 - 130
			Benzo(a)pyrene	2022/08/11		82	%	50 - 130
			Benzo(e)pyrene	2022/08/11		71	%	50 - 130
			Chrysene	2022/08/11		73	%	50 - 130
			Dibenz(a,h)anthracene	2022/08/11		79	%	50 - 130
			Fluoranthene	2022/08/11		82	%	50 - 130
			Fluorene	2022/08/11		81	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2022/08/11		83	%	50 - 130
			1-Methylnaphthalene	2022/08/11		65	%	50 - 130
			2-Methylnaphthalene	2022/08/11		84	%	50 - 130
			Naphthalene	2022/08/11		75	%	50 - 130
			Phenanthrene	2022/08/11		80	%	50 - 130
			Perylene	2022/08/11		69	%	50 - 130
			Pyrene	2022/08/11		80	%	50 - 130
			Quinoline	2022/08/11		86	%	50 - 130
A674718	NK3	Spiked Blank	D10-ANTHRACENE (sur.)	2022/08/11		101	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2022/08/11		97	%	50 - 130
			D8-NAPHTHALENE (sur.)	2022/08/11		88	%	50 - 130
			TERPHENYL-D14 (sur.)	2022/08/11		129	%	50 - 130
			Acenaphthene	2022/08/11		78	%	50 - 130
			Acenaphthylene	2022/08/11		79	%	50 - 130
			Acridine	2022/08/11		61	%	50 - 130
			Anthracene	2022/08/11		84	%	50 - 130
			Benzo(a)anthracene	2022/08/11		89	%	50 - 130
			Benzo(b&j)fluoranthene	2022/08/11		83	%	50 - 130
			Benzo(k)fluoranthene	2022/08/11		80	%	50 - 130
			Benzo(g,h,i)perylene	2022/08/11		78	%	50 - 130
			Benzo(c)phenanthrene	2022/08/11		87	%	50 - 130
			Benzo(a)pyrene	2022/08/11		88	%	50 - 130
			Benzo(e)pyrene	2022/08/11		75	%	50 - 130
			Chrysene	2022/08/11		78	%	50 - 130
			Dibenz(a,h)anthracene	2022/08/11		79	%	50 - 130
			Fluoranthene	2022/08/11		83	%	50 - 130
			Fluorene	2022/08/11		83	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2022/08/11		80	%	50 - 130
			1-Methylnaphthalene	2022/08/11		65	%	50 - 130
			2-Methylnaphthalene	2022/08/11		83	%	50 - 130
			Naphthalene	2022/08/11		75	%	50 - 130
							,.	
			Phenanthrene	2022/08/11		80	%	50 - 130



QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Pyrene	2022/08/11		81	%	50 - 130
			Quinoline	2022/08/11		87	%	50 - 130
A674718	NK3	Method Blank	D10-ANTHRACENE (sur.)	2022/08/11		102	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2022/08/11		95	%	50 - 130
			D8-NAPHTHALENE (sur.)	2022/08/11		90	%	50 - 130
			TERPHENYL-D14 (sur.)	2022/08/11		124	%	50 - 130
			Acenaphthene	2022/08/11	<0.0050		mg/kg	
			Acenaphthylene	2022/08/11	<0.0050		mg/kg	
			Acridine	2022/08/11	<0.010		mg/kg	
			Anthracene	2022/08/11	<0.0040		mg/kg	
			Benzo(a)anthracene	2022/08/11	<0.0050		mg/kg	
			Benzo(b&j)fluoranthene	2022/08/11	<0.0050		mg/kg	
			Benzo(k)fluoranthene	2022/08/11	<0.0050		mg/kg	
			Benzo(g,h,i)perylene	2022/08/11	<0.0050		mg/kg	
			Benzo(c)phenanthrene	2022/08/11	<0.0050		mg/kg	
			Benzo(a)pyrene	2022/08/11	<0.0050		mg/kg	
			Benzo(e)pyrene	2022/08/11	<0.0050		mg/kg	
			Chrysene	2022/08/11	<0.0050		mg/kg	
			Dibenz(a,h)anthracene	2022/08/11	<0.0050		mg/kg	
			Fluoranthene	2022/08/11	<0.0050		mg/kg	
			Fluorene	2022/08/11	<0.0050		mg/kg	
			Indeno(1,2,3-cd)pyrene	2022/08/11	<0.0050		mg/kg	
			1-Methylnaphthalene	2022/08/11	<0.0050		mg/kg	
			2-Methylnaphthalene	2022/08/11	<0.0050		mg/kg	
			Naphthalene	2022/08/11	<0.0050		mg/kg	
			Phenanthrene	2022/08/11	<0.0050		mg/kg	
			Perylene	2022/08/11	<0.0050		mg/kg	
			Pyrene	2022/08/11	<0.0050		mg/kg	
			Quinoline	2022/08/11	<0.010		mg/kg	
A674718	NK3	RPD	Acenaphthene	2022/08/11	NC		%	50
			Acenaphthylene	2022/08/11	NC		%	50
			Acridine	2022/08/11	NC		%	50
			Anthracene	2022/08/11	NC		%	50
			Benzo(a)anthracene	2022/08/11	NC		%	50
			Benzo(b&j)fluoranthene	2022/08/11	NC		%	50
			Benzo(k)fluoranthene	2022/08/11	NC		%	50
			Benzo(g,h,i)perylene	2022/08/11	NC		%	50
			Benzo(c)phenanthrene	2022/08/11	NC		%	50
			Benzo(a)pyrene	2022/08/11	NC		%	50
			Benzo(e)pyrene	2022/08/11	NC		%	50
			Chrysene	2022/08/11	NC		%	50
			Dibenz(a,h)anthracene	2022/08/11	NC		%	50
			Fluoranthene	2022/08/11	NC		%	50
			Fluorene	2022/08/11	NC		%	50
			Indeno(1,2,3-cd)pyrene	2022/08/11	NC		%	50
			1-Methylnaphthalene	2022/08/11	NC		%	50
			2-Methylnaphthalene	2022/08/11	12		%	50
			Naphthalene	2022/08/11	26		%	50
			Phenanthrene	2022/08/11	18		%	50
			Perylene	2022/08/11	NC		%	50
			Pyrene	2022/08/11	NC		%	50
			Quinoline	2022/08/11	NC		%	50
<u> </u>			Quinoine Dago 18 d		NC		/0	50



QUALITY ASSURANCE REPORT(CONT'D)

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A676506	CAU	Matrix Spike	O-TERPHENYL (sur.)	2022/08/11		140	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2022/08/11		141 (1)	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2022/08/11		134	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2022/08/11		140	%	60 - 140
A676506	CAU	Spiked Blank	O-TERPHENYL (sur.)	2022/08/11		94	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2022/08/11		88	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2022/08/11		93	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2022/08/11		93	%	60 - 140
A676506	CAU	Method Blank	O-TERPHENYL (sur.)	2022/08/11		102	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2022/08/11	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2022/08/11	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2022/08/11	<50		mg/kg	
A676506	CAU	RPD	F2 (C10-C16 Hydrocarbons)	2022/08/11	13		%	40
			F3 (C16-C34 Hydrocarbons)	2022/08/11	23		%	40
			F4 (C34-C50 Hydrocarbons)	2022/08/11	22		%	40
A676508	WLE	Method Blank	Moisture	2022/08/11	< 0.30		%	
A676508	WLE	RPD	Moisture	2022/08/11	2.5		%	20
A676514	WLE	Method Blank	Moisture	2022/08/11	<0.30		%	
A676514	WLE	RPD	Moisture	2022/08/11	11		%	20
A676660	NQU	QC Standard	Saturation %	2022/08/11		101	%	75 - 125
A676660	NQU	RPD	Saturation %	2022/08/11	8.0		%	12
A676662	LZ3	QC Standard	Soluble (CaCl2) pH	2022/08/11		98	%	97 - 103
A676662	LZ3	Spiked Blank	Soluble (CaCl2) pH	2022/08/11		100	%	97 - 103
A676662	LZ3	RPD	Soluble (CaCl2) pH	2022/08/11	0.29		%	N/A
A676666	WPK	Matrix Spike [AZF954-02]	1,4-Difluorobenzene (sur.)	2022/08/11		112	%	, 50 - 140
		··· · · · · · · · · · · · · · · · · ·	4-Bromofluorobenzene (sur.)	2022/08/11		80	%	50 - 140
			D10-o-Xylene (sur.)	2022/08/11		99	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2022/08/11		107	%	50 - 140
			Benzene	2022/08/11		98	%	50 - 140
			Toluene	2022/08/11		89	%	50 - 140
			Ethylbenzene	2022/08/11		83	%	50 - 140
			m & p-Xylene	2022/08/11		81	%	50 - 140
			o-Xylene	2022/08/11		78	%	50 - 140
			F1 (C6-C10)	2022/08/11		101	%	60 - 140
A676666	WPK	Spiked Blank	1,4-Difluorobenzene (sur.)	2022/08/11		121	%	50 - 140
			4-Bromofluorobenzene (sur.)	2022/08/11		100	%	50 - 140
			D10-o-Xylene (sur.)	2022/08/11		106	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2022/08/11		117	%	50 - 140
			Benzene	2022/08/11		104	%	60 - 130
			Toluene	2022/08/11		99	%	60 - 130
			Ethylbenzene	2022/08/11		86	%	60 - 130
			m & p-Xylene	2022/08/11		93	%	60 - 130
			o-Xylene	2022/08/11		83	%	60 - 130
			F1 (C6-C10)	2022/08/11		112	%	60 - 140
A676666	WPK	Method Blank	1,4-Difluorobenzene (sur.)	2022/08/11		130	%	50 - 140
			4-Bromofluorobenzene (sur.)	2022/08/11		93	%	50 - 140
			D10-o-Xylene (sur.)	2022/08/11		91	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2022/08/11		127	%	50 - 140
			Benzene	2022/08/11	<0.0050	127	mg/kg	30 IHU
			Toluene	2022/08/11	<0.0050		mg/kg	
			Ethylbenzene	2022/08/11	<0.030		mg/kg	
			m & p-Xylene	2022/08/11	<0.010		mg/kg	
				2022/00/11	×0.0 4 0		116/16	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			o-Xylene	2022/08/11	<0.020	,	mg/kg	
			F1 (C6-C10)	2022/08/11	<10		mg/kg	
A676666	WPK	RPD [AZF954-02]	Benzene	2022/08/11	NC		%	50
			Toluene	2022/08/11	NC (2)		%	50
			Ethylbenzene	2022/08/11	NC		%	50
			m & p-Xylene	2022/08/11	NC		%	50
			o-Xylene	2022/08/11	NC		%	50
			F1 (C6-C10)	2022/08/11	NC (2)		%	30
A676768	NQU	QC Standard	Saturation %	2022/08/11		99	%	75 - 125
A676768	NQU	RPD	Saturation %	2022/08/11	4.1		%	12
A676771	LZ3	QC Standard	Soluble (CaCl2) pH	2022/08/11		97	%	97 - 103
A676771	LZ3	Spiked Blank	Soluble (CaCl2) pH	2022/08/11		99	%	97 - 103
A676771	LZ3	RPD	Soluble (CaCl2) pH	2022/08/11	0.53		%	N/A
A676884	MKJ	Matrix Spike	Total Antimony (Sb)	2022/08/11		99	%	, 75 - 125
		•	Total Arsenic (As)	2022/08/11		96	%	75 - 125
			Total Barium (Ba)	2022/08/11		NC	%	75 - 125
			Total Beryllium (Be)	2022/08/11		98	%	75 - 125
			Total Cadmium (Cd)	2022/08/11		97	%	75 - 125
			Total Chromium (Cr)	2022/08/11		128 (1)	%	75 - 125
			Total Cobalt (Co)	2022/08/11		95	%	75 - 125
			Total Copper (Cu)	2022/08/11		95	%	75 - 125
			Total Lead (Pb)	2022/08/11		94	%	75 - 125
			Total Mercury (Hg)	2022/08/11		100	%	75 - 125
			Total Molybdenum (Mo)	2022/08/11		102	%	75 - 125
			Total Nickel (Ni)	2022/08/11		104	%	75 - 125
			Total Selenium (Se)	2022/08/11		97	%	75 - 125
			Total Silver (Ag)	2022/08/11		97	%	75 - 125
			Total Thallium (TI)	2022/08/11		95	%	75 - 125
			Total Tin (Sn)	2022/08/11		99	%	75 - 125
			Total Uranium (U)	2022/08/11		91	%	75 - 125
			Total Vanadium (V)	2022/08/11		119	%	75 - 125
			Total Zinc (Zn)	2022/08/11		NC	%	75 - 125
A676884	MKJ	QC Standard	Total Antimony (Sb)	2022/08/11		127	%	15 - 182
/ 0/ 000 1	11110	Qe Standard	Total Arsenic (As)	2022/08/11		114	%	53 - 147
			Total Barium (Ba)	2022/08/11		113	%	80 - 119
			Total Cadmium (Cd)	2022/08/11		111	%	72 - 128
			Total Chromium (Cr)	2022/08/11		113	%	59 - 141
			Total Cobalt (Co)	2022/08/11		108	%	58 - 142
			Total Copper (Cu)	2022/08/11		112	%	83 - 117
			Total Lead (Pb)	2022/08/11		119	%	79 - 121
			Total Molybdenum (Mo)	2022/08/11		131	%	67 - 133
			Total Nickel (Ni)	2022/08/11		119	%	79 - 121
			Total Silver (Ag)	2022/08/11		146	%	47 - 153
			Total Tin (Sn)	2022/08/11		109	%	67 - 133
			Total Uranium (U)	2022/08/11		103	%	07 - 133 77 - 123
			Total Vanadium (V)	2022/08/11		101	%	79 - 121
			Total Zinc (Zn)	2022/08/11		115	%	79 - 121 79 - 121
A676884	MKJ	Spiked Blank	Total Antimony (Sb)	2022/08/11		105	%	80 - 120
1070004	IVINJ		Total Arsenic (As)	2022/08/11		97	%	80 - 120 80 - 120
			Total Barium (Ba)	2022/08/11		97	%	80 - 120 80 - 120
			Total Beryllium (Be)	2022/08/11 2022/08/11		98 96	%	80 - 120 80 - 120
			Total Cadmium (Cd)	2022/08/11				
				2022/08/11		97	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Chromium (Cr)	2022/08/11		97	%	80 - 120
			Total Cobalt (Co)	2022/08/11		98	%	80 - 120
			Total Copper (Cu)	2022/08/11		98	%	80 - 120
			Total Lead (Pb)	2022/08/11		98	%	80 - 120
			Total Mercury (Hg)	2022/08/11		109	%	80 - 120
			Total Molybdenum (Mo)	2022/08/11		99	%	80 - 120
			Total Nickel (Ni)	2022/08/11		97	%	80 - 120
			Total Selenium (Se)	2022/08/11		101	%	80 - 120
			Total Silver (Ag)	2022/08/11		98	%	80 - 120
			Total Thallium (TI)	2022/08/11		98	%	80 - 120
			Total Tin (Sn)	2022/08/11		98	%	80 - 120
			Total Uranium (U)	2022/08/11		97	%	80 - 120
			Total Vanadium (V)	2022/08/11		98	%	80 - 120
			Total Zinc (Zn)	2022/08/11		99	%	80 - 120
A676884	MKJ	Method Blank	Total Antimony (Sb)	2022/08/11	<0.50		mg/kg	
			Total Arsenic (As)	2022/08/11	<1.0		mg/kg	
			Total Barium (Ba)	2022/08/11	<1.0		mg/kg	
			Total Beryllium (Be)	2022/08/11	<0.40		mg/kg	
			Total Cadmium (Cd)	2022/08/11	<0.050		mg/kg	
			Total Chromium (Cr)	2022/08/11	<1.0		mg/kg	
			Total Cobalt (Co)	2022/08/11	<0.50		mg/kg	
			Total Copper (Cu)	2022/08/11	<1.0		mg/kg	
			Total Lead (Pb)	2022/08/11	<0.50		mg/kg	
			Total Mercury (Hg)	2022/08/11	<0.050		mg/kg	
			Total Molybdenum (Mo)	2022/08/11	<0.40		mg/kg	
			Total Nickel (Ni)	2022/08/11	<1.0		mg/kg	
			Total Selenium (Se)	2022/08/11	<0.50		mg/kg	
			Total Silver (Ag)	2022/08/11	<0.20		mg/kg	
			Total Thallium (Tl)	2022/08/11	<0.10		mg/kg	
			Total Tin (Sn)	2022/08/11	<1.0		mg/kg	
			Total Uranium (U)	2022/08/11	<0.20		mg/kg	
			Total Vanadium (V)	2022/08/11	<1.0		mg/kg	
			Total Zinc (Zn)	2022/08/11	<10		mg/kg	
A676884	MKJ	RPD	Total Antimony (Sb)	2022/08/11	NC		%	30
			Total Arsenic (As)	2022/08/11	4.0		%	30
			Total Barium (Ba)	2022/08/11	0.54		%	35
			Total Beryllium (Be)	2022/08/11	5.7		%	30
			Total Cadmium (Cd)	2022/08/11	1.6		%	30
			Total Chromium (Cr)	2022/08/11	2.4		%	30
			Total Cobalt (Co)	2022/08/11	8.8		%	30
			Total Copper (Cu)	2022/08/11	2.5		%	30
			Total Lead (Pb)	2022/08/11	6.7		%	35
			Total Molybdenum (Mo)	2022/08/11	2.4		%	35
			Total Nickel (Ni)	2022/08/11	5.1		%	30
			Total Selenium (Se)	2022/08/11	NC		%	30
			Total Silver (Ag)	2022/08/11	NC		%	35
			Total Thallium (Tl)	2022/08/11	2.0		%	30
			Total Tin (Sn)	2022/08/11	NC		%	35
			Total Uranium (U)	2022/08/11	6.0		%	30
			Total Vanadium (V)	2022/08/11	0.28		%	30
			Total Zinc (Zn)	2022/08/11	8.3		%	30
A677124	MKJ	Matrix Spike	Total Antimony (Sb)	2022/08/11		93	%	75 - 125

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 Bureau Veritas
 Edmonton: 9331 - 48th Street T6B 2R4
 Telephone (780)577-7100
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QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
		4 • • / P •	Total Arsenic (As)	2022/08/11		92	%	75 - 125
			Total Barium (Ba)	2022/08/11		NC	%	75 - 125
			Total Beryllium (Be)	2022/08/11		94	%	75 - 125
			Total Cadmium (Cd)	2022/08/11		94	%	75 - 125
			Total Chromium (Cr)	2022/08/11		92	%	75 - 125
			Total Cobalt (Co)	2022/08/11		93	%	75 - 125
			Total Copper (Cu)	2022/08/11		92	%	75 - 125
			Total Lead (Pb)	2022/08/11		92	%	75 - 125
			Total Mercury (Hg)	2022/08/11		97	%	75 - 125
			Total Molybdenum (Mo)	2022/08/11		97	%	75 - 125
			Total Nickel (Ni)	2022/08/11		91	%	75 - 125
			Total Selenium (Se)	2022/08/11		98	%	75 - 125
			Total Silver (Ag)	2022/08/11		94	%	75 - 125
			Total Thallium (TI)	2022/08/11		93	%	75 - 125
			Total Tin (Sn)	2022/08/11		97	%	75 - 125
			Total Uranium (U)	2022/08/11		86	%	75 - 125
			Total Vanadium (V)	2022/08/11		93	%	75 - 125
			Total Zinc (Zn)	2022/08/11		NC	%	75 - 125
A677124	MKJ	QC Standard	Total Antimony (Sb)	2022/08/11		113	%	15 - 182
			Total Arsenic (As)	2022/08/11		97	%	53 - 147
			Total Barium (Ba)	2022/08/11		96	%	80 - 119
			Total Cadmium (Cd)	2022/08/11		94	%	72 - 128
			Total Chromium (Cr)	2022/08/11		93	%	59 - 141
			Total Cobalt (Co)	2022/08/11		91	%	58 - 142
			Total Copper (Cu)	2022/08/11		96	%	83 - 117
			Total Lead (Pb)	2022/08/11		103	%	79 - 121
			Total Molybdenum (Mo)	2022/08/11		116	%	67 - 133
			Total Nickel (Ni)	2022/08/11		102	%	79 - 121
			Total Silver (Ag)	2022/08/11		103	%	47 - 153
			Total Tin (Sn)	2022/08/11		94	%	67 - 133
			Total Uranium (U)	2022/08/11		84	%	77 - 123
			Total Vanadium (V)	2022/08/11		97	%	79 - 121
			Total Zinc (Zn)	2022/08/11		95	%	79 - 121
A677124	MKJ	Spiked Blank	Total Antimony (Sb)	2022/08/11		107	%	80 - 120
			Total Arsenic (As)	2022/08/11		98	%	80 - 120
			Total Barium (Ba)	2022/08/11		100	%	80 - 120
			Total Beryllium (Be)	2022/08/11		99	%	80 - 120
			Total Cadmium (Cd)	2022/08/11		100	%	80 - 120
			Total Chromium (Cr)	2022/08/11		99	%	80 - 120
			Total Cobalt (Co)	2022/08/11		99	%	80 - 120
			Total Copper (Cu)	2022/08/11		99	%	80 - 120
			Total Lead (Pb)	2022/08/11		100	%	80 - 120
			Total Mercury (Hg)	2022/08/11		112	%	80 - 120
			Total Molybdenum (Mo)	2022/08/11		102	%	80 - 120
			Total Nickel (Ni)	2022/08/11		100	%	80 - 120
			Total Selenium (Se)	2022/08/11		103	%	80 - 120
			Total Silver (Ag)	2022/08/11		100	%	80 - 120
			Total Thallium (TI)	2022/08/11		100	%	80 - 120
			Total Tin (Sn)	2022/08/11		101	%	80 - 120
			Total Uranium (U)	2022/08/11		99	%	80 - 120
			Total Vanadium (V)	2022/08/11		100	%	80 - 120
			Total Zinc (Zn)	2022/08/11		100	%	80 - 120



QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A677124	MKJ	Method Blank	Total Antimony (Sb)	2022/08/11	<0.50	Recovery	mg/kg	QC LIIIIIS
A077124	IVIIL	Method Blank	Total Arsenic (As)	2022/08/11	<1.0		mg/kg	
			Total Barium (Ba)	2022/08/11	<1.0		mg/kg	
			Total Beryllium (Be)	2022/08/11	<0.40		mg/kg	
			Total Cadmium (Cd)	2022/08/11	<0.40		mg/kg	
			Total Chromium (Cr)	2022/08/11	<1.0		mg/kg	
			Total Cobalt (Co)	2022/08/11	<0.50		mg/kg	
			Total Copper (Cu)	2022/08/11	<1.0		mg/kg	
			Total Lead (Pb)	2022/08/11	<0.50		mg/kg	
			Total Mercury (Hg)	2022/08/11	<0.050		mg/kg	
			Total Molybdenum (Mo)	2022/08/11	<0.050		mg/kg	
			Total Nickel (Ni)	2022/08/11	<1.0			
				2022/08/11	<0.50		mg/kg	
			Total Selenium (Se) Total Silver (Ag)	2022/08/11	<0.30		mg/kg	
			Total Thallium (TI)	2022/08/11	<0.20		mg/kg	
				2022/08/11	<0.10		mg/kg	
			Total Tin (Sn)				mg/kg	
			Total Uranium (U)	2022/08/11	<0.20		mg/kg	
			Total Vanadium (V)	2022/08/11 2022/08/11	<1.0		mg/kg	
AC77124	NAIZI		Total Zinc (Zn)	2022/08/11	<10		mg/kg	20
A677124	MKJ	RPD	Total Antimony (Sb)		11		%	30
			Total Arsenic (As)	2022/08/11	0.52		%	30
			Total Barium (Ba)	2022/08/11	4.1		%	35
			Total Beryllium (Be)	2022/08/11	1.7		%	30
			Total Cadmium (Cd)	2022/08/11	9.4		%	30
			Total Chromium (Cr)	2022/08/11	2.7		%	30
			Total Cobalt (Co)	2022/08/11	5.8		%	30
			Total Copper (Cu)	2022/08/11	0.63		%	30
			Total Lead (Pb)	2022/08/11	1.3		%	35
			Total Mercury (Hg)	2022/08/11	10		%	35
			Total Molybdenum (Mo)	2022/08/11	1.7		%	35
			Total Nickel (Ni)	2022/08/11	4.4		%	30
			Total Selenium (Se)	2022/08/11	4.1		%	30
			Total Silver (Ag)	2022/08/11	NC		%	35
			Total Thallium (TI)	2022/08/11	0.45		%	30
			Total Tin (Sn)	2022/08/11	NC		%	35
			Total Uranium (U)	2022/08/11	0.82		%	30
			Total Vanadium (V)	2022/08/11	0.92		%	30
			Total Zinc (Zn)	2022/08/11	0.29		%	30
A677150	FM0	Matrix Spike [AZF957-03]	Hex. Chromium (Cr 6+)	2022/08/11		84	%	75 - 125
A677150	FM0	Spiked Blank	Hex. Chromium (Cr 6+)	2022/08/11		102	%	80 - 120
A677150	FM0	Method Blank	Hex. Chromium (Cr 6+)	2022/08/11	<0.080		mg/kg	
A677150	FM0	RPD [AZF957-03]	Hex. Chromium (Cr 6+)	2022/08/11	NC		%	35
A677176	MPU	Matrix Spike	Soluble (Hot water) Boron (B)	2022/08/11		108	%	75 - 125
A677176	MPU	Spiked Blank	Soluble (Hot water) Boron (B)	2022/08/11		102	%	80 - 120
A677176	MPU	Method Blank	Soluble (Hot water) Boron (B)	2022/08/11	<0.10		mg/kg	
A677176	MPU	RPD	Soluble (Hot water) Boron (B)	2022/08/11	27		%	35
A677260	PL	Matrix Spike	Soluble Calcium (Ca)	2022/08/11		100	%	75 - 125
			Soluble Magnesium (Mg)	2022/08/11		103	%	75 - 125
			Soluble Sodium (Na)	2022/08/11		95	%	75 - 125
			Soluble Potassium (K)	2022/08/11		98	%	75 - 125
A677260	PL	QC Standard	Soluble Calcium (Ca)	2022/08/11		99	%	75 - 125
			Soluble Magnesium (Mg)	2022/08/11		97	%	75 - 125

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QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Soluble Sodium (Na)	2022/08/11		91	%	75 - 125
			Soluble Potassium (K)	2022/08/11		95	%	75 - 125
			Soluble Sulphate (SO4)	2022/08/11		97	%	75 - 125
A677260	PL	Spiked Blank	Soluble Calcium (Ca)	2022/08/11		103	%	80 - 120
			Soluble Magnesium (Mg)	2022/08/11		103	%	80 - 120
			Soluble Sodium (Na)	2022/08/11		95	%	80 - 120
			Soluble Potassium (K)	2022/08/11		98	%	80 - 120
A677260	PL	Method Blank	Soluble Calcium (Ca)	2022/08/11	<1.5		mg/L	
			Soluble Magnesium (Mg)	2022/08/11	<1.0		mg/L	
			Soluble Sodium (Na)	2022/08/11	<2.5		mg/L	
			Soluble Potassium (K)	2022/08/11	<1.3		mg/L	
			Soluble Sulphate (SO4)	2022/08/11	<5.0		mg/L	
A677260	PL	RPD	Soluble Calcium (Ca)	2022/08/11	3.7		%	30
/10//200			Soluble Magnesium (Mg)	2022/08/11	3.7		%	30
			Soluble Sodium (Na)	2022/08/11	3.5		%	30
			Soluble Potassium (K)	2022/08/11	4.1		%	30
			Soluble Sulphate (SO4)	2022/08/11	5.3		%	30
A677396	PL	Matrix Spike	Soluble Calcium (Ca)	2022/08/11	5.5	96	%	75 - 125
//0//0000		matikopike	Soluble Magnesium (Mg)	2022/08/11		101	%	75 - 125
			Soluble Sodium (Na)	2022/08/11		94	%	75 - 125
			Soluble Potassium (K)	2022/08/11		96	%	75 - 125
A677396	PL	QC Standard	Soluble Calcium (Ca)	2022/08/11		105	%	75 - 125
R077550		Qe Standard	Soluble Magnesium (Mg)	2022/08/11		103	%	75 - 125
			Soluble Sodium (Na)	2022/08/11		94	%	75 - 125
			Soluble Potassium (K)	2022/08/11		93	%	75 - 125
			Soluble Sulphate (SO4)	2022/08/11		101	%	75 - 125
A677396	PL	Spiked Blank	Soluble Calcium (Ca)	2022/08/11		101	%	80 - 120
A077330		Spiked Blank	Soluble Magnesium (Mg)	2022/08/11		100	%	80 - 120
			Soluble Sodium (Na)	2022/08/11		94	%	80 - 120
			Soluble Potassium (K)	2022/08/11		96	%	80 - 120
A677396	PL	Method Blank	Soluble Calcium (Ca)	2022/08/11	<1.5	50	mg/L	80 - 120
A077330		Method Blank	Soluble Magnesium (Mg)	2022/08/11	<1.0		mg/L	
			Soluble Magnesium (Mg)	2022/08/11	<2.5		mg/L	
			Soluble Potassium (K)	2022/08/11	<1.3		mg/L	
			Soluble Sulphate (SO4)	2022/08/11	<5.0		mg/L	
A677396	PL	RPD	Soluble Calcium (Ca)	2022/08/11	0.014		111g/ L %	30
A077390	F L	INF D	Soluble Magnesium (Mg)	2022/08/11	1.3		%	30
			Soluble Sodium (Na)	2022/08/11	1.2		%	30
			Soluble Potassium (K)	2022/08/11	1.2		%	30
			Soluble Sulphate (SO4)	2022/08/11	0.17		%	30
A677413	TOR	Matrix Spike	Soluble Chloride (Cl)	2022/08/11	0.17	108	%	75 - 125
A677413	TOR	QC Standard	Soluble Chloride (Cl)	2022/08/11		88	%	75 - 125
A677413	TOR	Spiked Blank	Soluble Chloride (Cl)	2022/08/11		105	%	80 - 120
		Method Blank	Soluble Chloride (Cl)		<10	105		80 - 120
A677413	TOR	RPD		2022/08/11	<10 7 2		mg/L %	20
A677413	TOR	QC Standard	Soluble Chloride (Cl)	2022/08/11	7.2	101		30 75 125
A677416 A677416	ZI	QC Standard Spiked Blank	Soluble Conductivity Soluble Conductivity	2022/08/11 2022/08/11		101 100	% %	75 - 125 90 - 110
A677416 A677416	ZI	•	-		<0.020	100		90 - 110
	ZI	Method Blank	Soluble Conductivity	2022/08/11	<0.020		dS/m ∞	20
A677416	ZI	RPD	Soluble Conductivity	2022/08/11	7.3	00	%	20
A677437	ZI	QC Standard	Soluble Conductivity	2022/08/11		98	%	75 - 125
A677437	ZI	Spiked Blank	Soluble Conductivity	2022/08/11	-0.000	100	%	90 - 110
A677437	ZI	Method Blank	Soluble Conductivity	2022/08/11	<0.020		dS/m	



04/00								
QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A677437	ZI	RPD	Soluble Conductivity	2022/08/11	3.2	Recovery	%	20
A677512	TOR	Matrix Spike	Soluble Chloride (Cl)	2022/08/11	0.12	110	%	75 - 125
A677512	TOR	QC Standard	Soluble Chloride (Cl)	2022/08/11		100	%	75 - 125
A677512	TOR	Spiked Blank	Soluble Chloride (Cl)	2022/08/11		110	%	80 - 120
A677512	TOR	Method Blank	Soluble Chloride (Cl)	2022/08/11	<10	110	mg/L	00 120
A677512	TOR	RPD	Soluble Chloride (Cl)	2022/08/11	14		%	30
A677996	JHC	QC Standard	Saturation %	2022/08/12	11	94	%	75 - 125
A677996	JHC	RPD	Saturation %	2022/08/12	1.2	51	%	12
A677998	AL7	QC Standard	Soluble (CaCl2) pH	2022/08/12	1.6	98	%	97 - 103
A677998	AL7	Spiked Blank	Soluble (CaCl2) pH	2022/08/12		100	%	97 - 103
A677998	AL7	RPD	Soluble (CaCl2) pH	2022/08/12	0.47	100	%	N/A
A678276	KGR	Matrix Spike [AZF959-03]	Total Antimony (Sb)	2022/08/12	0.17	98	%	75 - 125
//0/02/0	Non		Total Arsenic (As)	2022/08/12		95	%	75 - 125
			Total Barium (Ba)	2022/08/12		NC	%	75 - 125
			Total Beryllium (Be)	2022/08/12		97	%	75 - 125
			Total Cadmium (Cd)	2022/08/12		97	%	75 - 125
			Total Chromium (Cr)	2022/08/12		106	%	75 - 125
			Total Cobalt (Co)	2022/08/12		98	%	75 - 125
			Total Copper (Cu)	2022/08/12		99	%	75 - 125
			Total Lead (Pb)	2022/08/12		98	%	75 - 125
			Total Mercury (Hg)	2022/08/12		98	%	75 - 125
			Total Molybdenum (Mo)	2022/08/12		98	%	75 - 125
			Total Nickel (Ni)	2022/08/12		100	%	75 - 125
			Total Selenium (Se)	2022/08/12		99	%	75 - 125
			Total Silver (Ag)	2022/08/12		92	%	75 - 125
			Total Thallium (TI)	2022/08/12		97	%	75 - 125
			Total Tin (Sn)	2022/08/12		98	%	75 - 125
			Total Uranium (U)	2022/08/12		94	%	75 - 125
			Total Vanadium (V)	2022/08/12		114	%	75 - 125
			Total Zinc (Zn)	2022/08/12		105	%	75 - 125
A678276	KGR	QC Standard	Total Antimony (Sb)	2022/08/12		105	%	15 - 182
A070270	Kon	Qe Standard	Total Arsenic (As)	2022/08/12		103	%	53 - 147
			Total Barium (Ba)	2022/08/12		100	%	80 - 119
			Total Cadmium (Cd)	2022/08/12		99	%	72 - 128
			Total Chromium (Cr)	2022/08/12		98	%	59 - 141
			Total Cobalt (Co)	2022/08/12		98	%	58 - 142
			Total Copper (Cu)	2022/08/12		104	%	83 - 117
			Total Lead (Pb)	2022/08/12		110	%	79 - 121
			Total Molybdenum (Mo)	2022/08/12		124	%	67 - 133
			Total Nickel (Ni)	2022/08/12		110	%	79 - 121
			Total Silver (Ag)	2022/08/12		104	%	47 - 153
			Total Tin (Sn)	2022/08/12		112	%	67 - 133
			Total Uranium (U)	2022/08/12		90	%	77 - 123
			Total Vanadium (V)	2022/08/12		101	%	79 - 121
			Total Zinc (Zn)	2022/08/12		101	%	79 - 121
A678276	KGR	Spiked Blank	Total Antimony (Sb)	2022/08/12		100	%	80 - 120
		- F	Total Arsenic (As)	2022/08/12		96	%	80 - 120
			Total Barium (Ba)	2022/08/12		97	%	80 - 120
			Total Beryllium (Be)	2022/08/12		96	%	80 - 120
			Total Cadmium (Cd)	2022/08/12		97	%	80 - 120
			Total Chromium (Cr)	2022/08/12		98	%	80 - 120



QUALITY ASSURANCE REPORT(CONT'D)

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Copper (Cu)	2022/08/12		99	%	80 - 120
			Total Lead (Pb)	2022/08/12		98	%	80 - 120
			Total Mercury (Hg)	2022/08/12		104	%	80 - 120
			Total Molybdenum (Mo)	2022/08/12		99	%	80 - 120
			Total Nickel (Ni)	2022/08/12		98	%	80 - 120
			Total Selenium (Se)	2022/08/12		100	%	80 - 120
			Total Silver (Ag)	2022/08/12		99	%	80 - 120
			Total Thallium (Tl)	2022/08/12		98	%	80 - 120
			Total Tin (Sn)	2022/08/12		98	%	80 - 120
			Total Uranium (U)	2022/08/12		97	%	80 - 120
			Total Vanadium (V)	2022/08/12		99	%	80 - 120
			Total Zinc (Zn)	2022/08/12		97	%	80 - 120
A678276	KGR	Method Blank	Total Antimony (Sb)	2022/08/12	<0.50		mg/kg	
			Total Arsenic (As)	2022/08/12	<1.0		mg/kg	
			Total Barium (Ba)	2022/08/12	<1.0		mg/kg	
			Total Beryllium (Be)	2022/08/12	<0.40		mg/kg	
			Total Cadmium (Cd)	2022/08/12	<0.050		mg/kg	
			Total Chromium (Cr)	2022/08/12	<1.0		mg/kg	
			Total Cobalt (Co)	2022/08/12	<0.50		mg/kg	
			Total Copper (Cu)	2022/08/12	<1.0		mg/kg	
			Total Lead (Pb)	2022/08/12	<0.50		mg/kg	
			Total Mercury (Hg)	2022/08/12	< 0.050		mg/kg	
			Total Molybdenum (Mo)	2022/08/12	<0.40		mg/kg	
			Total Nickel (Ni)	2022/08/12	<1.0		mg/kg	
			Total Selenium (Se)	2022/08/12	<0.50		mg/kg	
			Total Silver (Ag)	2022/08/12	<0.20		mg/kg	
			Total Thallium (TI)	2022/08/12	<0.10		mg/kg	
			Total Tin (Sn)	2022/08/12	<1.0		mg/kg	
			Total Uranium (U)	2022/08/12	<0.20		mg/kg	
			Total Vanadium (V)	2022/08/12	<1.0		mg/kg	
			Total Zinc (Zn)	2022/08/12	<10		mg/kg	
A678276	KGR	RPD [AZF959-03]	Total Antimony (Sb)	2022/08/12	NC		%	30
1070270	Ron		Total Arsenic (As)	2022/08/12	1.5		%	30
			Total Barium (Ba)	2022/08/12	2.4		%	35
			Total Beryllium (Be)	2022/08/12	NC		%	30
			Total Cadmium (Cd)	2022/08/12	1.4		%	30
			Total Chromium (Cr)	2022/08/12	21		%	30
			Total Cobalt (Co)	2022/08/12	7.1		%	30
			Total Copper (Cu)	2022/08/12	15		%	30
			Total Lead (Pb)	2022/08/12	0.98		%	35
			Total Mercury (Hg)	2022/08/12	NC		%	35
			Total Molybdenum (Mo)	2022/08/12	13		%	35
			Total Nickel (Ni)	2022/08/12	13		%	30
							%	
			Total Selenium (Se)	2022/08/12	NC			30
			Total Silver (Ag)	2022/08/12	NC		%	35
			Total Thallium (TI)	2022/08/12	NC		%	30
			Total Tin (Sn)	2022/08/12	NC		%	35
			Total Uranium (U)	2022/08/12	1.6		%	30
			Total Vanadium (V)	2022/08/12	7.3		%	30
A C 70 C 2 F	MADU	Mately Calles [ATTOTO CO]	Total Zinc (Zn)	2022/08/12	5.7		%	30
A678625	MPU	Matrix Spike [AZF959-03]	Soluble (Hot water) Boron (B)	2022/08/12		101	%	75 - 125
A678625	MPU	Spiked Blank	Soluble (Hot water) Boron (B)	2022/08/12		102	%	80 - 120

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04/06

GOLDER ASSOCIATES LTD. Client Project #: 22525414-1000 Site Location: CAMP FAREWELL, NT Your P.O. #: 22525414-1100-1104 Sampler Initials: ML

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A678625	MPU	Method Blank	Soluble (Hot water) Boron (B)	2022/08/12	<0.10		mg/kg	
A678625	MPU	RPD [AZF959-03]	Soluble (Hot water) Boron (B)	2022/08/12	0.38		%	35
A678849	PL	Matrix Spike	Soluble Calcium (Ca)	2022/08/12		99	%	75 - 125
			Soluble Magnesium (Mg)	2022/08/12		109	%	75 - 125
			Soluble Sodium (Na)	2022/08/12		76	%	75 - 125
			Soluble Potassium (K)	2022/08/12		108	%	75 - 125
A678849	PL	QC Standard	Soluble Calcium (Ca)	2022/08/12		102	%	75 - 125
			Soluble Magnesium (Mg)	2022/08/12		103	%	75 - 125
			Soluble Sodium (Na)	2022/08/12		95	%	75 - 125
			Soluble Potassium (K)	2022/08/12		89	%	75 - 125
A678625 MPU A678849 PL A678849 TL A678849 TOR A678876 TOR			Soluble Sulphate (SO4)	2022/08/12		103	%	75 - 125
A678849	PL	Spiked Blank	Soluble Calcium (Ca)	2022/08/12		115	%	80 - 120
	3849 PL 3849 TOR 3876 TOR 3876 TOR		Soluble Magnesium (Mg)	2022/08/12		118	%	80 - 120
			Soluble Sodium (Na)	2022/08/12		102	%	80 - 120
			Soluble Potassium (K)	2022/08/12		114	%	80 - 120
A678849 PL	PL	Method Blank	Soluble Calcium (Ca)	2022/08/12	<1.5		mg/L	
			Soluble Magnesium (Mg)	2022/08/12	<1.0		mg/L	
			Soluble Sodium (Na)	2022/08/12	<2.5		mg/L	
			Soluble Potassium (K)	2022/08/12	<1.3		mg/L	
			Soluble Sulphate (SO4)	2022/08/12	<5.0		mg/L	
A678849	PL	RPD	Soluble Calcium (Ca)	2022/08/12	0.48		%	30
			Soluble Magnesium (Mg)	2022/08/12	0.28		%	30
			Soluble Sodium (Na)	2022/08/12	0.39		%	30
			Soluble Potassium (K)	2022/08/12	2.5		%	30
			Soluble Sulphate (SO4)	2022/08/12	2.5		%	30
A678876	TOR	Matrix Spike	Soluble Chloride (Cl)	2022/08/12		NC	%	75 - 125
A678876	TOR	QC Standard	Soluble Chloride (Cl)	2022/08/12		83	%	75 - 125
A678876	TOR	Spiked Blank	Soluble Chloride (Cl)	2022/08/12		108	%	80 - 120
A678876	TOR	Method Blank	Soluble Chloride (Cl)	2022/08/12	<10		mg/L	
A678876	TOR	RPD	Soluble Chloride (Cl)	2022/08/12	5.8		%	30
A678998	ZI	QC Standard	Soluble Conductivity	2022/08/12		96	%	75 - 125
A678998	ZI	Spiked Blank	Soluble Conductivity	2022/08/12		101	%	90 - 110
A678998	ZI	Method Blank	Soluble Conductivity	2022/08/12	<0.020		dS/m	
A678998	ZI	RPD	Soluble Conductivity	2022/08/12	5.7		%	20

N/A = Not Applicable

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.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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

(2) Detection limit reported based on MDL and sample weight used for analysis.



VALIDATION SIGNATURE PAGE

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

Gita Pokhrel, Laboratory Supervisor

Junzhi Gras

Janet Gao, B.Sc., QP, Supervisor, Organics

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

Mermicatelk

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



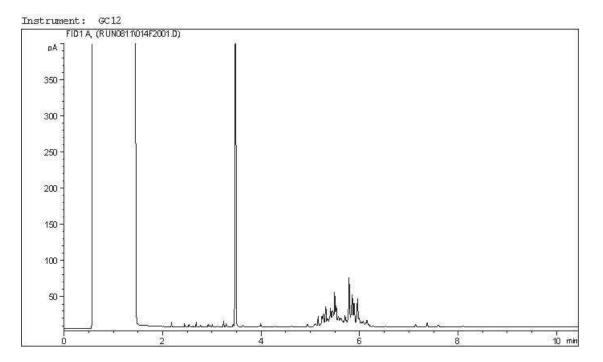
Automated Statchk

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 Signature Page.

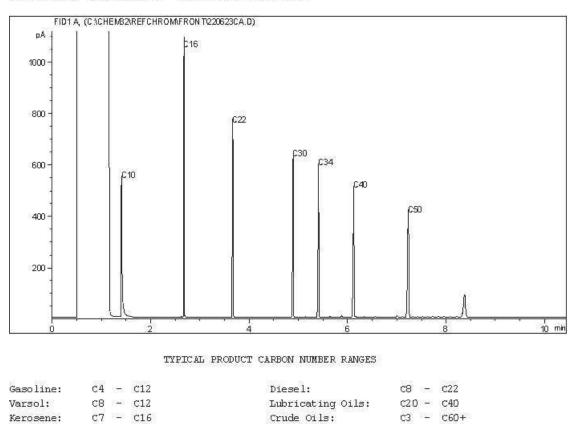
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Page 1 of 1			-1104 LAB USE ONLY - PLACE STICKER HERE			Rush Confirmation #:	/ -	X	Turnaroui	1 5t	Rush Turnaroun Surcharge	LIWENS		Date WW Do Date Control For Co	also em	ald SHELL DOPRATING	Supervision	Tilivet at P	41259544	XX2		X 3 Received in Vellowkylife	11.45 m	AUG no 2022	1-2-4-1 CE-4-1 CS-4	Tams. 7 19	TO BOARD AND AND AND COMPANIED AND COMPANIED AND AND AND A DAMAGENERS ACKNOWLEDGARM AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH IS ACKNOWLEDGARM AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH IS ALM WWW. BVVA.COM TERMS AND CONDITIONS OR BY CALLING THE LABORATORY USIED ABOVE TO OBTAIN A COPY	No reading by:		Time 4 2 3 1 Time 5 Special instructions			
ENV COC - 00013v3	Project Information	Shell	22525414.440009204% - 1100	22525414-谢如敏 - (DCvo	NA	Jamp Fare WRSPREHDANNEL, NT	NT	rmanieet Kauu	11 12 13 14 15 [°] 16 17 18		1	- dissolv	rietals netals otal iissolve iicron) sand; sandfi	Routine wa Regulated i Mercury - t Mercury - t Salinity 4 Sieve (75 Basic class i Basic class i													G OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGI 4E LABORATORY LISTED ABOVE TO OBTAIN A COPY	LAB USE ONLY Seal mosent	Seal Intact Cooling media mecant	Y DAM DD HH	~ 22 .08 #0 1	-	
-	e)	Quotation #:	P.O. #/ AFE#:	Project #:	Postal T2P 4K3 Site #:	Site Location:	Site Location	Sampled By:	/ 0 c + c		Q	REQUIRE	Davaa Tion F OT Jui	FIELD FILTE 2399 67128 47178 611 8717 71-64 8717 71-64 8145 8141 71 71 71 71 71 71 71 71 71 71 71 71 71	XX	XX	XX	XX	XX	X	X	×					WE AND CONDITIONS OR BY CALLING TH		1 2 3	Received by: (Signature/ Print)	Feer Magan face		
Edmonton, AB: 9331.48 St. T6b 2R4 Toll Free (800) 386-7247 Winnipeg, MB: D-675 Berry St. R3H 1A7 Toll Free (866) 800-6208	Report Information (if differs from invoice)	Golder Associates	Aurelie Bellavance		Calgary AB Co	403-299-5600	Oswan nevellant a lark	peter tan Quop.co		Drinking Water - Manitoba	B Other AMSRP	LIVERY TO BUREAU VERITAS	Time (24hr)	D HH MM Matrix	3 66 14 50 Soil	22 08 06 H 55 Soil	22 08 06 16 10 Soil	08 06 15 35 Soil	22 08 06 16 20 Soil	3 of (B 40 Sail	3 OGH 10 Soil	06 14 10	_					LAB USE ONLY Yes No present	Seal intact 3 Cooling media present		15 00 . Maper	7	
ив: 9331-48 St. 1 B: D-675 Berry		Company:	Contact Name:	Street Address:	City:	Phone:	Email:	opies:	B	Drir	Cth C	JUNG UNTIL DE	Date Sampled	YY MM	22 08	22 06	22 00	22 0	22 08	22 08	22 08	22 08				CHAIN: OF CHE	ARE AVAILAB	2.5 Seal	3 Cooli	DD M	5 03		
BVNA.com		Client #254, Golder Associates	237 - 4 Ave SW Suite 3300		Calgary Prov: AB Code:		Canada Account Payable	Development of the second		CCME	ichewan	SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BURE		Sample Identification	BH22-42-01	8422-42-02	BH 22-4%-01	MW22-43-01	22-45-01	22-46-01	22-41-01	E C	-			12 UMLESS OTHERWISE AGREED TO IN WRITING WORK SUBMITTED ON THIS CHAIN OF LIFETORY IS SUBMITTED ON THIS CHAIN OF LI		Ves No 7,5,3,5		YY Date	2.0 Minelissa lard 22 08	-	
	Invoice Information	Company :	Contact Name:	Street Address:		Phone:	Email:	Copies:		TTA AT1	Saskatchewan	SA			1 BH 2	² BH 2	3 BH 3	4 MUX	5 BH22	_	7 BH 22	* DUP	5	10	= :	12 • UNLESS OTHER		LAB USE ONLY Seal present	Seal intact Cooling media present	Reling	MANE	Par ser	60×

Page 29 of 37

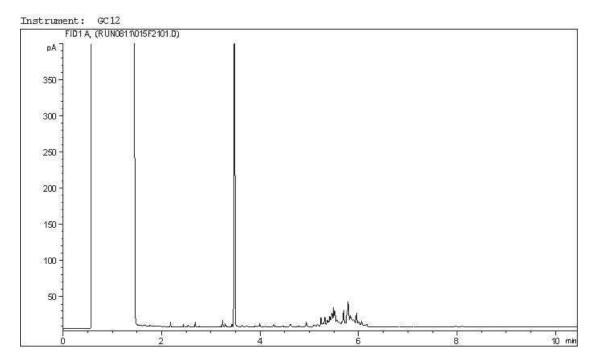
CCME Hydrocarbons (F2-F4 in soil) Chromatogram



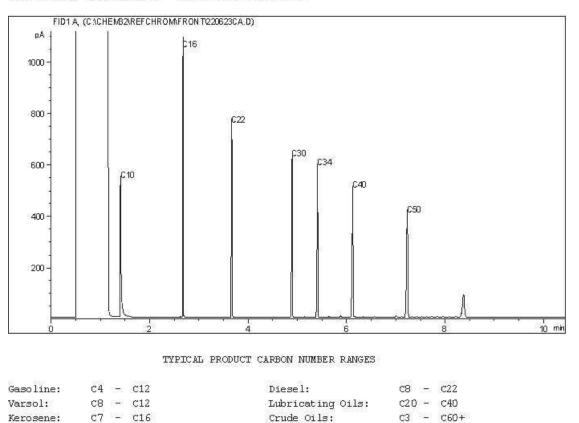
Carbon Range Distribution - Reference Chromatogram



CCME Hydrocarbons (F2-F4 in soil) Chromatogram

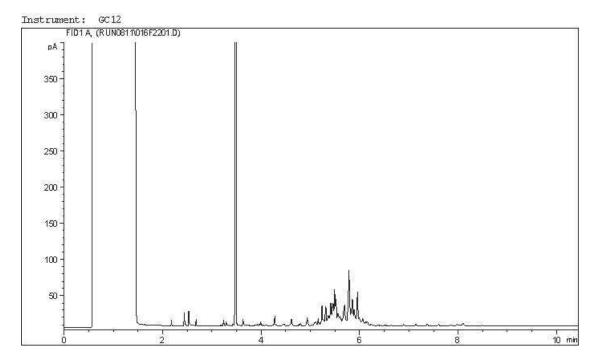


Carbon Range Distribution - Reference Chromatogram

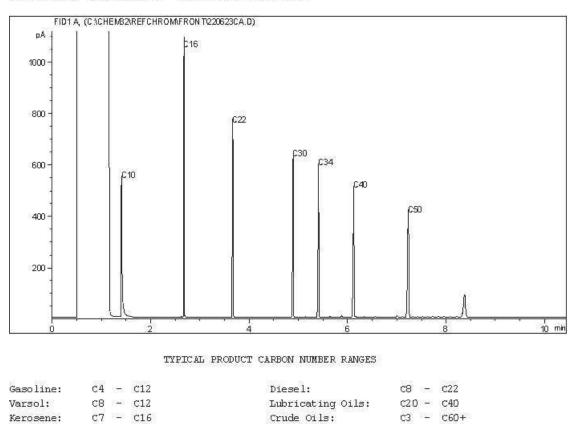


GOLDER ASSOCIATES LTD. Client Project #: 22525414-1000 Site Reference: CAMP FAREWELL, NT Client ID: BH22-44-01

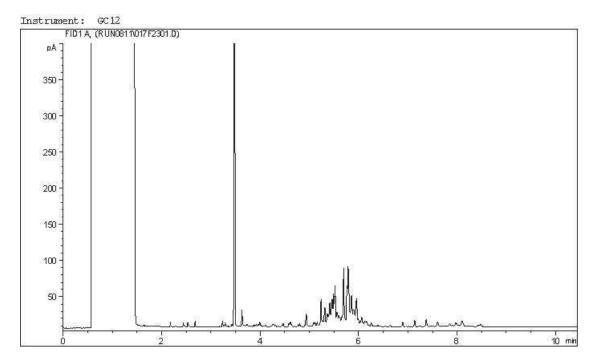
CCME Hydrocarbons (F2-F4 in soil) Chromatogram



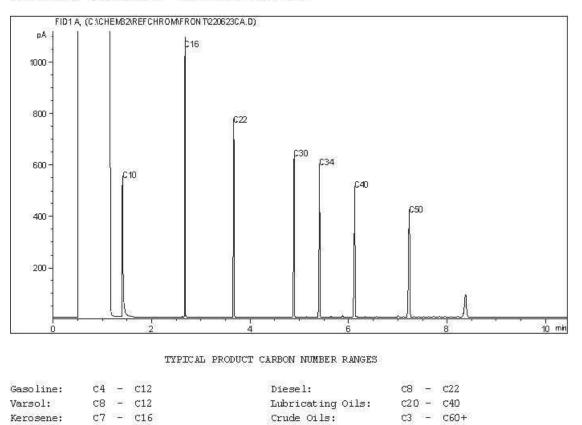
Carbon Range Distribution - Reference Chromatogram



CCME Hydrocarbons (F2-F4 in soil) Chromatogram

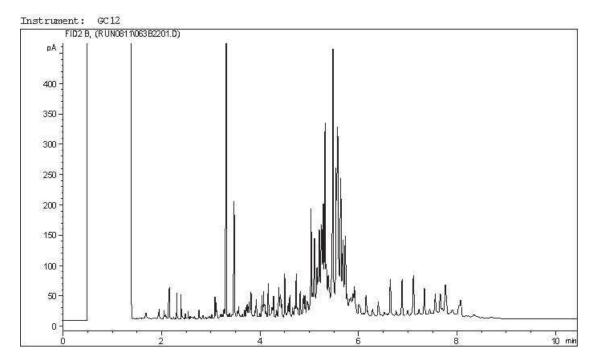


Carbon Range Distribution - Reference Chromatogram

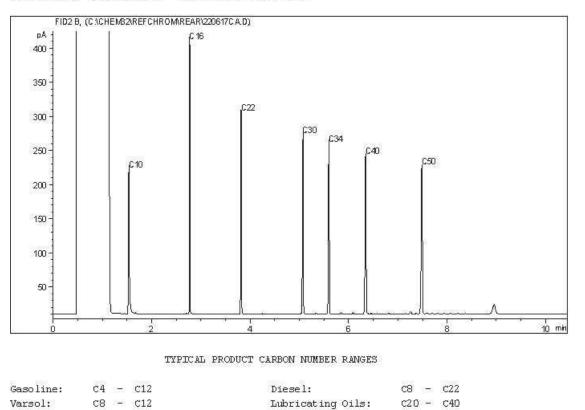


GOLDER ASSOCIATES LTD. Client Project #: 22525414-1000 Site Reference: CAMP FAREWELL, NT Client ID: BH22-45-01

CCME Hydrocarbons (F2-F4 in soil) Chromatogram



Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

c7 - c16

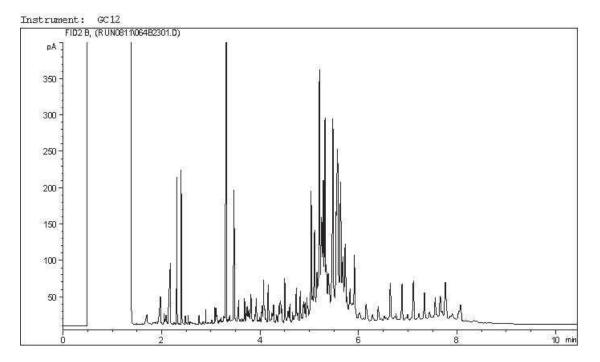
Kerosene:

Crude Oils:

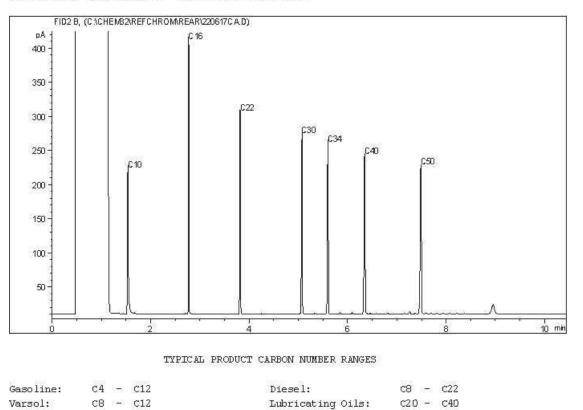
C3 - C60+

GOLDER ASSOCIATES LTD. Client Project #: 22525414-1000 Site Reference: CAMP FAREWELL, NT Client ID: BH22-46-01

CCME Hydrocarbons (F2-F4 in soil) Chromatogram



Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

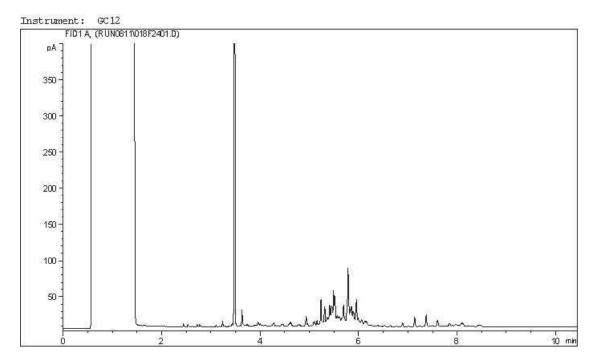
c7 - c16

Kerosene:

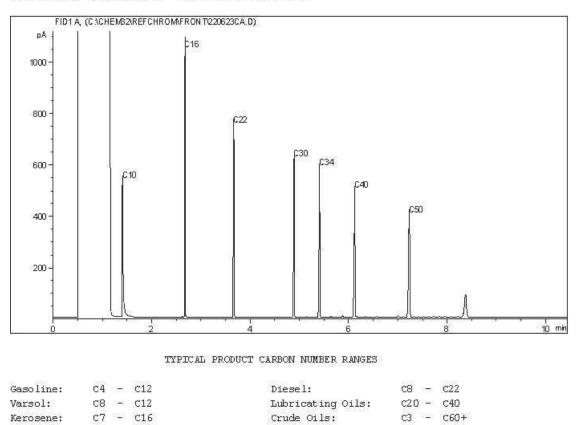
Crude Oils:

C3 - C60+

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

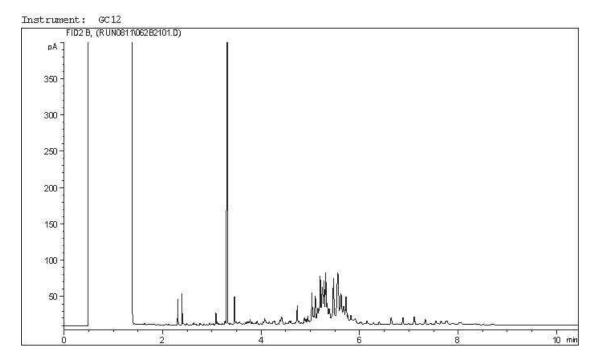


Carbon Range Distribution - Reference Chromatogram

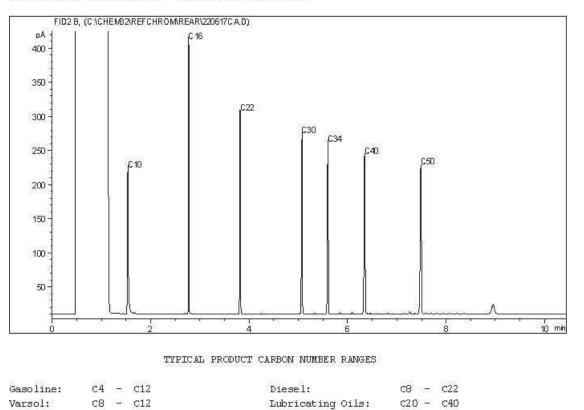


GOLDER ASSOCIATES LTD. Client Project #: 22525414-1000 Site Reference: CAMP FAREWELL, NT Client ID: DUP A

CCME Hydrocarbons (F2-F4 in soil) Chromatogram



Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

c7 - c16

Kerosene:

Crude Oils:



August 19, 2022

GOLDER ASSOCIATES LTD.

2800, 700 -2nd Street SW CALGARY, AB, T2P 2W2

Attention: Aurelie Bellavance

Re: Chromatogram Interpretation of CAMP FAREWELL, NT; Project 22525414-1000 Bureau Veritas Job No.: C259075

Bureau Veritas was retained by Golder Associates Ltd. to provide hydrocarbon interpretations concerning the likely origin of hydrocarbons quantified within CCME fraction(s) F2, F3 and/or F4.

Analytical Method

Petroleum hydrocarbon analyses at Bureau Veritas are conducted in accordance with the analytical specifications required by the prescriptive and performance-based (where appropriate) elements of the CCME Tier I protocols for hydrocarbon determination¹ in soil samples.

Chromatogram Interpretation

A comprehensive qualitative assessment of the resultant gas chromatograms in the F2-F4 ranges was performed. The chromatograms were inspected for specific peak profiles that would indicate the possible origin of the hydrocarbons present in the sample. The presence and nature of specific aliphatic compounds (n-alkanes), the presence of characteristic unresolved complex mixtures (UCMs) or "humps" and the relative abundance (ratios) of specific compounds are reviewed as part of the evaluation.

¹ Canadian Council of Ministers of the Environment: "Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil – Tier I Method" 2001



Data Interpretation

Table 1. Qualitative Data Summary – Chromatogram Interpretation

Lab ID	Sample ID	Chromatogram Interpretation
AZF958	BH22-45-01	The CCME F2-F4 chromatographic peak profile is consistent with biogenic organic material (e.g. peat). Chromatograms of biogenic
AZF959	BH22-46-01	organic material may contain peak patterns spanning the C10 to C50 range, but they are most commonly characterized by a profile
AZF960	BH22-41-01	of unevenly distributed sharp peaks between C28 and C34. The impacts are not consistent with a petroleum product or crude oil.

If you have any questions or require additional information, please do not hesitate to contact the undersigned.

Sincerely, Bureau Veritas Laboratories

Michael Sheppard, B.Sc., P.Bio., QP Consulting Scientist Environmental Services

t Cantuel

Scott Cantwell, CET, B.Sc., P.Chem. Director and General Manager – Western Canada Environmental Services

Disclaimer

Hydrocarbon Resemblance

Characterization by way of visual evaluation of the sample chromatogram may not be conclusive and is only indicative of substances that may be present. The resemblance information must be regarded as approximate and qualitative.

GOLDER DATA QUALITY REVIEW CHECKLIST

Site Location: Camp Farewe	ell, NT		_	Sampling Date	e: August 6 and 7, 2022							
Golder Project Number: 2	2525414	4-1000	_	Laboratory	y: Bureau Veritas Edmonton							
Lab Submission Number: <u>(</u>	259075		_									
Was the Cooler Received at the lab Was proper chain of custody of the Were sample temperatures accepta Were all samples analyzed and extr Has lab warranted all tests were in Was sufficient sample provided for Has lab warranted all samples were	samples ble when racted wi statistica the requ	s document in they reach ithin hold ti il control in uested analy	ed and key ned lab?: imes?: n CoA?: ysis?	ot?	Yes Yes Yes Yes Yes Yes Yes							
Are All Laboratory QC Within Acc	eptance	Criteria (Y	es, No, N	ot Applicable)?								
	Yes	No	NA		Comments							
Surrogate Recovery		Х		All remaining la	aboratory QC results are within							
Method Blank Concentration	Х			acceptance criteria, please see QA/QC								
Laboratory Duplicate RPD	Х			appendix.								
Matrix Spike Recovery		Х										
Blank Spike Recovery	Х											
Are All Field QC Samples Within .	Alert Lin	nits (Yes, N	No, Not A	pplicable)?								
	Yes	No	NA		Comments							
Field Blank Concentration			X	All field OC sar	mples are within							
Trip Blank Concentration			X	alert limits.	×							
Field Duplicate RPD	Х											
Is data considered reliable (Yes/No If answer is "No" or "Suspect", des	-	· · · · · · · · · · · · · · · · · · ·	ationale:	Yes	_							
Data Reviewed by (Print): 4	Anita Col	lbert	_	Data Reviewed b	by (Signature): Units Collect							
Date:	August	15, 2022	-									



Your P.O. #: 22525414-1100-1104 Your Project #: 22525414-100 Site Location: CAMP FAREWELL, NT Your C.O.C. #: 1 of 1

Attention: Aurelie Bellavance

GOLDER ASSOCIATES LTD. 2800, 700 -2nd Street SW CALGARY, AB CANADA T2P 2W2

> Report Date: 2022/08/19 Report #: R3218814 Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C259077 Received: 2022/08/09, 11:30

Sample Matrix: Soil # Samples Received: 10

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1, 2)	10	N/A	2022/08/11	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX (1)	10	N/A	2022/08/11		Auto Calc
CCME Hydrocarbons (F2-F4 in soil) (1, 3)	10	2022/08/10	2022/08/11	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F4G in soil) (1, 3)	1	2022/08/10	2022/08/11	AB SOP-00036	CCME PHC-CWS m
				AB SOP-00040	
Moisture (1)	10	N/A	2022/08/11	AB SOP-00002	CCME PHC-CWS 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.

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) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is date sampled unless otherwise stated.

(3) All CCME results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil, Validation of Performance-Based Alternative Methods September 2003. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.



Your P.O. #: 22525414-1100-1104 Your Project #: 22525414-100 Site Location: CAMP FAREWELL, NT Your C.O.C. #: 1 of 1

Attention: Aurelie Bellavance

GOLDER ASSOCIATES LTD. 2800, 700 -2nd Street SW CALGARY, AB CANADA T2P 2W2

> Report Date: 2022/08/19 Report #: R3218814 Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C259077 Received: 2022/08/09, 11:30

Encryption Key



22 Aug 2022 17:35:26

Please direct all questions regarding this Certificate of Analysis to your Project Manager. Cynny Hagen, Key Account Specialist Email: Cynny.HAGEN@bureauveritas.com Phone# (403)735-2273 _____

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 Signature Page.



AT1 BTEX AND F1-F4 IN SOIL (VIALS)

	175062			A7E064		175065			A7E066		
	09:05			09:05		09:20			09:50		
	1 of 1					1 of 1			1 of 1		
UNITS	BH22-01-01	RDL	QC Batch	DUP B	RDL	MW22-02-01	RDL	QC Batch	BH22-03-01	RDL	QC Batch
					-					-	-
mg/kg	<31 (1)	31	A676506	<33 (1)	33	110 (1)	26	A676506	280 (1)	35	A676506
mg/kg	290 (1)	150	A676506	310 (1)	170	2200 (1)	130	A676506	4800 (1)	170	A676506
mg/kg	<150 (1)	150	A676506	<170 (1)	170	750 (1)	130	A676506	2000 (1)	170	A676506
mg/kg	Yes	N/A	A676506	Yes	N/A	Yes	N/A	A676506	No	N/A	A676506
%	67	0.30	A676514	70	0.30	61	0.30	A676508	71	0.30	A676514
					-					-	
mg/kg	<0.25	0.25	A676395	<0.25	0.25	<0.17	0.17	A676395	<0.23	0.23	A676395
mg/kg	<35	35	A676395	<36	36	<24	24	A676395	<33	33	A676395
					-					-	
mg/kg	<0.028 (2)	0.028	A676666	<0.028 (2)	0.028	<0.019 (2)	0.019	A676666	<0.026 (2)	0.026	A676666
mg/kg	<0.050 (3)	0.050	A676666	<0.050 (3)	0.050	<0.050 (3)	0.050	A676666	4.0 (2)	0.26	A676666
mg/kg	<0.056 (2)	0.056	A676666	<0.057 (2)	0.057	<0.037 (2)	0.037	A676666	<0.052 (2)	0.052	A676666
mg/kg	<0.22 (2)	0.22	A676666	<0.23 (2)	0.23	<0.15 (2)	0.15	A676666	<0.21 (2)	0.21	A676666
mg/kg	<0.11 (2)	0.11	A676666	<0.11 (2)	0.11	<0.074 (2)	0.074	A676666	<0.10 (2)	0.10	A676666
mg/kg	<35 (3)	35	A676666	<36 (3)	36	<24 (3)	24	A676666	<33 (3)	33	A676666
					-					-	
%	108	N/A	A676666	123	N/A	116	N/A	A676666	124	N/A	A676666
%	87	N/A	A676666	87	N/A	93	N/A	A676666	89	N/A	A676666
%	96	N/A	A676666	101	N/A	100	N/A	A676666	117	N/A	A676666
%	103	N/A	A676666	111	N/A	110	N/A	A676666	109	N/A	A676666
%	96	N/A	A676506	97	N/A	95	N/A	A676506	98	N/A	A676506
	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	I of 1 UNITS BH22-01-01 mg/kg <31 (1)	2022/08/07 09:05	2022/08/07 09:05 Image: Constraint of the image: Consthe image: Constraint of the image: Constraint of the	2022/08/07 09:05 2022/08/07 09:05 1 of 1 I 2022/08/07 09:05 1 of 1 I 1 of 1 UNITS BH22-01-01 RDL QC Batch DUP B mg/kg <31 (1)	2022/08/07 09:05 2022/08/07 09:05 2022/08/07 09:05 1 of 1 1 of 1 1 of 1 UNITS BH22-01-01 RDL QC Batch DUP B RDL mg/kg <31 (1)	2022/08/07 09:05 2022/08/07 09:05 2022/08/07 09:05 2022/08/07 09:20 1 of 1 UNITS BH22-01-01 RDL QC Batch DUP B RDL MW22-02-01 mg/kg <31 (1)	2022/08/07 09:05 2022/08/07 09:05 2022/08/07 09:00 2022/08/07 09:00 1 of 1 UNITS BH22-01-01 RDL QC Batch DUP B RDL MW22-02-01 RDL mg/kg <31 (1)	2022/08/07 09:05 0 2022/08/07 09:05 2022/08/07 09:05 2022/08/07 09:20 0 1 of 1 0 0	2022/08/07 09:05 2022/08/07 09:05 2022/08/07 09:05 2022/08/07 09:20 2022/08/07 09:20 2022/08/07 09:50 1 of 1 1 1 of 1 1 1 of 1 1 1 of 1 1 1 of 1 UNITS BH22-01-01 RDL QC Batch DUP B RDL MW22-02-01 RDL QC Batch BH22-03-01 mg/kg <31 (1)	2022/08/07 09:052022/08/07 09:052022/08/07 09:052022/08/07 09:002022/08/07 09:002022/08/07 09:002022/08/07 09:002002022/08/07 09:002002002022/08/07 09:002002002002002002002002002002002002002002002002002002002001010111 </td

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Detection limits raised due to high moisture content, sample contains => 50% moisture.

(2) Detection limits raised based on sample weight used for analysis.

(3) Detection limit reported based on MDL and sample weight used for analysis.



AT1 BTEX AND F1-F4 IN SOIL (VIALS)

NITS ng/kg ng/kg ng/kg ng/kg	AZF967 2022/08/07 10:05 1 of 1 BH22-04-01 <20 (1) 310 (1) <100 (1)	AZF967 2022/08/07 10:05 1 of 1 BH22-04-01 Lab-Dup N/A N/A	RDL	AZF968 2022/08/07 10:20 1 of 1 BH22-05-01	RDL	AZF969 2022/08/07 10:25 1 of 1 BH22-05-02	AZF970 2022/08/07 10:35 1 of 1 BH22-06-02	AZF970 2022/08/07 10:35 1 of 1 BH22-06-02 Lab-Dup	RDL	QC Batch
ng/kg ng/kg ng/kg	10:05 1 of 1 BH22-04-01 <20 (1) 310 (1) <100 (1)	10:05 1 of 1 BH22-04-01 Lab-Dup		10:20 1 of 1 BH22-05-01	RDL	10:25 1 of 1	10:35 1 of 1	10:35 1 of 1 BH22-06-02	RDL	QC Batch
ng/kg ng/kg ng/kg	1 of 1 BH22-04-01 <20 (1) 310 (1) <100 (1)	1 of 1 BH22-04-01 Lab-Dup		1 of 1 BH22-05-01	RDL	1 of 1	1 of 1	1 of 1 BH22-06-02	RDL	QC Batch
ng/kg ng/kg ng/kg	BH22-04-01 <20 (1) 310 (1) <100 (1)	BH22-04-01 Lab-Dup		BH22-05-01	RDL			BH22-06-02	RDL	QC Batch
ng/kg ng/kg ng/kg	<20 (1) 310 (1) <100 (1)	Lab-Dup			RDL	BH22-05-02	BH22-06-02		RDL	QC Batch
ng/kg ng/kg	310 (1) <100 (1)		20	-20 (4)						i
ng/kg ng/kg	310 (1) <100 (1)		20	(20 (4)						
ng/kg	<100 (1)	N/A		<28 (1)	28	34	56 (2)	49	10	A676506
			100	400 (1)	140	730	530	420	50	A676506
ng/kg		N/A	100	<140 (1)	140	170	120	100	50	A676506
	Yes	N/A	N/A	Yes	N/A	Yes	Yes	Yes	N/A	A676506
%	50	45	0.30	65	0.30	39	31	N/A	0.30	A676514
			•							
ng/kg	<0.15	N/A	0.15	<0.18	0.18	<0.045	<0.045	N/A	0.045	A676395
ng/kg	<24	N/A	24	<25	25	<10	<10	N/A	10	A676395
ng/kg	<0.017 (3)	N/A	0.017	<0.020 (3)	0.020	<0.0050	<0.0050	N/A	0.0050	A676666
ng/kg	<0.050 (4)	N/A	0.050	<0.050 (4)	0.050	<0.050	<0.050	N/A	0.050	A676666
ng/kg	<0.034 (3)	N/A	0.034	<0.039 (3)	0.039	<0.010	<0.010	N/A	0.010	A676666
ng/kg	<0.14 (3)	N/A	0.14	<0.16 (3)	0.16	<0.040	<0.040	N/A	0.040	A676666
ng/kg	<0.068 (3)	N/A	0.068	<0.079 (3)	0.079	<0.020	<0.020	N/A	0.020	A676666
ng/kg	<24 (4)	N/A	24	<25 (4)	25	<10	<10	N/A	10	A676666
%	105	N/A	N/A	117	N/A	111	126	N/A	N/A	A676666
%	85	N/A	N/A	97	N/A	86	87	N/A	N/A	A676666
%	100	N/A	N/A	123	N/A	108	103	N/A	N/A	A676666
%	103	N/A	N/A	117	N/A	104	120	N/A	N/A	A676666
%	91	N/A	N/A	90	N/A	102	100	93	N/A	A676506
	g/kg g/kg g/kg g/kg g/kg g/kg g/kg g/kg	g/kg <0.15 g/kg <24 g/kg <24 g/kg <0.017 (3) g/kg <0.050 (4) g/kg <0.034 (3) g/kg <0.14 (3) g/kg <0.068 (3) g/kg <24 (4) % 105 % 85 % 100 % 103	g/kg <0.15 N/A g/kg <24	g/kg <0.15	g/kg <0.15	g/kg <0.15 N/A 0.15 <0.18 0.18 g/kg <24	g/kg <0.15 N/A 0.15 <0.18 0.18 <0.045 g/kg <24 N/A 24 <25 25 <10 g/kg <0.017 (3) N/A 0.017 <0.020 (3) 0.020 <0.0050 g/kg <0.050 (4) N/A 0.050 <0.050 (4) 0.050 <0.050 g/kg <0.034 (3) N/A 0.034 <0.039 (3) 0.039 <0.010 g/kg <0.034 (3) N/A 0.14 <0.039 (3) 0.039 <0.010 g/kg <0.043 (3) N/A 0.14 <0.16 (3) 0.16 <0.040 g/kg <0.068 (3) N/A 0.068 <0.079 (3) 0.079 <0.020 g/kg <0.068 (3) N/A N/A 117 N/A 111 % 85 N/A N/A 123 N/A 108 % 103 N/A N/A 117 N/A 104	g/kg <0.15 N/A 0.15 <0.18 0.18 <0.045 <0.045 g/kg <24 N/A 24 <25 25 <10 <10 g/kg <0.017 (3) N/A 0.017 <0.020 (3) 0.020 <0.0050 <0.0050 g/kg <0.050 (4) N/A 0.050 <0.020 (3) 0.020 <0.0050 <0.0050 g/kg <0.050 (4) N/A 0.050 <0.050 (4) 0.050 <0.050 <0.050 g/kg <0.034 (3) N/A 0.034 <0.039 (3) 0.039 <0.010 <0.010 g/kg <0.043 (3) N/A 0.14 <0.16 (3) 0.16 <0.040 <0.040 g/kg <0.068 (3) N/A 0.068 <0.079 (3) 0.079 <0.020 <0.020 g/kg <24 (4) N/A 117 N/A 111 126 % 105 N/A N/A 97 N/A 86 87 %	g/kg <0.15 N/A 0.15 <0.18 0.18 <0.045 <0.045 N/A g/kg <24	g/kg <0.15 N/A 0.15 <0.18 0.18 <0.045 <0.045 N/A 0.045 g/kg <24 N/A 24 <25 25 <10 <10 N/A 10 g/kg <0.017 (3) N/A 0.017 <0.020 (3) 0.020 <0.0050 <0.0050 N/A 0.0050 g/kg <0.050 (4) N/A 0.050 <0.050 (4) 0.050 <0.050 <0.050 N/A 0.0050 g/kg <0.050 (4) N/A 0.050 <0.050 (4) 0.050 <0.050 <0.050 N/A 0.0050 g/kg <0.050 (4) N/A 0.050 <<0.050 (4) 0.050 <0.050 <0.050 N/A 0.050 g/kg <0.034 (3) N/A 0.034 <<0.039 (3) 0.039 <0.010 <0.010 N/A 0.040 g/kg <0.068 (3) N/A 0.14 <0.16 (3) 0.16 <0.040 <0.020 <0.020 N/A 0.020 <0.020 <0.020

RDL = Reportable Detection Limit

Lab-Dup = Laboratory Initiated Duplicate

N/A = Not Applicable

(1) Detection limits raised due to high moisture content, sample contains => 50% moisture.

(2) Matrix spike exceeds acceptance limits due to probable matrix interference.

(3) Detection limits raised based on sample weight used for analysis.

(4) Detection limit reported based on MDL and sample weight used for analysis.



Bureau Veritas ID		AZF971		AZF972						
Sampling Date		2022/08/07		2022/08/07						
		10:50		11:10						
COC Number		1 of 1		1 of 1						
	UNITS	BH22-07-01	RDL	BH22-08-01	RDL	QC Batch				
Ext. Pet. Hydrocarbon										
F2 (C10-C16 Hydrocarbons)	mg/kg	27 (1)	22	110 (1)	29	A676506				
F3 (C16-C34 Hydrocarbons)	mg/kg	410 (1)	110	1300 (1)	150	A676506				
F4 (C34-C50 Hydrocarbons)	mg/kg	110 (1)	110	450 (1)	150	A676506				
Reached Baseline at C50	mg/kg	Yes	N/A	Yes	N/A	A676506				
Physical Properties										
Moisture	%	54	0.30	66	0.30	A676514				
Volatiles										
Xylenes (Total)	mg/kg	<0.14	0.14	<0.18	0.18	A676395				
F1 (C6-C10) - BTEX	mg/kg	<24	24	<26	26	A676395				
Field Preserved Volatiles	•				•					
Benzene	mg/kg	<0.016 (2)	0.016	<0.021 (2)	0.021	A676666				
Toluene	mg/kg	<0.050 (3)	0.050	<0.050 (3)	0.050	A676666				
Ethylbenzene	mg/kg	<0.031 (2)	0.031	<0.041 (2)	0.041	A676666				
m & p-Xylene	mg/kg	<0.13 (2)	0.13	<0.17 (2)	0.17	A676666				
o-Xylene	mg/kg	<0.063 (2)	0.063	<0.083 (2)	0.083	A676666				
F1 (C6-C10)	mg/kg	<24 (3)	24	<26 (3)	26	A676666				
Surrogate Recovery (%)										
1,4-Difluorobenzene (sur.)	%	114	N/A	98	N/A	A676666				
4-Bromofluorobenzene (sur.)	%	81	N/A	86	N/A	A676666				
D10-o-Xylene (sur.)	%	98	N/A	111	N/A	A676666				
D4-1,2-Dichloroethane (sur.)	%	104	N/A	102	N/A	A676666				
O-TERPHENYL (sur.)	%	89	N/A	93	N/A	A676506				
RDL = Reportable Detection Limit										
N/A = Not Applicable										
(1) Detection limits raised due moisture.	to high ı	noisture cont	ent, sar	mple contains	=> 50%	6				
	n on sa	nnle weight u	ised for	analysis						
(2) Detection limits raised based on sample weight used for analysis.										

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

(3) Detection limit reported based on MDL and sample weight used for analysis.



PETROLEUM HYDROCARBONS (CCME)

Bureau Veritas ID		AZF966		
Sampling Date		2022/08/07 09:50		
COC Number		1 of 1		
	UNITS	BH22-03-01	RDL	QC Batch
Ext. Pet. Hydrocarbon	UNITS	BH22-03-01	RDL	QC Batch
Ext. Pet. Hydrocarbon F4G-SG (Heavy Hydrocarbons-Grav.)	UNITS mg/kg	BH22-03-01 9200	RDL 1700	



GENERAL COMMENTS

Each	Each temperature is the average of up to three cooler temperatures taken at receipt									
	Package 1	3.0°C								
Versio	Version #4: Report reissued with Bio-Toluene report on sample AZF966 as per request from client. 20220818									
Versio	Version #3: Report reissued to include chromatogram review and report as per client request received 20220815									
Resu	Results relate only to the items tested.									



QUALITY ASSURANCE REPORT

QA/QC Batch	Init		Parameter	Date Analyzed	Value	Recovery		OClimit
Batch A676506	Init CAU	QC Type Matrix Spike [AZF970-01]	Parameter O-TERPHENYL (sur.)	Date Analyzed 2022/08/11	vaiue	Recovery 140	UNITS %	QC Limits 60 - 140
A070500	CAU	Matrix Spike [AZF970-01]	F2 (C10-C16 Hydrocarbons)	2022/08/11		140	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2022/08/11		134	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2022/08/11		134	%	60 - 140
A676506	CAU	Spiked Blank	O-TERPHENYL (sur.)	2022/08/11		94	%	60 - 140
A070500	CAU	Spikeu bialik	F2 (C10-C16 Hydrocarbons)	2022/08/11		94 88	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2022/08/11		93	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2022/08/11		93	%	60 - 140
A676506	CAU	Method Blank	O-TERPHENYL (sur.)	2022/08/11		102	%	60 - 140
A070300	CAU		F2 (C10-C16 Hydrocarbons)	2022/08/11	<10	102	mg/kg	00 - 140
			F3 (C16-C34 Hydrocarbons)	2022/08/11	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2022/08/11	<50		mg/kg	
A676506	CAU	RPD [AZF970-01]	F2 (C10-C16 Hydrocarbons)	2022/08/11	13		//////////////////////////////////////	40
A070500	CAU	KPD [A2F970-01]	F3 (C16-C34 Hydrocarbons)	2022/08/11	23		%	40
			F4 (C34-C50 Hydrocarbons)	2022/08/11	22		%	40
A676508	WLE	Method Blank	Moisture	2022/08/11	<0.30		%	40
A676508	WLE	RPD	Moisture	2022/08/11	2.5		%	20
A676514	WLE	Method Blank	Moisture	2022/08/11	<0.30		%	20
A676514	WLE	RPD [AZF967-01]	Moisture	2022/08/11	<0.30 11		%	20
A676666	WPK	Matrix Spike	1,4-Difluorobenzene (sur.)	2022/08/11	11	112	%	20 50 - 140
A070000	VVPN	Matrix Spike	4-Bromofluorobenzene (sur.)	2022/08/11		80	%	50 - 140
			D10-o-Xylene (sur.)	2022/08/11		99	%	50 - 140
			D10-0-Xylene (sur.) D4-1,2-Dichloroethane (sur.)	2022/08/11		107	%	50 - 140
			Benzene	2022/08/11		98	%	50 - 140
			Toluene	2022/08/11		98 89	%	50 - 140
			Ethylbenzene	2022/08/11		83	%	50 - 140 50 - 140
			m & p-Xylene	2022/08/11		85 81	%	50 - 140
						78	%	
			o-Xylene	2022/08/11				50 - 140
NETEEE		Spiked Blank	F1 (C6-C10) 1,4-Difluorobenzene (sur.)	2022/08/11		101	%	60 - 140 50 - 140
A676666	VVPK	Spiked Blank		2022/08/11		121	% %	
			4-Bromofluorobenzene (sur.)	2022/08/11		100 106		50 - 140
			D10-o-Xylene (sur.) D4-1,2-Dichloroethane (sur.)	2022/08/11		108	% %	50 - 140 50 - 140
				2022/08/11 2022/08/11				
			Benzene Toluene	2022/08/11		104 99	% %	60 - 130 60 - 130
			Ethylbenzene	2022/08/11		86	%	60 - 130
				2022/08/11		93	%	60 - 130
			m & p-Xylene o-Xylene	2022/08/11		83		60 - 130
			6-Xylene F1 (C6-C10)	2022/08/11		85 112	% %	60 - 130 60 - 140
A676666	WDV	Method Blank	1,4-Difluorobenzene (sur.)	2022/08/11		112	%	50 - 140 50 - 140
A070000	VVPK		4-Bromofluorobenzene (sur.)			93		
			D10-o-Xylene (sur.)	2022/08/11 2022/08/11			%	50 - 140
						91 127	% %	50 - 140
			D4-1,2-Dichloroethane (sur.)	2022/08/11		127		50 - 140
			Benzene	2022/08/11	<0.0050		mg/kg	
			Toluene Ethylbenzene	2022/08/11 2022/08/11	<0.050 <0.010		mg/kg	
							mg/kg	
			m & p-Xylene	2022/08/11	<0.040		mg/kg	
			o-Xylene	2022/08/11	<0.020		mg/kg	
	M/D/		F1 (C6-C10)	2022/08/11	<10		mg/kg	
A676666	WPK	KPD	Benzene	2022/08/11	NC		%	50
			Toluene	2022/08/11	NC (2)		%	50
			Ethylbenzene	2022/08/11	NC		%	50

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 Bureau Veritas
 Edmonton: 9331 - 48th Street T6B 2R4
 Telephone (780)577-7100
 Fax (780)450-4187



04/06

GOLDER ASSOCIATES LTD. Client Project #: 22525414-100 Site Location: CAMP FAREWELL, NT Your P.O. #: 22525414-1100-1104 Sampler Initials: ML

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			m & p-Xylene	2022/08/11	NC		%	50
			o-Xylene	2022/08/11	NC		%	50
			F1 (C6-C10)	2022/08/11	NC (2)		%	30
A677163	JLJ	Spiked Blank	F4G-SG (Heavy Hydrocarbons-Grav.)	2022/08/11		95	%	60 - 140
A677163	JLJ	Method Blank	F4G-SG (Heavy Hydrocarbons-Grav.)	2022/08/11	<500		mg/kg	

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

(2) Detection limit reported based on MDL and sample weight used for analysis.



VALIDATION SIGNATURE PAGE

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

Gita Pokhrel, Laboratory Supervisor

Junzhi Gas

Janet Gao, B.Sc., QP, Supervisor, Organics

1/monicatedk

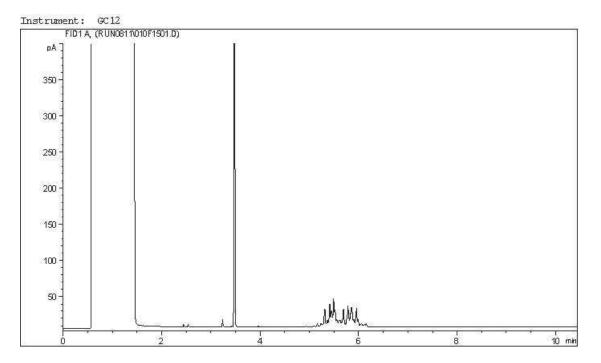
Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

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 Signature Page.

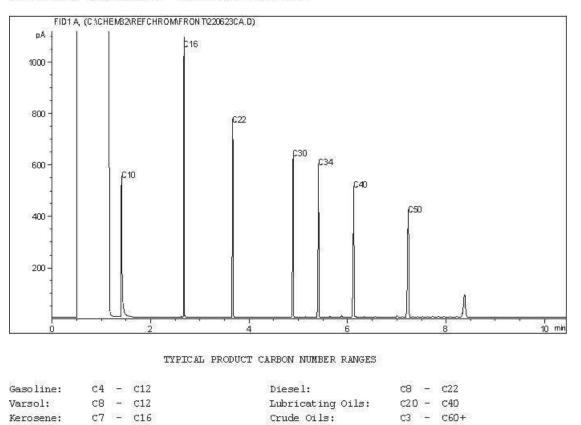
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Page 1 of			LAB USE ONLY - PLACE STICKER HERE			Rush Confirmation #:			21 22 Regular Turnaround Time (TAT)	5 to 7 Day	Rush Turnaroun Surcharge	azyjana	2 d Day	POE CONTRACT	also en	š	-	holoan to facility a		3	33	3	n	3		D ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH	"C	1 2 3 Special instructions	C2590770	
			10			-	-		19 20	tu	25210	NPLE	NAS O	2000 LIMITED	X	X	X	X	X	X	×	X	\times	X		5 MENT AN	No	Time	30	-
CHAIN OF CUSTODY RECORD ENV COC - 00013v3	Project Information	Shell	22525414-8800694004 - 1100 - 110	22525414-30099 -1000	NA	COTATO TOTOLOGIANAMEN, NT	TN	Melissa Lord, Harmanjeet Kaur			U	s - dissol	letem leto letot rlossib nonicron nonicron l noni l nonel II	90 vafine wa Regulated Mercury - I Mercury - I islinity 4 Sasic class	L 5 5 4 4				Received in Velowkhine	N Welevert		1 Coyci		H 1314		sublect to Bureau ventas strainanen trensa and conditions' signing of this chain of custory bocuMetri's accanourebonent and acceptance of our trensa and conditions and conditions which werning at www.guva.com/trensa and conditions on the caustor bocuMetri's accanourebonent and acceptance of our trensa and compitions on the caustor for the caustor of our acceptance	LAB USE ONLY Yes Seal present Seal Intact	Cooling media present Date	100 22 00 10 15	
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		Quotation #:	P.O. #/ AFE#	Project #:	T2P 4K3 Site #:	Site Lo	Site Location		2 3 4 2 P		Q		NOITI	116LD PRE2 AB FILTRA 3TEX F1-F4 3TEX F1-F4	X	X	X	X	×	\times	\times	\times	×	X		TERMS AND CONDIT ND CONDITIONS OR E	ç	Received by: (Signature/ Print)	er Megan	
(6-7247 7247 00-6208	Report Information (if differs from invoice)	Golder Associates	Aurelie Bellavance		Postal Code:	403-299-5600	e. bellavance@wsp.com	r. tan @wsp. com	-		1	1	20100301	Matrix XX IELD FILTI	-	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil		AU VERITAS STANDARD BVNA.COM/TERMS A	Yes No	Receiv	Mign Form	
e (800) 38 (800) 386- ree (866) 8	ation (if di	Golder	Aurelie		AB	403-2	even	On @		nitoba	6.P	O BUREAU VERITAS	Time (24hr)	MM	05	05	20	50 5	05	20	15	35	20	0		TO BUREZ		Ŧ	MM O	1
hoose location: Calgary, A8: 4000 19th St. NE, T2E 6P8 Toll Free (800) 386-7247 Edmonton, AB: 9331-48 St. TGB 2R4 Toll Free (800) 386-7247 Winnipeg. MB: D-675 Berry St. R3H 1A7 Toll Free (866) 800-6208	Report Inform				Calgary		aurelie. be	Deter.t.		Drinking Water - Manitoba	X other AmSRP		Date Sampled Time	8	b0 20 80	08 07 09	08 07 09	08 07 09	08 07 10	01 ±0 80	09 07 10	01 10 80	01 70 80	08 07 11		HAIN OF CUSTODY IS SUBJECT ARE AVAILABLE FOR VIEWING		a pres	15	
000 19th St. : 9331-48 S : D-675 Berr		Company:	Contact Name:	Street Address:	City:	Phone:	Email:	oples:			X	IIING UNTIL	Date	۶	22.	22 0	22	22	22 6	22.08	22 C	22	22	22		CHAIN OF C ARE AVAI	0'l		10 0	
Choose Location: Calgary, AB: 400 www.BVMA.com Winnipeg, MB:	rmation Invoice to (requires report)	Client #254, Golder Associates Co	237 - 4 Ave SW Suite 3300 Co	Sti	Calgary Prov: AB Postal Cr		Canada Account Payable	8	Regulatory Criteria	CCME	🗌 Saskatchewan	SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY 1		Sample Identification	BH 22-01-01	P B	MW22-02-01	BH 22-03-01	1	BH22-05-01	BH22-05-02	BH22-06-02	13422-67-01	+22-08-01		"UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS ARE AVAILABLE FOR	LAB USE ONLY Yes No vc 0,5 0	bv: (Signature/ Print)	17 PM	-
	Invoice Information	Company :	Contact Name:	Street Address:	City:	Phone:	Email:	Copies:		LTA	Sask				1 BH	2 DUP	a ML	4 BH	5 BH	• BH	7 84	° 84	181 .	18 or	11 11	•UNLESS OF	LAB U Seal present Seal intact	Cooling media present Relinquished	1 Male	

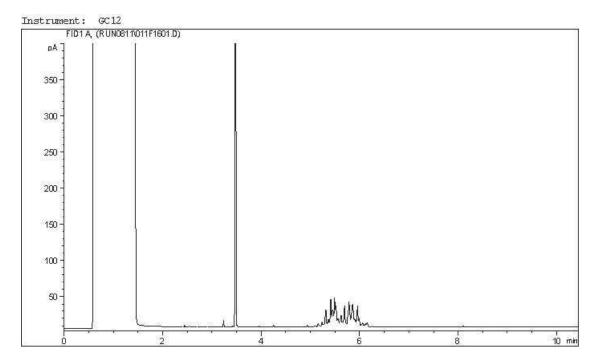
CCME Hydrocarbons (F2-F4 in soil) Chromatogram



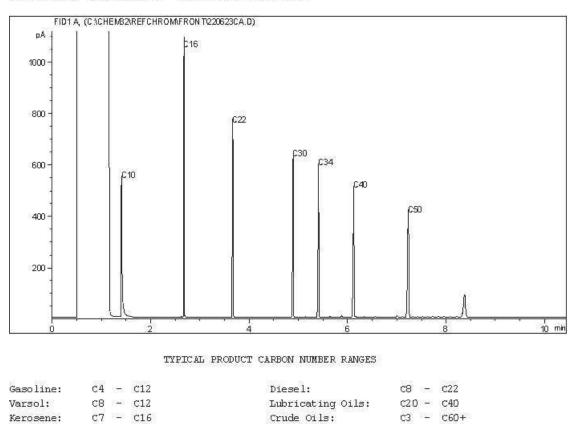
Carbon Range Distribution - Reference Chromatogram



CCME Hydrocarbons (F2-F4 in soil) Chromatogram

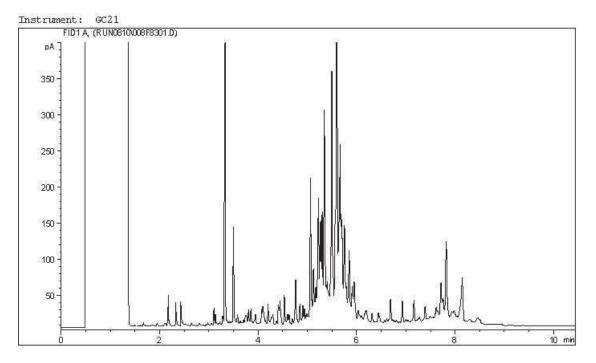


Carbon Range Distribution - Reference Chromatogram

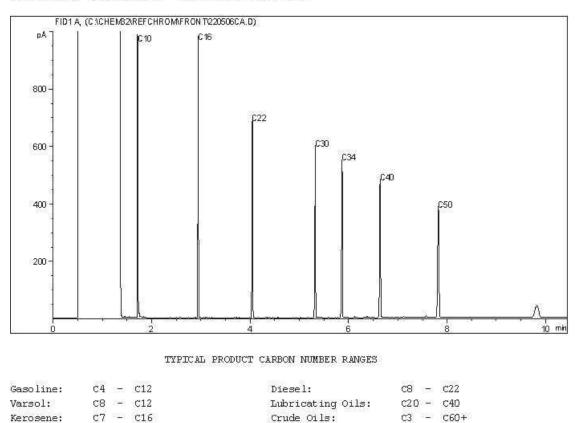


GOLDER ASSOCIATES LTD. Client Project #: 22525414-100 Site Reference: CAMP FAREWELL, NT Client ID: MW22-02-01

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

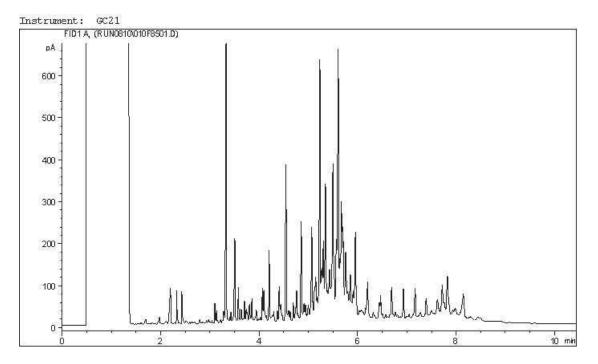


Carbon Range Distribution - Reference Chromatogram

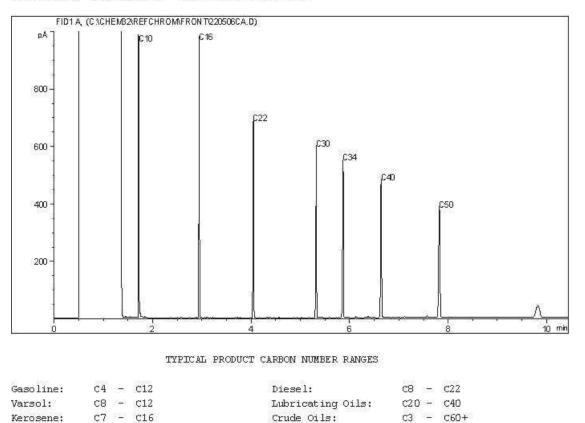


GOLDER ASSOCIATES LTD. Client Project #: 22525414-100 Site Reference: CAMP FAREWELL, NT Client ID: BH22-03-01

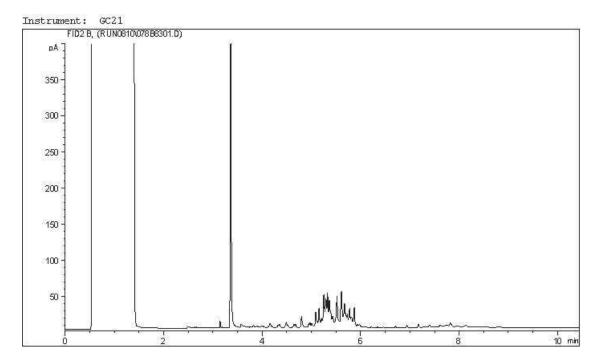
CCME Hydrocarbons (F2-F4 in soil) Chromatogram



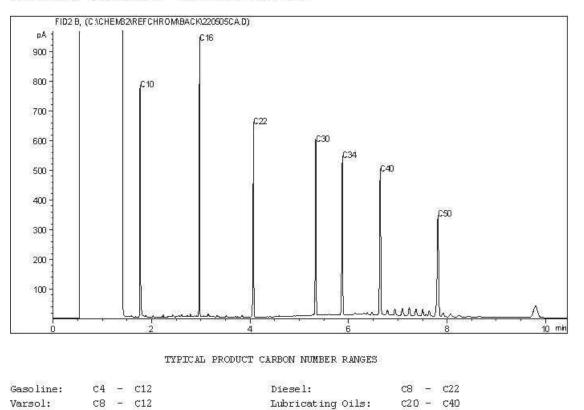
Carbon Range Distribution - Reference Chromatogram



CCME Hydrocarbons (F2-F4 in soil) Chromatogram



Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

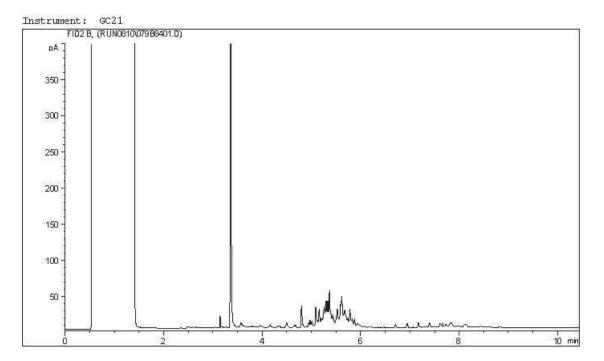
c7 - c16

Kerosene:

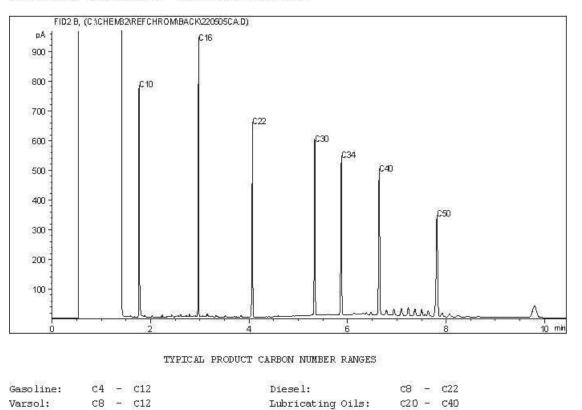
Crude Oils:

GOLDER ASSOCIATES LTD. Client Project #: 22525414-100 Site Reference: CAMP FAREWELL, NT Client ID: BH22-05-01

CCME Hydrocarbons (F2-F4 in soil) Chromatogram



Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

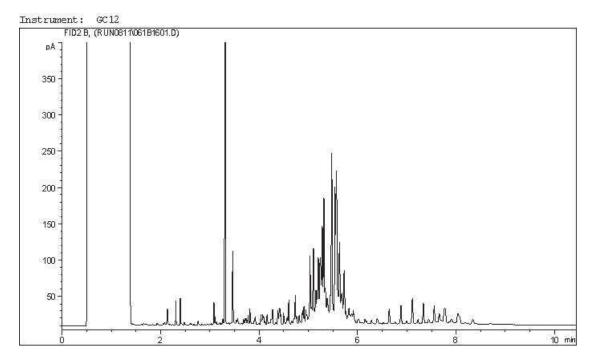
c7 - c16

Kerosene:

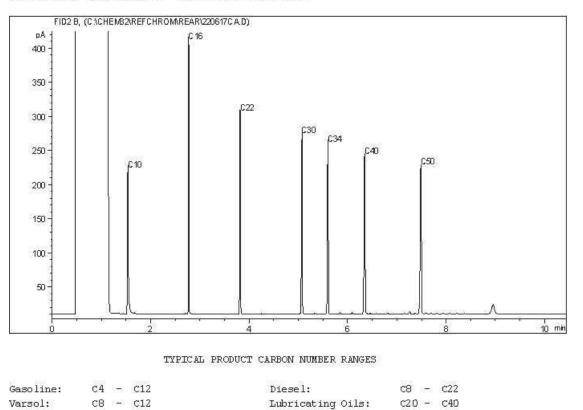
Crude Oils:

GOLDER ASSOCIATES LTD. Client Project #: 22525414-100 Site Reference: CAMP FAREWELL, NT Client ID: BH22-05-02

CCME Hydrocarbons (F2-F4 in soil) Chromatogram



Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

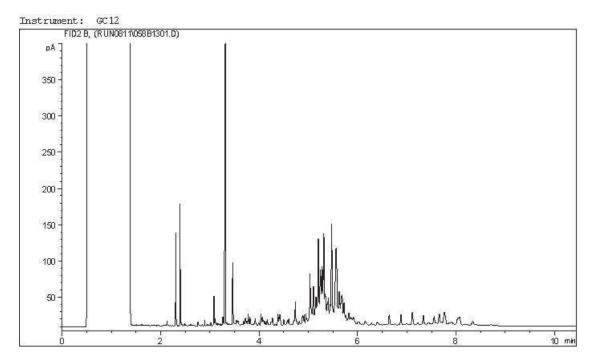
c7 - c16

Kerosene:

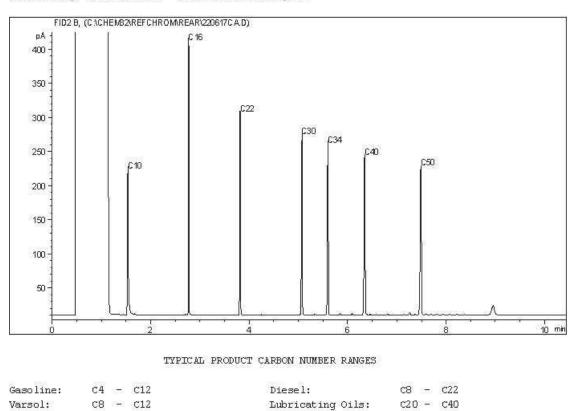
Crude Oils:

GOLDER ASSOCIATES LTD. Client Project #: 22525414-100 Site Reference: CAMP FAREWELL, NT Client ID: BH22-06-02

CCME Hydrocarbons (F2-F4 in soil) Chromatogram



Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Varsol:

Kerosene:

C8 - C12

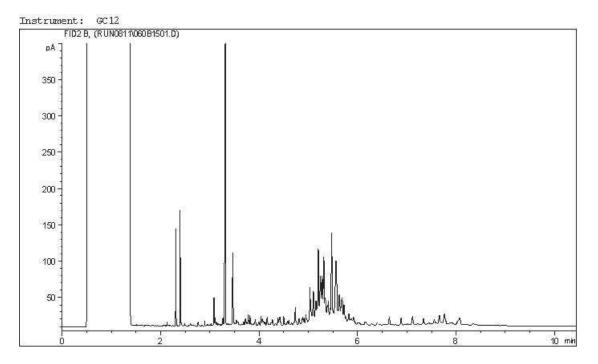
c7 - c16

Crude Oils:

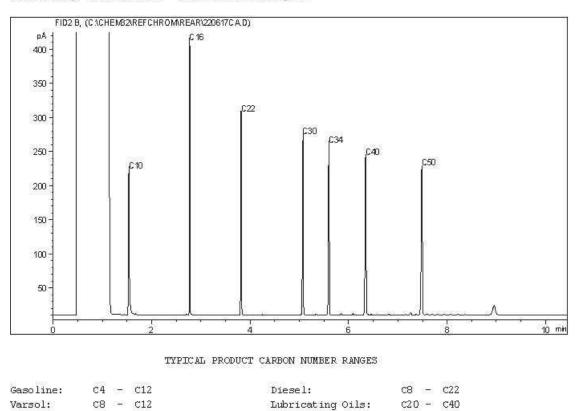
c20 - c40

GOLDER ASSOCIATES LTD. Client Project #: 22525414-100 Site Reference: CAMP FAREWELL, NT Client ID: BH22-06-02

CCME Hydrocarbons (F2-F4 in soil) Chromatogram



Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

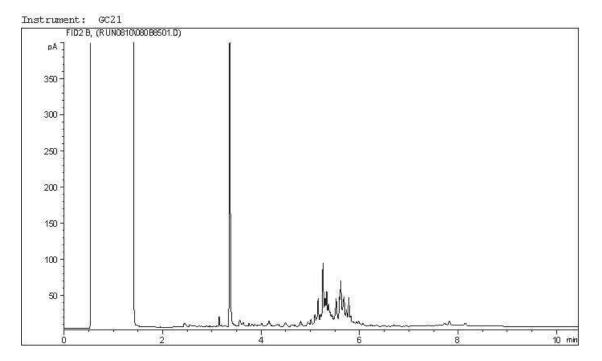
c7 - c16

Kerosene:

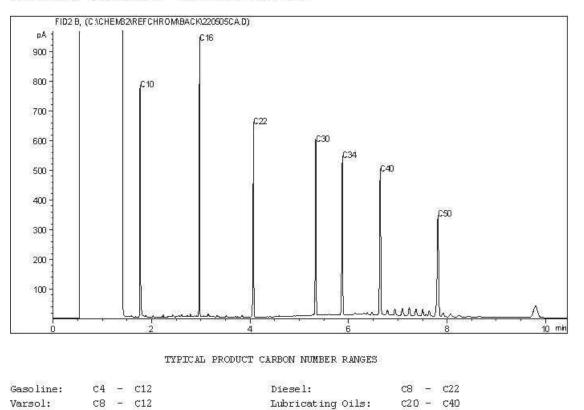
Crude Oils:

GOLDER ASSOCIATES LTD. Client Project #: 22525414-100 Site Reference: CAMP FAREWELL, NT Client ID: BH22-07-01

CCME Hydrocarbons (F2-F4 in soil) Chromatogram



Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

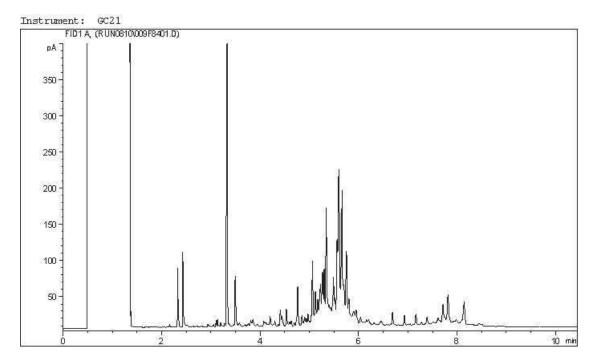
c7 - c16

Kerosene:

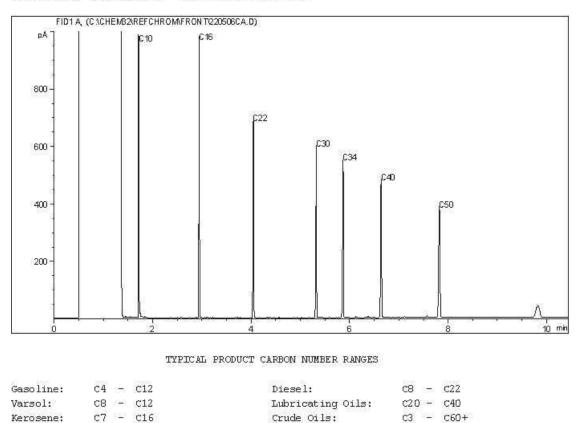
Crude Oils:

GOLDER ASSOCIATES LTD. Client Project #: 22525414-100 Site Reference: CAMP FAREWELL, NT Client ID: BH22-08-01

CCME Hydrocarbons (F2-F4 in soil) Chromatogram



Carbon Range Distribution - Reference Chromatogram





August 15, 2022

GOLDER ASSOCIATES LTD.

2800, 700 -2nd Street SW CALGARY, AB, T2P 2W2

Attention: Aurelie Bellavance

Re: Chromatogram Interpretation of CAMP FAREWELL, NT; Project 22525414-100 Bureau Veritas Job No.: C259077

Bureau Veritas was retained by Golder Associates Ltd. to provide hydrocarbon interpretations concerning the likely origin of hydrocarbons quantified within CCME fraction(s) F2, F3 and/or F4.

Analytical Method

Petroleum hydrocarbon analyses at Bureau Veritas are conducted in accordance with the analytical specifications required by the prescriptive and performance-based (where appropriate) elements of the CCME Tier I protocols for hydrocarbon determination¹ in soil samples.

Chromatogram Interpretation

A comprehensive qualitative assessment of the resultant gas chromatograms in the F2-F4 ranges was performed. The chromatograms were inspected for specific peak profiles that would indicate the possible origin of the hydrocarbons present in the sample. The presence and nature of specific aliphatic compounds (n-alkanes), the presence of characteristic unresolved complex mixtures (UCMs) or "humps" and the relative abundance (ratios) of specific compounds are reviewed as part of the evaluation.

¹ Canadian Council of Ministers of the Environment: "Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil – Tier I Method" 2001



Data Interpretation

Table 1. Qualitative Data Summary – Chromatogram Interpretation

Lab ID	Sample ID	Chromatogram Interpretation
AZF965	MW22-02-01	The COME FO FA observate graphic people profile is consistent with
AZF966	BH22-03-01	The CCME F2-F4 chromatographic peak profile is consistent with biogenic organic material (e.g. peat). Chromatograms of biogenic
AZF969	BH22-05-02	organic material may contain peak patterns spanning the C10 to
AZF970	BH22-06-02	C50 range, but they are most commonly characterized by a profile
AZF971	BH22-07-01	of unevenly distributed sharp peaks between C28 and C34. The impacts are not consistent with a petroleum product or crude oil.
AZF972	BH22-08-01	

If you have any questions or require additional information, please do not hesitate to contact the undersigned.

Sincerely, Bureau Veritas Laboratories

Michael Sheppard, B.Sc., P.Bio., QP Consulting Scientist Environmental Services

It Cantuel

Scott Cantwell, CET, B.Sc., P.Chem. Director and General Manager – Western Canada Environmental Services

Disclaimer

Hydrocarbon Resemblance

Characterization by way of visual evaluation of the sample chromatogram may not be conclusive and is only indicative of substances that may be present. The resemblance information must be regarded as approximate and qualitative.

August 19, 2022



GOLDER ASSOCIATES LTD.

2800, 700 -2nd Street SW CALGARY, AB, T2P 2W2

Attention: Aurelie Bellavance

Re: Biogenic Toluene Assessment of Camp Farewell, NT; Project 22525414-100 Bureau Veritas Job No.: C259077

Bureau Veritas Environmental & Specialty Services Laboratories (BV Labs) was retained by Golder Associated Ltd. to provide an interpretation concerning the likely origin of toluene quantified within CCME Fraction 1 (nC6-nC10).

Analytical Method

Petroleum hydrocarbon analyses at BV Labs are conducted in accordance with the analytical specifications required by the prescriptive and performance-based (where appropriate) elements of the CCME Tier I protocols for hydrocarbon determination¹ in soil samples.

Biogenic Toluene

The sample extract is analyzed by volatile organic compound (VOC) analysis in selected ion monitoring (SIM) mode to determine the origin of the quantified toluene. The presence of specific marker compounds, both biogenic and petrogenic, along with a series of associated parameters are reviewed as part of this evaluation. Diagnostic parameters of primary interest and the ranges typically associated with biogenic toluene samples are listed below²:

- Moisture: typically ≥70%
- Absence of an Unresolved Complex Mixture (UCM) within CCME Fractions F2 or F3.
- Presence of a "Biogenic Cluster" within CCME Fraction 3 (F3Bc); specifically F3B, nC32-nC34
- Presence of biogenic monoterpene compound(s)³
- Toluene ratio (T_{ratio}): Ratio between Toluene and sum of all BTEX compounds; typically >0.7
- Cymene ratio (Cratio): Ratio between p-Cymene and the sum of all three isomers; typically >0.8
- Additional diagnostic parameters may be included in the assessment if deemed beneficial (examples include: Carbon Preference Index (CPI), isoprenoid ratios, BIC, etc.)

¹ Canadian Council of Ministers of the Environment: "Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil – Tier I Method" 2001

² Bureau Veritas Laboratories Canada: threshold values derived internally (assessment of long-term data set)

³ Target compounds: α/β -Pinene, Camphene, (+)-3-Carene, α-Terpinene, Limonene, o/m/p-Cymene, γ-Terpinene and α-Terpinolene (list may be amended from time-to-time without notice)



Data Interpretation

Table 1. Data Summary - Biogenic Toluene Evaluation

Lab ID	Semente ID		Die	agnostic	Conclusion			
	Sample ID	Moist	UCM	F3Bc	Mono	T _{ratio}	Cratio	Conclusion⁵
AZF966	BH22-03-01	Н	No	Yes	No	1.0	NC	Inconclusive (neither)

NC: Unable to Calculate

If you have any questions or require additional information, please do not hesitate to contact the undersigned.

Sincerely, Bureau Veritas Environmental & Specialty Services Laboratories



Michael Sheppard, B.SC., P.Bio, QP Consulting Scientist Environmental Services

Scott Cantwell, CET, B.Sc., P.Chem. Director and General Manager – Western Canada Environmental Services

Disclaimer

Biogenic Toluene

A detailed assessment of Selective Ion Monitoring (SIM) GC-MS, and associated project data was completed to provide further information relating to the biogenic and/or petrogenic origin of compounds or fractions quantified as part of the CCME Tier I protocol. All statements must be regarded as approximate and qualitative.

⁴ Diagnostic Parameters

Moist: Moisture; H (≥70%), M (<70 & ≥20%), L (<20%) UCM: Presence/Position of Unresolved Complex Mixture F3Bc: Presence of a biogenic cluster within F3B Mono: Biogenic monoterpenes (excluding cymenes) T_{ratio} : Toluene Ratio (T/ Σ BTEX) C_{ratio} : Cymene Ratio (p-Cymene/ Σ Cymene isomers)

⁵ Conclusions

Biogenic Toluene: Quantified toluene likely of biogenic origin Petrogenic Toluene: Quantified toluene likely of petrogenic origin Inconclusive (both): Presence of both biogenic and petrogenic diagnostic parameters (CSIA recommended) Inconclusive (neither): Insufficient evidence to support Biogenic or Petrogenic origin (CSIA recommended)

GOLDER DATA QUALITY REVIEW CHECKLIST

Site Logation, Come Economit NT			Samuling Data, August 7, 2022					
Site Location: Camp Farewell, NT		Sampling Date: August 7, 2022						
Golder Project Number: 22525414	-1000	_	Laboratory: Bureau Veritas Edmonton					
Lab Submission Number: <u>C259077</u>		-						
Was the Cooler Received at the lab under a s	anlad and	intact cus	tody seal? Yes					
Was proper chain of custody of the samples								
Were sample temperatures acceptable when		1	Yes					
Were all samples analyzed and extracted with	•		Yes					
Has lab warranted all tests were in statistical			Yes					
Was sufficient sample provided for the reque			Yes					
Has lab warranted all samples were analyzed	•							
1 5		1	1					
Are All Laboratory QC Within Acceptance C	Criteria (Y	es, No, N	ot Applicable)?					
Yes	No	NA	Comments					
Surrogate Recovery X			Matrix spike recovery for F2 (141%) exceeded the					
Method Blank Concentration X			acceptance criteria of (60-140%).					
Laboratory Duplicate RPD X			All remaining laboratory QC results are within					
Matrix Spike Recovery	Х		acceptance criteria.					
Blank Spike Recovery X								
Are All Field QC Samples Within Alert Lim	its (Yes-N	Jo. Not Ar	mlicable)?					
	105 (105,1	10, 1101 11						
Yes	No	NA	Comments					
Field Blank Concentration		Х	All field QC samples are within					
Trip Blank Concentration		X	alert limits.					
Field Duplicate RPD X								
Is data considered reliable (Yes/No/Suspect)	?:		Yes					
If answer is "No" or "Suspect", describe and		ationale:						
Data Reviewed by (Print): Anita Colb	pert	_	Data Reviewed by (Signature): Onits Callert					
Date: August	12, 2022	_						



Your P.O. #: 22525414-1100-1104 Your Project #: 22525414-1000 Site Location: CAMP FAREWELL Your C.O.C. #: 1 of 1

Attention: Aurelie Bellavance

GOLDER ASSOCIATES LTD. 2800, 700 -2nd Street SW CALGARY, AB CANADA T2P 2W2

> Report Date: 2022/09/21 Report #: R3235977 Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C260012 Received: 2022/08/12, 09:00

Sample Matrix: Soil # Samples Received: 4

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
Boron (Hot Water Soluble) (1)	4	2022/08/16	2022/08/16	AB SOP-00034 / AB SOP- 00042	EPA 6010d R5 m
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1, 3)	4	N/A	2022/08/16	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX (1)	4	N/A	2022/08/17		Auto Calc
Hexavalent Chromium (1, 4)	4	2022/08/16	2022/08/16	AB SOP-00063	SM 23 3500-Cr B m
Barium on ICP using Fusion Extraction (2)	1	N/A	2022/09/21		
CCME Hydrocarbons (F2-F4 in soil) (1, 5)	3	2022/08/15	2022/08/16	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2-F4 in soil) (1, 5)	1	2022/08/17	2022/08/17	AB SOP-00036	CCME PHC-CWS m
Elements by ICPMS - Soils (1)	4	2022/08/16	2022/08/17	AB SOP-00001 / AB SOP- 00043	EPA 6020b R2 m
Moisture (1)	4	N/A	2022/08/16	AB SOP-00002	CCME PHC-CWS 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.

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



Your P.O. #: 22525414-1100-1104 Your Project #: 22525414-1000 Site Location: CAMP FAREWELL Your C.O.C. #: 1 of 1

Attention: Aurelie Bellavance

GOLDER ASSOCIATES LTD. 2800, 700 -2nd Street SW CALGARY, AB CANADA T2P 2W2

> Report Date: 2022/09/21 Report #: R3235977 Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C260012 Received: 2022/08/12. 09:00

(2) This test was performed by AGAT - Calgary, 2910 12th Street NE , Calgary, AB, T2E 7P7

(3) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is date sampled unless otherwise stated.

(4) Some soil samples may react with the Cr(VI) spike reducing it to Cr(III). These samples are highly unlikely to contain native hexavalent chromium. Thus a failed spike recovery does not invalidate a negative result on the native sample.

(5) All CCME results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil, Validation of Performance-Based Alternative Methods September 2003. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.



AUTHORIZED REPORT RAPPORT AUTORISE

Please direct all questions regarding this Certificate of Analysis to your Project Manager. Cynny Hagen, Key Account Soecialist

Email: Cynny.HAGEN@bureauveritas.com

Phone# (403)735-2273

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 Signature Page.



AT1 BTEX AND F1-F4 IN SOIL (VIALS)

Bureau Veritas ID		AZM154	AZM154		AZM155	AZM156	AZM157		
Sampling Date		2022/08/08	2022/08/08		2022/08/08	2022/08/08	2022/08/08		
		14:00	14:00		14:05	14:10	14:15		
COC Number		1 of 1	1 of 1		1 of 1	1 of 1	1 of 1		
	UNITS	BH22-17-01	BH22-17-01 Lab-Dup	RDL	BH22-17-02	BH22-17-03	BH22-17-04	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	<24 (1)	N/A	24	<10	<10	<10	10	A681385
F3 (C16-C34 Hydrocarbons)	mg/kg	370 (1)	N/A	120	180	<50	<50	50	A681385
F4 (C34-C50 Hydrocarbons)	mg/kg	120 (1)	N/A	120	<50	<50	<50	50	A681385
Reached Baseline at C50	mg/kg	Yes	N/A	N/A	Yes	Yes	Yes	N/A	A681385
Physical Properties									
Moisture	%	59	N/A	0.30	30	19	17	0.30	A681498
Volatiles									
Xylenes (Total)	mg/kg	<0.17	N/A	0.17	<0.045	<0.045	<0.045	0.045	A679841
F1 (C6-C10) - BTEX	mg/kg	<18	N/A	18	<10	<10	<10	10	A679841
Field Preserved Volatiles	•								
Benzene	mg/kg	<0.017 (2)	0.019	0.017	<0.0050	<0.0050	<0.0050	0.0050	A680671
Toluene	mg/kg	<0.050 (2)	<0.050	0.050	<0.050	<0.050	<0.050	0.050	A680671
Ethylbenzene	mg/kg	<0.025 (2)	0.032	0.025	<0.010	<0.010	<0.010	0.010	A680671
m & p-Xylene	mg/kg	<0.15 (3)	<0.15	0.15	<0.040	<0.040	<0.040	0.040	A680671
o-Xylene	mg/kg	<0.074 (4)	<0.074	0.074	<0.020	<0.020	<0.020	0.020	A680671
F1 (C6-C10)	mg/kg	<18 (2)	<18	18	<10	<10	<10	10	A680671
Surrogate Recovery (%)				-					
1,4-Difluorobenzene (sur.)	%	96	100	N/A	98	97	97	N/A	A680671
4-Bromofluorobenzene (sur.)	%	100	106	N/A	99	99	101	N/A	A680671
D10-o-Xylene (sur.)	%	103	119	N/A	103	93	115	N/A	A680671
D4-1,2-Dichloroethane (sur.)	%	99	94	N/A	97	97	96	N/A	A680671
O-TERPHENYL (sur.)	%	139	N/A	N/A	100	141 (5)	132	N/A	A681385

RDL = Reportable Detection Limit

Lab-Dup = Laboratory Initiated Duplicate

N/A = Not Applicable

(1) Detection limits raised due to high moisture content, sample contains => 50% moisture.

(2) Detection limit reported based on MDL and sample weight used for analysis.

(3) Detection limits raised based on sample weight used for analysis.

(4) Qualifying ion outside of acceptance criteria. Results are tentatively identified and potentially biased high. Detection limits raised based on sample weight used for analysis.

(5) Surrogate recovery exceeds acceptance criteria (high recovery). As results are non-detect, there is no impact on data quality.



CCME REGULATED METALS - SOILS (SOIL)

Bureau Veritas ID		AZM154		AZM155	AZM156	AZM157	AZM157		
Sampling Date		2022/08/08		2022/08/08	2022/08/08	2022/08/08	2022/08/08		
Sampling Date		14:00		14:05	14:10	14:15	14:15		
COC Number		1 of 1		1 of 1	1 of 1	1 of 1	1 of 1		
	UNITS	BH22-17-01	RDL	BH22-17-02	BH22-17-03	BH22-17-04	BH22-17-04 Lab-Dup	RDL	QC Batch
Elements									
Soluble (Hot water) Boron (B)	mg/kg	1.7	0.30	<0.10	<0.10	<0.10	N/A	0.10	A683000
Hex. Chromium (Cr 6+)	mg/kg	<0.19 (1)	0.19	<0.080	<0.080	<0.080	<0.080	0.080	A682694
Total Antimony (Sb)	mg/kg	<1.0	1.0	<0.50	<0.50	<0.50	<0.50	0.50	A683223
Total Arsenic (As)	mg/kg	2.9	2.0	4.3	3.5	4.1	3.7	1.0	A683223
Total Barium (Ba)	mg/kg	770	2.0	110	62	82	71	1.0	A683223
Total Beryllium (Be)	mg/kg	<0.80	0.80	<0.40	<0.40	<0.40	<0.40	0.40	A683223
Total Cadmium (Cd)	mg/kg	0.18	0.10	0.081	0.085	0.069	0.069	0.050	A683223
Total Chromium (Cr)	mg/kg	6.9	2.0	6.4	4.6	7.0	6.4	1.0	A683223
Total Cobalt (Co)	mg/kg	5.2	1.0	3.3	2.6	3.0	2.8	0.50	A683223
Total Copper (Cu)	mg/kg	6.1	2.0	3.6	2.8	3.1	2.9	1.0	A683223
Total Lead (Pb)	mg/kg	7.2	1.0	3.5	2.7	2.9	2.8	0.50	A683223
Total Mercury (Hg)	mg/kg	<0.10	0.10	<0.050	<0.050	<0.050	<0.050	0.050	A683223
Total Molybdenum (Mo)	mg/kg	1.3	0.80	0.52	0.62	1.3	1.3	0.40	A683223
Total Nickel (Ni)	mg/kg	7.5	2.0	8.5	7.5	8.3	7.9	1.0	A683223
Total Selenium (Se)	mg/kg	<1.0	1.0	<0.50	<0.50	<0.50	<0.50	0.50	A683223
Total Silver (Ag)	mg/kg	<0.40	0.40	<0.20	<0.20	<0.20	<0.20	0.20	A683223
Total Thallium (Tl)	mg/kg	<0.20	0.20	<0.10	<0.10	<0.10	<0.10	0.10	A683223
Total Tin (Sn)	mg/kg	<2.0	2.0	<1.0	<1.0	<1.0	<1.0	1.0	A683223
Total Uranium (U)	mg/kg	<0.40	0.40	0.28	0.30	0.33	0.31	0.20	A683223
Total Vanadium (V)	mg/kg	10	2.0	12	8.4	10	9.3	1.0	A683223
Total Zinc (Zn)	mg/kg	28	20	19	18	20	19	10	A683223

RDL = Reportable Detection Limit

Lab-Dup = Laboratory Initiated Duplicate

N/A = Not Applicable

(1) Detection limits raised due to high moisture content, samples contain => 50% moisture.



RESULTS OF CHEMICAL ANALYSES OF SOIL

Bureau Veritas ID		AZM154	
Sampling Date		2022/08/08 14:00	
COC Number		1 of 1	
	UNITS	BH22-17-01	QC Batch
Parameter			
Subcontract Parameter	N/A	ATTACHED	A725297



GENERAL COMMENTS

Each te	emperature is the	average of up to	o three cooler temperatures taken at receipt
	Package 1	1.7°C	
Versior	2: Report reissue	ed to include resu	ults for Barium-True Total on sample BH22-17-01/AZM154 as per client request received 2022/08/24.
Sample	AZM154 [BH22-	17-01] : Please s	see attachment for Barium on ICP using Fusion Extraction results.
			CCME REGULATED METALS - SOILS (SOIL) Comments
Sample	e AZM154 [BH22-	17-01] Boron (H	ot Water Soluble): Detection limits raised based on sample weight used for analysis.
Sample	e AZM154 [BH22-	17-01] Elements	s by ICPMS - Soils: Detection limits raised due to sample matrix.
Result	s relate only to th	e items tested.	



QUALITY ASSURANCE REPORT

QA/QC		007	. .					0011
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A680671	D01	Matrix Spike [AZM154-03]	1,4-Difluorobenzene (sur.)	2022/08/16		96	%	50 - 140
			4-Bromofluorobenzene (sur.)	2022/08/16		100	%	50 - 140
			D10-o-Xylene (sur.)	2022/08/16		105	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2022/08/16		99	%	50 - 140
			Benzene	2022/08/16		102	%	50 - 140
			Toluene	2022/08/16		100	%	50 - 140
			Ethylbenzene	2022/08/16		99	%	50 - 140
			m & p-Xylene	2022/08/16		100	%	50 - 140
			o-Xylene	2022/08/16		99	%	50 - 140
			F1 (C6-C10)	2022/08/16		104	%	60 - 140
A680671	D01	Spiked Blank	1,4-Difluorobenzene (sur.)	2022/08/16		97	%	50 - 140
			4-Bromofluorobenzene (sur.)	2022/08/16		100	%	50 - 140
			D10-o-Xylene (sur.)	2022/08/16		93	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2022/08/16		99	%	50 - 140
			Benzene	2022/08/16		98	%	60 - 130
			Toluene	2022/08/16		94	%	60 - 130
			Ethylbenzene	2022/08/16		95	%	60 - 130
			m & p-Xylene	2022/08/16		93	%	60 - 130
			o-Xylene	2022/08/16		93	%	60 - 130
			F1 (C6-C10)	2022/08/16		97	%	60 - 140
A680671	DO1	Method Blank	1,4-Difluorobenzene (sur.)	2022/08/17		98	%	50 - 140
			4-Bromofluorobenzene (sur.)	2022/08/17		106	%	50 - 140
			D10-o-Xylene (sur.)	2022/08/17		104	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2022/08/17		96	%	50 - 140
			Benzene	2022/08/17	<0.0050		mg/kg	
			Toluene	2022/08/17	<0.050		mg/kg	
			Ethylbenzene	2022/08/17	<0.010		mg/kg	
			m & p-Xylene	2022/08/17	<0.040		mg/kg	
			o-Xylene	2022/08/17	<0.020		mg/kg	
			F1 (C6-C10)	2022/08/17	<10		mg/kg	
A680671	DO1	RPD [AZM154-03]	Benzene	2022/08/17	9.8		%	50
			Toluene	2022/08/17	NC		%	50
			Ethylbenzene	2022/08/17	24		%	50
			m & p-Xylene	2022/08/17	NC		%	50
			o-Xylene	2022/08/17	NC		%	50
			F1 (C6-C10)	2022/08/17	NC		%	30
A681385	VP4	Matrix Spike	O-TERPHENYL (sur.)	2022/08/16		134	%	60 - 140
		·	F2 (C10-C16 Hydrocarbons)	2022/08/16		128	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2022/08/16		131	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2022/08/16		128	%	60 - 140
A681385	VP4	Spiked Blank	O-TERPHENYL (sur.)	2022/08/16		116	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2022/08/16		113	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2022/08/16		117	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2022/08/16		114	%	60 - 140
A681385	VP4	Method Blank	O-TERPHENYL (sur.)	2022/08/16		128	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2022/08/16	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2022/08/16	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2022/08/16	<50		mg/kg	
A681385	VP4	RPD	F2 (C10-C16 Hydrocarbons)	2022/08/16	NC		%	40
			F3 (C16-C34 Hydrocarbons)	2022/08/16	NC		%	40
			F4 (C34-C50 Hydrocarbons)	2022/08/16	NC		%	40



QUALITY ASSURANCE REPORT(CONT'D)

			QUALITI ASSOLATE	- (/				
QA/QC	Init		Darameter	Data Analyzad	Value	Decovery		OC Limite
Batch A681498	Init A1H	QC Type Method Blank	Parameter Moisture	Date Analyzed 2022/08/16	Value <0.30	Recovery	UNITS %	QC Limits
A681498	A1H	RPD	Moisture	2022/08/16	18		%	20
A682694	FM0	Matrix Spike	Hex. Chromium (Cr 6+)	2022/08/16	10	96	%	75 - 125
A082094	11010	[AZM157-01]	Hex. Chromium (Cr 0+)	2022/08/10		50	70	75-125
A682694	FM0	Spiked Blank	Hex. Chromium (Cr 6+)	2022/08/16		104	%	80 - 120
A682694	FM0	Method Blank	Hex. Chromium (Cr 6+)	2022/08/16	<0.080		mg/kg	
A682694	FM0	RPD [AZM157-01]	Hex. Chromium (Cr 6+)	2022/08/16	NC		%	35
A683000	MPU	Matrix Spike	Soluble (Hot water) Boron (B)	2022/08/16		95	%	75 - 125
A683000	MPU	Spiked Blank	Soluble (Hot water) Boron (B)	2022/08/16		89	%	80 - 120
A683000	MPU	Method Blank	Soluble (Hot water) Boron (B)	2022/08/16	<0.10		mg/kg	
A683000	MPU	RPD	Soluble (Hot water) Boron (B)	2022/08/16	4.3		%	35
A683223	KH2	Matrix Spike [AZM157-01]	Total Antimony (Sb)	2022/08/17		104	%	75 - 125
		[]	Total Arsenic (As)	2022/08/17		100	%	75 - 125
			Total Barium (Ba)	2022/08/17		NC	%	75 - 125
			Total Beryllium (Be)	2022/08/17		105	%	75 - 125
			Total Cadmium (Cd)	2022/08/17		101	%	75 - 125
			Total Chromium (Cr)	2022/08/17		113	%	75 - 125
			Total Cobalt (Co)	2022/08/17		102	%	75 - 125
			Total Copper (Cu)	2022/08/17		101	%	75 - 125
			Total Lead (Pb)	2022/08/17		103	%	75 - 125
			Total Mercury (Hg)	2022/08/17		101	%	75 - 125
			Total Molybdenum (Mo)	2022/08/17		106	%	75 - 125
			Total Nickel (Ni)	2022/08/17		106	%	75 - 125
			Total Selenium (Se)	2022/08/17		100	%	75 - 125
			Total Silver (Ag)	2022/08/17		104	%	75 - 125
			Total Thallium (TI)	2022/08/17		102	%	75 - 125
			Total Tin (Sn)	2022/08/17		105	%	75 - 125
			Total Uranium (U)	2022/08/17		101	%	75 - 125
			Total Vanadium (V)	2022/08/17		131 (1)	%	75 - 125
			Total Zinc (Zn)	2022/08/17		113	%	75 - 125
A683223	KH2	QC Standard	Total Antimony (Sb)	2022/08/17		96	%	15 - 182
			Total Arsenic (As)	2022/08/17		73	%	53 - 147
			Total Barium (Ba)	2022/08/17		89	%	80 - 119
			Total Cadmium (Cd)	2022/08/17		85	%	72 - 128
			Total Chromium (Cr)	2022/08/17		78	%	59 - 141
			Total Cobalt (Co)	2022/08/17		73	%	58 - 142
			Total Copper (Cu)	2022/08/17		101	%	83 - 117
			Total Lead (Pb)	2022/08/17		98	%	79 - 121
			Total Molybdenum (Mo)	2022/08/17		112	%	67 - 133
			Total Nickel (Ni)	2022/08/17		81	%	79 - 121
			Total Silver (Ag)	2022/08/17		80	%	47 - 153
			Total Tin (Sn)	2022/08/17		86	%	67 - 133
			Total Uranium (U)	2022/08/17		81	%	77 - 123
			Total Vanadium (V)	2022/08/17		79	%	79 - 121
			Total Zinc (Zn)	2022/08/17		101	%	79 - 121
A683223	KH2	Spiked Blank	Total Antimony (Sb)	2022/08/17		101	%	80 - 120
			Total Arsenic (As)	2022/08/17		94	%	80 - 120
			Total Barium (Ba)	2022/08/17		97	%	80 - 120
			Total Beryllium (Be)	2022/08/17		98	%	80 - 120
			Total Cadmium (Cd)	2022/08/17		96	%	80 - 120
			Total Chromium (Cr)	2022/08/17		97	%	80 - 120



QUALITY ASSURANCE REPORT(CONT'D)

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Cobalt (Co)	2022/08/17		97	%	80 - 120
			Total Copper (Cu)	2022/08/17		97	%	80 - 120
			Total Lead (Pb)	2022/08/17		97	%	80 - 120
			Total Mercury (Hg)	2022/08/17		102	%	80 - 120
			Total Molybdenum (Mo)	2022/08/17		99	%	80 - 120
			Total Nickel (Ni)	2022/08/17		96	%	80 - 120
			Total Selenium (Se)	2022/08/17		96	%	80 - 120
			Total Silver (Ag)	2022/08/17		98	%	80 - 120
			Total Thallium (Tl)	2022/08/17		98	%	80 - 120
			Total Tin (Sn)	2022/08/17		97	%	80 - 120
			Total Uranium (U)	2022/08/17		98	%	80 - 120
			Total Vanadium (V)	2022/08/17		98	%	80 - 120
			Total Zinc (Zn)	2022/08/17		95	%	80 - 120
A683223	KH2	Method Blank	Total Antimony (Sb)	2022/08/17	<0.50		mg/kg	
			Total Arsenic (As)	2022/08/17	<1.0		mg/kg	
			Total Barium (Ba)	2022/08/17	<1.0		mg/kg	
			Total Beryllium (Be)	2022/08/17	<0.40		mg/kg	
			Total Cadmium (Cd)	2022/08/17	<0.050		mg/kg	
			Total Chromium (Cr)	2022/08/17	<1.0		mg/kg	
			Total Cobalt (Co)	2022/08/17	<0.50		mg/kg	
			Total Copper (Cu)	2022/08/17	<1.0		mg/kg	
			Total Lead (Pb)	2022/08/17	<0.50		mg/kg	
			Total Mercury (Hg)	2022/08/17	<0.050		mg/kg	
			Total Molybdenum (Mo)	2022/08/17	<0.40		mg/kg	
			Total Nickel (Ni)	2022/08/17	<1.0		mg/kg	
			Total Selenium (Se)	2022/08/17	<0.50		mg/kg	
			Total Silver (Ag)	2022/08/17	<0.20		mg/kg	
			Total Thallium (Tl)	2022/08/17	<0.10		mg/kg	
			Total Tin (Sn)	2022/08/17	<1.0		mg/kg	
			Total Uranium (U)	2022/08/17	<0.20		mg/kg	
			Total Vanadium (V)	2022/08/17	<1.0		mg/kg	
			Total Zinc (Zn)	2022/08/17	<10		mg/kg	
A683223	KH2	RPD [AZM157-01]	Total Antimony (Sb)	2022/08/17	NC		%	30
			Total Arsenic (As)	2022/08/17	10		%	30
			Total Barium (Ba)	2022/08/17	14		%	35
			Total Beryllium (Be)	2022/08/17	NC		%	30
			Total Cadmium (Cd)	2022/08/17	0.64		%	30
			Total Chromium (Cr)	2022/08/17	7.9		%	30
			Total Cobalt (Co)	2022/08/17	7.9		%	30
			Total Copper (Cu)	2022/08/17	5.9		%	30
			Total Lead (Pb)	2022/08/17	3.3		%	35
			Total Mercury (Hg)	2022/08/17	NC		%	35
			Total Molybdenum (Mo)	2022/08/17	2.7		%	35
			Total Nickel (Ni)	2022/08/17	4.8		%	30
			Total Selenium (Se)	2022/08/17	NC		%	30
			Total Silver (Ag)	2022/08/17	NC		%	35
			Total Thallium (Tl)	2022/08/17	NC		%	30
			Total Tin (Sn)	2022/08/17	NC		%	35
			Total Uranium (U)	2022/08/17	5.0		%	30
			Total Vanadium (V)	2022/08/17	11		%	30



QUALITY ASSURANCE REPORT(CONT'D)

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Zinc (Zn)	2022/08/17	6.1		%	30
Duplicat	e: Paire	d analysis of a sep	arate portion of the same sample. Used to eval	luate the variance in the measure	ment.			

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

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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



VALIDATION SIGNATURE PAGE

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

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Gita Pokhrel, Laboratory Supervisor

Junchi Gras

Janet Gao, B.Sc., QP, Supervisor, Organics

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

1/ennicatelk

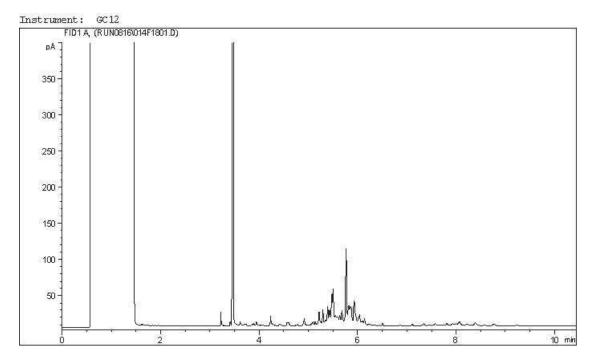
Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

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 Signature Page.

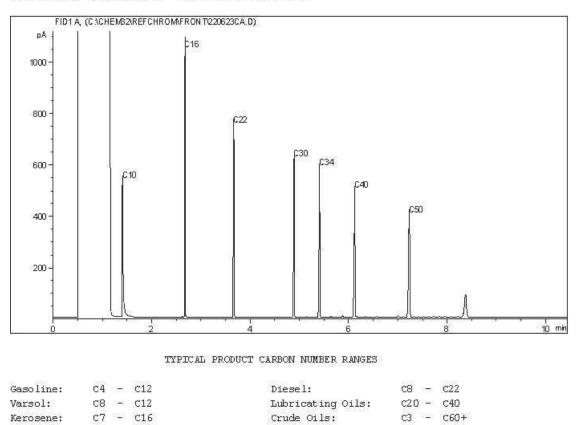
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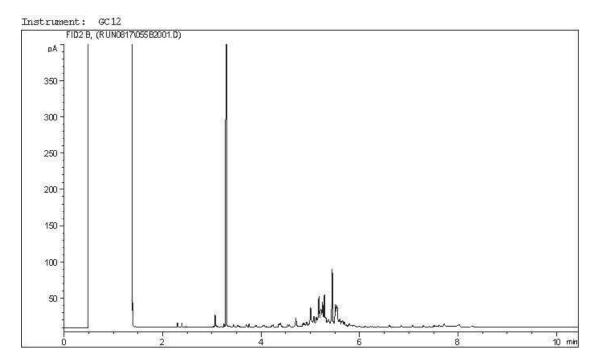
																s.com	5	code													
0394 - ° -	12-Aug-22 09.00	CVIIIV Harren		C260012		INS-0001		10	Turnaroun	E to 7 Day Day				Comments	XX4 cmailread to:	W.		Hoload to Facility	41259544	· · ·	tecelved in reliowing inc	1: Ja 10 29: 32 2	AU5 12 2022	5-5-51 522 471	Tanp 3 1 / 1	DEMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH.	WING AT WWW BWAA COM/TERMS-AND-CONDITIONS OR BY CALUNG THE LABORATIONY LISTED ABOVE TO OBTAIN A COPY	No *C	1 2 3	Time	1 <u>50</u>
CHAIN OF CUSTODY RECORD ENV COC - 00013v3	Project Information	Shell	22525414-1100-1104	22525414-\$000	Caso Farevella	C WEST CHANNEL, NT	NT	Lor J. Harmanje	8 9 10 11 12 13 14 15 16 17 18			vlozzib - z , silt, clay	ilaten b bretali letot - diozzib - diozzoh diozzib - diozzih diozih diozzih diozih di diozih diozih di diozih di diozih diozih di diozih diozih di	Mercury Mercury Salinity 4 S() Svei	X			X								NING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLE	5 THE LABORATORY LISTED ABOVE TO OBTAIN A COPY	LAB USE ONLY Yes Seal present	Seal intact Cooling media present	Pate Date Date Date Date Date Date Date D	2023 08 15
		Quotation #:	P.O. #/ AFE#:	Project #:	3 Site #:	Site Location:	Site Location Province:	By:	5 6 7			JATC	F2	гная га хата мыяаа												CONDITIONS SIGN	ONS OR BY CALLING		2	sture/ Print)	Sarah Dalan
roose Location: Calgary, AB: 4000 19th St. NE, T2E 6P8 Toll Free (800) 366-7247 Edmonton, AB: 9331.48 St. T5B 2R4 Toll Free (800) 366-7247 Winnipeg, MB: D-675 Berry St. R3H 1A7 Toll Free (866) 800-5208	Report Information (if differs from invoice)	Golder Associates	Aurelie Bellavance		Calgary AB Postal T2P 4K3	403-299-5600	aurelie bellavance Queso. www		1 2 3 4	er - Manitoba	Wother Amsep	BUREAU VERITAS	ISVR323	MM HE HELD FIL FIELD FIL FIELD PR FIELD PR HELL PR	08 08 14 00 Soil X	-08 08 14 05 Soil X	08 08 14 10	08 0% iy 15								DE CLISTODY IS SUBJECT TO BUBEAU VERTAS STANDABD FERMS AND C	VAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIO	LAB USE ONLY Yes No Seal present *C	Seal intact Seal intact 1000 1000 1000 1000 1000 1000 1000 10	DD HH MM Received by: (Signature/ Print)	00 00 1 C 291
Choose location: Calgary, AB: 4000 19th St. NE, 172 6P8 T Edmonton, AB: 9331-48 St. T68 2A4 Tol Winnipee, MB: D-675 Berry St. R3H 1A7	Invoice to (requires report)	Client #254, Golder Associates Company:	237 - 4 Ave SW Suite 3300 Contact	Street	AB Postal City:	Phone:	Canada Account Payable Email:	Copies:	Regulatory Criteria	Drinking Water - Canada	🗌 Drinking Water - Alberta	SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO		Sample Identification	01 22	22 22		04 22								WRITING - WORK SUBMITTED ON THIS CHAIN C		· 5.2 5.1 5.2	1 2 3	Date YY MM	Melissatural 22 08 0
(C) www.BVNA.com	Invoice Information Invoice				Address: City: Calgary Prov:			Copies:			Saskatchewan	SAMPLES MUST BE KEPT		Sample Ids	1 RH27-17-0	2 RH1.2-17-0	3 RH22-17-0	t.	2	, D	7	Ø	6	10	11	12 *!!NJFSS OTHERWISE AGREED TO IN 1		LAB USE ONLY Yes Seal present	Seal intact Cooling media present	Relinquished by: (Signature/ Print)	Apple / U.L.M.



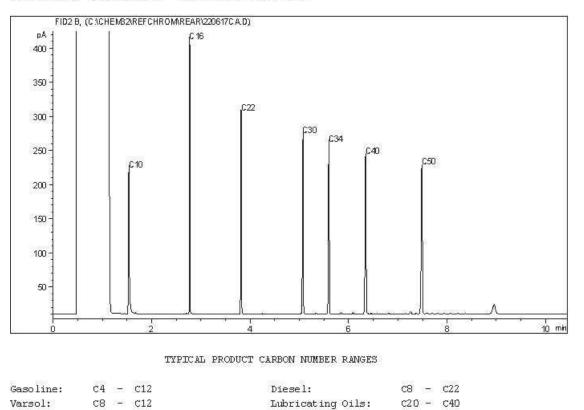
Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.



Carbon Range Distribution - Reference Chromatogram



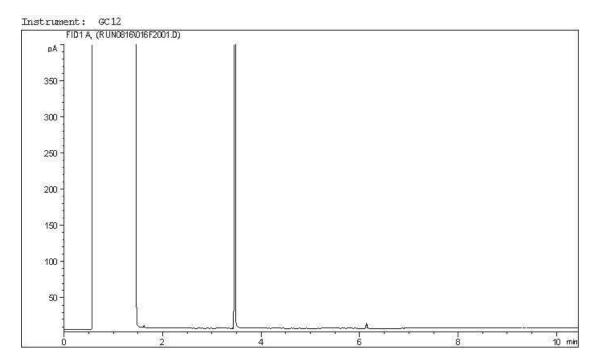
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

c7 - c16

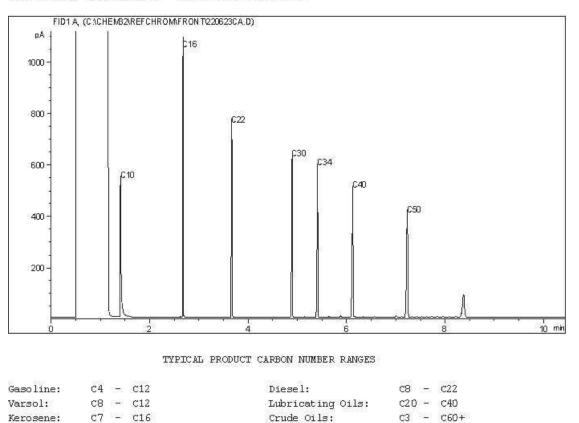
Kerosene:

Crude Oils:

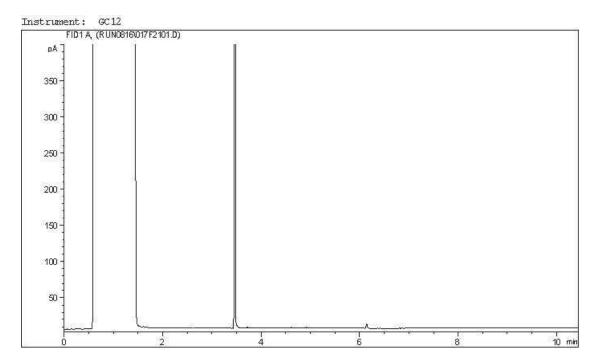
C3 - C60+



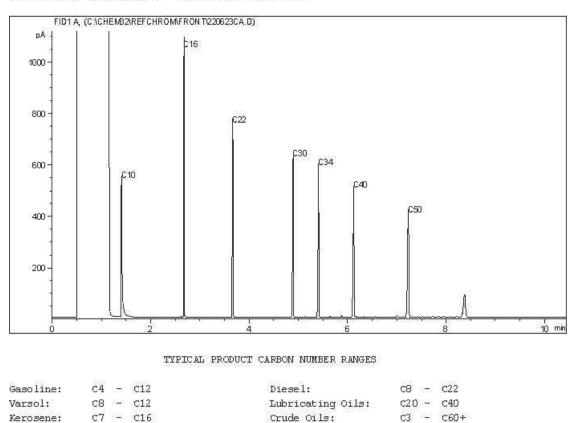
Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.



Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.



2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatlabs.com

CLIENT NAME: BUREAU VERITAS CANADA (2019) INC 2021 - 41ST STREET NE Calgary, AB T2E6P2 (403) 291-3077 **ATTENTION TO: Cynny Hagen** PROJECT: C260012 AGAT WORK ORDER: 22C940487 SOIL ANALYSIS REVIEWED BY: Loan Nguyen, Senior Analyst DATE REPORTED: Sep 06, 2022 PAGES (INCLUDING COVER): 7 VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (403) 735-2005

*Notes		
Disclaimer:		

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
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- The test results reported herewith relate only to the samples as received by the laboratory.
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- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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(APEGA)	
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Environmental Services Association of Alberta (ESAA)	

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Certificate of Analysis

AGAT WORK ORDER: 22C940487 PROJECT: C260012

CLIENT NAME: BUREAU VERITAS CANADA (2019) INC

SAMPLING SITE:

ATTENTION TO: Cynny Hagen

SAMPLED BY:

Metals -	Barium	by	Fusion	ICP
----------	--------	----	--------	-----

DATE RECEIVED: 2022-09-01					DATE REPORTED: 2022-09-06
				AZM154-BH22-	
	S	SAMPLE DES	CRIPTION:	17-01	
		SAM	PLE TYPE:	Soil	
		DATE	SAMPLED:	2022-09-01 14:00	
Parameter	Unit	G/S	RDL	4266968	
True Barium by Fusion ICP	mg/kg		50	11400	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

4266968 Result is based on the dry weight of the sample.

Analysis performed at AGAT Calgary (unless marked by *)

Certified By:

2910 12TH STREET NE

http://www.agatlabs.com

CALGARY, ALBERTA CANADA T2E 7P7

TEL (403)735-2005 FAX (403)735-2771



2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatlabs.com

Quality Assurance

CLIENT NAME: BUREAU VERITAS CANADA (2019) INC

PROJECT: C260012 SAMPLING SITE: AGAT WORK ORDER: 22C940487

ATTENTION TO: Cynny Hagen

SAMPLED BY:

	Soil Analysis														
RPT Date: Sep 06, 2022			C	DUPLICAT	E		REFEREN	NCE MA	TERIAL	METHOD	BLAN	(SPIKE	MAT	RIX SPI	KE
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank		Acceptable Measured Limits		Recovery	Acceptable Limits		Recovery	Lin	eptable nits
							value	Lower	Upper		Lower	Upper		Lower	Upper
Metals - Barium by Fusion ICP Barium by Fusion ICP-OES	4266587		976	977	0.0%	< 40	95%	70%	130%				NA	70%	130%

Comments: Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated. Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.

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AGAT QUALITY ASSURANCE REPORT (V1)

Page 3 of 7

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Method Summary

CLIENT NAME: BUREAU VERITAS CAN	NADA (2019) INC	AGAT WORK OR	DER: 22C940487						
PROJECT: C260012		ATTENTION TO: Cynny Hagen							
SAMPLING SITE:		SAMPLED BY:							
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE						
Soil Analysis									
True Barium by Fusion ICP	SOIL- 0620, INST- 0140	ASTM D4503.08	ICP/OES						

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BUREAU
VERITAS

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Sent To: AGAT - Calgary 2910 12th Street NE Calgary, AB, T2E 7P7

1-SEP '22 PM12:10 CHAIN OF CUSTODY RECORD FOR SUBCONTRACTED WORK Page 01 of 01

COC # C260012-CAGT-01-01

Tel: (403) 735-2005

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1	1 miles						

REPORT INFORMATION	N									ANA	LYSIS RE	QUEST	ED				a fine		
Company:	Bureau Veritas								- 53							1			
Address:	4000 19st N.E, Calgary, Alberta	, T2E 6P8																	
Contact Name:	Cynny Hagen						Extraction												
Email:	Cynny.HAGEN@bureauveritas.	com, Cus	tomersolution	swest@bu	reauverita	s.coi	Extra												
Phone:	(403) 735-2273						Fusion												
Lab Project #:	C260012						using F												
# SAMPLE ID		MATRIX	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	SAMPLER INITIALS	# CONT.	Barium on ICP u										ADDITIONAL	SAM	PLE INFORMATION
1 AZM154-BH22-1	.7-01	SOIL	2022/08/08	14:00	ML	1	x									(P:01)			
2																			
3																			
4																			
5																			
6						_				_			_	_	1				
8						_						_							
9						-			-	-	-	-	-		-				
10						_													
REGULATORY CRITERIA			SPECIAL INSTR	UCTIONS									_	-				Ï	TURNAROUND TIME
			Please inform • You are no • The hold ti **Please retur	t accredited me is appro	for the req aching for t	ueste he re	ed test queste	d test(s	;).										X Rush Required
COOLER ID: Custody Seal Present Custody Seal Intact Cooling Media Present	YES NO	Å.	COOLER ID: Custody Seal Pre Custody Seal Inta Cooling Media Pi	act	YES NO	Ten (°(· ·	4	5 J		COOLER Custody S Custody S Cooling M	ieal Pres	ct	YES N	D Temp (°C)		2 3		Date Required Please inform us if rush charges will be incurred.
RELINQUISHED BY: (SIGN			(YYYY/MM/DD)	TIME: (H		RECE	IVED B	Y: (SIGN	& PRINT	-	-				YYYY/MA		TIME: (HH:M	IM)	
2.	[2062] Mebranty	1227	109/01	09:	50	1. 2.		(lam		<u>eua</u>			202	2 09	101	12:10		

AGAT Lat	ooratories SAMPLE INTEGRITY RECEIPT
RECEIVING BASICS - Shipping Company/Consultant: Bureau Vecitors Courier: Jatoo Prepaid Collect Waybill# Branch: EDM Branch: EDM GP FN FM RD VAN LYD FSJ EST SASK	Temperature (Bottles/Jars only) N/A if only Soil Bags ReceivedFROZEN (Please Circle if samples received Frozen)1 (Bottle/Jar) NA Soil =OC 2(Bottle/Jar) + + =OC3 (Bottle/Jar) + + =OC 4 (Bottle/Jar) + + =OC5 (Bottle/Jar) + + =OC 6 (Bottle/Jar) + + =OC7 (Bottle/Jar) + + =OC 8 (Bottle/Jar) + + =OC
If multiple sites were submitted at once: Yes No Custody Seal Intact: Yes No NA	9 (Bottle/Jar)++=°C 10 (Bottle/Jar)++=°C (If more than 10 coolers are received use another sheet of paper and attach)
TAT: <24hr 24-48hr 48-72hr Reg Other Cooler Quantity:	LOGISTICS USE ONLY Workorder No: <u>22C94048</u> 7
TIME SENSITIVE ISSUES - Shipping ALREADY EXCEEDED HOLD TIME? Yes No Inorganic Tests (Please Circle): Mibi , BOD , Nitrate/Nitrite , Turbidity , Color , Microtox , Ortho PO4 , Tedlar Bag , Residual Chlorine , Chlorophyll* , Chloroamines*	Samples Damaged: Yes No If YES why? No Bubble Wrap Frozen Courier Other: Account Project Manager: have they been notified of the above issues: Yes No Whom spoken to: Date/Time:
Earliest Expiry: Hydrocarbons: Earliest Expiry	CPM Initial General Comments:
SAMPLE INTEGRITY - Shipping Hazardous Samples: YES NO Legal Samples: Yes No International Samples: Yes No Tape Sealed: Yes No Coolant Used: Icepack Free Ice Free Water	

* Subcontracted Analysis (See CPM)

Page 1 of 1

www.jazoocourier.com		Billed To: Bureau Veritas	Bureau Veritas Calgary AGAT-Calgary 2910 12th street NE Calgary AR T2F 7P7	r, 1 Medûn Caler			D/O Time:	Surcharge	A A	(Mark)						city nearest you: 587-645-6364 587-297-8406	PRESS COURIER.
JAZOO EXPRESS COURIER	CLIENT USE ONLY	Sample Reception		1 Lange Cooler,	Jeb/PO/Reference #:	DRIVER USE ONLY	1152	# Of Same Day	Shall	D/0 Driver Name:	HAY.	HOTSHOT DETAILS	Or Total Charge (\$):	OFFICE USE ONLY Invoiced By:		contact alspatch at the Fort McMurray Grande Prairie	THANK YOU FOR SUPPORTING LOCAL AND CHOOSING JAZOO EXPRESS COURIER.
		Robel Mebrahhu Receiver	2022/09/01 Delivery To:	Z Description: envelope, sm/med/Ig box, cooler, etc.	Authorized Chinner Signature.	annihile iaddine to	P/U Time:	ht # of TDG	ä	Total # Items Dropped Off:	Authorized Receiver Signature:		1. 1.	F.	To schodulo a nickin nice	Calgary 403-660-5504 Edmonton 780-903-3628	THANK YOU FOR SUPPORTING
		Sender Name:	Date:	# Items:	Authorize		P/U Driver Name: # Items P/U:	# Of Overweight	Additional Info:	Total # Item	Authorized		Total Km:	Verified By:			

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Page 7 of 7



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CLIENT NAME: BUREAU VERITAS CANADA (2019) INC 2021 - 41ST STREET NE Calgary, AB T2E6P2 (403) 291-3077 ATTENTION TO: Cynny Hagen PROJECT: C260012 AGAT WORK ORDER: 22C940487 SOIL ANALYSIS REVIEWED BY: Loan Nguyen, Senior Analyst DATE REPORTED: Sep 06, 2022 PAGES (INCLUDING COVER): 7 VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (403) 735-2005

*Notes	
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- The test results reported herewith relate only to the samples as received by the laboratory.
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- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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(APEGA)	
Western Enviro-Agricultural Laboratory Association (WEALA)	
Environmental Services Association of Alberta (ESAA)	

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Certificate of Analysis

AGAT WORK ORDER: 22C940487 PROJECT: C260012 2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatlabs.com

CLIENT NAME: BUREAU VERITAS CANADA (2019) INC

SAMPLING SITE:

ATTENTION TO: Cynny Hagen

SAMPLED BY:

				Metals - Bar	um by Fusion ICP	
DATE RECEIVED: 2022-09-01						DATE REPORTED: 2022-09-06
				AZM154-BH22-		
	S	SAMPLE DES	CRIPTION:	17-01		
		SAM	PLE TYPE:	Soil		
		DATES	SAMPLED:	2022-09-01 14:00		
Parameter	Unit	G/S	RDL	4266968		
True Barium by Fusion ICP	mg/kg		50	11400		

Comments:RDL - Reported Detection Limit;G / S - Guideline / Standard4266968Result is based on the dry weight of the sample.

4200900 Result is based on the dry weight of the sam

Analysis performed at AGAT Calgary (unless marked by $^{\ast})$

Certified By:



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Quality Assurance

CLIENT NAME: BUREAU VERITAS CANADA (2019) INC

PROJECT: C260012

AGAT WORK ORDER: 22C940487

ATTENTION TO: Cynny Hagen

SAMPLING SITE:

SAMPLED BY:

				Soi	il Ana	alysis	5								
RPT Date: Sep 06, 2022			[DUPLICAT	E		REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured		ptable nits	Recovery	Lir	ptable nits	Recovery	Lie	ptable nits
		ld					Value	Lower	Upper		Lower	Upper		Lower	Upper
Metals - Barium by Fusion ICP Barium by Fusion ICP-OES	4266587		976	977	0.0%	< 40	95%	70%	130%				NA	70%	130%

Comments: Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated. Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.

Certified By:



AGAT QUALITY ASSURANCE REPORT (V1)

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2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatlabs.com

Method Summary

CLIENT NAME: BUREAU VERITAS CANA	DA (2019) INC	AGAT WORK ORDER: 22C940487						
PROJECT: C260012		ATTENTION TO: Cynny Hagen						
SAMPLING SITE:		SAMPLED BY:						
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE					
Soil Analysis								
True Barium by Fusion ICP	SOIL- 0620, INST- 0140	ASTM D4503.08	ICP/OES					

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Sent To: AGAT - Calgary 2910 12th Street NE Calgary, AB, T2E 7P7

1-SEP '22 PM12:10 CHAIN OF CUSTODY RECORD FOR SUBCONTRACTED WORK Page 01 of 01

COC # C260012-CAGT-01-01

Tel: (403) 735-2005

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1	1 miles						

REPORT INFORMATION	EPORT INFORMATION									ANA	LYSIS RE	QUEST	ED				a fine		
Company:	Bureau Veritas								- 53							1			
Address:	4000 19st N.E, Calgary, Alberta	, T2E 6P8																	
Contact Name:	Cynny Hagen						Extraction												
Email:	Cynny.HAGEN@bureauveritas.	com, Cus	tomersolution	swest@bu	reauverita	s.coi	Extra												
Phone:	(403) 735-2273						Fusion												
Lab Project #:	C260012						using F												
# SAMPLE ID		MATRIX	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	SAMPLER INITIALS	# CONT.	Barium on ICP u										ADDITIONAL	SAM	PLE INFORMATION
1 AZM154-BH22-1	.7-01	SOIL	2022/08/08	14:00	ML	1	x									(P:01)			
2																			
3																			
4																			
5												_							
6						_							_	_	1				
8						_						_							
9						-			-	-	-	-	-		-				
10						_													
REGULATORY CRITERIA			SPECIAL INSTR	UCTIONS									_	-				Ï	TURNAROUND TIME
			Please inform • You are no • The hold ti **Please retur	t accredited me is appro	for the req aching for t	ueste he re	ed test queste	d test(s	;).										X Rush Required
COOLER ID: Custody Seal Present Custody Seal Intact Cooling Media Present	YES NO	Å.	COOLER ID: Custody Seal Pre Custody Seal Inta Cooling Media Pi	act	YES NO	Ten (°(· ·	4	5 J		COOLER Custody S Custody S Cooling M	ieal Pres	ct	YES N	D Temp (°C)		2 3		Date Required Please inform us if rush charges will be incurred.
RELINQUISHED BY: (SIGN			(YYYY/MM/DD)	TIME: (H		RECE	IVED B	Y: (SIGN	& PRINT	-	-				YYYY/MA		TIME: (HH:M	IM)	
2.	[2062] Mebranty	1227	109/01	09:	50	1. 2.		(lam		<u>eua</u>			202	2 09	101	12:10		

AGAT Lat	ooratories SAMPLE INTEGRITY RECEIPT
RECEIVING BASICS - Shipping Company/Consultant: Bureau Vecitors Courier: Jatoo Prepaid Collect Waybill# Branch: EDM Branch: EDM GP FN FM RD VAN LYD FSJ EST SASK	Temperature (Bottles/Jars only) N/A if only Soil Bags ReceivedFROZEN (Please Circle if samples received Frozen)1 (Bottle/Jar) NA Soil =OC 2(Bottle/Jar) + + =OC3 (Bottle/Jar) + + =OC 4 (Bottle/Jar) + + =OC5 (Bottle/Jar) + + =OC 6 (Bottle/Jar) + + =OC7 (Bottle/Jar) + + =OC 8 (Bottle/Jar) + + =OC
If multiple sites were submitted at once: Yes No Custody Seal Intact: Yes No NA	9 (Bottle/Jar)++=°C 10 (Bottle/Jar)++=°C (If more than 10 coolers are received use another sheet of paper and attach)
TAT: <24hr 24-48hr 48-72hr Reg Other Cooler Quantity:	LOGISTICS USE ONLY Workorder No: <u>22C94048</u> 7
TIME SENSITIVE ISSUES - Shipping ALREADY EXCEEDED HOLD TIME? Yes No Inorganic Tests (Please Circle): Mibi , BOD , Nitrate/Nitrite , Turbidity , Color , Microtox , Ortho PO4 , Tedlar Bag , Residual Chlorine , Chlorophyll* , Chloroamines*	Samples Damaged: Yes No If YES why? No Bubble Wrap Frozen Courier Other: Account Project Manager: have they been notified of the above issues: Yes No Whom spoken to: Date/Time:
Earliest Expiry: Hydrocarbons: Earliest Expiry	CPM Initial General Comments:
SAMPLE INTEGRITY - Shipping Hazardous Samples: YES NO Legal Samples: Yes No International Samples: Yes No Tape Sealed: Yes No Coolant Used: Icepack Free Ice Free Water	

* Subcontracted Analysis (See CPM)

Page 1 of 1

www.jazoocourier.com		Billed To: Bureau Veritas	Bureau Veritas Calgary AGAT-Calgary 2910 12th street NE Calgary AR T2F 7P7	r, 1 Medûn Caler			D/O Time:	Surcharge	A A	(Mark)						city nearest you: 587-645-6364 587-297-8406	PRESS COURIER.
JAZOO EXPRESS COURIER	CLIENT USE ONLY	Sample Reception		1 Lange Cooler,	Jeb/PO/Reference #:	DRIVER USE ONLY	1152	# Of Same Day	Shall	D/0 Driver Name:	HAY.	HOTSHOT DETAILS	Or Total Charge (\$):	OFFICE USE ONLY Invoiced By:		contact alspatch at the Fort McMurray Grande Prairie	THANK YOU FOR SUPPORTING LOCAL AND CHOOSING JAZOO EXPRESS COURIER.
		Robel Mebrahhu Receiver	2022/09/01 Delivery To:	Z Description: envelope, sm/med/Ig box, cooler, etc.	Authorized Chinner Signature.	annihile iaddine to	P/U Time:	ht # of TDG	ä	Total # Items Dropped Off:	Authorized Receiver Signature:		1. 1.	F.	To schodulo a nickin nice	Calgary 403-660-5504 Edmonton 780-903-3628	THANK YOU FOR SUPPORTING
		Sender Name:	Date:	# Items:	Authorize		P/U Driver Name: # Items P/U:	# Of Overweight	Additional Info:	Total # Item	Authorized		Total Km:	Verified By:			

PL

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Page 7 of 7

GOLDER DATA QUALITY REVIEW CHECKLIST

Site Location: Camp Farewel	ll, NT			Sampling Date:	August 8, 2022
		1000	_		
Golder Project Number: <u>2</u> 2	2525414	-1000	_	Laboratory:	Bureau Veritas Edmonton
Lab Submission Number: <u>C</u>	260012		_		
Was the Cooler Received at the lab	under a s	sealed and	l intact cus	tody seal?	Yes
Was proper chain of custody of the	samples	document	ed and kep	ot?	Yes
Were sample temperatures acceptab		•			Yes
Were all samples analyzed and extra					Yes
Has lab warranted all tests were in s					Yes
Was sufficient sample provided for	-				Yes
Has lab warranted all samples were	analyzed	l with limi	ited headsp	bace present?:	Yes
Are All Laboratory QC Within Acco	eptance (Yes	Criteria (Y No	Yes, No, No NA		Comments
Surrogate Recovery		Х		0	ry for o-terphenyl (141%) exceeded
Method Blank Concentration	Х			1	iteria (60-140%). Matrix spike
Laboratory Duplicate RPD	Х				adium (131%) exceeded the
Matrix Spike Recovery	37	Х			ia of (75-125%). All remaining
Blank Spike Recovery	Х			laboratory QC res	sults are within acceptance criteria.
Are All Field QC Samples Within A	Alert Lim	its (Yes, N	No, Not Aj	oplicable)?	
	Yes	No	NA		Comments
Field Blank Concentration			Х	No field QC sample	ples were collected.
Trip Blank Concentration			Х		
Field Duplicate RPD			Х		
Is data considered reliable (Yes/No/ If answer is "No" or "Suspect", desc			ationale:	Yes	-
Data Reviewed by (Print): <u>A</u>	nita Coll	pert		Data Reviewed by	(Signature): Units Callent
Date:	August	18, 2022	_		



Your P.O. #: 22525414-1100-1104 Your Project #: 22525414-1000 Site Location: CAMP FAREWELL,NT Your C.O.C. #: 1 of 1

Attention: Aurelie Bellavance

GOLDER ASSOCIATES LTD. 2800, 700 -2nd Street SW CALGARY, AB CANADA T2P 2W2

> Report Date: 2022/09/06 Report #: R3226709 Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C260013 Received: 2022/08/12, 09:00

Sample Matrix: Soil # Samples Received: 8

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
Boron (Hot Water Soluble) (1)	4	2022/08/16	2022/08/16	AB SOP-00034 / AB SOP- 00042	EPA 6010d R5 m
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1, 3)	3	N/A	2022/08/16	AB SOP-00039	CCME CWS/EPA 8260d m
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1, 3)	5	N/A	2022/08/17	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX (1)	8	N/A	2022/08/17		Auto Calc
Hexavalent Chromium (1, 4)	4	2022/08/16	2022/08/16	AB SOP-00063	SM 23 3500-Cr B m
Barium on ICP using Fusion Extraction (2)	1	N/A	2022/09/06		
CCME Hydrocarbons (F2-F4 in soil) (1, 5)	7	2022/08/15	2022/08/16	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2-F4 in soil) (1, 5)	1	2022/08/17	2022/08/17	AB SOP-00036	CCME PHC-CWS m
Elements by ICPMS - Soils (1)	1	2022/08/16	2022/08/16	AB SOP-00001 / AB SOP- 00043	EPA 6020b R2 m
Elements by ICPMS - Soils (1)	3	2022/08/16	2022/08/17	AB SOP-00001 / AB SOP- 00043	EPA 6020b R2 m
Moisture (1)	8	N/A	2022/08/16	AB SOP-00002	CCME PHC-CWS 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.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.



Your P.O. #: 22525414-1100-1104 Your Project #: 22525414-1000 Site Location: CAMP FAREWELL,NT Your C.O.C. #: 1 of 1

Attention: Aurelie Bellavance

GOLDER ASSOCIATES LTD. 2800, 700 -2nd Street SW CALGARY, AB CANADA T2P 2W2

> Report Date: 2022/09/06 Report #: R3226709 Version: 3 - Revision

CERTIFICATE OF ANALYSIS - REVISED REPORT

BUREAU VERITAS JOB #: C260013

Received: 2022/08/12, 09:00

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 AGAT - Calgary, 2910 12th Street NE , Calgary, AB, T2E 7P7

(3) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is date sampled unless otherwise stated.

(4) Some soil samples may react with the Cr(VI) spike reducing it to Cr(III). These samples are highly unlikely to contain native hexavalent chromium. Thus a failed spike recovery does not invalidate a negative result on the native sample.

(5) All CCME results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil, Validation of Performance-Based Alternative Methods September 2003. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.





Please direct all questions regarding this Certificate of Analysis to your Project Manager. Cynny Hagen, Key Account Specialist Email: Cynny.HAGEN@bureauveritas.com Phone# (403)735-2273

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 Signature Page.



AT1 BTEX AND F1-F4 IN SOIL (VIALS)

Bureau Veritas ID		AZM158	AZM159	AZM159		AZM160		AZM161		
Sampling Date		2022/08/08	2022/08/08	2022/08/08		2022/08/08		2022/08/08		
		11:00	11:10	11:10		11:20		11:30		
COC Number		1 of 1	1 of 1	1 of 1		1 of 1		1 of 1		
	UNITS	BH22-19-01	BH22-19-02	BH22-19-02 Lab-Dup	RDL	BH22-19-03	RDL	BH22-19-04	RDL	QC Batch
Ext. Pet. Hydrocarbon										
F2 (C10-C16 Hydrocarbons)	mg/kg	14	<10	N/A	10	44 (1)	23	<10	10	A681385
F3 (C16-C34 Hydrocarbons)	mg/kg	160	<50	N/A	50	580 (1)	110	<50	50	A681385
F4 (C34-C50 Hydrocarbons)	mg/kg	73	<50	N/A	50	190 (1)	110	<50	50	A681385
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	N/A	Yes	N/A	Yes	N/A	A681385
Physical Properties					•					
Moisture	%	10	4.9	4.1	0.30	57	0.30	17	0.30	A681498
Volatiles						•	•			
Xylenes (Total)	mg/kg	<0.045	<0.045	N/A	0.045	<0.14	0.14	<0.045	0.045	A679841
F1 (C6-C10) - BTEX	mg/kg	<10	<10	N/A	10	<15	15	<10	10	A679841
Field Preserved Volatiles			-					-		
Benzene	mg/kg	<0.0050	<0.0050	N/A	0.0050	<0.014 (2)	0.014	<0.0050	0.0050	A680671
Toluene	mg/kg	<0.050	<0.050	N/A	0.050	<0.050 (2)	0.050	<0.050	0.050	A680671
Ethylbenzene	mg/kg	<0.010	<0.010	N/A	0.010	<0.021 (2)	0.021	<0.010	0.010	A680671
m & p-Xylene	mg/kg	<0.040	<0.040	N/A	0.040	<0.13 (3)	0.13	<0.040	0.040	A680671
o-Xylene	mg/kg	<0.020	<0.020	N/A	0.020	<0.064 (3)	0.064	<0.020	0.020	A680671
F1 (C6-C10)	mg/kg	<10	<10	N/A	10	<15 (2)	15	<10	10	A680671
Surrogate Recovery (%)					-					
1,4-Difluorobenzene (sur.)	%	98	97	N/A	N/A	96	N/A	96	N/A	A680671
4-Bromofluorobenzene (sur.)	%	99	100	N/A	N/A	99	N/A	99	N/A	A680671
D10-o-Xylene (sur.)	%	98	94	N/A	N/A	102	N/A	111	N/A	A680671
D4-1,2-Dichloroethane (sur.)	%	97	97	N/A	N/A	99	N/A	99	N/A	A680671
O-TERPHENYL (sur.)	%	127	91	N/A	N/A	135	N/A	129	N/A	A681385

RDL = Reportable Detection Limit

Lab-Dup = Laboratory Initiated Duplicate

N/A = Not Applicable

(1) Detection limits raised due to high moisture content, sample contains => 50% moisture.

(2) Detection limit reported based on MDL and sample weight used for analysis.

(3) Detection limits raised based on sample weight used for analysis.



AT1 BTEX AND F1-F4 IN SOIL (VIALS)

								r	r
Bureau Veritas ID		AZM162	AZM163		AZM164		AZM165		
Sampling Date		2022/08/08	2022/08/08		2022/08/08		2022/08/08		
		09:40	09:40		09:50		10:00		
COC Number		1 of 1	1 of 1		1 of 1		1 of 1		
	UNITS	BH22-27-05	DUP C	RDL	BH22-27-06	RDL	BH22-27-07	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	22	25	10	<10	10	<10	10	A681385
F3 (C16-C34 Hydrocarbons)	mg/kg	88	140	50	<50	50	<50	50	A681385
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	54	50	<50	50	<50	50	A681385
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	Yes	N/A	Yes	N/A	A681385
Physical Properties									
Moisture	%	18	22	0.30	18	0.30	16	0.30	A681498
Volatiles									
Xylenes (Total)	mg/kg	<0.045	<0.045	0.045	<0.11	0.11	<0.045	0.045	A679841
F1 (C6-C10) - BTEX	mg/kg	<10	<10	10	<12	12	<10	10	A679841
Field Preserved Volatiles									
Benzene	mg/kg	<0.0050	<0.0050	0.0050	<0.011 (1)	0.011	<0.0050	0.0050	A680671
Toluene	mg/kg	<0.050	<0.050	0.050	<0.050 (1)	0.050	<0.050	0.050	A680671
Ethylbenzene	mg/kg	<0.010	<0.010	0.010	<0.017 (1)	0.017	<0.010	0.010	A680671
m & p-Xylene	mg/kg	<0.040	<0.040	0.040	<0.10 (2)	0.10	<0.040	0.040	A680671
o-Xylene	mg/kg	<0.020	<0.020	0.020	<0.051 (2)	0.051	<0.020	0.020	A680671
F1 (C6-C10)	mg/kg	<10	<10	10	<12 (1)	12	<10	10	A680671
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	102	103	N/A	93	N/A	97	N/A	A680671
4-Bromofluorobenzene (sur.)	%	87	86	N/A	99	N/A	99	N/A	A680671
D10-o-Xylene (sur.)	%	119	113	N/A	155 (3)	N/A	101	N/A	A680671
D4-1,2-Dichloroethane (sur.)	%	115	119	N/A	103	N/A	99	N/A	A680671
O-TERPHENYL (sur.)	%	128	138	N/A	131	N/A	130	N/A	A681385

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Detection limit reported based on MDL and sample weight used for analysis.

(2) Detection limits raised based on sample weight used for analysis.

(3) Surrogate recovery exceeds acceptance criteria (high recovery). As results are non-detect, there is no impact on data quality.



CCME REGULATED METALS - SOILS (SOIL)

Bureau Veritas ID		AZM158		AZM159		AZM160			AZM161		
Sampling Date		2022/08/08 11:00		2022/08/08 11:10		2022/08/08 11:20			2022/08/08 11:30		
COC Number		1 of 1		1 of 1		1 of 1			1 of 1		
	UNITS	BH22-19-01	QC Batch	BH22-19-02	RDL	BH22-19-03	RDL	QC Batch	BH22-19-04	RDL	QC Batch
Elements											
Soluble (Hot water) Boron (B)	mg/kg	0.47	A683000	0.13	0.10	0.74	0.30	A683000	<0.10	0.10	A683007
Hex. Chromium (Cr 6+)	mg/kg	<0.080	A682697	<0.080	0.080	<0.18 (1)	0.18	A682694	<0.080	0.080	A682694
Total Antimony (Sb)	mg/kg	0.61	A683223	<0.50	0.50	<0.50	0.50	A683223	<0.50	0.50	A682439
Total Arsenic (As)	mg/kg	4.0	A683223	4.4	1.0	2.7	1.0	A683223	6.3	1.0	A682439
Total Barium (Ba)	mg/kg	1300	A683223	200	1.0	290	1.0	A683223	310	1.0	A682439
Total Beryllium (Be)	mg/kg	<0.40	A683223	<0.40	0.40	<0.40	0.40	A683223	<0.40	0.40	A682439
Total Cadmium (Cd)	mg/kg	0.13	A683223	<0.050	0.050	0.33	0.050	A683223	0.069	0.050	A682439
Total Chromium (Cr)	mg/kg	5.5	A683223	5.8	1.0	7.8	1.0	A683223	12	1.0	A682439
Total Cobalt (Co)	mg/kg	1.8	A683223	1.5	0.50	4.0	0.50	A683223	3.7	0.50	A682439
Total Copper (Cu)	mg/kg	15	A683223	3.5	1.0	7.5	1.0	A683223	5.6	1.0	A682439
Total Lead (Pb)	mg/kg	38	A683223	6.7	0.50	4.6	0.50	A683223	6.9	0.50	A682439
Total Mercury (Hg)	mg/kg	<0.050	A683223	<0.050	0.050	0.051	0.050	A683223	<0.050	0.050	A682439
Total Molybdenum (Mo)	mg/kg	0.75	A683223	0.67	0.40	0.63	0.40	A683223	1.2	0.40	A682439
Total Nickel (Ni)	mg/kg	4.6	A683223	3.8	1.0	17	1.0	A683223	10	1.0	A682439
Total Selenium (Se)	mg/kg	<0.50	A683223	<0.50	0.50	0.77	0.50	A683223	<0.50	0.50	A682439
Total Silver (Ag)	mg/kg	<0.20	A683223	<0.20	0.20	<0.20	0.20	A683223	<0.20	0.20	A682439
Total Thallium (Tl)	mg/kg	<0.10	A683223	<0.10	0.10	<0.10	0.10	A683223	<0.10	0.10	A682439
Total Tin (Sn)	mg/kg	<1.0	A683223	<1.0	1.0	<1.0	1.0	A683223	<1.0	1.0	A682439
Total Uranium (U)	mg/kg	0.36	A683223	0.35	0.20	0.55	0.20	A683223	0.31	0.20	A682439
Total Vanadium (V)	mg/kg	9.2	A683223	11	1.0	20	1.0	A683223	15	1.0	A682439
Total Zinc (Zn)	mg/kg	68	A683223	11	10	<10	10	A683223	29	10	A682439
RDL = Reportable Detection Lin	nit										

RDL = Reportable Detection Limit

(1) Detection limits raised due to high moisture content, samples contain => 50% moisture.



RESULTS OF CHEMICAL ANALYSES OF SOIL

Bureau Veritas ID		AZM158	
Buleau Ventas ID			
Sampling Date		2022/08/08	
ounping bute		11:00	
COC Number		1 of 1	
	UNITS	BH22-19-01	QC Batch
Parameter			
Subcontract Parameter	N/A	ATTACHED	A705550



GENERAL COMMENTS

Each te	mperature is the	average of up to t	hree cooler temperatures taken at receipt	
]	Package 1	1.7°C		
Version	2: Report reissue	d to include Chron	natogram analysis on sample AZM160/BH22-19-03 as per client request received 2022/08/18.	
Version	3: Report reissue	d to include result	s for Barium - True Total on sample BH22-19-01/AZM158 as per client request received 2022/08/24.	
Sample	AZM158 [BH22-1	19-01] : Please see	e attachment for Barium on ICP using Fusion Extraction results.	
			CCME REGULATED METALS - SOILS (SOIL) Comments	
Sample	AZM160 [BH22-1	.9-03] Boron (Hot	Water Soluble): Detection limits raised based on sample weight used for analysis.	
Results	relate only to the	e items tested.		



QUALITY ASSURANCE REPORT

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A680671	D01	Matrix Spike	1,4-Difluorobenzene (sur.)	2022/08/16		96	%	50 - 140
			4-Bromofluorobenzene (sur.)	2022/08/16		100	%	50 - 140
			D10-o-Xylene (sur.)	2022/08/16		105	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2022/08/16		99	%	50 - 140
			Benzene	2022/08/16		102	%	50 - 140
			Toluene	2022/08/16		100	%	50 - 140
			Ethylbenzene	2022/08/16		99	%	50 - 140
			m & p-Xylene	2022/08/16		100	%	50 - 140
			o-Xylene	2022/08/16		99	%	50 - 140
			F1 (C6-C10)	2022/08/16		104	%	60 - 140
A680671	D01	Spiked Blank	1,4-Difluorobenzene (sur.)	2022/08/16		97	%	50 - 140
			4-Bromofluorobenzene (sur.)	2022/08/16		100	%	50 - 140
			D10-o-Xylene (sur.)	2022/08/16		93	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2022/08/16		99	%	50 - 140
			Benzene	2022/08/16		98	%	60 - 130
			Toluene	2022/08/16		94	%	60 - 130
			Ethylbenzene	2022/08/16		95	%	60 - 130
			m & p-Xylene	2022/08/16		93	%	60 - 130
			o-Xylene	2022/08/16		93	%	60 - 130
			F1 (C6-C10)	2022/08/16		97	%	60 - 140
A680671	DO1	Method Blank	1,4-Difluorobenzene (sur.)	2022/08/17		98	%	50 - 140
			4-Bromofluorobenzene (sur.)	2022/08/17		106	%	50 - 140
			D10-o-Xylene (sur.)	2022/08/17		104	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2022/08/17		96	%	50 - 140
			Benzene	2022/08/17	<0.0050		mg/kg	
			Toluene	2022/08/17	<0.050		mg/kg	
			Ethylbenzene	2022/08/17	<0.010		mg/kg	
			m & p-Xylene	2022/08/17	<0.040		mg/kg	
			o-Xylene	2022/08/17	<0.020		mg/kg	
			F1 (C6-C10)	2022/08/17	<10		mg/kg	
A680671	DO1	RPD	Benzene	2022/08/17	9.8		%	50
			Toluene	2022/08/17	NC		%	50
			Ethylbenzene	2022/08/17	24		%	50
			m & p-Xylene	2022/08/17	NC		%	50
			o-Xylene	2022/08/17	NC		%	50
			F1 (C6-C10)	2022/08/17	NC		%	30
A681385	VP4	Matrix Spike	O-TERPHENYL (sur.)	2022/08/16		134	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2022/08/16		128	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2022/08/16		131	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2022/08/16		128	%	60 - 140
A681385	VP4	Spiked Blank	O-TERPHENYL (sur.)	2022/08/16		116	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2022/08/16		113	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2022/08/16		117	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2022/08/16		114	%	60 - 140
A681385	VP4	Method Blank	O-TERPHENYL (sur.)	2022/08/16		128	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2022/08/16	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2022/08/16	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2022/08/16	<50		mg/kg	
A681385	VP4	RPD	F2 (C10-C16 Hydrocarbons)	2022/08/16	NC		%	40
			F3 (C16-C34 Hydrocarbons)	2022/08/16	NC		%	40
			F4 (C34-C50 Hydrocarbons)	2022/08/16	NC		%	40
A681498	A1H	Method Blank	Moisture	2022/08/16	<0.30		%	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A681498	A1H	RPD [AZM159-02]	Moisture	2022/08/16	18		%	20
A682439	KH2	Matrix Spike	Total Antimony (Sb)	2022/08/16		94	%	75 - 125
		·	Total Arsenic (As)	2022/08/16		99	%	75 - 125
			Total Barium (Ba)	2022/08/16		NC	%	75 - 125
			Total Beryllium (Be)	2022/08/16		101	%	75 - 125
			Total Cadmium (Cd)	2022/08/16		100	%	75 - 125
			Total Chromium (Cr)	2022/08/16		121	%	75 - 125
			Total Cobalt (Co)	2022/08/16		100	%	75 - 125
			Total Copper (Cu)	2022/08/16		97	%	75 - 125
			Total Lead (Pb)	2022/08/16		96	%	75 - 125
			Total Mercury (Hg)	2022/08/16		88	%	75 - 125
			Total Molybdenum (Mo)	2022/08/16		102	%	75 - 125
			Total Nickel (Ni)	2022/08/16		103	%	75 - 125
			Total Selenium (Se)	2022/08/16		100	%	75 - 125
			Total Silver (Ag)	2022/08/16		100	%	75 - 125
			Total Thallium (TI)	2022/08/16		95	%	75 - 125
			Total Tin (Sn)	2022/08/16		102	%	75 - 125
			Total Uranium (U)	2022/08/16		91	%	75 - 125
			Total Vanadium (V)	2022/08/16		151 (1)	%	75 - 125
			Total Zinc (Zn)	2022/08/16		NC	%	75 - 125
A682439	KH2	QC Standard	Total Antimony (Sb)	2022/08/16		114	%	15 - 182
			Total Arsenic (As)	2022/08/16		108	%	53 - 147
			Total Barium (Ba)	2022/08/16		105	%	80 - 119
			Total Cadmium (Cd)	2022/08/16		105	%	72 - 128
			Total Chromium (Cr)	2022/08/16		99	%	59 - 141
			Total Cobalt (Co)	2022/08/16		100	%	58 - 142
			Total Copper (Cu)	2022/08/16		99	%	83 - 117
			Total Lead (Pb)	2022/08/16		112	%	79 - 121
			Total Molybdenum (Mo)	2022/08/16		119	%	67 - 133
			Total Nickel (Ni)	2022/08/16		112	%	79 - 121
			Total Silver (Ag)	2022/08/16		101	%	47 - 153
			Total Tin (Sn)	2022/08/16		103	%	67 - 133
			Total Uranium (U)	2022/08/16		89	%	77 - 123
			Total Vanadium (V)	2022/08/16		103	%	79 - 121
			Total Zinc (Zn)	2022/08/16		107	%	79 - 121
A682439	KH2	Spiked Blank	Total Antimony (Sb)	2022/08/16		107	%	80 - 120
		•	Total Arsenic (As)	2022/08/16		98	%	80 - 120
			Total Barium (Ba)	2022/08/16		101	%	80 - 120
			Total Beryllium (Be)	2022/08/16		97	%	80 - 120
			Total Cadmium (Cd)	2022/08/16		99	%	80 - 120
			Total Chromium (Cr)	2022/08/16		99	%	80 - 120
			Total Cobalt (Co)	2022/08/16		99	%	80 - 120
			Total Copper (Cu)	2022/08/16		98	%	80 - 120
			Total Lead (Pb)	2022/08/16		98	%	80 - 120
			Total Mercury (Hg)	2022/08/16		99	%	80 - 120
			Total Molybdenum (Mo)	2022/08/16		100	%	80 - 120
			Total Nickel (Ni)	2022/08/16		99	%	80 - 120
			Total Selenium (Se)	2022/08/16		103	%	80 - 120
			Total Silver (Ag)	2022/08/16		99	%	80 - 120
			Total Thallium (TI)	2022/08/16		99	%	80 - 120
			Total Tin (Sn)	2022/08/16		99	%	80 - 120
			· · ·					



QUALITY ASSURANCE REPORT(CONT'D)

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Vanadium (V)	2022/08/16		99	%	80 - 120
			Total Zinc (Zn)	2022/08/16		100	%	80 - 120
A682439	KH2	Method Blank	Total Antimony (Sb)	2022/08/16	<0.50		mg/kg	
			Total Arsenic (As)	2022/08/16	<1.0		mg/kg	
			Total Barium (Ba)	2022/08/16	<1.0		mg/kg	
			Total Beryllium (Be)	2022/08/16	<0.40		mg/kg	
			Total Cadmium (Cd)	2022/08/16	<0.050		mg/kg	
			Total Chromium (Cr)	2022/08/16	<1.0		mg/kg	
			Total Cobalt (Co)	2022/08/16	<0.50		mg/kg	
			Total Copper (Cu)	2022/08/16	<1.0		mg/kg	
			Total Lead (Pb)	2022/08/16	<0.50		mg/kg	
			Total Mercury (Hg)	2022/08/16	<0.050		mg/kg	
			Total Molybdenum (Mo)	2022/08/16	<0.40		mg/kg	
			Total Nickel (Ni)	2022/08/16	<1.0		mg/kg	
			Total Selenium (Se)	2022/08/16	<0.50		mg/kg	
			Total Silver (Ag)	2022/08/16	<0.20		mg/kg	
			Total Thallium (TI)	2022/08/16	<0.10		mg/kg	
			Total Tin (Sn)	2022/08/16	<1.0		mg/kg	
			Total Uranium (U)	2022/08/16	<0.20		mg/kg	
			Total Vanadium (V)	2022/08/16	<1.0		mg/kg	
			Total Zinc (Zn)	2022/08/16	<10		mg/kg	
A682439	KH2	RPD	Total Antimony (Sb)	2022/08/16	1.3		%	30
A002433	RHZ		Total Arsenic (As)	2022/08/16	4.3		%	30
			Total Barium (Ba)	2022/08/16	1.5		%	35
			Total Beryllium (Be)	2022/08/16	4.5		%	30
			Total Cadmium (Cd)	2022/08/16	3.3		%	30
			Total Chromium (Cr)	2022/08/16	3.6		%	30
			Total Cobalt (Co)	2022/08/16	3.3		%	30
							%	30
			Total Copper (Cu)	2022/08/16	4.5			
			Total Lead (Pb)	2022/08/16	2.1		%	35
			Total Mercury (Hg)	2022/08/16	0.65		%	35
			Total Molybdenum (Mo)	2022/08/16	0.18		%	35
			Total Nickel (Ni)	2022/08/16	4.3		%	30
			Total Selenium (Se)	2022/08/16	NC		%	30
			Total Silver (Ag)	2022/08/16	NC		%	35
			Total Thallium (TI)	2022/08/16	3.6		%	30
			Total Tin (Sn)	2022/08/16	NC		%	35
			Total Uranium (U)	2022/08/16	2.5		%	30
			Total Vanadium (V)	2022/08/16	4.0		%	30
			Total Zinc (Zn)	2022/08/16	3.1		%	30
A682694	FM0	Matrix Spike	Hex. Chromium (Cr 6+)	2022/08/16		96	%	75 - 125
A682694	FM0	Spiked Blank	Hex. Chromium (Cr 6+)	2022/08/16		104	%	80 - 120
A682694	FM0	Method Blank	Hex. Chromium (Cr 6+)	2022/08/16	<0.080		mg/kg	
A682694	FM0	RPD	Hex. Chromium (Cr 6+)	2022/08/16	NC		%	35
A682697	FM0	Matrix Spike	Hex. Chromium (Cr 6+)	2022/08/16		97	%	75 - 125
A682697	FM0	Spiked Blank	Hex. Chromium (Cr 6+)	2022/08/16		98	%	80 - 120
A682697	FM0	Method Blank	Hex. Chromium (Cr 6+)	2022/08/16	<0.080		mg/kg	
A682697	FM0	RPD	Hex. Chromium (Cr 6+)	2022/08/16	NC		%	35
A683000	MPU	Matrix Spike	Soluble (Hot water) Boron (B)	2022/08/16		95	%	75 - 125
A683000	MPU	Spiked Blank	Soluble (Hot water) Boron (B)	2022/08/16		89	%	80 - 120
A683000	MPU	Method Blank	Soluble (Hot water) Boron (B)	2022/08/16	<0.10		mg/kg	
A683000	MPU	RPD	Soluble (Hot water) Boron (B)	2022/08/16	4.3		%	35

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A683007	MPU	Matrix Spike	Soluble (Hot water) Boron (B)	2022/08/16		91	%	75 - 125
A683007	MPU	Spiked Blank	Soluble (Hot water) Boron (B)	2022/08/16		94	%	80 - 120
A683007	MPU	Method Blank	Soluble (Hot water) Boron (B)	2022/08/16	<0.10		mg/kg	
A683007	MPU	RPD	Soluble (Hot water) Boron (B)	2022/08/16	6.8		%	35
A683223	KH2	Matrix Spike	Total Antimony (Sb)	2022/08/17		104	%	75 - 125
		·	Total Arsenic (As)	2022/08/17		100	%	75 - 125
			Total Barium (Ba)	2022/08/17		NC	%	75 - 125
			Total Beryllium (Be)	2022/08/17		105	%	75 - 125
			Total Cadmium (Cd)	2022/08/17		101	%	75 - 125
			Total Chromium (Cr)	2022/08/17		113	%	75 - 125
			Total Cobalt (Co)	2022/08/17		102	%	75 - 125
			Total Copper (Cu)	2022/08/17		101	%	75 - 125
			Total Lead (Pb)	2022/08/17		103	%	75 - 125
			Total Mercury (Hg)	2022/08/17		101	%	75 - 125
			Total Molybdenum (Mo)	2022/08/17		106	%	75 - 125
			Total Nickel (Ni)	2022/08/17		106	%	75 - 125
			Total Selenium (Se)	2022/08/17		100	%	75 - 125
			Total Silver (Ag)	2022/08/17		104	%	75 - 125
			Total Thallium (Tl)	2022/08/17		102	%	75 - 125
			Total Tin (Sn)	2022/08/17		105	%	75 - 125
			Total Uranium (U)	2022/08/17		101	%	75 - 125
			Total Vanadium (V)	2022/08/17		131 (1)	%	75 - 125
			Total Zinc (Zn)	2022/08/17		113	%	75 - 125
A683223	KH2	QC Standard	Total Antimony (Sb)	2022/08/17		96	%	15 - 182
			Total Arsenic (As)	2022/08/17		73	%	53 - 147
			Total Barium (Ba)	2022/08/17		89	%	80 - 119
			Total Cadmium (Cd)	2022/08/17		85	%	72 - 128
			Total Chromium (Cr)	2022/08/17		78	%	59 - 141
			Total Cobalt (Co)	2022/08/17		73	%	58 - 142
			Total Copper (Cu)	2022/08/17		101	%	83 - 117
			Total Lead (Pb)	2022/08/17		98	%	79 - 121
			Total Molybdenum (Mo)	2022/08/17		112	%	67 - 133
			Total Nickel (Ni)	2022/08/17		81	%	79 - 121
			Total Silver (Ag)	2022/08/17		80	%	47 - 153
			Total Tin (Sn)	2022/08/17		86	%	67 - 133
			Total Uranium (U)	2022/08/17		81	%	77 - 123
			Total Vanadium (V)	2022/08/17		79	%	79 - 121
			Total Zinc (Zn)	2022/08/17		101	%	79 - 121
A683223	KH2	Spiked Blank	Total Antimony (Sb)	2022/08/17		101	%	80 - 120
			Total Arsenic (As)	2022/08/17		94	%	80 - 120
			Total Barium (Ba)	2022/08/17		97	%	80 - 120
			Total Beryllium (Be)	2022/08/17		98	%	80 - 120
			Total Cadmium (Cd)	2022/08/17		96	%	80 - 120
			Total Chromium (Cr)	2022/08/17		97	%	80 - 120
			Total Cobalt (Co)	2022/08/17		97	%	80 - 120
			Total Copper (Cu)	2022/08/17		97	%	80 - 120
			Total Lead (Pb)	2022/08/17		97	%	80 - 120
			Total Mercury (Hg)	2022/08/17		102	%	80 - 120
			Total Molybdenum (Mo)	2022/08/17		99	%	80 - 120
			Total Nickel (Ni)	2022/08/17		96	%	80 - 120
			Total Selenium (Se)	2022/08/17		96	%	80 - 120
			Total Silver (Ag)	2022/08/17		98	%	80 - 120



QUALITY ASSURANCE REPORT(CONT'D)

Init	QC Type	Parameter		14.1	Deserve		
		i ai ai iletei	Date Analyzed	Value	Recovery	UNITS	QC Limits
		Total Thallium (TI)	2022/08/17		98	%	80 - 120
		Total Tin (Sn)	2022/08/17		97	%	80 - 120
		Total Uranium (U)	2022/08/17		98	%	80 - 120
		Total Vanadium (V)	2022/08/17		98	%	80 - 120
		Total Zinc (Zn)	2022/08/17		95	%	80 - 120
KH2	Method Blank	Total Antimony (Sb)	2022/08/17	<0.50		mg/kg	
		Total Arsenic (As)	2022/08/17	<1.0		mg/kg	
		Total Barium (Ba)	2022/08/17	<1.0		mg/kg	
		Total Beryllium (Be)	2022/08/17	<0.40		mg/kg	
		Total Cadmium (Cd)	2022/08/17	<0.050		mg/kg	
		Total Chromium (Cr)	2022/08/17	<1.0		mg/kg	
		Total Cobalt (Co)	2022/08/17	<0.50		mg/kg	
		Total Copper (Cu)	2022/08/17	<1.0		mg/kg	
		Total Lead (Pb)	2022/08/17	<0.50		mg/kg	
		Total Mercury (Hg)	2022/08/17	<0.050		mg/kg	
		Total Molybdenum (Mo)	2022/08/17	<0.40		mg/kg	
		Total Nickel (Ni)	2022/08/17	<1.0		mg/kg	
		Total Selenium (Se)	2022/08/17	<0.50		mg/kg	
		Total Silver (Ag)	2022/08/17	<0.20		mg/kg	
		Total Thallium (TI)	2022/08/17	<0.10		mg/kg	
		Total Tin (Sn)	2022/08/17	<1.0			
		Total Uranium (U)	2022/08/17	<0.20			
		Total Vanadium (V)	2022/08/17	<1.0		mg/kg	
		Total Zinc (Zn)	2022/08/17	<10		mg/kg	
KH2	RPD	Total Antimony (Sb)	2022/08/17	NC		%	30
		Total Arsenic (As)	2022/08/17	10		%	30
		Total Barium (Ba)	2022/08/17	14		%	35
		Total Beryllium (Be)		NC		%	30
		, , ,		0.64		%	30
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			KH2Method BlankTotal Zinc (Zn)KH2Method BlankTotal Antimony (Sb)Total Arsenic (As)Total Barium (Ba)Total Beryllium (Be)Total Cadmium (Cd)Total Cadmium (Cd)Total Chromium (Cr)Total Cobalt (Co)Total Cobalt (Co)Total Copper (Cu)Total Lead (Pb)Total Mercury (Hg)Total Molybdenum (Mo)Total Nickel (Ni)Total Selenium (Se)Total Silver (Ag)Total Thallium (Tl)Total Tin (Sn)Total Uranium (U)Total Zinc (Zn)Total Antimony (Sb)	Total Zinc (Zn) 2022/08/17 KH2 Method Blank Total Antimony (Sb) 2022/08/17 Total Arsenic (As) 2022/08/17 Total Barylium (Be) 2022/08/17 Total Cadmium (Cd) 2022/08/17 Total Cadmium (Cd) 2022/08/17 Total Cobatt (Co) 2022/08/17 Total Cobatt (Co) 2022/08/17 Total Cobper (Cu) 2022/08/17 Total Cobper (Cu) 2022/08/17 Total Cobper (Cu) 2022/08/17 Total Mercury (Hg) 2022/08/17 Total Mercury (Hg) 2022/08/17 Total Nickel (Ni) 2022/08/17 Total Silver (Ag) 2022/08/17 Total Tin (Sn) 2022/08/17 Total Tin (Sn) 2022/08/17 Total Arsenic (As) 2022/08/17 Total Aritimony (Sb) 2022/08/17 Total Aritim (Ba) 2022/08/17 Total Aritim (Cl) 2022/08/17 Total Aritim (Sb) 2022/08/17 Total Aritim (Cl) 2022/08/17 Total Aritim (Ba) 2022/08/17 <td< td=""><td>Total Zinc (Zn) 2022/08/17 KH2 Method Blank Total Antimony (Sb) 2022/08/17 <0.50</td> Total Arsenic (As) 2022/08/17 <1.0</td<>	Total Zinc (Zn) 2022/08/17 KH2 Method Blank Total Antimony (Sb) 2022/08/17 <0.50	Total Zinc (Zn) 2022/08/17 95 KH2 Method Blank Total Antimony (Sb) 2022/08/17 <0.50	Total Zinc (Zn) 2022/08/17 95 % KH2 Method Blank Total Antimony (Sb) 2022/08/17 <1.0



QUALITY ASSURANCE REPORT(CONT'D)

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Zinc (Zn)	2022/08/17	6.1		%	30
Duplicate	e: Paire	d analysis of a sepa	rate portion of the same sample. Used to ev	valuate the variance in the measure	ment.			

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

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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



VALIDATION SIGNATURE PAGE

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

Chantal Vincent, Customer Solutions Representative

Gita Pokhrel, Laboratory Supervisor

Junzhi Gras

Janet Gao, B.Sc., QP, Supervisor, Organics

Sandy Yuan, M.Sc., QP, Scientific Specialist

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

Mermicatelk

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

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 Signature Page.

COR FCD-00265 / 5 Page ____ of ____

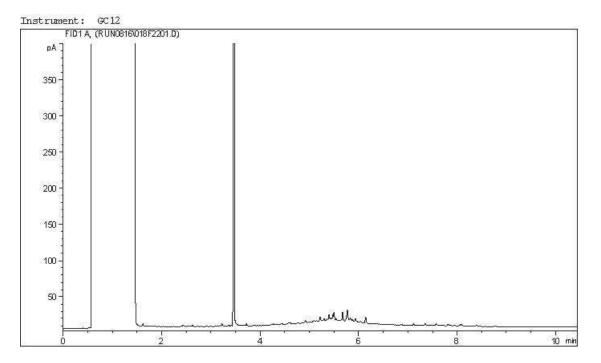
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ADDITIONAL COOLER TEMPERATURE RECORD

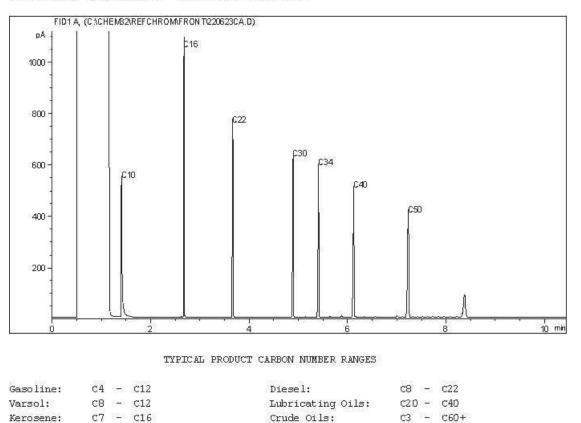
CHAIN-OF-CUSTODY RECORD

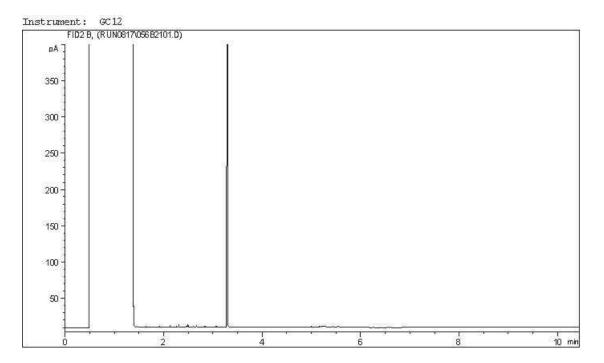
		COOLER OBSERVATIONS:	ATIONS:				BV JOB#:					
	CHAIN OF CUSTODY #						C 260013	0	\bigcirc	M		
-		CUSTODY SEAL	YES	NO COOLER ID	ER ID		CUSTODY SEAL	YES	NO COOLER ID	DLER ID		
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		CUSTODY SEAL	YES	NO COOLER ID	ER ID	-	CUSTODY SEAL	YES	NO COC	COOLER ID		
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υf		CUSTODY SEAL	YES	NO COOLER ID	EKID		CUSIODY SEAL	YES	NO			
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of		ICE PRESENT	1	T	-	E C	ICE PRESENT		T	-	2	m
		CUSTODY SEAL	YES	NO COOLER ID	1	-	CUSTODY SEAL	YES	NO COC	COOLER ID		
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		INTACT		TEMP	۵.		INTACT		F	TEMP		
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		CUSTODY SEAL	YES P	NO COOLER ID	ER ID		CUSTODY SEAL	YES	NO COC	COOLER ID		
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3		CUSTODY SEAL	YES N	NO COOLER ID	ER ID		CUSTODY SEAL	YES	NO COC	COOLER ID		
of		PRESENT					PRESENT					
		INTACT		TEMP	a.		INTACT		F	TEMP	-	
of		ICE PRESENT			1	2 3	ICE PRESENT		_	-	2	m
		CUSTODY SEAL	YES P	NO COOLER ID	ER ID		CUSTODY SEAL	YES	NO COC	COOLER ID		
of		PRESENT		_			PRESENT					
		INTACT		TEMP	a		INTACT		F	TEMP		
of		ICE PRESENT		Г	1	2 3	ICE PRESENT			1	2	m
		CUSTODY SEAL	YES P	NO COOLER ID	ER ID		CUSTODY SEAL	YES	NO COC	COOLER ID		
of		PRESENT					PRESENT					
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of		ICE PRESENT			1	2 3	ICE PRESENT		_	1	2	m
	; ;						-			ſ		
121	COOL+1 # 14/0	RECEIVED BY (SIGN & PRINT)	IGN & PR	(INT)			DATE	DATE (YYYY/MM/DD)	(dd/M		TIME (HH:MM)	E
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639 - " -	12-Aug-22 09.00	Cvnnv Harmer 24 02.00		C260013		- IKA INS-0001		Caur	19 20 21 22 Regular Turnarour	2 to 7 Day 10 Day	E E		BNIATN	ного - I # OE CO	X4 email report to:	X4 gld Shell DQR @ ey uis	All ald inl-equise was	X4 Upload to Fairly	3 41259544		3 Received in Yellowkn fe	cores.			5-152/	Temp: 3 /	BUREAU VERTIAS STAUBARED TERRES THD CONDITIONS: SHOWING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH WWW. BWM. CONFIEERINS AND CONDITIONS OR BY CALUNG THE LABORATORY LISTED ABOVE TO OBTAIN A COPY	No Temperature reading by:	, , ,	pecial in		
CHAIN OF CUSTODY RECORD ENV COC - 00013v3	Project Information	Shell	22525414-\$100-\$104	22525414-\$000	Camp Forewelling	(>	NT	Lord, Hu	8 9 10 11 12 13 14 15 16 17 1			lved n) d, silt, cla	brand betsa brand b letot - letot - l lotot l nez %)	Regulate Mercury Mercury Yinity Yinity (7) Sieve		×	×	×					2 was mare	men man			NING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOW 5 THE LABORATORY LISTED ABOVE TO OBTAIN A COPY	LAB USE ONLY Yes	Seal present Seal intact	3 Cooling media present Date Date DD	1	
		Quotation #:	P.O. #/ AFE#:	Project #:	T2P 4K3 Site #:	Site Location:	Site Location		2 3 4 5 6 7		ED	ו גנטווו	PPD F4 F2 F2	PPHS PPHS	X X	X	X	* ×	X	×	X	×	222222	aguar			RD TERMIS AND CONDITIONS SIG		ů,	Received by: (Signature/ Print)	Sarah Der	
noose Location: (=diagray, A4000 13th 5t, NE, T25 6PB Toil Free (800) 386-7247 Edmonton, AB: 9331-48 St. T6B JA4 Toll Free (800) 386-7247 (=Wirmipeg, MB: 0-675 Berry St. RJH 1A7 Toll Free (866) 800-6208	Report Information (if differs from involce)	Golder Associates	Aurelie Bellavance		Calgary AB Code:	403-299-5600	aurelle bellavance WSD.com	10		Drinking Water - Manitoba	Xother HMSRP	L DELIVERY TO BUREAU VERITAS	Date Sampled Time (24hr)	MM DD HH MM Matrix	0% 08 11 00 Soil	08 08 11 10 Soil		08 08 11 30 Soil	08 08 09 40 Soil	08 08 09 40 SOI)	08 08 09 50 Soil	08 08 10 00 Soil	Sales 11 NEd NU	08/01/2011				LAB USE ONLY	-Seal present Seal intact	cooling media present Time HH MM	03 00 2	
tion: AB: 4000 19th SI 3n, AB: 9331-481 6, MB: D-675 Be		Company:	Contact Name:	Street Address:	City:	Phone:	Email:	Copies:	riteria			SAMPLING UNTI	Date	**	22	22	22	22.	22	22	22	22	where	1 AZZ			N THIS CHAIN OF ARE AV		2.1.2	Date 13 10	0	
Choose Location: Calgary, AB: 4 Edunatory, AB: 4 Winnipeg, MB	mation Invoice to (requires report)	Client #254, Golder Associates	237 - 4 Ave SW Suite 3300		Calgary Prov: AB Postal		Canada Account Payable		Regulatory Criteria	CCME Drinking Water - Canada	Saskatchewan	SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BURE U V		Sample Identification	BH22-19-01	8422-19-02	BH22-19-03	BH22-19-04	BH 22 - 27 - 05	DUP C	BH 22- 27-06	BH22- 27-07	monnon	mmmmm			-UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO ARE AVAILABLE FOR VIEWING AT	Ise only Yes No	2. 2.	by: (Signature/ Print)	fluel Melissaburd 22	
	Invoice Information	Company :	Contact	Street	Address: City:	Phone:	Email:	Copies:	STREET, STREET	LTA 🗌	Sas				1	2	10 10	4 F	s J	9	7 Đ	8	9 6	10 M	11	12	+UNLESS O	LAB	Seal present Seal intact	Cooling media present Relinquished	2 Male	

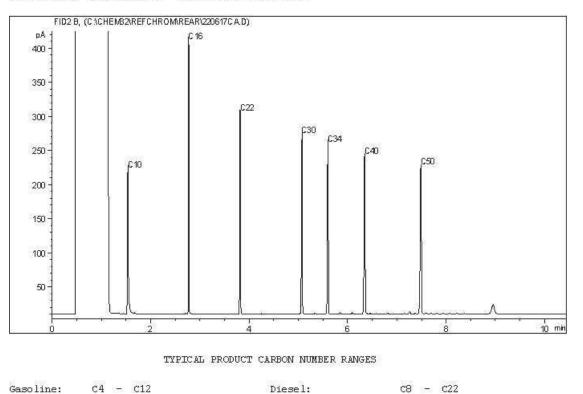


Carbon Range Distribution - Reference Chromatogram





Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Varsol:

Kerosene:

C8 - C12

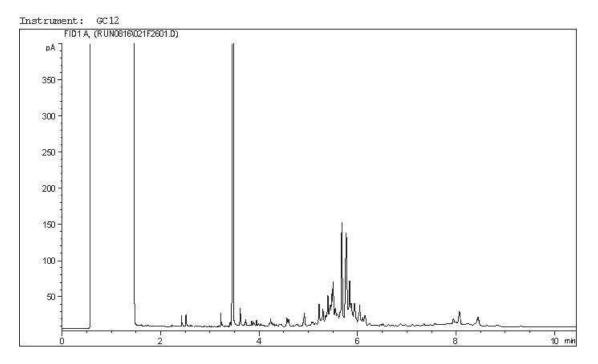
c7 - c16

Lubricating Oils:

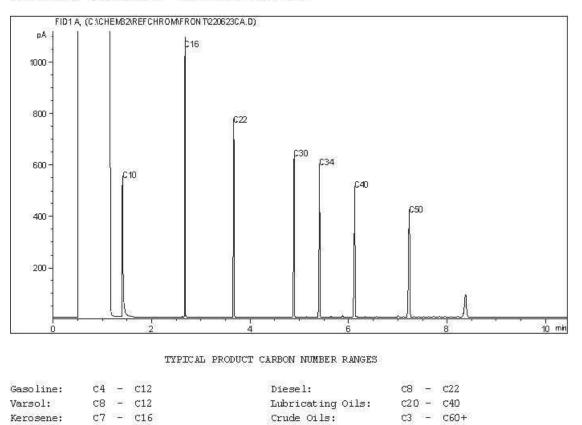
Crude Oils:

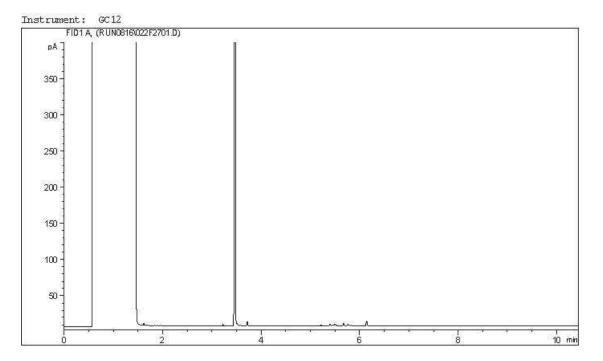
c20 - c40

C3 - C60+

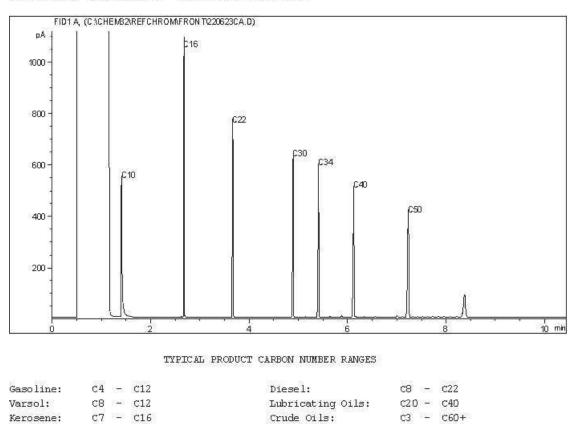


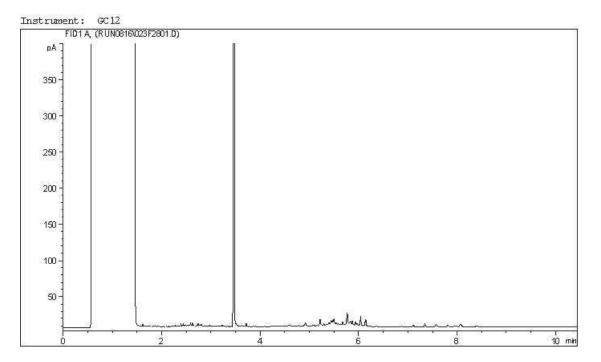
Carbon Range Distribution - Reference Chromatogram



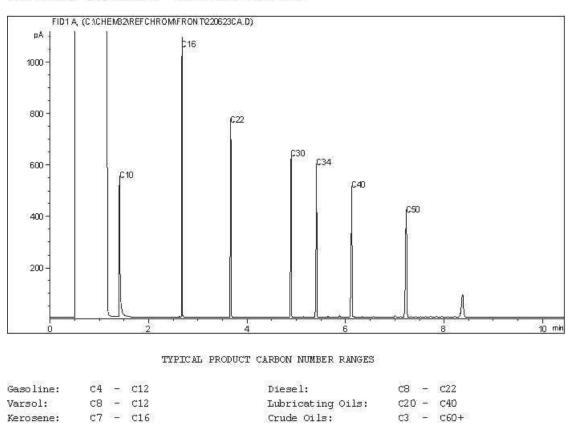


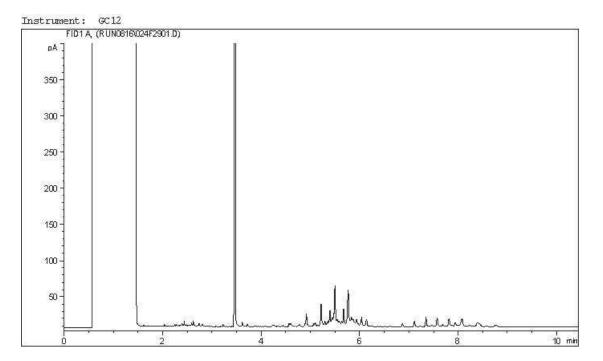
Carbon Range Distribution - Reference Chromatogram



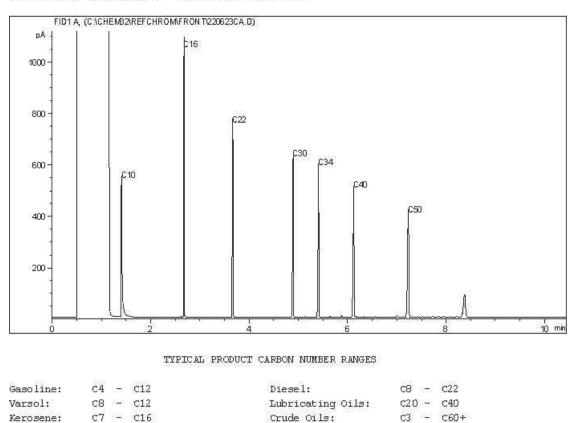


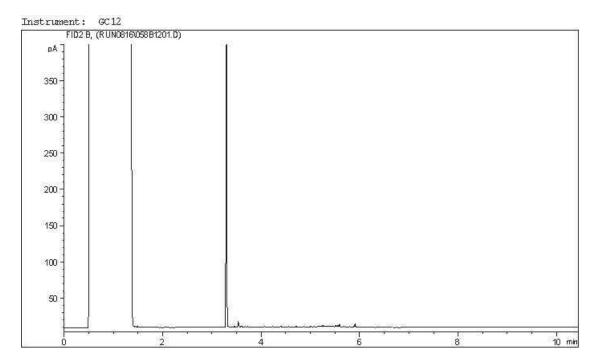
Carbon Range Distribution - Reference Chromatogram



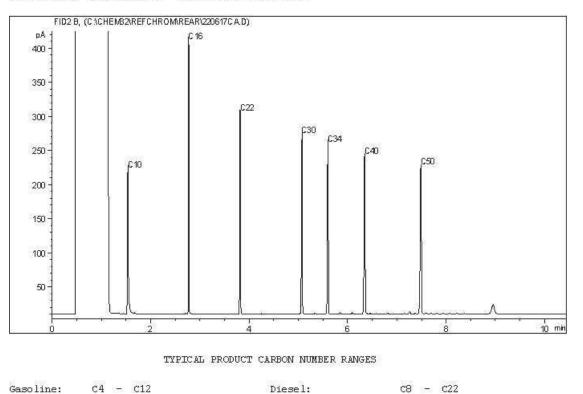


Carbon Range Distribution - Reference Chromatogram





Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Varsol:

Kerosene:

C8 - C12

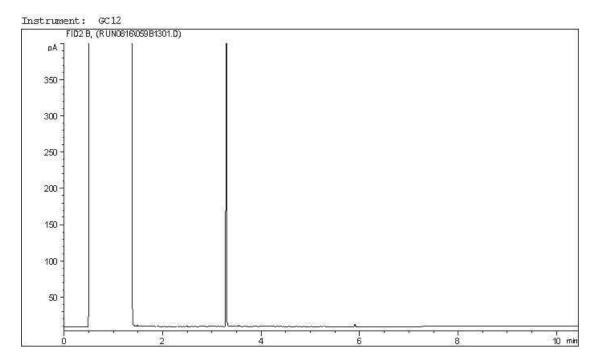
c7 - c16

Lubricating Oils:

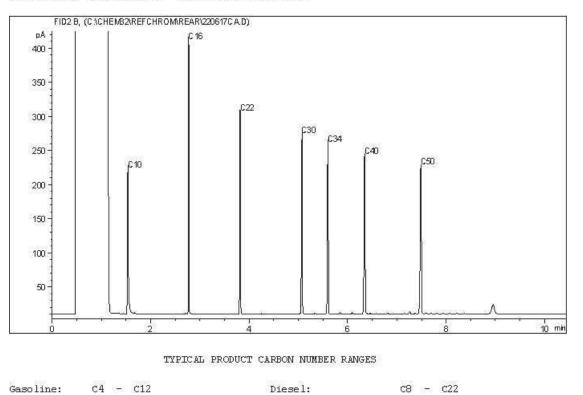
Crude Oils:

c20 - c40

C3 - C60+



Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Varsol:

Kerosene:

C8 - C12

c7 - c16

Lubricating Oils:

Crude Oils:

c20 - c40

C3 - C60+



August 19, 2022

GOLDER ASSOCIATES LTD.

2800, 700 -2nd Street SW CALGARY, AB, T2P 2W2

Attention: Aurelie Bellavance

Re: Chromatogram Interpretation of CAMP FAREWELL, NT; Project 22525414-1000 Bureau Veritas Job No.: C260013

Bureau Veritas was retained by Golder Associates Ltd. to provide hydrocarbon interpretations concerning the likely origin of hydrocarbons quantified within CCME fraction(s) F2, F3 and/or F4.

Analytical Method

Petroleum hydrocarbon analyses at Bureau Veritas are conducted in accordance with the analytical specifications required by the prescriptive and performance-based (where appropriate) elements of the CCME Tier I protocols for hydrocarbon determination¹ in soil samples.

Chromatogram Interpretation

A comprehensive qualitative assessment of the resultant gas chromatograms in the F2-F4 ranges was performed. The chromatograms were inspected for specific peak profiles that would indicate the possible origin of the hydrocarbons present in the sample. The presence and nature of specific aliphatic compounds (n-alkanes), the presence of characteristic unresolved complex mixtures (UCMs) or "humps" and the relative abundance (ratios) of specific compounds are reviewed as part of the evaluation.

¹ Canadian Council of Ministers of the Environment: "Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil – Tier I Method" 2001



Data Interpretation

Table 1. Qualitative Data Summary – Chromatogram Interpretation

Lab ID	Sample ID	Chromatogram Interpretation
AZM160	BH22-19-03	The CCME F2-F4 chromatographic peak profile is consistent with biogenic organic material (e.g. peat). Chromatograms of biogenic organic material may contain peak patterns spanning the C10 to C50 range, but they are most commonly characterized by a profile of unevenly distributed sharp peaks between C28 and C34. The impacts are not consistent with a petroleum product or crude oil.

If you have any questions or require additional information, please do not hesitate to contact the undersigned.

Sincerely, Bureau Veritas Laboratories

Michael Sheppard, B.Sc., P.Bio., QP Consulting Scientist Environmental Services

Canture

Scott Cantwell, CET, B.Sc., P.Chem. Director and General Manager – Western Canada Environmental Services

Disclaimer

Hydrocarbon Resemblance

Characterization by way of visual evaluation of the sample chromatogram may not be conclusive and is only indicative of substances that may be present. The resemblance information must be regarded as approximate and qualitative.



2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatlabs.com

CLIENT NAME: BUREAU VERITAS CANADA (2019) INC 2021 - 41ST STREET NE Calgary, AB T2E6P2 (403) 291-3077 ATTENTION TO: Cynny Hagen PROJECT: C260013 AGAT WORK ORDER: 22C940491 SOIL ANALYSIS REVIEWED BY: Loan Nguyen, Senior Analyst DATE REPORTED: Sep 06, 2022 PAGES (INCLUDING COVER): 7 VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (403) 735-2005

*Notes		
Disclaimer:		

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

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(APEGA)	
Western Enviro-Agricultural Laboratory Association (WEALA)	
Environmental Services Association of Alberta (ESAA)	

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Certificate of Analysis

AGAT WORK ORDER: 22C940491 PROJECT: C260013 2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatiabs.com

CLIENT NAME: BUREAU VERITAS CANADA (2019) INC

SAMPLING SITE:

ATTENTION TO: Cynny Hagen

SAMPLED BY:

				Metals -	arium by Fusion ICP
DATE RECEIVED: 2022-09-01					DATE REPORTED: 2022-09-06
				AZM158-BH22-	
	S	AMPLE DES	CRIPTION:	19-01	
		SAM	PLE TYPE:	Soil	
		DATES	SAMPLED:	2022-08-08 11:00	
Parameter	Unit	G/S	RDL	4267008	
True Barium by Fusion ICP	mg/kg		50	7750	

Comments:RDL - Reported Detection Limit;G / S - Guideline / Standard4267008Result is based on the dry weight of the sample.

Analysis performed at AGAT Calgary (unless marked by *)

Certified By:



2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatlabs.com

Quality Assurance

CLIENT NAME: BUREAU VERITAS CANADA (2019) INC

PROJECT: C260013

AGAT WORK ORDER: 22C940491

ATTENTION TO: Cynny Hagen

SAMPLING SITE:

SAMPLED BY:

	Soil Analysis														
RPT Date: Sep 06, 2022		[DUPLICAT	E		REFEREN	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE		
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured		ptable nits	Recovery	Lir	ptable nits	Recovery	Lin	eptable nits
		ld					Value	Lower	Upper		Lower	Upper		Lower	Upper
Metals - Barium by Fusion ICP Barium by Fusion ICP-OES	4266587		976	977	0.0%	< 40	95%	70%	130%				NA	70%	130%

Comments: Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated. Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.

Certified By:



AGAT QUALITY ASSURANCE REPORT (V1)

Page 3 of 7

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2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatlabs.com

Method Summary

CLIENT NAME: BUREAU VERITAS CANA	DA (2019) INC	AGAT WORK ORDER: 22C940491							
PROJECT: C260013		ATTENTION TO: C	Synny Hagen						
SAMPLING SITE:		SAMPLED BY:							
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE						
Soil Analysis									
True Barium by Fusion ICP	SOIL- 0620, INST- 0140	ASTM D4503.08	ICP/OES						



Sent To: AGAT - Calgary 2910 12th Street NE Calgary, AB, T2E 7P7 Tel: (403) 735-2005

1-SEP 722 PH12:09 CHAIN OF CUSTODY RECORD FOR SUBCONTRACTED WORK

Page 01 of 01

coc#c260013-CAGT-01-01 22C9H0491

							-									2			
										AN	IALYSIS R	EQUEST	TED						
Company:	Bureau Veritas																		
Address:	4000 19st N.E, Calgary, Alberta	, T2E 6P8	3																
Contact Name:	Cynny Hagen						Extraction								÷.				
Email:	Cynny.HAGEN@bureauveritas.	com, Cus	tomersolutions	west@bu	reauverita	as.coi	Extra								1.1				
Phone:	(403) 735-2273						Fusion												
Lab Project #:	C260013						using Fi												
# SAMPLE ID		MATRIX	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	SAMPLER INITIALS		Barium on ICP us										ADDITION	IAL SAM	PLE INFORMATION
1 AZM158-BH2	2-19-01	SOIL	2022/08/08	11:00	ML	1	х									(P:01)			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9														_					
10																			
REGULATORY CRITE	RIA		SPECIAL INSTRU										_						TURNAROUND TIME
			Please inform B • You are not • The hold tin **Please return	accredited	for the req aching for t	ueste he re	ed tesi quest	ed test(s).										X Rush Requireda
COOLER ID:		ï	COOLER ID:				_	_		-1	COOLER								Date Required
Custody Seal Present Custody Seal Intact Cooling Media Present	YES NO Temp: (°C)	*	Custody Seal Press Custody Seal Intac Cooling Media Pre	t	YES NO	Tem (°C	· .	,a .	·	8,	Custody Custody	Seal Pres Seal Inta Media Pre	ct	YES NO	D Temp (°C)		<i>E</i>	4	Please inform us if rush charges will be incurred.
RELINQUISHED BY: (S			(YYYY/MM/DD)	TIME: (H		RECE	IVED	BY: (SIGI	N & PRINT	T)		1		DATE:	YYYY/MN	A/DD)	TIME: (HI	H:MM)	
IT AXAT	Kobil Webrehn	2027	109/01	091	30	1,		la	07 C	RU	F	tan	3	2022	109	01	12:0	9	
2.						2.							-						

	SAMPLE INTEGRITY RECEIPT
agat Lat	
RECEIVING BASICS - Shipping	Temperature (Bottles/Jars only) N/A only Soil Bags Received
Company/Consultant: Bureau Veritas	FROZEN (Please Circle if samples received Frozen)
Courier: Prepaid Collect	1 (Bottle/Jar) $NASail ={C} C = 2(Bottle/Jar) ++ ={C} C$
	3 (Bottle/Jar)++=°C 4 (Bottle/Jar)++_=°C
Waybill#	5 (Bottle/Jar)++=°C 6 (Bottle/Jar)++=°C
Branch: EDM GP FN FM RD VAN LYD FSJ EST SASK Other:	7 (Bottle/Jar)++=°C 8 (Bottle/Jar)++=°C
If multiple sites were submitted at once: Yes No	9 (Bottle/Jar)++=°C 10 (Bottle/Jar)++=°C
Custody Seal Intact: Yes No NA	(If more than 10 coolers are received use another sheet of paper and attach)
TAT: <24hr 24-48hr 48-72hr Reg Other	LOGISTICS USE ONLY
Cooler Quantity:	Workorder No: <u>22694049</u>
TIME SENSITIVE ISSUES - Shipping	Samples Damaged: Yes No If YES why?
	No Bubble Wrap Frozen Courier
ALREADY EXCEEDED HOLD TIME? Yes No	Other:
Inorganic Tests (Please Circle): Mibi, BOD, Nitrate/Nitrite, Turbidity,	Account Project Manager:have they been notified of the above issues: Yes No
Color, Microtox, Ortho PO4, Tedlar Bag, Residual Chlorine, Chlorophyll*, Chloroamines*	Whom spoken to: Date/Time:
	CPM Initial
Earliest Expiry:	General Comments:
Hydrocarbons: Earliest Expiry	
SAMPLE INTEGRITY - Shipping	
Hazardous Samples: YES NO Precaution Taken:	
Legal Samples: Yes No	
International Samples: Yes No	
Tape Sealed: Yes No	
Coolant Used: Icepack Bagged Ice Free Ice Free Water None	

* Subcontracted Analysis (See CPM)

No ne

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- N-CIZZ	JAZOO EXPRESS COURIER www.jazoocourier.com	CLIENT USE ONLY	Receiver Name:	Delivery From:	-	envelope, sm/med/lg box, cooler,	eitc.	Jeb/PO/Refarance #.	TA A A A	DRIVER USE ONLY		D/O Time:	# Of TDG # Of Same Day Surcharge I + 0		and -	D/O Driver Name:	the last	HOTSHOT DETAILS	Or Total Charge (\$):	OFFICE USE ONLY	Invoiced By:	To schedule a pickup please contact dispatch at the city nearest you:	Calgary 403-660-5504 Fort McMurray 587-645-6364 Edmonton 780-903-3628 Grande Prairie 587-297-8406	UPPORTING LOCAL AND CHOOSING JAZ
	JAZO		Robel Mebrahmu	01001002		2			Authorized Shipper Signature:	V	1 BL	6		-		Total # Items Dropped Off:	Authorized Receiver Signature:					To sched	Calgary Edmonto	THANK YOU F
	A STATE		Sender Name:	Date:		# Items:			Authorize		P/U Driver Name:	# Items P/U:	# Of Overweight	Additional Info:		Total # Item	Authorized		Total Km:	Month of		-		

×.



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CLIENT NAME: BUREAU VERITAS CANADA (2019) INC 2021 - 41ST STREET NE Calgary, AB T2E6P2 (403) 291-3077 ATTENTION TO: Cynny Hagen PROJECT: C260013 AGAT WORK ORDER: 22C940491 SOIL ANALYSIS REVIEWED BY: Loan Nguyen, Senior Analyst DATE REPORTED: Sep 06, 2022 PAGES (INCLUDING COVER): 7 VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (403) 735-2005

*Notes		
Disclaimer:		

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
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- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Environmental Services Association of Alberta (ESAA)	

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Certificate of Analysis

AGAT WORK ORDER: 22C940491 PROJECT: C260013 2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatiabs.com

CLIENT NAME: BUREAU VERITAS CANADA (2019) INC

SAMPLING SITE:

ATTENTION TO: Cynny Hagen

SAMPLED BY:

Metals - Barium by Fusion ICP									
DATE RECEIVED: 2022-09-01					DATE REPORTED: 2022-09-06				
				AZM158-BH22-					
	S	AMPLE DES	CRIPTION:	19-01					
		SAM	PLE TYPE:	Soil					
		DATES	SAMPLED:	2022-08-08 11:00					
Parameter	Unit	G/S	RDL	4267008					
True Barium by Fusion ICP	mg/kg		50	7750					

Comments:RDL - Reported Detection Limit;G / S - Guideline / Standard4267008Result is based on the dry weight of the sample.

Analysis performed at AGAT Calgary (unless marked by *)

Certified By:



2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatlabs.com

Quality Assurance

CLIENT NAME: BUREAU VERITAS CANADA (2019) INC

PROJECT: C260013

AGAT WORK ORDER: 22C940491

ATTENTION TO: Cynny Hagen

SAMPLING SITE:

SAMPLED BY:

	Soil Analysis														
RPT Date: Sep 06, 2022		[DUPLICAT	E		REFEREN	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE		
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured		ptable nits	Recovery	Lir	ptable nits	Recovery	Lin	eptable nits
		ld					Value	Lower	Upper		Lower	Upper		Lower	Upper
Metals - Barium by Fusion ICP Barium by Fusion ICP-OES	4266587		976	977	0.0%	< 40	95%	70%	130%				NA	70%	130%

Comments: Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated. Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.

Certified By:



AGAT QUALITY ASSURANCE REPORT (V1)

Page 3 of 7

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.



2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatlabs.com

Method Summary

CLIENT NAME: BUREAU VERITAS CANA	DA (2019) INC	AGAT WORK ORDER: 22C940491							
PROJECT: C260013		ATTENTION TO: C	Synny Hagen						
SAMPLING SITE:		SAMPLED BY:							
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE						
Soil Analysis									
True Barium by Fusion ICP	SOIL- 0620, INST- 0140	ASTM D4503.08	ICP/OES						



Sent To: AGAT - Calgary 2910 12th Street NE Calgary, AB, T2E 7P7 Tel: (403) 735-2005

1-SEP 722 PH12:09 CHAIN OF CUSTODY RECORD FOR SUBCONTRACTED WORK

Page 01 of 01

coc#c260013-CAGT-01-01 22C9H0491

							-									2			
										AN	IALYSIS R	EQUEST	TED						
Company:	Bureau Veritas																		
Address:	4000 19st N.E, Calgary, Alberta	, T2E 6P8	3																
Contact Name:	Cynny Hagen						Extraction								÷.				
Email:	Cynny.HAGEN@bureauveritas.	com, Cus	tomersolutions	west@bu	reauverita	as.coi	Extra								1.1				
Phone:	(403) 735-2273						Fusion												
Lab Project #:	C260013						using F												
# SAMPLE ID		MATRIX	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	SAMPLER INITIALS		Barium on ICP us										ADDITION	IAL SAM	PLE INFORMATION
1 AZM158-BH2	2-19-01	SOIL	2022/08/08	11:00	ML	1	х									(P:01)			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9														_					
10																			
REGULATORY CRITE	RIA		SPECIAL INSTRU										_						TURNAROUND TIME
			Please inform B • You are not • The hold tin **Please return	accredited	for the req aching for t	ueste he re	ed tesi quest	ed test(s).										X Rush Requireda
COOLER ID:		ï	COOLER ID:				_	_		-1	COOLER								Date Required
Custody Seal Present Custody Seal Intact Cooling Media Present	YES NO Temp: (°C)	*	Custody Seal Prese Custody Seal Intac Cooling Media Pre	t	YES NO	Tem (°C	· .	,a .	·	8,	Custody Custody	Seal Pres Seal Inta Media Pre	ct	YES NO	D Temp (°C)			4	Please inform us if rush charges will be incurred.
RELINQUISHED BY: (S			(YYYY/MM/DD)	TIME: (H		RECE	IVED	BY: (SIGI	N & PRINT	T)		10		DATE:	YYYY/MN	A/DD)	TIME: (HI	H:MM)	
IT AXAT	Kobil Webrehn	2027	109/01	091	30	1,		la	07 C	RU	F	tan	3	2022	109	01	12:0	9	
2.						2.							-						

	SAMPLE INTEGRITY RECEIPT
agat Lat	
RECEIVING BASICS - Shipping	Temperature (Bottles/Jars only) N/A only Soil Bags Received
Company/Consultant: Bureau Veritas	FROZEN (Please Circle if samples received Frozen)
Courier: Prepaid Collect	1 (Bottle/Jar) $NASail ={C} C = 2(Bottle/Jar) ++ ={C} C$
	3 (Bottle/Jar)++=°C 4 (Bottle/Jar)++_=°C
Waybill#	5 (Bottle/Jar)++=°C 6 (Bottle/Jar)++=°C
Branch: EDM GP FN FM RD VAN LYD FSJ EST SASK Other:	7 (Bottle/Jar)++=°C 8 (Bottle/Jar)++=°C
If multiple sites were submitted at once: Yes No	9 (Bottle/Jar)++=°C 10 (Bottle/Jar)++=°C
Custody Seal Intact: Yes No NA	(If more than 10 coolers are received use another sheet of paper and attach)
TAT: <24hr 24-48hr 48-72hr Reg Other	LOGISTICS USE ONLY
Cooler Quantity:	Workorder No: <u>22694049</u>
TIME SENSITIVE ISSUES - Shipping	Samples Damaged: Yes No If YES why?
	No Bubble Wrap Frozen Courier
ALREADY EXCEEDED HOLD TIME? Yes No	Other:
Inorganic Tests (Please Circle): Mibi, BOD, Nitrate/Nitrite, Turbidity,	Account Project Manager:have they been notified of the above issues: Yes No
Color, Microtox, Ortho PO4, Tedlar Bag, Residual Chlorine, Chlorophyll*, Chloroamines*	Whom spoken to: Date/Time:
	CPM Initial
Earliest Expiry:	General Comments:
Hydrocarbons: Earliest Expiry	
SAMPLE INTEGRITY - Shipping	
Hazardous Samples: YES NO Precaution Taken:	
Legal Samples: Yes No	
International Samples: Yes No	
Tape Sealed: Yes No	
Coolant Used: Icepack Bagged Ice Free Ice Free Water None	

* Subcontracted Analysis (See CPM)

No ne

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Z NN-CIY Z	JAZOO EXPRESS COURIER www.jazoocourier.com	CLIENT USE ONLY	Receiver Name:	Delivery From: Bureau Veritas Calgary	Item Description: envelope, sm/med/Ig	etc.	Jeb/PO/Reference #:	DRIVER USE ONLY	P/U Time: D/0 Time: D/0 Time:	# Of TDG # Of Same Day Surcharge / 205 pm		and a	D/O Driver Name:	At ()	HOTSHOT DETAILS	Or Total Charge (\$):	OFFICE USE ONLY	Involued by:	To schedule a pickup please contact dispatch at the city nearest you:	Calgary 403-660-5504 Fort McMurray 587-645-6364 Edmonton 780-903-3628 Grande Prairie 587-297-8406	UPPORTING LOCAL AND CHOOSING JAZ
	JAZO		Robel Mebrahmu	0100/002	5		Authorized Shipper Signature:	X	Je l				Total # Items Dropped Off:	Authorized Receiver Signature:					To sched	Calgary Edmonto	THANK YOU F
	A STORE		Sender Name:	Date:	Total # Items:		Authorize		P/U Driver Name: # Items	# Of Overweight	Additional Info:	-	Total # Item	Authorized		Total Km:	Varifiad Bu.	· /			

×.

GOLDER DATA QUALITY REVIEW CHECKLIST

Site Location: Camp Farewe	ll, NT			Sampling Date:	August 8, 2022				
Golder Project Number: 2	252541	4-1000	Laboratory: Bureau Veritas Edmonton						
I ab Submission Number (320012								
Lab Submission Number: <u>C</u>	200015		•						
	1		•	. 1 10	X.				
Was the Cooler Received at the lab				•	Yes				
Was proper chain of custody of the	-			51?	Yes Yes				
Were sample temperatures acceptable		•							
Were all samples analyzed and extr					Yes				
Has lab warranted all tests were in s				Yes					
Was sufficient sample provided for	-	•			Yes				
Has lab warranted all samples were	anatyze	a with limit	ed neads	pace present?:	Yes				
Are All Laboratory QC Within Acc	eptance	Criteria (Y	es, No, N	ot Applicable)?					
	Yes	No	NA	Comments					
Surrogate Recovery		Х		Surrogate recovery for d10-o-xylene (155%) exceeded					
Method Blank Concentration	Х			the acceptance criteria (50-140%).					
Laboratory Duplicate RPD	Х			Matrix spike recovery for vanadium (151% and 131%					
Matrix Spike Recovery		Х		exceeded the acc	eptance criteria of (75-125%).				
Blank Spike Recovery	Х			All remaining lab	ooratory QC results are within				
				acceptance criter	ia.				
Are All Field QC Samples Within A	Alert Lir	nits (Yes, N	o, Not Aj	oplicable)?					
	Yes	No	NA		Comments				
Field Blank Concentration			Х	All field QC sam	ples are within				
Trip Blank Concentration			Х	alert limits.	<u> </u>				
Field Duplicate RPD	Х								
Is data considered reliable (Yes/No	/Suspec	t)?:		Yes					
If answer is "No" or "Suspect", des			tionale:		-				
Data Reviewed by (Print): <u>A</u>	Anita Co	lbert		Data Reviewed by	(Signature): Onits Callent				
Date: August 18, 2022									



Your P.O. #: 22525414-1100-1104 Your Project #: 22525414-1000 Site Location: CAMP FAREWELL,NT Your C.O.C. #: 1 of 1

Attention: Aurelie Bellavance

GOLDER ASSOCIATES LTD. 2800, 700 -2nd Street SW CALGARY, AB CANADA T2P 2W2

> Report Date: 2022/08/19 Report #: R3218840 Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C260016 Received: 2022/08/12, 09:00

Sample Matrix: Soil # Samples Received: 9

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
Boron (Hot Water Soluble) (1)	5	2022/08/16	2022/08/16	AB SOP-00034 / AB SOP- 00042	EPA 6010d R5 m
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1, 2)	9	N/A	2022/08/16	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX (1)	9	N/A	2022/08/17		Auto Calc
Hexavalent Chromium (1, 3)	5	2022/08/16	2022/08/16	AB SOP-00063	SM 23 3500-Cr B m
CCME Hydrocarbons (F2-F4 in soil) (1, 4)	4	2022/08/16	2022/08/16	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2-F4 in soil) (1, 4)	5	2022/08/16	2022/08/17	AB SOP-00036	CCME PHC-CWS m
Elements by ICPMS - Soils (1)	4	2022/08/16	2022/08/16	AB SOP-00001 / AB SOP- 00043	EPA 6020b R2 m
Elements by ICPMS - Soils (1)	1	2022/08/16	2022/08/17	AB SOP-00001 / AB SOP- 00043	EPA 6020b R2 m
Moisture (1)	9	N/A	2022/08/17	AB SOP-00002	CCME PHC-CWS m
Benzo[a]pyrene Equivalency (1)	5	N/A	2022/08/17		Auto Calc
PAH in Soil by GC/MS (1)	5	2022/08/16	2022/08/17	AB SOP-00036 / AB SOP- 00003	EPA 3540C/8270E 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.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.



Your P.O. #: 22525414-1100-1104 Your Project #: 22525414-1000 Site Location: CAMP FAREWELL,NT Your C.O.C. #: 1 of 1

Attention: Aurelie Bellavance

GOLDER ASSOCIATES LTD. 2800, 700 -2nd Street SW CALGARY, AB CANADA T2P 2W2

> Report Date: 2022/08/19 Report #: R3218840 Version: 2 - Revision

CERTIFICATE OF ANALYSIS - REVISED REPORT

BUREAU VERITAS JOB #: C260016 Received: 2022/08/12. 09:00

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) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is date sampled unless otherwise stated.

(3) Some soil samples may react with the Cr(VI) spike reducing it to Cr(III). These samples are highly unlikely to contain native hexavalent chromium. Thus a failed spike recovery does not invalidate a negative result on the native sample.

(4) All CCME results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil, Validation of Performance-Based Alternative Methods September 2003. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.



Please direct all questions regarding this Certificate of Analysis to your Project Manager. Cynny Hagen, Key Account Specialist Email: Cynny.HAGEN@bureauveritas.com Phone# (403)735-2273

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 Signature Page.



AT1 BTEX AND F1-F4 IN SOIL (VIALS)

Bureau Veritas ID		AZM175	AZM175		AZM176	AZM176	AZM177		
Someling Data		2022/08/09	2022/08/09		2022/08/09	2022/08/09	2022/08/09		
Sampling Date		13:20	13:20		13:10	13:10	13:10		
COC Number		1 of 1	1 of 1		1 of 1	1 of 1	1 of 1		
	UNITS	BH22-29-03	BH22-29-03 Lab-Dup	RDL	DUP J	DUP J Lab-Dup	BH22-29-02	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	48	N/A	10	<10	N/A	<10	10	A682565
F3 (C16-C34 Hydrocarbons)	mg/kg	790	N/A	50	100	N/A	<50	50	A682565
F4 (C34-C50 Hydrocarbons)	mg/kg	240	N/A	50	<50	N/A	<50	50	A682565
Reached Baseline at C50	mg/kg	Yes	N/A	N/A	Yes	N/A	Yes	N/A	A682565
Physical Properties			•					•	
Moisture	%	43	N/A	0.30	5.2	6.1	4.4	0.30	A682261
Volatiles	•							•	
Xylenes (Total)	mg/kg	<0.13	N/A	0.13	<0.045	N/A	<0.045	0.045	A679841
F1 (C6-C10) - BTEX	mg/kg	<18	N/A	18	<10	N/A	<10	10	A679841
Field Preserved Volatiles			•					•	
Benzene	mg/kg	<0.012 (1)	<0.012	0.012	<0.0050	N/A	<0.0050	0.0050	A680674
Toluene	mg/kg	<0.050 (1)	<0.050	0.050	<0.050	N/A	<0.050	0.050	A680674
Ethylbenzene	mg/kg	<0.022 (1)	0.025	0.022	< 0.010	N/A	<0.010	0.010	A680674
m & p-Xylene	mg/kg	<0.11 (2)	<0.11	0.11	<0.040	N/A	<0.040	0.040	A680674
o-Xylene	mg/kg	<0.056 (2)	<0.056	0.056	<0.020	N/A	<0.020	0.020	A680674
F1 (C6-C10)	mg/kg	<18 (1)	<18	18	<10	N/A	<10	10	A680674
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	83	87	N/A	84	N/A	84	N/A	A680674
4-Bromofluorobenzene (sur.)	%	88	95	N/A	90	N/A	91	N/A	A680674
D10-o-Xylene (sur.)	%	93	118	N/A	99	N/A	98	N/A	A680674
D4-1,2-Dichloroethane (sur.)	%	82	88	N/A	88	N/A	83	N/A	A680674
O-TERPHENYL (sur.)	%	95	N/A	N/A	92	N/A	97	N/A	A682565

RDL = Reportable Detection Limit

Lab-Dup = Laboratory Initiated Duplicate

N/A = Not Applicable

(1) Detection limit reported based on MDL and sample weight used for analysis.

(2) Detection limits raised based on sample weight used for analysis.



AT1 BTEX AND F1-F4 IN SOIL (VIALS)

Bureau Veritas ID		AZM178		AZM179	AZM180	AZM181	AZM182		
Sampling Date		2022/08/09 13:00		2022/08/09 15:20	2022/08/09 15:00	2022/08/09 15:10	2022/08/09 15:30		
COC Number		1 of 1		1 of 1	1 of 1	1 of 1	1 of 1		
	UNITS	BH22-29-01	QC Batch	BH22-25-03	BH22-25-01	BH22-25-02	BH22-25-04	RDL	QC Batch
Ext. Pet. Hydrocarbon	•								
F2 (C10-C16 Hydrocarbons)	mg/kg	11	A682565	<10	36	29	14	10	A682914
F3 (C16-C34 Hydrocarbons)	mg/kg	160	A682565	<50	180	160	<50	50	A682914
F4 (C34-C50 Hydrocarbons)	mg/kg	72	A682565	<50	55	<50	<50	50	A682914
Reached Baseline at C50	mg/kg	Yes	A682565	Yes	Yes	Yes	Yes	N/A	A682914
Physical Properties	•				-	-	-		
Moisture	%	5.4	A682261	4.9	6.5	10	4.4	0.30	A682261
Volatiles									
Xylenes (Total)	mg/kg	<0.045	A680070	<0.045	<0.045	<0.045	<0.045	0.045	A679841
F1 (C6-C10) - BTEX	mg/kg	<10	A680070	<10	<10	<10	<10	10	A679841
Field Preserved Volatiles		-							
Benzene	mg/kg	<0.0050	A680674	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	A680674
Toluene	mg/kg	<0.050	A680674	<0.050	<0.050	<0.050	<0.050	0.050	A680674
Ethylbenzene	mg/kg	<0.010	A680674	<0.010	<0.010	<0.010	<0.010	0.010	A680674
m & p-Xylene	mg/kg	<0.040	A680674	<0.040	<0.040	<0.040	<0.040	0.040	A680674
o-Xylene	mg/kg	<0.020	A680674	<0.020	<0.020	<0.020	<0.020	0.020	A680674
F1 (C6-C10)	mg/kg	<10	A680674	<10	<10	<10	<10	10	A680674
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	88	A680674	86	90	89	86	N/A	A680674
4-Bromofluorobenzene (sur.)	%	94	A680674	93	94	93	93	N/A	A680674
D10-o-Xylene (sur.)	%	107	A680674	102	107	106	110	N/A	A680674
D4-1,2-Dichloroethane (sur.)	%	93	A680674	84	90	92	86	N/A	A680674
O-TERPHENYL (sur.)	%	95	A682565	91	82	93	88	N/A	A682914
RDL = Reportable Detection Lir	nit								
N/A = Not Applicable									



Bureau Veritas ID		AZM183		
Sampling Data		2022/08/09		
Sampling Date		13:40		
COC Number		1 of 1		
	UNITS	BH22-25-5	RDL	QC Batch
Ext. Pet. Hydrocarbon				
F2 (C10-C16 Hydrocarbons)	mg/kg	380	10	A682914
F3 (C16-C34 Hydrocarbons)	mg/kg	190	50	A682914
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	50	A682914
Reached Baseline at C50	mg/kg	Yes	N/A	A682914
Physical Properties				
Moisture	%	4.8	0.30	A682261
Volatiles				
Xylenes (Total)	mg/kg	<0.045	0.045	A679841
F1 (C6-C10) - BTEX	mg/kg	<10	10	A679841
Field Preserved Volatiles				
Benzene	mg/kg	<0.0050	0.0050	A680674
Toluene	mg/kg	<0.050	0.050	A680674
Ethylbenzene	mg/kg	<0.010	0.010	A680674
m & p-Xylene	mg/kg	<0.040	0.040	A680674
o-Xylene	mg/kg	<0.020	0.020	A680674
F1 (C6-C10)	mg/kg	<10	10	A680674
Surrogate Recovery (%)				
1,4-Difluorobenzene (sur.)	%	87	N/A	A680674
4-Bromofluorobenzene (sur.)	%	92	N/A	A680674
D10-o-Xylene (sur.)	%	102	N/A	A680674
D4-1,2-Dichloroethane (sur.)	%	86	N/A	A680674
O-TERPHENYL (sur.)	%	90	N/A	A682914
RDL = Reportable Detection Lii N/A = Not Applicable	nit			

AT1 BTEX AND F1-F4 IN SOIL (VIALS)



CCME REGULATED METALS - SOILS (SOIL)

Bureau Veritas ID		AZM179		AZM180	AZM180	AZM181		AZM182		
Sampling Date		2022/08/09		2022/08/09	2022/08/09	2022/08/09		2022/08/09		
		15:20		15:00	15:00	15:10		15:30		
COC Number		1 of 1		1 of 1	1 of 1	1 of 1		1 of 1		
	UNITS	BH22-25-03	QC Batch	BH22-25-01	BH22-25-01 Lab-Dup	BH22-25-02	QC Batch	BH22-25-04	RDL	QC Batch
Elements										
Soluble (Hot water) Boron (B)	mg/kg	0.17	A683007	0.28	N/A	0.37	A682378	<0.10	0.10	A683007
Hex. Chromium (Cr 6+)	mg/kg	<0.080	A682694	<0.080	N/A	<0.080	A682694	<0.080	0.080	A682694
Total Antimony (Sb)	mg/kg	<0.50	A682439	<0.50	<0.50	<0.50	A682363	<0.50	0.50	A682611
Total Arsenic (As)	mg/kg	6.3	A682439	6.0	7.5	6.5	A682363	6.5	1.0	A682611
Total Barium (Ba)	mg/kg	790	A682439	2600	2200	2100	A682363	830	1.0	A682611
Total Beryllium (Be)	mg/kg	<0.40	A682439	<0.40	<0.40	<0.40	A682363	<0.40	0.40	A682611
Total Cadmium (Cd)	mg/kg	0.085	A682439	0.20	0.19	0.17	A682363	0.10	0.050	A682611
Total Chromium (Cr)	mg/kg	6.7	A682439	7.2	7.6	7.4	A682363	8.0	1.0	A682611
Total Cobalt (Co)	mg/kg	4.6	A682439	2.7	3.2	3.1	A682363	4.8	0.50	A682611
Total Copper (Cu)	mg/kg	4.5	A682439	9.5	9.6	9.2	A682363	4.3	1.0	A682611
Total Lead (Pb)	mg/kg	6.2	A682439	29	27	20	A682363	6.0	0.50	A682611
Total Mercury (Hg)	mg/kg	<0.050	A682439	0.084	0.071	<0.050	A682363	<0.050	0.050	A682611
Total Molybdenum (Mo)	mg/kg	0.59	A682439	0.70	0.76	0.70	A682363	0.55	0.40	A682611
Total Nickel (Ni)	mg/kg	8.1	A682439	6.5	7.9	7.1	A682363	10	1.0	A682611
Total Selenium (Se)	mg/kg	<0.50	A682439	<0.50	<0.50	<0.50	A682363	<0.50	0.50	A682611
Total Silver (Ag)	mg/kg	<0.20	A682439	<0.20	<0.20	<0.20	A682363	<0.20	0.20	A682611
Total Thallium (Tl)	mg/kg	<0.10	A682439	<0.10	<0.10	<0.10	A682363	<0.10	0.10	A682611
Total Tin (Sn)	mg/kg	<1.0	A682439	<1.0	<1.0	<1.0	A682363	<1.0	1.0	A682611
Total Uranium (U)	mg/kg	0.26	A682439	0.43	0.42	0.36	A682363	0.32	0.20	A682611
Total Vanadium (V)	mg/kg	14	A682439	12 (1)	13	14	A682363	16	1.0	A682611
Total Zinc (Zn)	mg/kg	30	A682439	44	44	41	A682363	32	10	A682611

RDL = Reportable Detection Limit

Lab-Dup = Laboratory Initiated Duplicate

N/A = Not Applicable

(1) Matrix spike exceeds acceptance limits due to matrix interference.



Bureau Veritas ID		AZM183		
Sampling Date		2022/08/09		
		13:40		
COC Number		1 of 1		
	UNITS	BH22-25-5	RDL	QC Batch
Elements				
Soluble (Hot water) Boron (B)	mg/kg	<0.10	0.10	A682378
Hex. Chromium (Cr 6+)	mg/kg	<0.080	0.080	A682694
Total Antimony (Sb)	mg/kg	<0.50	0.50	A682363
Total Arsenic (As)	mg/kg	6.0	1.0	A682363
Total Barium (Ba)	mg/kg	680	1.0	A682363
Total Beryllium (Be)	mg/kg	<0.40	0.40	A682363
Total Cadmium (Cd)	mg/kg	0.089	0.050	A682363
Total Chromium (Cr)	mg/kg	5.8	1.0	A682363
Total Cobalt (Co)	mg/kg	3.9	0.50	A682363
Total Copper (Cu)	mg/kg	3.6	1.0	A682363
Total Lead (Pb)	mg/kg	5.0	0.50	A682363
Total Mercury (Hg)	mg/kg	<0.050	0.050	A682363
Total Molybdenum (Mo)	mg/kg	0.43	0.40	A682363
Total Nickel (Ni)	mg/kg	9.9	1.0	A682363
Total Selenium (Se)	mg/kg	<0.50	0.50	A682363
Total Silver (Ag)	mg/kg	<0.20	0.20	A682363
Total Thallium (Tl)	mg/kg	<0.10	0.10	A682363
Total Tin (Sn)	mg/kg	<1.0	1.0	A682363
Total Uranium (U)	mg/kg	0.26	0.20	A682363
Total Vanadium (V)	mg/kg	12	1.0	A682363
Total Zinc (Zn)	mg/kg	29	10	A682363
RDL = Reportable Detection Lin	nit			

CCME REGULATED METALS - SOILS (SOIL)



SEMIVOLATILE ORGANICS BY GC-MS (SOIL)

Bureau Veritas ID		AZM179	AZM180	AZM181	AZM182	AZM183		
Sampling Data		2022/08/09	2022/08/09	2022/08/09	2022/08/09	2022/08/09		
Sampling Date		15:20	15:00	15:10	15:30	13:40		
COC Number		1 of 1						
	UNITS	BH22-25-03	BH22-25-01	BH22-25-02	BH22-25-04	BH22-25-5	RDL	QC Batch
Polycyclic Aromatics								
B[a]P TPE Total Potency Equivalents	mg/kg	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	0.0071	A679833
Naphthalene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0088 (1)	0.0050	A682912
Surrogate Recovery (%)					•		•	
D10-ANTHRACENE (sur.)	%	88	80	91	91	96	N/A	A682912
D8-ACENAPHTHYLENE (sur.)	%	84	77	90	87	94	N/A	A682912
D8-NAPHTHALENE (sur.)	%	76	71	81	78	86	N/A	A682912
DO NATITIALLINE (SUL)								

N/A = Not Applicable

(1) Qualifying ion outside of acceptance criteria. Results are tentatively identified and potentially biased high.



GENERAL COMMENTS

Each ter	nperature is the a	verage of up to	three cooler temperatures taken at receipt
Γ	Package 1	4.0°C	
AZM183	2: Report reissuec /BH22-25-05 /BH22-29-03c	l to include Chro	matogram analysis on below samples as per client request received 2022/08/18.
Results	relate only to the	items tested.	



QUALITY ASSURANCE REPORT

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A680674	D01	Matrix Spike [AZM175-02]	1,4-Difluorobenzene (sur.)	2022/08/16		85	%	50 - 140
			4-Bromofluorobenzene (sur.)	2022/08/16		93	%	50 - 140
			D10-o-Xylene (sur.)	2022/08/16		113	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2022/08/16		86	%	50 - 140
			Benzene	2022/08/16		71	%	50 - 140
			Toluene	2022/08/16		83	%	50 - 140
			Ethylbenzene	2022/08/16		86	%	50 - 140
			m & p-Xylene	2022/08/16		88	%	50 - 140
			o-Xylene	2022/08/16		86	%	50 - 140
			F1 (C6-C10)	2022/08/16		106	%	60 - 140
A680674	D01	Spiked Blank	1,4-Difluorobenzene (sur.)	2022/08/16		87	%	50 - 140
			4-Bromofluorobenzene (sur.)	2022/08/16		90	%	50 - 140
			D10-o-Xylene (sur.)	2022/08/16		98	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2022/08/16		86	%	50 - 140
			Benzene	2022/08/16		73	%	60 - 130
			Toluene	2022/08/16		80	%	60 - 130
			Ethylbenzene	2022/08/16		86	%	60 - 130
			m & p-Xylene	2022/08/16		86	%	60 - 130
			o-Xylene	2022/08/16		86	%	60 - 130
			F1 (C6-C10)	2022/08/16		97	%	60 - 140
A680674	D01	Method Blank	1,4-Difluorobenzene (sur.)	2022/08/16		82	%	50 - 140
			4-Bromofluorobenzene (sur.)	2022/08/16		94	%	50 - 140
			D10-o-Xylene (sur.)	2022/08/16		90	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2022/08/16		85	%	50 - 140
			Benzene	2022/08/16	<0.0050		mg/kg	
			Toluene	2022/08/16	<0.050		mg/kg	
			Ethylbenzene	2022/08/16	<0.010		mg/kg	
			m & p-Xylene	2022/08/16	<0.040		mg/kg	
			o-Xylene	2022/08/16	<0.020		mg/kg	
			F1 (C6-C10)	2022/08/16	<10		mg/kg	
A680674	D01	RPD [AZM175-02]	Benzene	2022/08/16	NC		%	50
			Toluene	2022/08/16	NC		%	50
			Ethylbenzene	2022/08/16	14		%	50
			m & p-Xylene	2022/08/16	NC		%	50
			o-Xylene	2022/08/16	NC		%	50
			F1 (C6-C10)	2022/08/16	NC		%	30
A682261	KLG	Method Blank	Moisture	2022/08/17	<0.30		%	
A682261	KLG	RPD [AZM176-01]	Moisture	2022/08/17	16		%	20
A682363	KH2	Matrix Spike [AZM180-01]	Total Antimony (Sb)	2022/08/16		104	%	75 - 125
			Total Arsenic (As)	2022/08/16		100	%	75 - 125
			Total Barium (Ba)	2022/08/16		NC	%	75 - 125
			Total Beryllium (Be)	2022/08/16		96	%	75 - 125
			Total Cadmium (Cd)	2022/08/16		98	%	75 - 125
			Total Chromium (Cr)	2022/08/16		110	%	75 - 125
			Total Cobalt (Co)	2022/08/16		99	%	75 - 125
			Total Copper (Cu)	2022/08/16		100	%	75 - 125
			Total Lead (Pb)	2022/08/16		108	%	75 - 125
			Total Mercury (Hg)	2022/08/16		94	%	75 - 125
			Total Molybdenum (Mo)	2022/08/16		99	%	75 - 125
			Total Nickel (Ni)	2022/08/16		103	%	75 - 125



QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Selenium (Se)	2022/08/16		103	%	75 - 125
			Total Silver (Ag)	2022/08/16		98	%	75 - 125
			Total Thallium (Tl)	2022/08/16		97	%	75 - 125
			Total Tin (Sn)	2022/08/16		99	%	75 - 125
			Total Uranium (U)	2022/08/16		95	%	75 - 125
			Total Vanadium (V)	2022/08/16		136 (1)	%	75 - 125
			Total Zinc (Zn)	2022/08/16		117	%	75 - 125
A682363	KH2	QC Standard	Total Antimony (Sb)	2022/08/16		141	%	15 - 182
			Total Arsenic (As)	2022/08/16		129	%	53 - 147
			Total Barium (Ba)	2022/08/16		104	%	80 - 119
			Total Cadmium (Cd)	2022/08/16		123	%	72 - 128
			Total Chromium (Cr)	2022/08/16		116	%	59 - 141
			Total Cobalt (Co)	2022/08/16		119	%	58 - 142
			Total Copper (Cu)	2022/08/16		103	%	83 - 117
			Total Lead (Pb)	2022/08/16		112	%	79 - 121
			Total Molybdenum (Mo)	2022/08/16		118	%	67 - 133
			Total Nickel (Ni)	2022/08/16		109	%	79 - 121
			Total Silver (Ag)	2022/08/16		119	%	47 - 153
			Total Tin (Sn)	2022/08/16		132	%	67 - 133
			Total Uranium (U)	2022/08/16		104	%	77 - 123
			Total Vanadium (V)	2022/08/16		108	%	79 - 121
			Total Zinc (Zn)	2022/08/16		107	%	79 - 121
A682363	KH2	Spiked Blank	Total Antimony (Sb)	2022/08/16		113	%	80 - 120
			Total Arsenic (As)	2022/08/16		105	%	80 - 120
			Total Barium (Ba)	2022/08/16		108	%	80 - 120
			Total Beryllium (Be)	2022/08/16		101	%	80 - 120
			Total Cadmium (Cd)	2022/08/16		105	%	80 - 120
			Total Chromium (Cr)	2022/08/16		106	%	80 - 120
			Total Cobalt (Co)	2022/08/16		107	%	80 - 120
			Total Copper (Cu)	2022/08/16		106	%	80 - 120
			Total Lead (Pb)	2022/08/16		105	%	80 - 120
			Total Mercury (Hg)	2022/08/16		107	%	80 - 120
			Total Molybdenum (Mo)	2022/08/16		105	%	80 - 120
			Total Nickel (Ni)	2022/08/16		105	%	80 - 120
			Total Selenium (Se)	2022/08/16		107	%	80 - 120
			Total Silver (Ag)	2022/08/16		105	%	80 - 120
			Total Thallium (Tl)	2022/08/16		106	%	80 - 120
1			Total Tin (Sn)	2022/08/16		106	%	80 - 120
			Total Uranium (U)	2022/08/16		104	%	80 - 120
			Total Vanadium (V)	2022/08/16		107	%	80 - 120
			Total Zinc (Zn)	2022/08/16		108	%	80 - 120
A682363	KH2	Method Blank	Total Antimony (Sb)	2022/08/16	<0.50		mg/kg	
			Total Arsenic (As)	2022/08/16	<1.0		mg/kg	
			Total Barium (Ba)	2022/08/16	<1.0		mg/kg	
			Total Beryllium (Be)	2022/08/16	<0.40		mg/kg	
			Total Cadmium (Cd)	2022/08/16	<0.050		mg/kg	
			Total Chromium (Cr)	2022/08/16	<1.0		mg/kg	
			Total Cobalt (Co)	2022/08/16	<0.50		mg/kg	
			Total Copper (Cu)	2022/08/16	<1.0		mg/kg	
			Total Lead (Pb)	2022/08/16	<0.50		mg/kg	
			Total Mercury (Hg)	2022/08/16	<0.050		mg/kg	
			Total Molybdenum (Mo)	2022/08/16	<0.40		mg/kg	



QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Nickel (Ni)	2022/08/16	<1.0		mg/kg	
			Total Selenium (Se)	2022/08/16	<0.50		mg/kg	
			Total Silver (Ag)	2022/08/16	<0.20		mg/kg	
			Total Thallium (Tl)	2022/08/16	<0.10		mg/kg	
			Total Tin (Sn)	2022/08/16	<1.0		mg/kg	
			Total Uranium (U)	2022/08/16	<0.20		mg/kg	
			Total Vanadium (V)	2022/08/16	<1.0		mg/kg	
			Total Zinc (Zn)	2022/08/16	<10		mg/kg	
A682363	KH2	RPD [AZM180-01]	Total Antimony (Sb)	2022/08/16	NC		%	30
			Total Arsenic (As)	2022/08/16	22		%	30
			Total Barium (Ba)	2022/08/16	16		%	35
			Total Beryllium (Be)	2022/08/16	NC		%	30
			Total Cadmium (Cd)	2022/08/16	3.1		%	30
			Total Chromium (Cr)	2022/08/16	5.3		%	30
			Total Cobalt (Co)	2022/08/16	19		%	30
			Total Copper (Cu)	2022/08/16	0.82		%	30
			Total Lead (Pb)	2022/08/16	8.2		%	35
			Total Mercury (Hg)	2022/08/16	17		%	35
			Total Molybdenum (Mo)	2022/08/16	8.0		%	35
			Total Nickel (Ni)	2022/08/16	21		%	30
			Total Selenium (Se)	2022/08/16	NC		%	30
			Total Silver (Ag)	2022/08/16	NC		%	35
			Total Thallium (Tl)	2022/08/16	NC		%	30
			Total Tin (Sn)	2022/08/16	NC		%	35
			Total Uranium (U)	2022/08/16	1.3		%	30
			Total Vanadium (V)	2022/08/16	5.2		%	30
			Total Zinc (Zn)	2022/08/16	0.46		%	30
A682378	PC5	Matrix Spike	Soluble (Hot water) Boron (B)	2022/08/16		103	%	75 - 125
A682378	PC5	Spiked Blank	Soluble (Hot water) Boron (B)	2022/08/16		104	%	80 - 120
A682378	PC5	Method Blank	Soluble (Hot water) Boron (B)	2022/08/16	<0.10		mg/kg	
A682378	PC5	RPD	Soluble (Hot water) Boron (B)	2022/08/16	NC		%	35
A682439	KH2	Matrix Spike	Total Antimony (Sb)	2022/08/16		94	%	75 - 125
			Total Arsenic (As)	2022/08/16		99	%	75 - 125
			Total Barium (Ba)	2022/08/16		NC	%	75 - 125
			Total Beryllium (Be)	2022/08/16		101	%	75 - 125
			Total Cadmium (Cd)	2022/08/16		100	%	75 - 125
			Total Chromium (Cr)	2022/08/16		121	%	75 - 125
			Total Cobalt (Co)	2022/08/16		100	%	75 - 125
			Total Copper (Cu)	2022/08/16		97	%	75 - 125
			Total Lead (Pb)	2022/08/16		96	%	75 - 125
			Total Mercury (Hg)	2022/08/16		88	%	75 - 125
			Total Molybdenum (Mo)	2022/08/16		102	%	75 - 125
			Total Nickel (Ni)	2022/08/16		103	%	75 - 125
			Total Selenium (Se)	2022/08/16		100	%	75 - 125
			Total Silver (Ag)	2022/08/16		100	%	75 - 125
			Total Thallium (TI)	2022/08/16		95	%	75 - 125
			Total Tin (Sn)	2022/08/16		102	%	75 - 125
			Total Uranium (U)	2022/08/16		91	%	75 - 125
			Total Vanadium (V)	2022/08/16		151 (1)	%	75 - 125
			Total Zinc (Zn)	2022/08/16		NC	%	75 - 125
A682439	KH2	QC Standard	Total Antimony (Sb)	2022/08/16		114	%	15 - 182
			Total Arsenic (As)	2022/08/16		108	%	53 - 147



QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Barium (Ba)	2022/08/16		105	%	80 - 119
			Total Cadmium (Cd)	2022/08/16		105	%	72 - 128
			Total Chromium (Cr)	2022/08/16		99	%	59 - 141
			Total Cobalt (Co)	2022/08/16		100	%	58 - 142
			Total Copper (Cu)	2022/08/16		99	%	83 - 117
			Total Lead (Pb)	2022/08/16		112	%	79 - 121
			Total Molybdenum (Mo)	2022/08/16		119	%	67 - 133
			Total Nickel (Ni)	2022/08/16		112	%	79 - 121
			Total Silver (Ag)	2022/08/16		101	%	47 - 153
			Total Tin (Sn)	2022/08/16		103	%	67 - 133
			Total Uranium (U)	2022/08/16		89	%	77 - 123
			Total Vanadium (V)	2022/08/16		103	%	79 - 121
			Total Zinc (Zn)	2022/08/16		107	%	79 - 121
A682439	KH2	Spiked Blank	Total Antimony (Sb)	2022/08/16		107	%	80 - 120
			Total Arsenic (As)	2022/08/16		98	%	80 - 120
			Total Barium (Ba)	2022/08/16		101	%	80 - 120
			Total Beryllium (Be)	2022/08/16		97	%	80 - 120
			Total Cadmium (Cd)	2022/08/16		99	%	80 - 120
			Total Chromium (Cr)	2022/08/16		99	%	80 - 120
			Total Cobalt (Co)	2022/08/16		99	%	80 - 120
			Total Copper (Cu)	2022/08/16		98	%	80 - 120
			Total Lead (Pb)	2022/08/16		98	%	80 - 120
			Total Mercury (Hg)	2022/08/16		99	%	80 - 120
			Total Molybdenum (Mo)	2022/08/16		100	%	80 - 120
			Total Nickel (Ni)	2022/08/16		99	%	80 - 120
			Total Selenium (Se)	2022/08/16		103	%	80 - 120
			Total Silver (Ag)	2022/08/16		99	%	80 - 120
			Total Thallium (TI)	2022/08/16		99	%	80 - 120
			Total Tin (Sn)	2022/08/16		99	%	80 - 120
			Total Uranium (U)	2022/08/16		97	%	80 - 120
			Total Vanadium (V)	2022/08/16		99	%	80 - 120
			Total Zinc (Zn)	2022/08/16		100	%	80 - 120
A682439	KH2	Method Blank	Total Antimony (Sb)	2022/08/16	<0.50		mg/kg	
			Total Arsenic (As)	2022/08/16	<1.0		mg/kg	
			Total Barium (Ba)	2022/08/16	<1.0		mg/kg	
			Total Beryllium (Be)	2022/08/16	<0.40		mg/kg	
			Total Cadmium (Cd)	2022/08/16	<0.050		mg/kg	
			Total Chromium (Cr)	2022/08/16	<1.0		mg/kg	
			Total Cobalt (Co)	2022/08/16	<0.50		mg/kg	
			Total Copper (Cu)	2022/08/16	<1.0		mg/kg	
			Total Lead (Pb)	2022/08/16	<0.50		mg/kg	
			Total Mercury (Hg)	2022/08/16	<0.050		mg/kg	
			Total Molybdenum (Mo)	2022/08/16	<0.40		mg/kg	
			Total Nickel (Ni)	2022/08/16	<1.0		mg/kg	
			Total Selenium (Se)	2022/08/16	<0.50		mg/kg	
			Total Silver (Ag)	2022/08/16	<0.20		mg/kg	
			Total Thallium (TI)	2022/08/16	<0.10		mg/kg	
			Total Tin (Sn)	2022/08/16	<1.0		mg/kg	
			Total Uranium (U)	2022/08/16	<0.20		mg/kg	
			Total Vanadium (V)	2022/08/16	<1.0		mg/kg	
			Total Zinc (Zn)	2022/08/16	<10		mg/kg	
A682439	KH2	RPD	Total Antimony (Sb)	2022/08/16	1.3		%	30



QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Arsenic (As)	2022/08/16	4.3		%	30
			Total Barium (Ba)	2022/08/16	1.5		%	35
			Total Beryllium (Be)	2022/08/16	4.5		%	30
			Total Cadmium (Cd)	2022/08/16	3.3		%	30
			Total Chromium (Cr)	2022/08/16	3.6		%	30
			Total Cobalt (Co)	2022/08/16	3.3		%	30
			Total Copper (Cu)	2022/08/16	4.5		%	30
			Total Lead (Pb)	2022/08/16	2.1		%	35
			Total Mercury (Hg)	2022/08/16	0.65		%	35
			Total Molybdenum (Mo)	2022/08/16	0.18		%	35
			Total Nickel (Ni)	2022/08/16	4.3		%	30
			Total Selenium (Se)	2022/08/16	NC		%	30
			Total Silver (Ag)	2022/08/16	NC		%	35
			Total Thallium (Tl)	2022/08/16	3.6		%	30
			Total Tin (Sn)	2022/08/16	NC		%	35
			Total Uranium (U)	2022/08/16	2.5		%	30
			Total Vanadium (V)	2022/08/16	4.0		%	30
			Total Zinc (Zn)	2022/08/16	3.1		%	30
A682565	GG3	Matrix Spike	O-TERPHENYL (sur.)	2022/08/16		91	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2022/08/16		87	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2022/08/16		84	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2022/08/16		83	%	60 - 140
A682565	GG3	Spiked Blank	O-TERPHENYL (sur.)	2022/08/16		90	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2022/08/16		86	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2022/08/16		83	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2022/08/16		82	%	60 - 140
A682565	GG3	Method Blank	O-TERPHENYL (sur.)	2022/08/16		104	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2022/08/16	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2022/08/16	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2022/08/16	<50		mg/kg	
A682565	GG3	RPD	F2 (C10-C16 Hydrocarbons)	2022/08/16	NC		%	40
			F3 (C16-C34 Hydrocarbons)	2022/08/16	NC		%	40
			F4 (C34-C50 Hydrocarbons)	2022/08/16	NC		%	40
A682611	MKJ	Matrix Spike	Total Antimony (Sb)	2022/08/17		101	%	75 - 125
			Total Arsenic (As)	2022/08/17		97	%	75 - 125
			Total Barium (Ba)	2022/08/17		NC	%	75 - 125
			Total Beryllium (Be)	2022/08/17		96	%	75 - 125
			Total Cadmium (Cd)	2022/08/17		98	%	75 - 125
			Total Chromium (Cr)	2022/08/17		113	%	75 - 125
			Total Cobalt (Co)	2022/08/17		99	%	75 - 125
			Total Copper (Cu)	2022/08/17		100	%	75 - 125
			Total Lead (Pb)	2022/08/17		99	%	75 - 125
			Total Mercury (Hg)	2022/08/17		96	%	75 - 125
			Total Molybdenum (Mo)	2022/08/17		101	%	75 - 125
			Total Nickel (Ni)	2022/08/17		104	%	75 - 125
			Total Selenium (Se)	2022/08/17		100	%	75 - 125
			Total Silver (Ag)	2022/08/17		99	%	75 - 125
			Total Thallium (Tl)	2022/08/17		98	%	75 - 125
			Total Tin (Sn)	2022/08/17		102	%	75 - 125
			Total Uranium (U)	2022/08/17		95	%	75 - 125
			Total Vanadium (V)	2022/08/17		140 (1)	%	75 - 125
			Total Zinc (Zn)	2022/08/17		102	%	75 - 125



QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A682611	MKJ	QC Standard	Total Antimony (Sb)	2022/08/17		109	%	15 - 182
			Total Arsenic (As)	2022/08/17		103	%	53 - 147
			Total Barium (Ba)	2022/08/17		103	%	80 - 119
			Total Cadmium (Cd)	2022/08/17		94	%	72 - 128
			Total Chromium (Cr)	2022/08/17		113	%	59 - 141
			Total Cobalt (Co)	2022/08/17		101	%	58 - 142
			Total Copper (Cu)	2022/08/17		103	%	83 - 117
			Total Lead (Pb)	2022/08/17		111	%	79 - 121
			Total Molybdenum (Mo)	2022/08/17		122	%	67 - 133
			Total Nickel (Ni)	2022/08/17		110	%	79 - 121
			Total Silver (Ag)	2022/08/17		89	%	47 - 153
			Total Tin (Sn)	2022/08/17		98	%	67 - 133
			Total Uranium (U)	2022/08/17		98	%	77 - 123
			Total Vanadium (V)	2022/08/17		111	%	79 - 121
			Total Zinc (Zn)	2022/08/17		103	%	79 - 121
A682611	MKJ	Spiked Blank	Total Antimony (Sb)	2022/08/17		102	%	80 - 120
			Total Arsenic (As)	2022/08/17		95	%	80 - 120
			Total Barium (Ba)	2022/08/17		96	%	80 - 120
			Total Beryllium (Be)	2022/08/17		92	%	80 - 120
			Total Cadmium (Cd)	2022/08/17		95	%	80 - 120
			Total Chromium (Cr)	2022/08/17		97	%	80 - 120
			Total Cobalt (Co)	2022/08/17		97	%	80 - 120
			Total Copper (Cu)	2022/08/17		97	%	80 - 120
			Total Lead (Pb)	2022/08/17		97	%	80 - 120
			Total Mercury (Hg)	2022/08/17		100	%	80 - 120
			Total Molybdenum (Mo)	2022/08/17		96	%	80 - 120
			Total Nickel (Ni)	2022/08/17		96	%	80 - 120
			Total Selenium (Se)	2022/08/17		99	%	80 - 120
			Total Silver (Ag)	2022/08/17		96	%	80 - 120
			Total Thallium (Tl)	2022/08/17		97	%	80 - 120
			Total Tin (Sn)	2022/08/17		96	%	80 - 120
			Total Uranium (U)	2022/08/17		97	%	80 - 120
			Total Vanadium (V)	2022/08/17		97	%	80 - 120
			Total Zinc (Zn)	2022/08/17		97	%	80 - 120
A682611	MKJ	Method Blank	Total Antimony (Sb)	2022/08/17	<0.50		mg/kg	
			Total Arsenic (As)	2022/08/17	<1.0		mg/kg	
			Total Barium (Ba)	2022/08/17	<1.0		mg/kg	
			Total Beryllium (Be)	2022/08/17	<0.40		mg/kg	
			Total Cadmium (Cd)	2022/08/17	<0.050		mg/kg	
			Total Chromium (Cr)	2022/08/17	<1.0		mg/kg	
			Total Cobalt (Co)	2022/08/17	<0.50		mg/kg	
			Total Copper (Cu)	2022/08/17	<1.0		mg/kg	
			Total Lead (Pb)	2022/08/17	<0.50		mg/kg	
			Total Mercury (Hg)	2022/08/17	<0.050		mg/kg	
			Total Molybdenum (Mo)	2022/08/17	<0.40		mg/kg	
			Total Nickel (Ni)	2022/08/17	<1.0		mg/kg	
			Total Selenium (Se)	2022/08/17	<0.50		mg/kg	
			Total Silver (Ag)	2022/08/17	<0.20		mg/kg	
			Total Thallium (TI)	2022/08/17	<0.10		mg/kg	
			Total Tin (Sn)	2022/08/17	<1.0		mg/kg	
			Total Uranium (U)	2022/08/17	<0.20		mg/kg	
			Total Vanadium (V)	,,	<1.0		0, 10	



QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Zinc (Zn)	2022/08/17	<10		mg/kg	
A682611	MKJ	RPD	Total Chromium (Cr)	2022/08/17	1.9		%	30
			Total Nickel (Ni)	2022/08/17	5.2		%	30
A682694	FM0	Matrix Spike	Hex. Chromium (Cr 6+)	2022/08/16		96	%	75 - 125
A682694	FM0	Spiked Blank	Hex. Chromium (Cr 6+)	2022/08/16		104	%	80 - 120
A682694	FM0	Method Blank	Hex. Chromium (Cr 6+)	2022/08/16	<0.080		mg/kg	
A682694	FM0	RPD	Hex. Chromium (Cr 6+)	2022/08/16	NC		%	35
A682912	SJ1	Matrix Spike	D10-ANTHRACENE (sur.)	2022/08/17		100	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2022/08/17		100	%	50 - 130
			D8-NAPHTHALENE (sur.)	2022/08/17		91	%	50 - 130
			TERPHENYL-D14 (sur.)	2022/08/17		128	%	50 - 130
			Naphthalene	2022/08/17		94	%	50 - 130
A682912	SJ1	Spiked Blank	D10-ANTHRACENE (sur.)	2022/08/17		88	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2022/08/17		83	%	50 - 130
			D8-NAPHTHALENE (sur.)	2022/08/17		79	%	50 - 130
			TERPHENYL-D14 (sur.)	2022/08/17		103	%	50 - 130
			Naphthalene	2022/08/17		76	%	50 - 130
A682912	SJ1	Method Blank	D10-ANTHRACENE (sur.)	2022/08/17		100	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2022/08/17		94	%	50 - 130
			D8-NAPHTHALENE (sur.)	2022/08/17		89	%	50 - 130
			TERPHENYL-D14 (sur.)	2022/08/17		129	%	50 - 130
			Naphthalene	2022/08/17	<0.0050		mg/kg	
A682912	SJ1	RPD	Naphthalene	2022/08/17	23		%	50
A682914	GG3	Matrix Spike	O-TERPHENYL (sur.)	2022/08/17		86	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2022/08/17		96	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2022/08/17		88	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2022/08/17		84	%	60 - 140
A682914	GG3	Spiked Blank	O-TERPHENYL (sur.)	2022/08/17		97	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2022/08/17		89	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2022/08/17		96	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2022/08/17		91	%	60 - 140
A682914	GG3	Method Blank	O-TERPHENYL (sur.)	2022/08/17		100	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2022/08/17	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2022/08/17	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2022/08/17	<50		mg/kg	
A682914	GG3	RPD	F2 (C10-C16 Hydrocarbons)	2022/08/17	1.2		%	40
			F3 (C16-C34 Hydrocarbons)	2022/08/17	5.7		%	40
			F4 (C34-C50 Hydrocarbons)	2022/08/17	4.1		%	40
A683007	MPU	Matrix Spike	Soluble (Hot water) Boron (B)	2022/08/16		91	%	75 - 125
A683007	MPU	Spiked Blank	Soluble (Hot water) Boron (B)	2022/08/16		94	%	80 - 120
A683007	MPU	Method Blank	Soluble (Hot water) Boron (B)	2022/08/16	<0.10	-	mg/kg	



QUALITY ASSURANCE REPORT(CONT'D)

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A683007	MPU	RPD	Soluble (Hot water) Boron (B)	2022/08/16	6.8		%	35
Duplicate	: Paired	d analysis of a sepa	rate portion of the same sample. Used to evaluate	the variance in the measure	ment.			

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

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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



VALIDATION SIGNATURE PAGE

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

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Gita Pokhrel, Laboratory Supervisor

Junchi Gras

Janet Gao, B.Sc., QP, Supervisor, Organics

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

1/ennicatelk

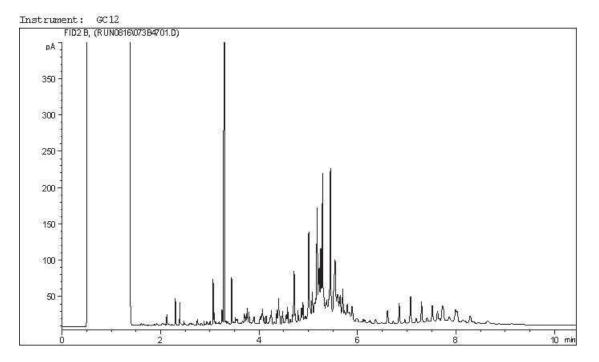
Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

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 Signature Page.

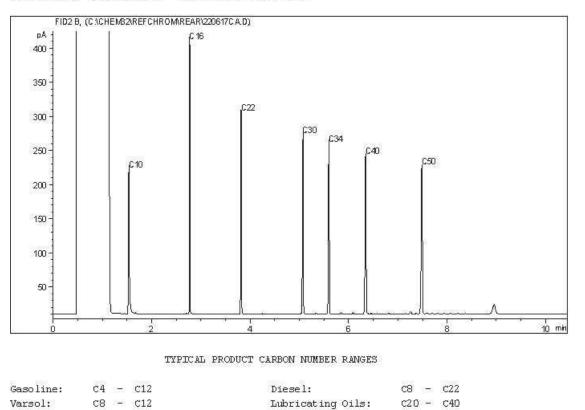
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Choose Location: Choose Location: Calgary, AB: 4000 19th St. NE, T2E 6FB Toll Free (800) 386-7247 Edmonton, AB: 9331-48 St. T6B 2A4 Toll Free (806) 386-7247 Winnipeg, MB: D-675 Berry St. R3H 1A7 Toll Free (866) 800-6208				Str	ΰ	-H-		8	Regulatory Criteria	- Canada	- Alberta	IME OF SAMPLI															TIED ON THIS	1	υ 2	Date		
8	Invoice to (requires report)	der Associat	V Suite 3300		AB Postal Code:		unt Payable		Regu	Drinking Water - Canada	Drinking Water - Alberta	(<10°C) FROM T		tion						-	2	T	ហ័				IG, WORK SUBM		<u>ر ر</u> ہ			
5	Invoice to (re	Client #254, Golder Associates	237 - 4 Ave SW Suite 3300		Prov: A		Canada Account Payable					SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VE		Sample Identification	20-1		29-02	10-6	-25-02	2-25-0	22-25-02	BH 22-25-04	BH 22-25-05				"UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTORY IS SUBJECT TO	Yes		Relinquished by: (Signature/ Print)	Melissa Lord	
www.BVNA.com	rmation	Clie	2		Calgary						Saskatchewan	SAMPLES MUS		ы S	RH27-29	a	22-	BH22-29-01	22	0	122-2	122-2	+22-				THERWISE AGRE	LAB USE ONLY	t lia present	inquished by:	1 ent	
	Invoice Information	Company :	Contact Name:	Street	City:	Phone:	Email:	Coples:		AT1	Sask				1 BH	2 DU	a Ba	4 BI	= BH	° RH3	, BH	" BH	" m	10	11	12	-UNLESS OF	LAB	Seal present Seal intact Cooling media present	R	2	

GOLDER ASSOCIATES LTD. Client Project #: 22525414-1000 Site Reference: CAMP FAREWELL,NT Client ID: BH22-29-03

CCME Hydrocarbons (F2-F4 in soil) Chromatogram



Carbon Range Distribution - Reference Chromatogram

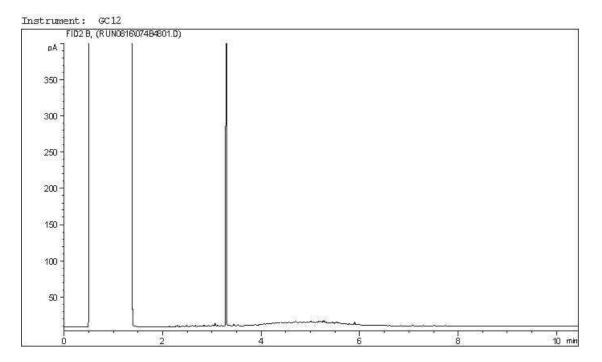


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

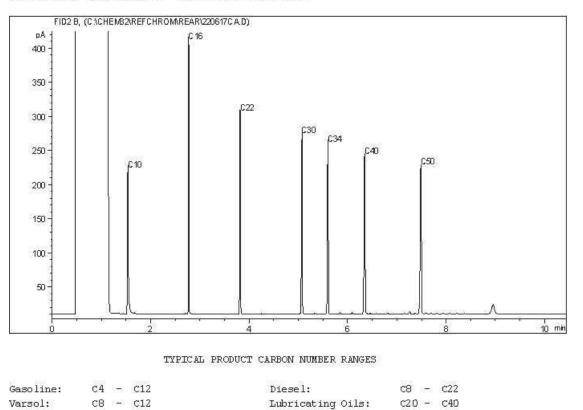
c7 - c16

Kerosene:

Crude Oils:



Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Varsol:

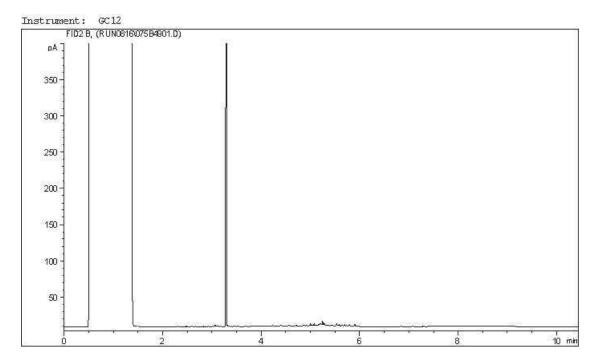
Kerosene:

C8 - C12

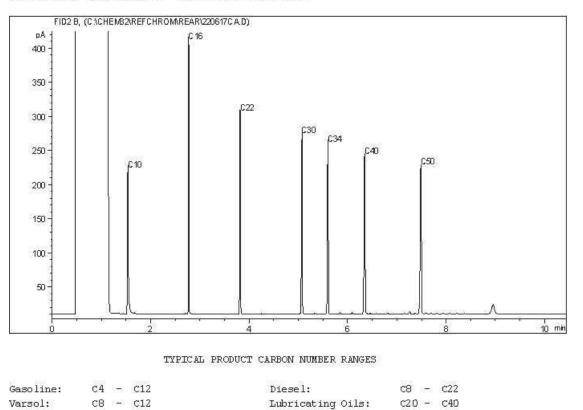
c7 - c16

Crude Oils:

c20 - c40



Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Varsol:

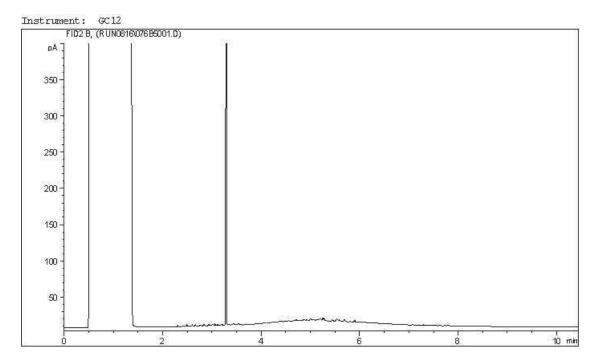
Kerosene:

C8 - C12

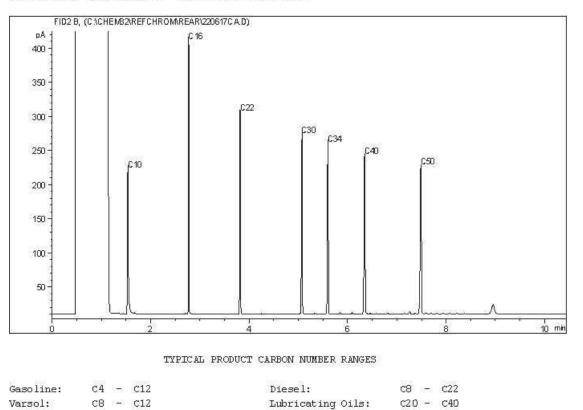
c7 - c16

Crude Oils:

c20 - c40



Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Varsol:

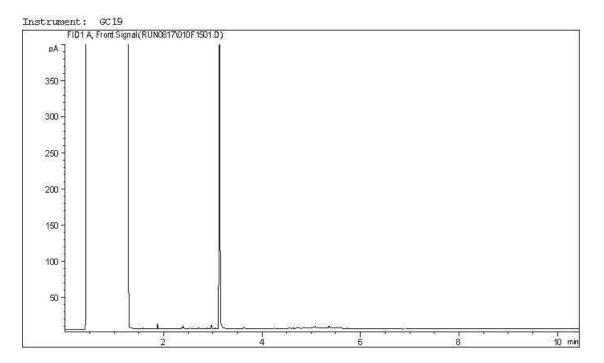
Kerosene:

C8 - C12

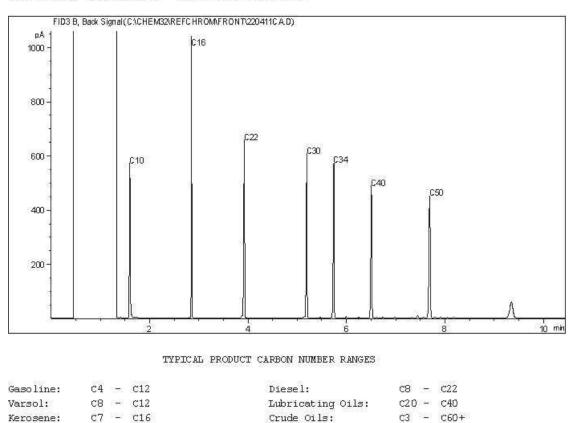
c7 - c16

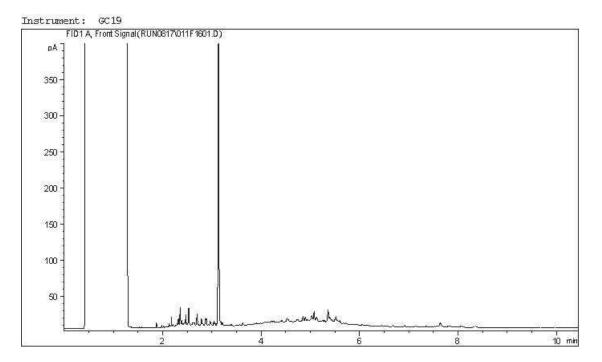
Crude Oils:

c20 - c40

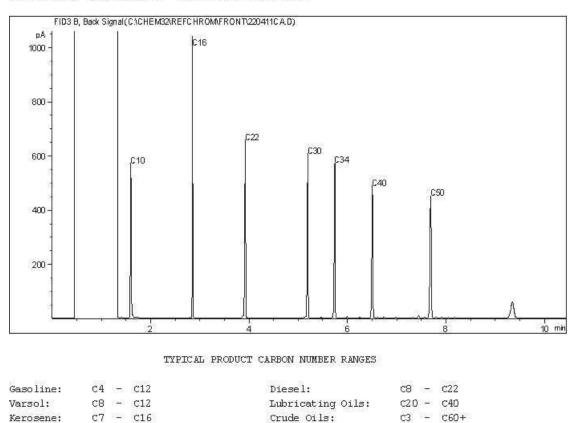


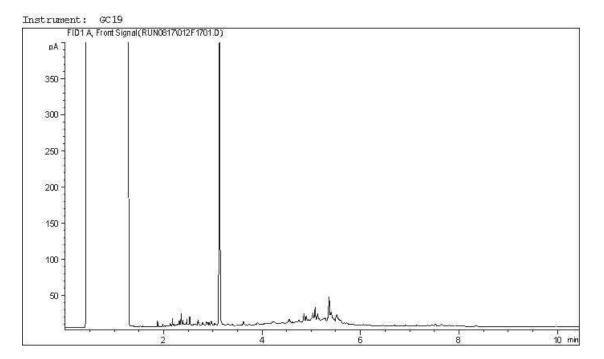
Carbon Range Distribution - Reference Chromatogram



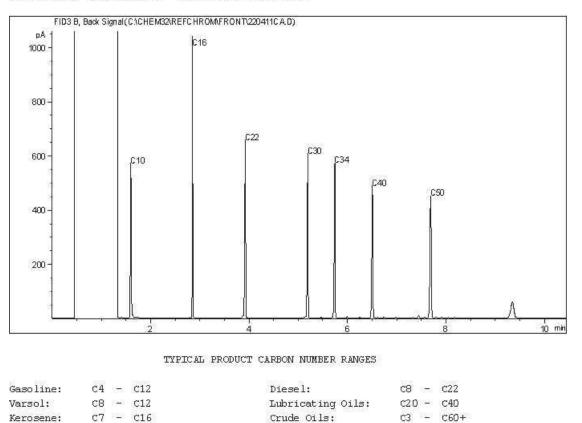


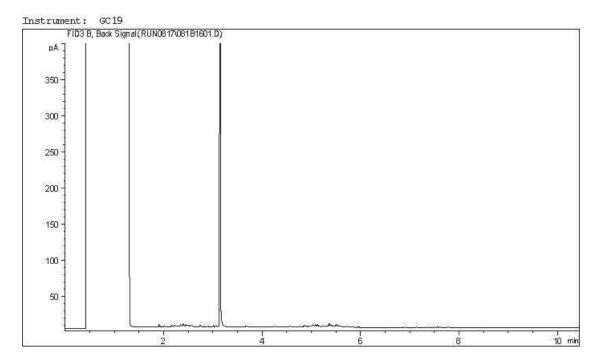
Carbon Range Distribution - Reference Chromatogram



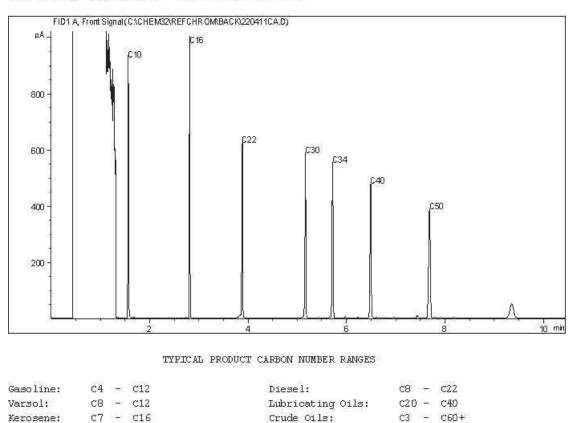


Carbon Range Distribution - Reference Chromatogram



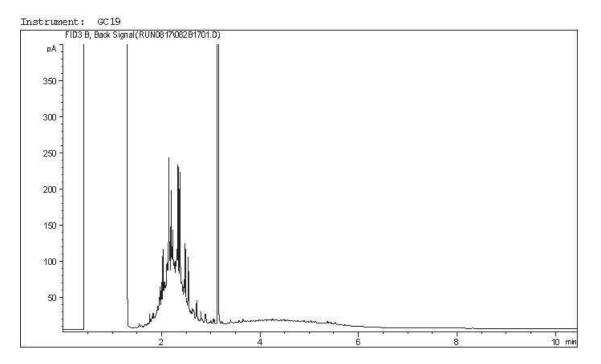


Carbon Range Distribution - Reference Chromatogram

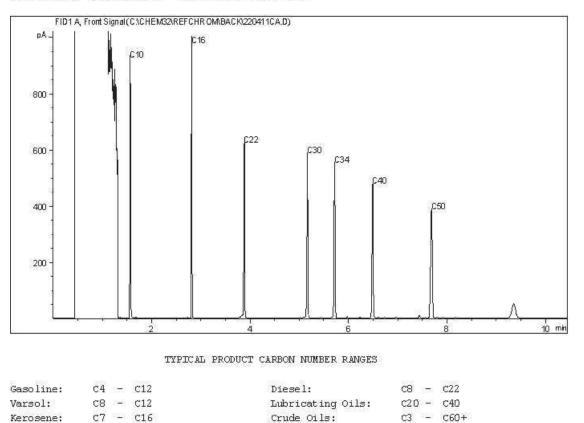


GOLDER ASSOCIATES LTD. Client Project #: 22525414-1000 Site Reference: CAMP FAREWELL,NT Client ID: BH22-25-5

CCME Hydrocarbons (F2-F4 in soil) Chromatogram



Carbon Range Distribution - Reference Chromatogram





August 19, 2022

GOLDER ASSOCIATES LTD.

2800, 700 -2nd Street SW CALGARY, AB, T2P 2W2

Attention: Aurelie Bellavance

Re: Chromatogram Interpretation of CAMP FAREWELL, NT; Project 22525414-1000 Bureau Veritas Job No.: C260016

Bureau Veritas was retained by Golder Associates Ltd. to provide hydrocarbon interpretations concerning the likely origin of hydrocarbons quantified within CCME fraction(s) F2, F3 and/or F4.

Analytical Method

Petroleum hydrocarbon analyses at Bureau Veritas are conducted in accordance with the analytical specifications required by the prescriptive and performance-based (where appropriate) elements of the CCME Tier I protocols for hydrocarbon determination¹ in soil samples.

Chromatogram Interpretation

A comprehensive qualitative assessment of the resultant gas chromatograms in the F2-F4 ranges was performed. The chromatograms were inspected for specific peak profiles that would indicate the possible origin of the hydrocarbons present in the sample. The presence and nature of specific aliphatic compounds (n-alkanes), the presence of characteristic unresolved complex mixtures (UCMs) or "humps" and the relative abundance (ratios) of specific compounds are reviewed as part of the evaluation.

¹ Canadian Council of Ministers of the Environment: "Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil – Tier I Method" 2001



Data Interpretation

Table 1. Qualitative Data Summary – Chromatogram Interpretation

Lab ID	Sample ID	Chromatogram Interpretation
AZM175	BH22-29-03	The CCME F2-F4 chromatographic peak profile is consistent with biogenic organic material (e.g. peat). Chromatograms of biogenic organic material may contain peak patterns spanning the C10 to C50 range, but they are most commonly characterized by a profile of unevenly distributed sharp peaks between C28 and C34. The impacts are not consistent with a petroleum product or crude oil.
AZM183	BH22-25-5	The CCME F2-F4 chromatographic peak profile is consistent with a weathered middle distillate petroleum product (e.g. Diesel #1/Kerosene). These are typically characterized by evenly distributed peaks between C10 and C24, representing the simple straight chain aliphatic compounds (n-alkanes). These peaks will decrease in height, relative to the unresolved complex mixture (UCM or "hump") with increased weathering of the product material.

If you have any questions or require additional information, please do not hesitate to contact the undersigned.

Sincerely, Bureau Veritas Laboratories

Michael Sheppard, B.Sc., P.Bio., QP Consulting Scientist Environmental Services

Scott Cantwell, CET, B.Sc., P.Chem. Director and General Manager – Western Canada Environmental Services

Disclaimer

Hydrocarbon Resemblance

Characterization by way of visual evaluation of the sample chromatogram may not be conclusive and is only indicative of substances that may be present. The resemblance information must be regarded as approximate and qualitative.



2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatlabs.com

CLIENT NAME: BUREAU VERITAS CANADA (2019) INC 2021 - 41ST STREET NE Calgary, AB T2E6P2 (403) 291-3077 ATTENTION TO: Cynny Hagen PROJECT: C260016 AGAT WORK ORDER: 22C940433 SOIL ANALYSIS REVIEWED BY: Loan Nguyen, Senior Analyst DATE REPORTED: Sep 06, 2022 PAGES (INCLUDING COVER): 7 VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (403) 735-2005

*Notes	
Disclaimer:	

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

Member of: Association of Professional Engineers and Geoscientists of Alberta	
(APEGA)	
Western Enviro-Agricultural Laboratory Association (WEALA)	
Environmental Services Association of Alberta (ESAA)	

Page 1 of 7

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.



Certificate of Analysis

AGAT WORK ORDER: 22C940433

PROJECT: C260016

CLIENT NAME: BUREAU VERITAS CANADA (2019) INC

SAMPLING SITE:

OANII EINO OTE.									
				Metals	s - Barium b	y Fusion IC	CP		
DATE RECEIVED: 2022-09-01									DATE REPORTED: 2022-09-06
				AZM179-BH22-	AZM180-BH22-	AZM181-BH22-	AZM182-BH22-	AZM183-BH22	-
		SAMPLE DESCR	RIPTION:	25-03	25-01	25-02	25-04	25-5	
		SAMPL	E TYPE:	Soil	Soil	Soil	Soil	Soil	
		DATE SA	AMPLED:	2022-09-01 15:20	2022-09-01 15:00	2022-09-01 15:10	2022-09-01 15:30	2022-09-01 15:40	
Parameter	Unit	G / S	RDL	4266731	4266735	4266736	4266737	4266738	
True Barium by Fusion ICP	mg/kg		50	3560	36400	9770	3770	1960	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard 4266731-4266738 Result is based on the dry weight of the sample.

Analysis performed at AGAT Calgary (unless marked by *)

2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatilabs.com

ATTENTION TO: Cynny Hagen

SAMPLED BY:



2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatlabs.com

Quality Assurance

CLIENT NAME: BUREAU VERITAS CANADA (2019) INC

PROJECT: C260016

AGAT WORK ORDER: 22C940433

ATTENTION TO: Cynny Hagen

SAMPLING SITE:

SAMPLED BY:

				Soi	l Ana	alysis	5								
RPT Date: Sep 06, 2022		C	DUPLICAT	E		REFEREN	NCE MA	TERIAL	METHOD	BLANK SPIKE		MAT	RIX SPI	KE	
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured		ptable nits	Recovery	Lir	ptable nits	Recovery	Lie	ptable nits
		là					Value	Lower	Upper		Lower	Upper		Lower	Upper
Metals - Barium by Fusion ICP Barium by Fusion ICP-OES	4266587		976	977	0.0%	< 40	95%	70%	130%				NA	70%	130%

Comments: Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated. Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.

Certified By:



AGAT QUALITY ASSURANCE REPORT (V1)

Page 3 of 7

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2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatlabs.com

Method Summary

CLIENT NAME: BUREAU VERITAS CANA	DA (2019) INC	AGAT WORK ORDER: 22C940433								
PROJECT: C260016		ATTENTION TO: Cynny Hagen								
SAMPLING SITE:		SAMPLED BY:								
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE							
Soil Analysis										
True Barium by Fusion ICP	SOIL- 0620, INST- 0140	ASTM D4503.08	ICP/OES							

1 -SEP '22 PM12:10

BUREAU

141

Sent To: AGAT - Calgary 2910 12th Street NE Calgary AB T2E 787

CHAIN OF CUSTODY RECORD FOR SUBCONTRACTED WORK

COC # C260016-CAGT-01-01

Page 01 of 01

Calgary, AB, T2E 7P7 Tel: (403) 735-2005

22	69	40	433	
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REP	PORT INFORMATI	ON									AN	ALYSIS	REQUES	STED					
Coi	mpany:	Bureau Veritas									1								
Ad	dress:	4000 19st N.E, Calgary, Alberta	, T2E 6P8	}															
Cor	ntact Name:	Cynny Hagen						ction											
Em	ail:	Cynny. HAGEN@bureauveritas.	com, Cus	tomersolution	swest@bu	reauverita	s.co	Fusion Extraction											
Pho	one:	(403) 735-2273						usion											
Lab	Project #:	C260016						using F											Ē
#	SAMPLE ID		MATRIX	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	SAMPLER INITIALS	# CONT.	Barium on ICP u							2			ADDITIONAL SAM	IPLE INFORMATION
1	AZM179-BH22	2-25-03	SOIL	2022/08/09	15:20	ML	1	X									(P:01)		
2	AZM180-BH22	2-25-01	SOIL	2022/08/09	15:00	ML	1	X									(P: 01)		
3	AZM181-BH22	2-25-02	SOIL	2022/08/09	15:10	ML	1	X									(P:01)		
4	AZM182-BH22	2-25-04	SOIL	2022/08/09	15:30	ML	1	×									(P:01)		
5	AZM183-BH22	2-25-5	SOIL	2022/08/09	13:40	ML	1	X									(P:01)		
6																			
7																	_		
8																			
9																			
10																			r
REG	SULATORY CRITER	RIA		SPECIAL INSTR															TURNAROUND TIME
				Please inform • You are no • The hold ti **Please retur	it accredited me is appro	I for the rec aching for f	uest the re	ed test equest	ed test((s).									X Rush Required
				[_					les et							Date Required
Cust Cust	OLER ID: tody Seal Present tody Seal Intact ling Media Present	YES NO		COOLER ID: Custody Seal Pre Custody Seal Int Cooling Media P	act	YES NO	Ter (°	np: C)	10	2	9	Custoc	ER ID: ly Seal Pr ly Seal In g Media	tact	YES	Те	mp: °C) VA		Please inform us if rush charges will be incurred.
REL	INQUISHED BY: (S			(YYYY/MM/DD)	TIME: (I		REC	EIVED		N & PRI	-		1	9		1	MM/DD)	TIME: (HH:MM)	
200	2 AR	obel Mebrenn	201	109101	09:	30	1. 2.		la	int (Ru	1	tan	2	2	02/0	20101	12:10	

A REAL PROPERTY AND A REAL	SAMPLE INTEGRITY RECEIPT
agat Lat	
RECEIVING BASICS - Shipping	Temperature (Bottles/Jars only) N/A only Soil Bags Received
RECEIVING BASICS - Shipping Company/Consultant: Surcau Veritors Courier: Surcau Veritors Prepaid Collect Waybill# Branch: EDM GP FN FM RD VAN LYD FSJ EST SASK Other: If multiple sites were submitted at once: Yest No Custody Seal Intact: Yes No TAT: 24-48hr 48-72hr Reg Other	Temperature (Bottles/Jars Only) (N/A/ Only Soft Bags ReceivedFROZEN (Please Circle if samples received Frozen)1 (Bottle/Jar) N S_{O1} 2 (Bottle/Jar) $+$ $+$ 3 (Bottle/Jar) $+$ $+$ $+$ $+$ $ \circ$ C3 (Bottle/Jar) $+$ $+$ $+$ $+$ $ \circ$ C5 (Bottle/Jar) $+$ $+$ $+$ $+$ $ \circ$ C6 (Bottle/Jar) $+$ $+$ $ -$ 7 (Bottle/Jar) $+$ $+$ $+$ $ \circ$ C9 (Bottle/Jar) $+$ $+$ $+$ $ \circ$ C10 (Bottle/Jar) $+$ $+$ $ \circ$ C $ -$
Cooler Quantity:	Workorder No:
TIME SENSITIVE ISSUES - Shipping ALREADY EXCEEDED HOLD TIME? Yes No Inorganic Tests (Please Circle): Mibi , BOD , Nitrate/Nitrite , Turbidity , Color , Microtox , Ortho PO4 , Tedlar Bag , Residual Chlorine , Chlorophyll* ,	Samples Damaged: Yes No If YES why? No Bubble Wrap Frozen Courier Other:
Chloroamines* Earliest Expiry: Hydrocarbons: Earliest Expiry	Whom spoken to: Date/Time: CPM Initial General Comments:
SAMPLE INTEGRITY - Shipping Hazardous Samples: YES NO Legal Samples: Yes No International Samples: Yes No Tape Sealed: Yes No Coolant Used: Icepack Dagged Ice Free Ice Free Water None	

* Subcontracted Analysis (See CPM)

25.192

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ころう	COURIER www.jazoocourier.com	JSE ONLY	Sample Reception Billed To: Bureau Veritas	Bureau Veritas Calgary	Lange Cooler, 1 Medium Cooler			Jeb/PO/Reference #:	JSE ONLY		D/O Time:	Surcharge /		Jong	D/O Driver Name:	her ()	HOTSHOT DETAILS	Or Total Charge (\$):	OFFICE USE ONLY	Invoiced By:	مۇ مازىمىمۇمار، مۇلام مۇلام مۇلام يىمىنى	ct disparch at the city hearest you: Fort McMurray 587-645-6364	Grande Prairie 587-297-8406	THANK YOU FOR SUPPORTING LOCAL AND CHOOSING JAZOO EXPRESS COURIER.
- NI - (JAZOO EXPRESS COURIER	CLIENT USE ONLY	Sender Robel Mebrahmu Receiver Sample	Date: 202109101 Delivery From: Bureau	Item Description.	# Items: 2 envelope, envelope, sm/med/lg box, cooler,	etc.	Authorized Shipper Signature:	DRIVER USE ONLY	P/U Driver And	# Items P/U Time:	# Of Overweight # Of TDG	Additional Info:		Total # Items Dropped Off: D/	Authorized Receiver Signature:	нотенот	Total Km: Or Tota		Verified By: Inv	To schedule a nickun nlags contac	o sciedule a pickup piease contact aisparch at the city nearest you: Calgary 403-660-5504 Fort McMurray 587-645-6364	Edmonton 780-903-3628	THANK YOU FOR SUPPORTING LOCAL ANI

REC

 $\alpha = 1 - \infty = 4$

GOLDER DATA QUALITY REVIEW CHECKLIST

Site Location: Camp Farewell,	NT		Sampling Date: August 9, 2022						
Site Location. Camp Farewen,	1 1 1	-	Sampling Date: <u>August 9, 2022</u>						
Golder Project Number: 22:	525414-1000	_	Laboratory: Bureau Veritas Edmonton						
Lab Submission Number: C2	60016								
Lao Submission Number. C2	00010	-							
Was the Cooler Received at the lab u	nder a sealed and	intact cus	tody seal? Yes						
Was proper chain of custody of the sa	-	-	ot? Yes						
Were sample temperatures acceptable	•		Yes						
Were all samples analyzed and extract			Yes						
Has lab warranted all tests were in sta			Yes						
Was sufficient sample provided for the			Yes						
Has lab warranted all samples were a	nalyzed with limi	ted headsp	pace present?: Yes						
Are All Laboratory QC Within Accept	otance Criteria (Y	es No N	ot Applicable)?						
		•0,110,11							
	Yes No	NA	Comments						
Surrogate Recovery	X		Matrix spike recovery for vanadium (136%, 151% and						
Method Blank Concentration	X		140%) exceeded the acceptance criteria of (75-125%)						
Laboratory Duplicate RPD	X	All remaining laboratory QC results are within							
Matrix Spike Recovery	X		acceptance criteria.						
Blank Spike Recovery									
Are All Field QC Samples Within Al	ert Limits (Yes, N	No, Not Aj	oplicable)?						
	Yes No	NA	Comments						
Field Blank Concentration		X	All field QC samples are within						
Trip Blank Concentration	V	X	alert limits.						
Field Duplicate RPD	Х								
Is data considered reliable (Yes/No/S	uspect)?		Yes						
If answer is "No" or "Suspect", descr		otionale	1 05						
If answer is two of Suspect, descr	ibe and provide is	ationale.							
1									
Data Reviewed by (Print): An	ita Colbert		Data Reviewed by (Signature): Onits Collect						
		-	Dua to to to by (Dignatio)						
Date: A	August 18, 2022								
		-							



Your P.O. #: 22525414-1100-1104 Your Project #: 22525414-1000 Site Location: CAMP FAREWELL,NT Your C.O.C. #: 1 of 1

Attention: Aurelie Bellavance

GOLDER ASSOCIATES LTD. 2800, 700 -2nd Street SW CALGARY, AB CANADA T2P 2W2

> Report Date: 2022/09/06 Report #: R3226608 Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C260023 Received: 2022/08/12, 09:00

Sample Matrix: Soil # Samples Received: 8

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
Boron (Hot Water Soluble) (1)	8	2022/08/16	2022/08/16	AB SOP-00034 / AB SOP-	EPA 6010d R5 m
				00042	
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1, 3)	8	N/A	2022/08/17	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX (1)	8	N/A	2022/08/17		Auto Calc
Hexavalent Chromium (1, 4)	8	2022/08/16	2022/08/16	AB SOP-00063	SM 23 3500-Cr B m
Barium on ICP using Fusion Extraction (2)	2	N/A	2022/09/06		
CCME Hydrocarbons (F2-F4 in soil) (1, 5)	8	2022/08/15	2022/08/16	AB SOP-00036	CCME PHC-CWS m
Elements by ICPMS - Soils (1)	8	2022/08/16	2022/08/17	AB SOP-00001 / AB SOP-	EPA 6020b R2 m
				00043	
Moisture (1)	8	N/A	2022/08/16	AB SOP-00002	CCME PHC-CWS m
Benzo[a]pyrene Equivalency (1)	2	N/A	2022/08/16		Auto Calc
Benzo[a]pyrene Equivalency (1)	6	N/A	2022/08/17		Auto Calc
PAH in Soil by GC/MS (1)	7	2022/08/15	2022/08/16	AB SOP-00036 / AB SOP-	EPA 3540C/8270E m
				00003	
PAH in Soil by GC/MS (1)	1	2022/08/16	2022/08/16	AB SOP-00036 / AB SOP-	EPA 3540C/8270E m
				00003	

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



Your P.O. #: 22525414-1100-1104 Your Project #: 22525414-1000 Site Location: CAMP FAREWELL,NT Your C.O.C. #: 1 of 1

Attention: Aurelie Bellavance

GOLDER ASSOCIATES LTD. 2800, 700 -2nd Street SW CALGARY, AB CANADA T2P 2W2

> Report Date: 2022/09/06 Report #: R3226608 Version: 2 - Revision

CERTIFICATE OF ANALYSIS - REVISED REPORT

BUREAU VERITAS JOB #: C260023

Received: 2022/08/12, 09:00

dilution methods.

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 AGAT - Calgary, 2910 12th Street NE , Calgary, AB, T2E 7P7

(3) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is date sampled unless otherwise stated.

(4) Some soil samples may react with the Cr(VI) spike reducing it to Cr(III). These samples are highly unlikely to contain native hexavalent chromium. Thus a failed spike recovery does not invalidate a negative result on the native sample.

(5) All CCME results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil, Validation of Performance-Based Alternative Methods September 2003. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.





Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Cynny Hagen, Key Account Specialist

Email: Cynny.HAGEN@bureauveritas.com

Phone# (403)735-2273

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 Signature Page.



AT1 BTEX AND F1-F4 IN SOIL (VIALS)

Bureau Veritas ID		AZM220	AZM221	AZM222	AZM223	AZM224	AZM224		
Sampling Date		2022/08/08	2022/08/08	2022/08/08	2022/08/08	2022/08/08	2022/08/08		
Sampling Date		10:20	10:30	10:35	10:40	10:45	10:45		
COC Number		1 of 1							
	UNITS	BH22-24-01	BH22-24-02	BH22-24-03	BH22-24-04	BH22-24-05	BH22-24-05 Lab-Dup	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	44	31	<10	<10	<10	10	A681385
F3 (C16-C34 Hydrocarbons)	mg/kg	77	82	360	<50	<50	<50	50	A681385
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	<50	92	<50	<50	<50	50	A681385
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	Yes	Yes	N/A	A681385
Physical Properties				•		•			
Moisture	%	4.5	8.2	25	7.8	17	N/A	0.30	A681498
Volatiles									
Xylenes (Total)	mg/kg	<0.045	<0.045	<0.045	<0.045	<0.045	N/A	0.045	A680070
F1 (C6-C10) - BTEX	mg/kg	<10	<10	<10	<10	<10	N/A	10	A680070
Field Preserved Volatiles									
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	N/A	0.0050	A680671
Toluene	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	N/A	0.050	A680671
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	<0.010	N/A	0.010	A680671
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	<0.040	N/A	0.040	A680671
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	N/A	0.020	A680671
F1 (C6-C10)	mg/kg	<10	<10	<10	<10	<10	N/A	10	A680671
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	98	98	97	96	97	N/A	N/A	A680671
4-Bromofluorobenzene (sur.)	%	99	99	98	98	98	N/A	N/A	A680671
D10-o-Xylene (sur.)	%	95	92	111	100	102	N/A	N/A	A680671
D4-1,2-Dichloroethane (sur.)	%	99	101	99	98	98	N/A	N/A	A680671
O-TERPHENYL (sur.)	%	123	116	140	123	116	116	N/A	A681385
RDL = Reportable Detection Lir	mit								
Lab-Dup = Laboratory Initiated N/A = Not Applicable	l Duplica	te							

N/A = Not Applicable



AT1 BTEX AND F1-F4 IN SOIL (VIALS)

Bureau Veritas ID		AZM225		AZM226		AZM227		
Sampling Date		2022/08/08 10:50		2022/08/08 10:55		2022/08/08 10:55		
COC Number		1 of 1		1 of 1		1 of 1		
	UNITS	BH22-24-06	RDL	BH22-24-07	RDL	DUP D	RDL	QC Batch
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	10	<10	10	<10	10	A681385
F3 (C16-C34 Hydrocarbons)	mg/kg	<50	50	<50	50	<50	50	A681385
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	50	<50	50	<50	50	A681385
Reached Baseline at C50	mg/kg	Yes	N/A	Yes	N/A	Yes	N/A	A681385
Physical Properties								
Moisture	%	16	0.30	18	0.30	17	0.30	A681498
Volatiles								
Xylenes (Total)	mg/kg	<0.045	0.045	<0.092	0.092	<0.10	0.10	A680070
F1 (C6-C10) - BTEX	mg/kg	<10	10	<21	21	<23	23	A680070
Field Preserved Volatiles								
Benzene	mg/kg	<0.0050	0.0050	<0.0090 (1)	0.0090	<0.010 (1)	0.010	A680671
Toluene	mg/kg	<0.050	0.050	<0.050 (1)	0.050	<0.050 (1)	0.050	A680671
Ethylbenzene	mg/kg	<0.010	0.010	<0.014 (1)	0.014	<0.015 (1)	0.015	A680671
m & p-Xylene	mg/kg	<0.040	0.040	<0.082 (2)	0.082	<0.091 (2)	0.091	A680671
o-Xylene	mg/kg	<0.020	0.020	<0.041 (2)	0.041	<0.045 (2)	0.045	A680671
F1 (C6-C10)	mg/kg	<10	10	<21 (2)	21	<23 (2)	23	A680671
Surrogate Recovery (%)								
1,4-Difluorobenzene (sur.)	%	96	N/A	101	N/A	97	N/A	A680671
4-Bromofluorobenzene (sur.)	%	99	N/A	98	N/A	99	N/A	A680671
D10-o-Xylene (sur.)	%	105	N/A	106	N/A	111	N/A	A680671
D4-1,2-Dichloroethane (sur.)	%	98	N/A	95	N/A	98	N/A	A680671
O-TERPHENYL (sur.)	%	118	N/A	122	N/A	125	N/A	A681385
RDL = Reportable Detection Lir	nit							

N/A = Not Applicable

(1) Detection limit reported based on MDL and sample weight used for analysis.

(2) Detection limits raised based on sample weight used for analysis.



CCME REGULATED METALS - SOILS (SOIL)

Bureau Veritas ID		AZM220	AZM221		AZM222		AZM223	AZM224		
Sampling Date		2022/08/08 10:20	2022/08/08 10:30		2022/08/08 10:35		2022/08/08 10:40	2022/08/08 10:45		
COC Number		1 of 1	1 of 1		1 of 1		1 of 1	1 of 1		
	UNITS	BH22-24-01	BH22-24-02	QC Batch	BH22-24-03	QC Batch	BH22-24-04	BH22-24-05	RDL	QC Batch
Elements										
Soluble (Hot water) Boron (B)	mg/kg	0.11	0.72	A683007	0.36	A683000	<0.10	<0.10	0.10	A683007
Hex. Chromium (Cr 6+)	mg/kg	<0.080	<0.080	A682694	<0.080	A682694	<0.080	<0.080	0.080	A682694
Total Antimony (Sb)	mg/kg	<0.50	<0.50	A682611	<0.50	A683223	<0.50	<0.50	0.50	A682611
Total Arsenic (As)	mg/kg	8.8	8.7	A682611	3.5	A683223	7.6	6.1	1.0	A682611
Total Barium (Ba)	mg/kg	1900	310	A682611	280	A683223	910	130	1.0	A682611
Total Beryllium (Be)	mg/kg	<0.40	<0.40	A682611	<0.40	A683223	<0.40	<0.40	0.40	A682611
Total Cadmium (Cd)	mg/kg	0.14	0.12	A682611	0.10	A683223	0.075	0.093	0.050	A682611
Total Chromium (Cr)	mg/kg	21	31	A682611	17	A683223	10	31	1.0	A682611
Total Cobalt (Co)	mg/kg	3.7	3.8	A682611	4.0	A683223	4.2	4.7	0.50	A682611
Total Copper (Cu)	mg/kg	9.2	7.1	A682611	4.6	A683223	4.4	5.5	1.0	A682611
Total Lead (Pb)	mg/kg	17	7.5	A682611	5.5	A683223	6.6	3.9	0.50	A682611
Total Mercury (Hg)	mg/kg	0.052	0.058	A682611	0.057	A683223	<0.050	<0.050	0.050	A682611
Total Molybdenum (Mo)	mg/kg	1.9	1.3	A682611	0.88	A683223	1.2	0.88	0.40	A682611
Total Nickel (Ni)	mg/kg	14	20	A682611	9.8	A683223	8.6	14	1.0	A682611
Total Selenium (Se)	mg/kg	<0.50	<0.50	A682611	<0.50	A683223	<0.50	<0.50	0.50	A682611
Total Silver (Ag)	mg/kg	<0.20	<0.20	A682611	<0.20	A683223	<0.20	<0.20	0.20	A682611
Total Thallium (Tl)	mg/kg	<0.10	<0.10	A682611	<0.10	A683223	<0.10	<0.10	0.10	A682611
Total Tin (Sn)	mg/kg	<1.0	<1.0	A682611	<1.0	A683223	<1.0	<1.0	1.0	A682611
Total Uranium (U)	mg/kg	0.44	0.47	A682611	0.36	A683223	0.31	0.45	0.20	A682611
Total Vanadium (V)	mg/kg	19	17	A682611	14	A683223	21	18	1.0	A682611
Total Zinc (Zn)	mg/kg	37	23	A682611	14	A683223	27	32	10	A682611
RDL = Reportable Detection Lin	nit									



					//		
Bureau Veritas ID		AZM225		AZM226	AZM227		
Sampling Date		2022/08/08		2022/08/08	2022/08/08		
		10:50		10:55	10:55		
COC Number		1 of 1		1 of 1	1 of 1		
	UNITS	BH22-24-06	QC Batch	BH22-24-07	DUP D	RDL	QC Batch
Elements							
Soluble (Hot water) Boron (B)	mg/kg	<0.10	A683007	<0.10	<0.10	0.10	A683000
Hex. Chromium (Cr 6+)	mg/kg	<0.080	A682694	<0.080	<0.080	0.080	A682694
Total Antimony (Sb)	mg/kg	<0.50	A682611	<0.50	<0.50	0.50	A683223
Total Arsenic (As)	mg/kg	5.3	A682611	3.9	3.9	1.0	A683223
Total Barium (Ba)	mg/kg	190	A682611	89	100	1.0	A683223
Total Beryllium (Be)	mg/kg	<0.40	A682611	<0.40	<0.40	0.40	A683223
Total Cadmium (Cd)	mg/kg	0.082	A682611	0.068	0.073	0.050	A683223
Total Chromium (Cr)	mg/kg	21	A682611	15	17	1.0	A683223
Total Cobalt (Co)	mg/kg	3.7	A682611	2.8	2.9	0.50	A683223
Total Copper (Cu)	mg/kg	4.2	A682611	3.3	3.4	1.0	A683223
Total Lead (Pb)	mg/kg	3.8	A682611	3.1	3.8	0.50	A683223
Total Mercury (Hg)	mg/kg	<0.050	A682611	<0.050	<0.050	0.050	A683223
Total Molybdenum (Mo)	mg/kg	0.60	A682611	0.61	0.60	0.40	A683223
Total Nickel (Ni)	mg/kg	10	A682611	7.5	8.1	1.0	A683223
Total Selenium (Se)	mg/kg	<0.50	A682611	<0.50	<0.50	0.50	A683223
Total Silver (Ag)	mg/kg	<0.20	A682611	<0.20	<0.20	0.20	A683223
Total Thallium (Tl)	mg/kg	<0.10	A682611	<0.10	<0.10	0.10	A683223
Total Tin (Sn)	mg/kg	<1.0	A682611	<1.0	<1.0	1.0	A683223
Total Uranium (U)	mg/kg	0.35	A682611	0.33	0.34	0.20	A683223
Total Vanadium (V)	mg/kg	14	A682611	9.1	9.1	1.0	A683223
Total Zinc (Zn)	mg/kg	26	A682611	19	19	10	A683223
RDL = Reportable Detection Lir	nit						

CCME REGULATED METALS - SOILS (SOIL)



Bureau Veritas ID		AZM220	AZM223	
Sampling Date		2022/08/08 10:20	2022/08/08 10:40	
COC Number		1 of 1	1 of 1	
	UNITS	BH22-24-01	BH22-24-04	QC Batch
Parameter				
Subcontract Parameter	N/A	ATTACHED	ATTACHED	A705604

RESULTS OF CHEMICAL ANALYSES OF SOIL



SEMIVOLATILE ORGANICS BY GC-MS (SOIL)

Bureau Veritas ID		AZM220	AZM221	AZM222	AZM223	AZM224	AZM224		
Sampling Date		2022/08/08	2022/08/08	2022/08/08	2022/08/08	2022/08/08	2022/08/08		
Sampling Date		10:20	10:30	10:35	10:40	10:45	10:45		
COC Number		1 of 1							
	UNITS	BH22-24-01	BH22-24-02	BH22-24-03	BH22-24-04	BH22-24-05	BH22-24-05	RDL	QC Batch
	UNITS	BH22-24-01	BHZZ-24-02	ВП22-24-03	BHZZ-24-04	BHZZ-24-05	Lab-Dup	KUL	
Polycyclic Aromatics									
B[a]P TPE Total Potency Equivalents	mg/kg	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	N/A	0.0071	A679833
Naphthalene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.012	0.0050	A681395
Surrogate Recovery (%)	••				•	•	•		
D10-ANTHRACENE (sur.)	%	127	121	124	109	104	119	N/A	A681395
D8-ACENAPHTHYLENE (sur.)	%	114	107	107	117	97	105	N/A	A681395
D8-NAPHTHALENE (sur.)	%	112	106	103	125	94	102	N/A	A681395
TERPHENYL-D14 (sur.)	%	167 (1)	154 (1)	163 (1)	145 (1)	135 (1)	151 (1)	N/A	A681395
							•		•

RDL = Reportable Detection Limit

Lab-Dup = Laboratory Initiated Duplicate

N/A = Not Applicable

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

Bureau Veritas ID		AZM225	AZM226	AZM227		
Sampling Date		2022/08/08 10:50	2022/08/08 10:55	2022/08/08 10:55		
COC Number		1 of 1	1 of 1	1 of 1		
	UNITS	BH22-24-06	BH22-24-07	DUP D	RDL	QC Batch
Polycyclic Aromatics						
B[a]P TPE Total Potency Equivalents	mg/kg	<0.0071	<0.0071	<0.0071	0.0071	A679833
Naphthalene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	A681395
Surrogate Recovery (%)						
D10-ANTHRACENE (sur.)	%	107	116	124	N/A	A681395
D8-ACENAPHTHYLENE (sur.)	%	123	119	124	N/A	A681395
D8-NAPHTHALENE (sur.)	%	117	114	126	N/A	A681395
TERPHENYL-D14 (sur.)	%	170 (1)	165 (1)	193 (1)	N/A	A681395
RDL = Reportable Detection Limit						
N/A = Not Applicable						
 Recovery or RPD for this paramete meets acceptability criteria. 	r is outs	ide control lim	ts. The overall	quality control	for this	analysis



GENERAL COMMENTS

Each te	emperature is the	average of up to	three cooler temperatures taken at receipt
	· Package 1	6.3°C	
BH22-2	2: Report reissue 4-01/AZM220 4-04/AZM223	ed to include resu	Its for Barium - True Total on below samples as per client request received 2022/08/24.
Sample	AZM220 [BH22-	24-01]:Please s	ee attachment for Barium on ICP using Fusion Extraction results.
Sample	AZM223 [BH22-	24-04] :Please s	ee attachment for Barium on ICP using Fusion Extraction results.
Results	relate only to th	e items tested.	



QUALITY ASSURANCE REPORT

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A680671	D01	Matrix Spike	1,4-Difluorobenzene (sur.)	2022/08/16		96	%	50 - 140
			4-Bromofluorobenzene (sur.)	2022/08/16		100	%	50 - 140
			D10-o-Xylene (sur.)	2022/08/16		105	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2022/08/16		99	%	50 - 140
			Benzene	2022/08/16		102	%	50 - 140
			Toluene	2022/08/16		100	%	50 - 140
			Ethylbenzene	2022/08/16		99	%	50 - 140
			m & p-Xylene	2022/08/16		100	%	50 - 140
			o-Xylene	2022/08/16		99	%	50 - 140
			F1 (C6-C10)	2022/08/16		104	%	60 - 140
A680671	DO1	Spiked Blank	1,4-Difluorobenzene (sur.)	2022/08/16		97	%	50 - 140
			4-Bromofluorobenzene (sur.)	2022/08/16		100	%	50 - 140
			D10-o-Xylene (sur.)	2022/08/16		93	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2022/08/16		99	%	50 - 140
			Benzene	2022/08/16		98	%	60 - 130
			Toluene	2022/08/16		94	%	60 - 130
			Ethylbenzene	2022/08/16		95	%	60 - 130
			m & p-Xylene	2022/08/16		93	%	60 - 130
			o-Xylene	2022/08/16		93	%	60 - 130
			F1 (C6-C10)	2022/08/16		97	%	60 - 140
A680671	D01	Method Blank	1,4-Difluorobenzene (sur.)	2022/08/17		98	%	50 - 140
			4-Bromofluorobenzene (sur.)	2022/08/17		106	%	50 - 140
			D10-o-Xylene (sur.)	2022/08/17		104	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2022/08/17		96	%	50 - 140
			Benzene	2022/08/17	<0.0050		mg/kg	
			Toluene	2022/08/17	<0.050		mg/kg	
			Ethylbenzene	2022/08/17	<0.010		mg/kg	
			m & p-Xylene	2022/08/17	<0.040		mg/kg	
			o-Xylene	2022/08/17	<0.020		mg/kg	
			F1 (C6-C10)	2022/08/17	<10		mg/kg	
A680671	D01	RPD	Benzene	2022/08/17	9.8		%	50
	201		Toluene	2022/08/17	NC		%	50
			Ethylbenzene	2022/08/17	24		%	50
			m & p-Xylene	2022/08/17	NC		%	50
			o-Xylene	2022/08/17	NC		%	50
			F1 (C6-C10)	2022/08/17	NC		%	30
A681385	VP4	Matrix Spike	O-TERPHENYL (sur.)	2022/08/16		134	%	60 - 140
A001303	VIT	[AZM224-02]		2022/00/10		154	70	00 140
			F2 (C10-C16 Hydrocarbons)	2022/08/16		128	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2022/08/16		131	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2022/08/16		128	%	60 - 140
A681385	VP4	Spiked Blank	O-TERPHENYL (sur.)	2022/08/16		116	%	60 - 140
///////////////////////////////////////	••••	Spined Blank	F2 (C10-C16 Hydrocarbons)	2022/08/16		113	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2022/08/16		117	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2022/08/16		114	%	60 - 140
A681385	VP4	Method Blank	O-TERPHENYL (sur.)	2022/08/16		128	%	60 - 140
, .001303	v I - T		F2 (C10-C16 Hydrocarbons)	2022/08/16	<10	120	 mg/kg	00 - 140
			F3 (C16-C34 Hydrocarbons)	2022/08/16	<10		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2022/08/16	<50		mg/kg	
A681385	\/D <i>1</i>		F2 (C10-C16 Hydrocarbons)					40
CQCTQDH	VP4	RPD [AZM224-02]		2022/08/16	NC		%	40
			F3 (C16-C34 Hydrocarbons)	2022/08/16	NC		%	40
			F4 (C34-C50 Hydrocarbons)	2022/08/16	NC		%	40



QUALITY ASSURANCE REPORT(CONT'D)

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A681395	SJ1	Matrix Spike	D10-ANTHRACENE (sur.)	2022/08/16		122	%	50 - 130
		[AZM224-02]						
			D8-ACENAPHTHYLENE (sur.)	2022/08/16		110	%	50 - 130
			D8-NAPHTHALENE (sur.)	2022/08/16		109	%	50 - 130
			TERPHENYL-D14 (sur.)	2022/08/16		157 (1)	%	50 - 130
			Naphthalene	2022/08/16		113	%	50 - 130
A681395	SJ1	Spiked Blank	D10-ANTHRACENE (sur.)	2022/08/16		112	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2022/08/16		99	%	50 - 130
			D8-NAPHTHALENE (sur.)	2022/08/16		106	%	50 - 130
			TERPHENYL-D14 (sur.)	2022/08/16		139 (1)	%	50 - 130
			Naphthalene	2022/08/16		105	%	50 - 130
A681395	SJ1	Method Blank	D10-ANTHRACENE (sur.)	2022/08/16		118	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2022/08/16		118	%	50 - 130
			D8-NAPHTHALENE (sur.)	2022/08/16		116	%	50 - 130
			TERPHENYL-D14 (sur.)	2022/08/16		175 (1)	%	50 - 130
			Naphthalene	2022/08/16	<0.0050		mg/kg	
A681395	SJ1	RPD [AZM224-02]	Naphthalene	2022/08/16	NC		%	50
A681498	A1H	Method Blank	Moisture	2022/08/16	<0.30		%	
A681498	A1H	RPD	Moisture	2022/08/16	18		%	20
A682611	MKJ	Matrix Spike	Total Antimony (Sb)	2022/08/17		101	%	75 - 125
			Total Arsenic (As)	2022/08/17		97	%	75 - 125
			Total Barium (Ba)	2022/08/17		NC	%	75 - 125
			Total Beryllium (Be)	2022/08/17		96	%	75 - 125
			Total Cadmium (Cd)	2022/08/17		98	%	75 - 125
			Total Chromium (Cr)	2022/08/17		113	%	75 - 125
			Total Cobalt (Co)	2022/08/17		99	%	75 - 125
			Total Copper (Cu)	2022/08/17		100	%	75 - 125
			Total Lead (Pb)	2022/08/17		99	%	75 - 125
			Total Mercury (Hg)	2022/08/17		96	%	75 - 125
			Total Molybdenum (Mo)	2022/08/17		101	%	75 - 125
			Total Nickel (Ni)	2022/08/17		104	%	75 - 125
			Total Selenium (Se)	2022/08/17		100	%	75 - 125
			Total Silver (Ag)	2022/08/17		99	%	75 - 125
			Total Thallium (Tl)	2022/08/17		98	%	75 - 125
			Total Tin (Sn)	2022/08/17		102	%	75 - 125
			Total Uranium (U)	2022/08/17		95	%	75 - 125
			Total Vanadium (V)	2022/08/17		140 (1)	%	75 - 125
			Total Zinc (Zn)	2022/08/17		102	%	75 - 125
A682611	MKJ	QC Standard	Total Antimony (Sb)	2022/08/17		109	%	15 - 182
			Total Arsenic (As)	2022/08/17		103	%	53 - 147
			Total Barium (Ba)	2022/08/17		103	%	80 - 119
			Total Cadmium (Cd)	2022/08/17		94	%	72 - 128
			Total Chromium (Cr)	2022/08/17		113	%	59 - 141
			Total Cobalt (Co)	2022/08/17		101	%	58 - 142
			Total Copper (Cu)	2022/08/17		103	%	83 - 117
			Total Lead (Pb)	2022/08/17		111	%	79 - 121
			Total Molybdenum (Mo)	2022/08/17		122	%	67 - 133
			Total Nickel (Ni)	2022/08/17		110	%	79 - 121
			Total Silver (Ag)	2022/08/17		89	%	47 - 153
			Total Tin (Sn)	2022/08/17		98	%	67 - 133
			Total Uranium (U)	2022/08/17		98	%	77 - 123
			Total Vanadium (V)	2022/08/17		111	%	79 - 121



QUALITY ASSURANCE REPORT(CONT'D)

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Zinc (Zn)	2022/08/17		103	%	79 - 121
A682611	MKJ	Spiked Blank	Total Antimony (Sb)	2022/08/17		102	%	80 - 120
			Total Arsenic (As)	2022/08/17		95	%	80 - 120
			Total Barium (Ba)	2022/08/17		96	%	80 - 120
			Total Beryllium (Be)	2022/08/17		92	%	80 - 120
			Total Cadmium (Cd)	2022/08/17		95	%	80 - 120
			Total Chromium (Cr)	2022/08/17		97	%	80 - 120
			Total Cobalt (Co)	2022/08/17		97	%	80 - 120
			Total Copper (Cu)	2022/08/17		97	%	80 - 120
			Total Lead (Pb)	2022/08/17		97	%	80 - 120
			Total Mercury (Hg)	2022/08/17		100	%	80 - 120
			Total Molybdenum (Mo)	2022/08/17		96	%	80 - 120
			Total Nickel (Ni)	2022/08/17		96	%	80 - 120
			Total Selenium (Se)	2022/08/17		99	%	80 - 120
			Total Silver (Ag)	2022/08/17		96	%	80 - 120
			Total Thallium (TI)	2022/08/17		97	%	80 - 120
			Total Tin (Sn)	2022/08/17		96	%	80 - 120
			Total Uranium (U)	2022/08/17		97	%	80 - 120
			Total Vanadium (V)	2022/08/17		97	%	80 - 120
			Total Zinc (Zn)	2022/08/17		97	%	80 - 120
A682611	MKJ	Method Blank	Total Antimony (Sb)	2022/08/17	<0.50	•••	mg/kg	
			Total Arsenic (As)	2022/08/17	<1.0		mg/kg	
			Total Barium (Ba)	2022/08/17	<1.0		mg/kg	
			Total Beryllium (Be)	2022/08/17	<0.40		mg/kg	
			Total Cadmium (Cd)	2022/08/17	< 0.050		mg/kg	
			Total Chromium (Cr)	2022/08/17	<1.0		mg/kg	
			Total Cobalt (Co)	2022/08/17	<0.50		mg/kg	
			Total Copper (Cu)	2022/08/17	<1.0		mg/kg	
			Total Lead (Pb)	2022/08/17	<0.50		mg/kg	
			Total Mercury (Hg)	2022/08/17	< 0.050		mg/kg	
			Total Molybdenum (Mo)	2022/08/17	<0.40		mg/kg	
			Total Nickel (Ni)	2022/08/17	<1.0		mg/kg	
			Total Selenium (Se)	2022/08/17	<0.50		mg/kg	
			Total Silver (Ag)	2022/08/17	<0.20		mg/kg	
			Total Thallium (TI)	2022/08/17	<0.10		mg/kg	
			Total Tin (Sn)	2022/08/17	<1.0		mg/kg	
			Total Uranium (U)	2022/08/17	<0.20		mg/kg	
			Total Vanadium (V)	2022/08/17	<1.0		mg/kg	
			Total Zinc (Zn)	2022/08/17	<10		mg/kg	
A682611	MKJ	RPD	Total Chromium (Cr)	2022/08/17	1.9		%	30
			Total Nickel (Ni)	2022/08/17	5.2		%	30
A682694	FM0	Matrix Spike	Hex. Chromium (Cr 6+)	2022/08/16		96	%	75 - 125
A682694	FM0	Spiked Blank	Hex. Chromium (Cr 6+)	2022/08/16		104	%	80 - 120
A682694	FM0	Method Blank	Hex. Chromium (Cr 6+)	2022/08/16	<0.080	-	mg/kg	-
A682694	FM0	RPD	Hex. Chromium (Cr 6+)	2022/08/16	NC		%	35
A683000	MPU	Matrix Spike	Soluble (Hot water) Boron (B)	2022/08/16	-	95	%	75 - 125
A683000	MPU	Spiked Blank	Soluble (Hot water) Boron (B)	2022/08/16		89	%	80 - 120
A683000	MPU	Method Blank	Soluble (Hot water) Boron (B)	2022/08/16	<0.10		mg/kg	
A683000	MPU	RPD	Soluble (Hot water) Boron (B)	2022/08/16	4.3		%	35
A683007	MPU	Matrix Spike	Soluble (Hot water) Boron (B)	2022/08/16	-	91	%	75 - 125
A683007	MPU	Spiked Blank	Soluble (Hot water) Boron (B)	2022/08/16		94	%	80 - 120
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 Page 12 of 26

 Bureau Veritas
 Edmonton: 9331 - 48th Street T6B 2R4
 Telephone (780)577-7100
 Fax (780)450-4187



QUALITY ASSURANCE REPORT(CONT'D)

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A683007	MPU	RPD	Soluble (Hot water) Boron (B)	2022/08/16	6.8		%	35
A683223	KH2	Matrix Spike	Total Antimony (Sb)	2022/08/17		104	%	75 - 125
		·	Total Arsenic (As)	2022/08/17		100	%	75 - 125
			Total Barium (Ba)	2022/08/17		NC	%	75 - 125
			Total Beryllium (Be)	2022/08/17		105	%	75 - 125
			Total Cadmium (Cd)	2022/08/17		101	%	75 - 125
			Total Chromium (Cr)	2022/08/17		113	%	75 - 125
			Total Cobalt (Co)	2022/08/17		102	%	75 - 125
			Total Copper (Cu)	2022/08/17		101	%	75 - 125
			Total Lead (Pb)	2022/08/17		103	%	75 - 125
			Total Mercury (Hg)	2022/08/17		101	%	75 - 125
			Total Molybdenum (Mo)	2022/08/17		106	%	75 - 125
			Total Nickel (Ni)	2022/08/17		106	%	75 - 125
			Total Selenium (Se)	2022/08/17		100	%	75 - 125
			Total Silver (Ag)	2022/08/17		104	%	75 - 125
			Total Thallium (TI)	2022/08/17		102	%	75 - 125
			Total Tin (Sn)	2022/08/17		105	%	75 - 125
			Total Uranium (U)	2022/08/17		101	%	75 - 125
			Total Vanadium (V)	2022/08/17		131 (1)	%	75 - 125
			Total Zinc (Zn)	2022/08/17		113	%	75 - 125
A683223	KH2	QC Standard	Total Antimony (Sb)	2022/08/17		96	%	15 - 182
			Total Arsenic (As)	2022/08/17		73	%	53 - 147
			Total Barium (Ba)	2022/08/17		89	%	80 - 119
			Total Cadmium (Cd)	2022/08/17		85	%	72 - 128
			Total Chromium (Cr)	2022/08/17		78	%	59 - 141
			Total Cobalt (Co)	2022/08/17		73	%	58 - 142
			Total Copper (Cu)	2022/08/17		101	%	83 - 117
			Total Lead (Pb)	2022/08/17		98	%	79 - 121
			Total Molybdenum (Mo)	2022/08/17		112	%	67 - 133
			Total Nickel (Ni)	2022/08/17		81	%	79 - 121
			Total Silver (Ag)	2022/08/17		80	%	47 - 153
			Total Tin (Sn)	2022/08/17		86	%	67 - 133
			Total Uranium (U)	2022/08/17		81	%	77 - 123
			Total Vanadium (V)	2022/08/17		79	%	79 - 121
			Total Zinc (Zn)	2022/08/17		101	%	79 - 121
A683223	KH2	Spiked Blank	Total Antimony (Sb)	2022/08/17		101	%	80 - 120
			Total Arsenic (As)	2022/08/17		94	%	80 - 120
			Total Barium (Ba)	2022/08/17		97	%	80 - 120
			Total Beryllium (Be)	2022/08/17		98	%	80 - 120
			Total Cadmium (Cd)	2022/08/17		96	%	80 - 120
			Total Chromium (Cr)	2022/08/17		97	%	80 - 120
			Total Cobalt (Co)	2022/08/17		97	%	80 - 120
			Total Copper (Cu)	2022/08/17		97	%	80 - 120
			Total Lead (Pb)	2022/08/17		97	%	80 - 120
			Total Mercury (Hg)	2022/08/17		102	%	80 - 120
			Total Molybdenum (Mo)	2022/08/17		99	%	80 - 120
			Total Nickel (Ni)	2022/08/17		96	%	80 - 120
			Total Selenium (Se)	2022/08/17		96	%	80 - 120
			Total Silver (Ag)	2022/08/17		98	%	80 - 120
			Total Thallium (TI)	2022/08/17		98	%	80 - 120
				,,				
			Total Tin (Sn)	2022/08/17		97	%	80 - 120



QUALITY ASSURANCE REPORT(CONT'D)

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Vanadium (V)	2022/08/17		98	%	80 - 120
			Total Zinc (Zn)	2022/08/17		95	%	80 - 120
A683223	KH2	Method Blank	Total Antimony (Sb)	2022/08/17	<0.50		mg/kg	
			Total Arsenic (As)	2022/08/17	<1.0		mg/kg	
			Total Barium (Ba)	2022/08/17	<1.0		mg/kg	
			Total Beryllium (Be)	2022/08/17	<0.40		mg/kg	
			Total Cadmium (Cd)	2022/08/17	<0.050		mg/kg	
			Total Chromium (Cr)	2022/08/17	<1.0		mg/kg	
			Total Cobalt (Co)	2022/08/17	<0.50		mg/kg	
			Total Copper (Cu)	2022/08/17	<1.0		mg/kg	
			Total Lead (Pb)	2022/08/17	<0.50		mg/kg	
			Total Mercury (Hg)	2022/08/17	<0.050		mg/kg	
			Total Molybdenum (Mo)	2022/08/17	<0.40		mg/kg	
			Total Nickel (Ni)	2022/08/17	<1.0		mg/kg	
			Total Selenium (Se)	2022/08/17	<0.50		mg/kg	
			Total Silver (Ag)	2022/08/17	<0.20		mg/kg	
			Total Thallium (Tl)	2022/08/17	<0.10		mg/kg	
			Total Tin (Sn)	2022/08/17	<1.0		mg/kg	
			Total Uranium (U)	2022/08/17	<0.20		mg/kg	
			Total Vanadium (V)	2022/08/17	<1.0		mg/kg	
			Total Zinc (Zn)	2022/08/17	<10		mg/kg	
A683223	KH2	RPD	Total Antimony (Sb)	2022/08/17	NC		%	30
			Total Arsenic (As)	2022/08/17	10		%	30
			Total Barium (Ba)	2022/08/17	14		%	35
			Total Beryllium (Be)	2022/08/17	NC		%	30
			Total Cadmium (Cd)	2022/08/17	0.64		%	30
			Total Chromium (Cr)	2022/08/17	7.9		%	30
			Total Cobalt (Co)	2022/08/17	7.9		%	30
			Total Copper (Cu)	2022/08/17	5.9		%	30
			Total Lead (Pb)	2022/08/17	3.3		%	35
			Total Mercury (Hg)	2022/08/17	NC		%	35
			Total Molybdenum (Mo)	2022/08/17	2.7		%	35
			Total Nickel (Ni)	2022/08/17	4.8		%	30
			Total Selenium (Se)	2022/08/17	NC		%	30
			Total Silver (Ag)	2022/08/17	NC		%	35
			Total Thallium (Tl)	2022/08/17	NC		%	30
			Total Tin (Sn)	2022/08/17	NC		%	35
			Total Uranium (U)	2022/08/17	5.0		%	30
			Total Vanadium (V)	2022/08/17	11		%	30



QUALITY ASSURANCE REPORT(CONT'D)

QA/QC													
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits					
			Total Zinc (Zn)	2022/08/17	6.1		%	30					
Duplicate	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.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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



VALIDATION SIGNATURE PAGE

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

Chantal Vincent, Customer Solutions Representative

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Gita Pokhrel, Laboratory Supervisor

Junzhi Gras

Janet Gao, B.Sc., QP, Supervisor, Organics

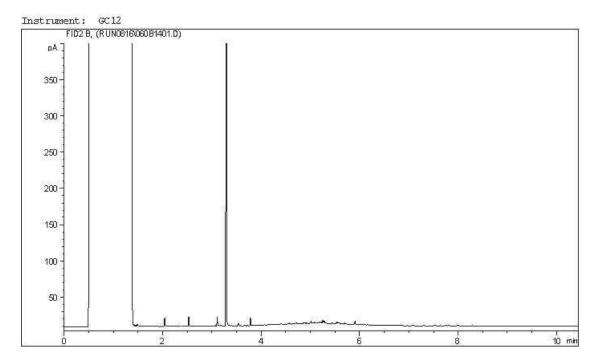
Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

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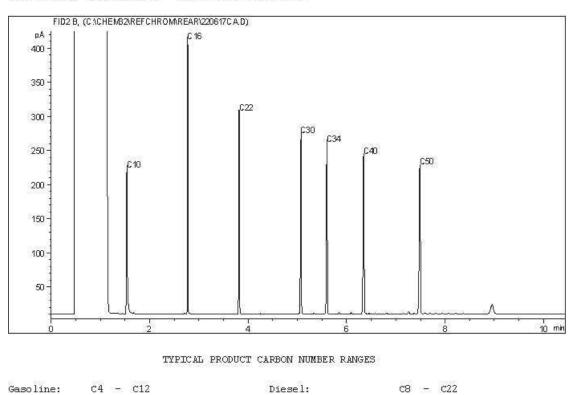
Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

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 Signature Page.

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www.B	rmation				Calgary					Saskatchewan	A MARLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BU			B H22	BH22	BH2	BHZ	BH 22	BH72	BH27	DUP	3	2			HERWISE	LAB USE ONLY esent	a present	Relinquished by: (Signature/ Print)	Jul	
	Invoice Information	Company :	Contact Name:	Street Address:	City:	Phone:	Email:	Coples:	ATI	Sask	Ar and						-				-		1			*UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJ ARE AVAILABLE FOR VIEW	LAB U Seal present	Seal intact Cooling media present	Rel	MM	
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Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Varsol:

Kerosene:

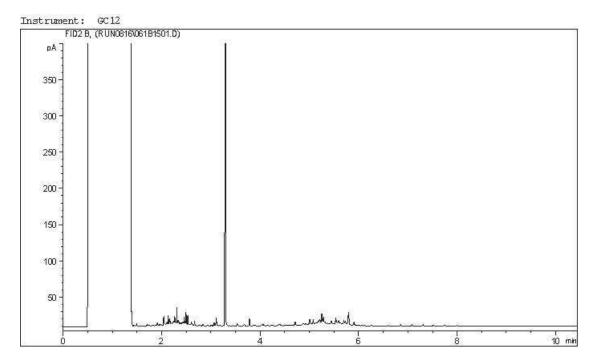
C8 - C12

c7 - c16

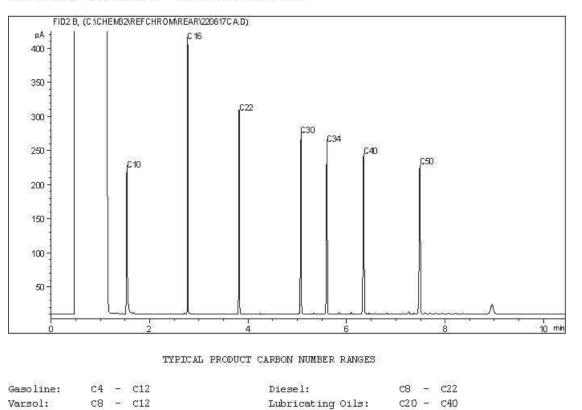
Lubricating Oils:

Crude Oils:

c20 - c40



Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Varsol:

Kerosene:

C8 - C12

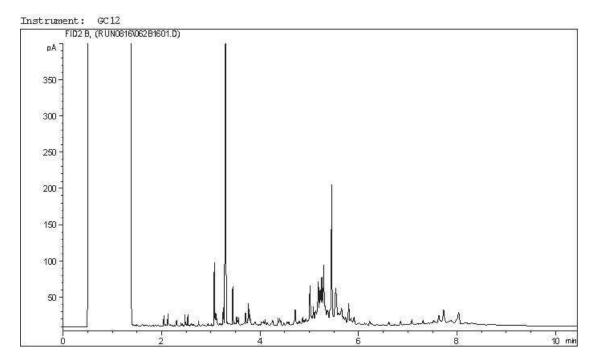
c7 - c16

Crude Oils:

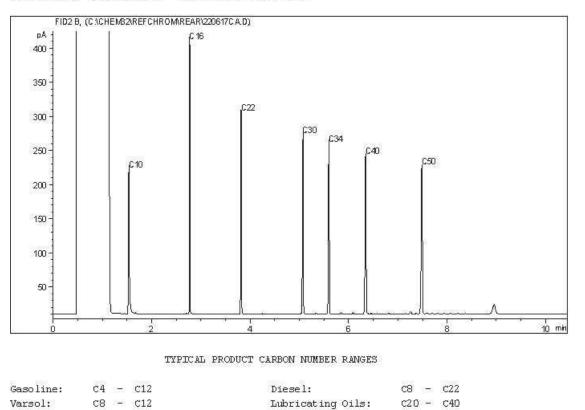
c20 - c40

GOLDER ASSOCIATES LTD. Client Project #: 22525414-1000 Site Reference: CAMP FAREWELL,NT Client ID: BH22-24-03

CCME Hydrocarbons (F2-F4 in soil) Chromatogram



Carbon Range Distribution - Reference Chromatogram

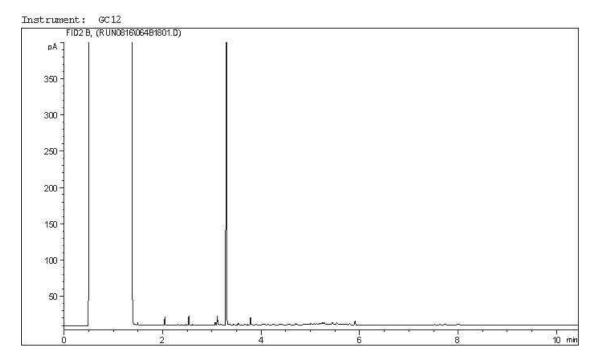


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

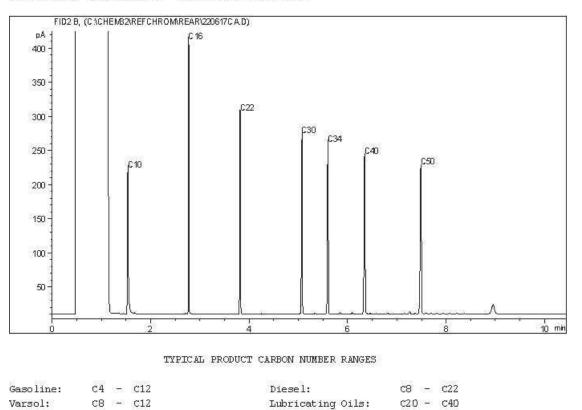
c7 - c16

Kerosene:

Crude Oils:



Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Varsol:

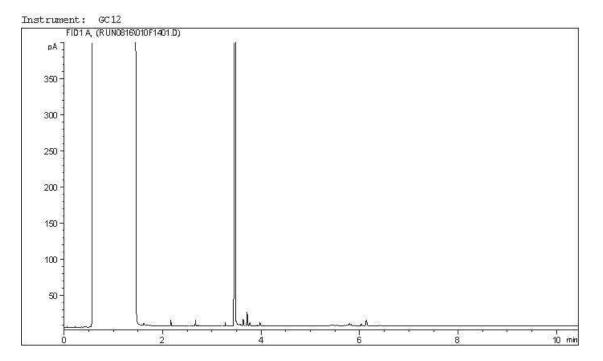
Kerosene:

C8 - C12

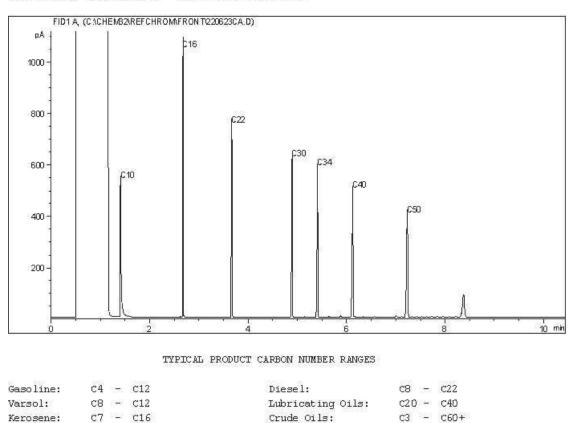
c7 - c16

Crude Oils:

c20 - c40



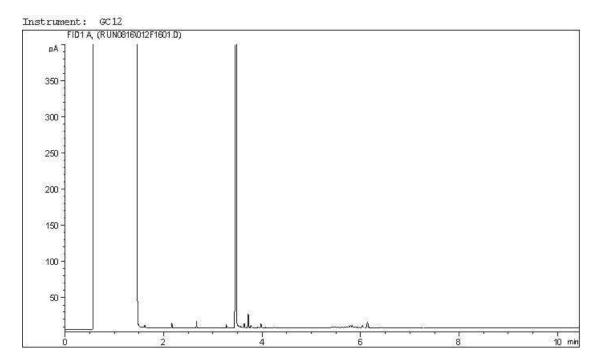
Carbon Range Distribution - Reference Chromatogram



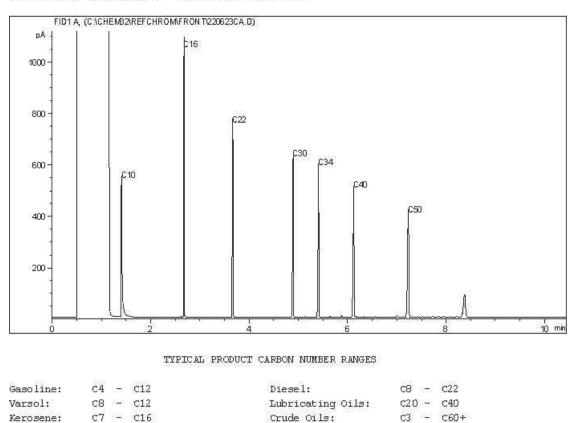
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

GOLDER ASSOCIATES LTD. Client Project #: 22525414-1000 Site Reference: CAMP FAREWELL,NT Client ID: BH22-24-05

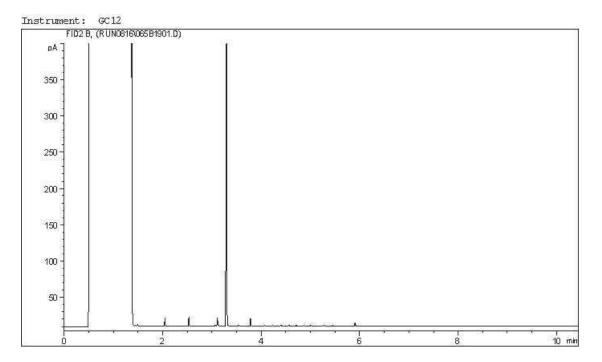
CCME Hydrocarbons (F2-F4 in soil) Chromatogram



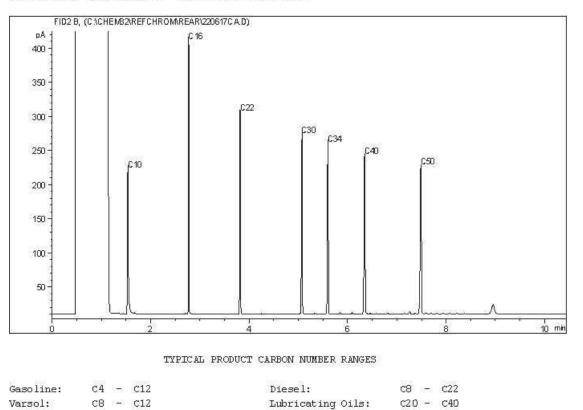
Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.



Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Varsol:

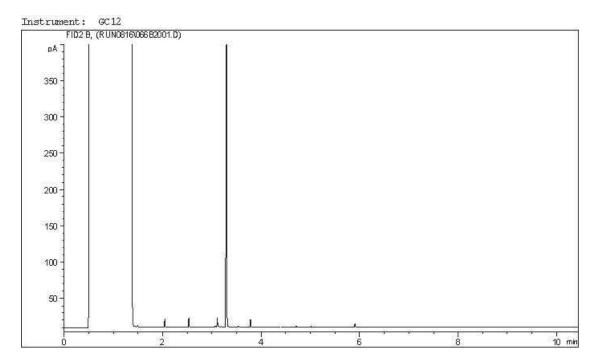
Kerosene:

C8 - C12

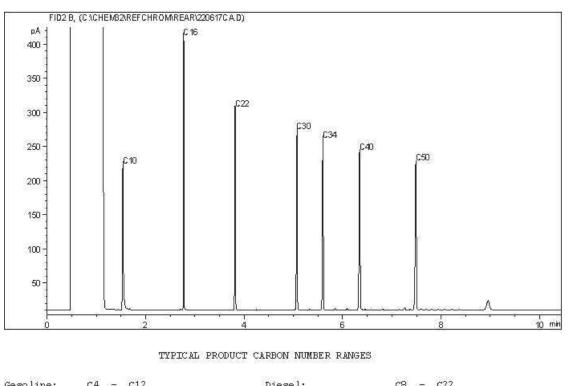
c7 - c16

Crude Oils:

c20 - c40

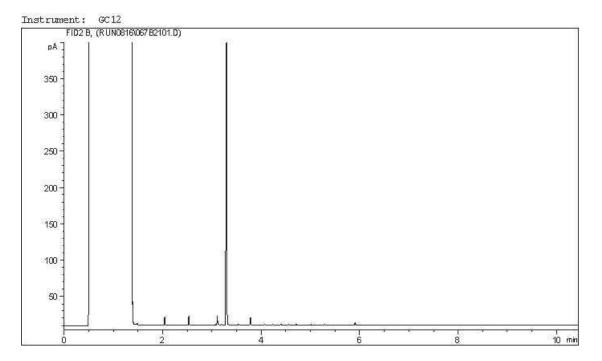


Carbon Range Distribution - Reference Chromatogram

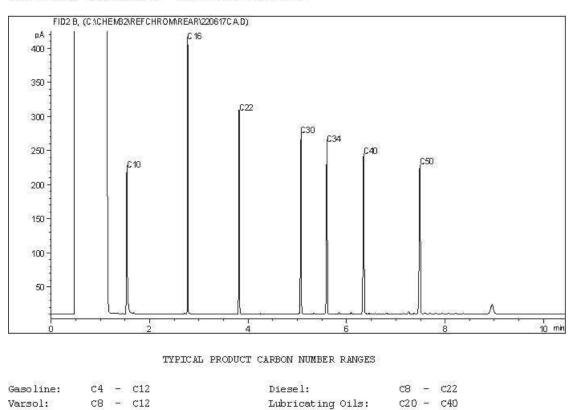


Gasoline:	64 -	- C12	Diesel:	C8 -	144
Varsol:	c8 -	- c12	Lubricating Oils:	C20 -	C40
Kerosene:	c7 -	- C16	Crude Oils:	сз –	C60+

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.



Carbon Range Distribution - Reference Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Varsol:

Kerosene:

C8 - C12

c7 - c16

Crude Oils:

c20 - c40



2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatlabs.com

CLIENT NAME: BUREAU VERITAS CANADA (2019) INC 2021 - 41ST STREET NE Calgary, AB T2E6P2 (403) 291-3077 ATTENTION TO: Cynny Hagen PROJECT: C260023 AGAT WORK ORDER: 22C940477 SOIL ANALYSIS REVIEWED BY: Loan Nguyen, Senior Analyst DATE REPORTED: Sep 06, 2022 PAGES (INCLUDING COVER): 7 VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (403) 735-2005

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aimer:	

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

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(APEGA)	
Western Enviro-Agricultural Laboratory Association (WEALA)	
Environmental Services Association of Alberta (ESAA)	

Page 1 of 7

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Certificate of Analysis

AGAT WORK ORDER: 22C940477 PROJECT: C260023 2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatilabs.com

CLIENT NAME: BUREAU VERITAS CANADA (2019) INC

SAMPLING SITE:

ATTENTION TO: Cynny Hagen

SAMPLED BY:

Metals - Barium by Fusion ICP													
DATE RECEIVED: 2022-09-08						DATE REPORTED: 2022-09-06							
				AZM220-BH22-	AZM223-BH22-								
	S	AMPLE DES	CRIPTION:	24-01	24-04								
		SAM	PLE TYPE:	Soil	Soil								
		DATE	SAMPLED:	2022-09-02 10:20	2022-09-02 10:40								
Parameter	Unit	G/S	RDL	4266910	4266912								
True Barium by Fusion ICP	mg/kg		50	4930	3650								

Comments:RDL - Reported Detection Limit;G / S - Guideline / Standard4266910-4266912Result is based on the dry weight of the sample.

Analysis performed at AGAT Calgary (unless marked by *)

Certified By:



2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatlabs.com

Quality Assurance

CLIENT NAME: BUREAU VERITAS CANADA (2019) INC

PROJECT: C260023

AGAT WORK ORDER: 22C940477

ATTENTION TO: Cynny Hagen

SAMPLING SITE:

SAMPLED BY:

				Soi	l Ana	alysis	5								
RPT Date: Sep 06, 2022			C	DUPLICAT	E		REFEREN	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured		ptable nits	Recovery	Lir	ptable nits	Recovery	Lie	ptable nits
		là					Value	Lower	Upper		Lower	Upper		Lower	Upper
Metals - Barium by Fusion ICP Barium by Fusion ICP-OES	4266587		976	977	0.0%	< 40	95%	70%	130%				NA	70%	130%

Comments: Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated. Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.

Certified By:



AGAT QUALITY ASSURANCE REPORT (V1)

Page 3 of 7

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Method Summary

CLIENT NAME: BUREAU VERITAS CANA	DA (2019) INC	AGAT WORK ORDER: 22C940477							
PROJECT: C260023		ATTENTION TO: 0	Synny Hagen						
SAMPLING SITE:		SAMPLED BY:							
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE						
Soil Analysis									
True Barium by Fusion ICP	SOIL- 0620, INST- 0140	ASTM D4503.08	ICP/OES						

1 -SEP -22 PM12:10

BUREAU VERITAS

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Sent To: AGAT - Calgary 2910 12th Street NE Calgary, AB, T2E 7P7 Tel: (403) 735-2005

CHAIN OF CUSTODY RECORD FOR SUBCONTRACTED WORK Page 01 of 01

COC # C260023-CAGT-01-01

226940477

REF	PORT INFORMATION pmpany: Bureau Veritas														A	NALYS	IS REQU	ESTED							
Co	mpany:	Bure	au Ve	ritas														Τ				1			
Ad	dress:	4000	19st	N.E, Cal	lgary, A	lberta,	T2E 6P8																		
Col	ntact Name:	Cynn	y Hag	en								Extraction													
Em	ail:	Cynn	y.HAC	SEN@bi	ureauve	eritas.c	om, Cus	tomersolution	swest@bu	reauverita	as.co	Extra													
Pho	one:	(403)	735-	2273								using Fusion													
Lab	Project #:	C260	023									sing F													
#	SAMPLE ID						MATRIX	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	SAMPLER INITIALS		Barium on ICP us											ADDITIO	NAL SAN	IPLE INFORMATION
1	AZM220-BH22	-24-01					SOIL	2022/08/08	10:20	ML	1	x										(P:01)			
2	AZM223-BH22	-24-04					SOIL	2022/08/08	10:40	ML	1	х										(P:01)			
3																									
4																									
5																									
6																									
7														_	_			_							
8														_	_		_								
9														_		_	_	_							
10		_	_	_												_1_									
REG	ULATORY CRITER	A				_		SPECIAL INSTR			_														TURNAROUND TIME
								Please inform I • You are no • The hold ti **Please return	t accredited me is appro	for the rec aching for f	queste the re	ed tes equest	ted tes	st(s).											X Rush Required
coc	DLER ID:						1	COOLER ID:									DLER ID:							- 1	Date Required
Cust	ody Seal Present ody Seal Intact ing Media Present	YES	NO	Temp: (°C)	L.	ž.	10	YES NO Custody Seal Present Temp Custody Seal Intact (°C) Cooling Media Present				L.	9	×	Cust	ody Seal ody Seal ing Medi	ntact		YES NO	Tem (°C)		2		Please inform us if rush charges will be incurred.	
RELI	NOUISHED BY: (SI	N & PR						(YYYY/MM/DD)	TIME: (H		RECE	IVED	BY: (S	IGN & P	RINT)				l	DATE: ()	YYY/MN	/DD)	TIME: ()	HH:MM)	
1/	Bed 1	わか	11	Wibre	hhu	6	2021	109101	109:	30	1			lai	nC	RIA	le	Th		2022			12:1	0	
2.											2.														

A A A A A A A A A A A A A A A A A A A	SAMPLE INTEGRITY RECEIPT
AGAT Lat	poratories
RECEIVING BASICS - Shipping	Temperature (Bottles/Jars only) N/A only Soil Bags Received
Company/Consultant: Bureau Veritas	FROZEN (Please Circle if samples received Frozen)
Courier: 0100 Prepaid Collect	1 (Bottle/Jar) <u>NASail =</u> °C 2(Bottle/Jar)++=°C
counci	3 (Bottle/Jar)++=°C 4 (Bottle/Jar)++=°C
Waybill#	5 (Bottle/Jar)++=°C 6 (Bottle/Jar)++=°C
Branch: EDM GP FN FM RD VAN LYD FSJ EST SASK Other:	7 (Bottle/Jar)++=°C 8 (Bottle/Jar)++=°C
If multiple sites were submitted at once: Yes No	9 (Bottle/Jar)++=°C 10 (Bottle/Jar)++=°C
Custody Seal Intact: Yes No NA	(If more than 10 coolers are received use another sheet of paper and attach)
TAT: <24hr 24-48hr 48-72hr Reg Other	LOGISTICS USE ONLY
Cooler Quantity:	Workorder No: <u>22C94047</u> 7
TIME SENSITIVE ISSUES - Shipping	Samples Damaged: Yes No If YES why?
	No Bubble Wrap Frozen Courier
ALREADY EXCEEDED HOLD TIME? Yes No	Other:
Inorganic Tests (Please Circle): Mibi , BOD , Nitrate/Nitrite , Turbidity , Color , Microtox , Ortho PO4 , Tedlar Bag , Residual Chlorine , Chlorophyll* ,	Account Project Manager:have they been notified of the above issues: Yes No
Chloroamines*	Whom spoken to: Date/Time:
Earliest Expiry:	CPM Initial
Hydrocarbons: Earliest Expiry	General Comments:
SAMPLE INTEGRITY - Shipping	
Hazardous Samples: YES NO Precaution Taken:	
Legal Samples: Yes No	
International Samples: Yes No	
Tape Sealed: Yes No	
Coolant Used: Icepack Bagged Ice Free Ice Free Water None	

* Subcontracted Analysis (See CPM)

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- IN - CITY -	JAZOO EXPRESS COURIER www.jazoocourier.com	CLIENT USE ONLY	Receiver Sample Reception Billed To: Bureau Veritas	Delivery From: Bureau Veritas Calgary	Delivery To: AGAT-Calgary 2910 12th street NE Calgary,AB, T2E 7P7		erivelupe, sm/med/lg box, cooler, efc	Jeb/PO/Refatence #:	DRIVER USE ONLY		D/O Time:	# Of Same Day		and and	D/O Driver Name:	LAN ()	HOTSHOT DETAILS	Or Total Charge (\$):	OFFICE USE ONLY	Invoiced By:	To schedule a pickup please contact dispatch at the city nearest vou:	403-660-5504 Fort McMurray 587-645-6364 780-903-3628 Grande Prairie 587-297-8406	CAL AND (
V.	JAZ00		Robel Mebrahmu		10/10/2202	c	\sim	Authorized Shipper Signature:	K	1 BY	6	1 # 0f TDG			Total # Items Dropped Off:	Authorized Receiver Signature:		a			To schedule a	Calgary Edmonton	THANK YOU FOR S
	A STORES COUNT		Sender Name:	Date:		Total # Items:		 Authorize		P/U Driver Name:	# Items P/U:	# Of Overweight	Additional Info:		Total # Item:	Authorized		Total Km:		Verified By:			

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2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatlabs.com

CLIENT NAME: BUREAU VERITAS CANADA (2019) INC 2021 - 41ST STREET NE Calgary, AB T2E6P2 (403) 291-3077 ATTENTION TO: Cynny Hagen PROJECT: C260023 AGAT WORK ORDER: 22C940477 SOIL ANALYSIS REVIEWED BY: Loan Nguyen, Senior Analyst DATE REPORTED: Sep 06, 2022 PAGES (INCLUDING COVER): 7 VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (403) 735-2005

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aimer:	

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

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(APEGA)	
Western Enviro-Agricultural Laboratory Association (WEALA)	
Environmental Services Association of Alberta (ESAA)	

Page 1 of 7

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Certificate of Analysis

AGAT WORK ORDER: 22C940477 PROJECT: C260023 2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatilabs.com

CLIENT NAME: BUREAU VERITAS CANADA (2019) INC

SAMPLING SITE:

ATTENTION TO: Cynny Hagen

SAMPLED BY:

				Metals	s - Barium by	' Fusion ICP
DATE RECEIVED: 2022-09-08						DATE REPORTED: 2022-09-06
				AZM220-BH22-	AZM223-BH22-	
	S	SAMPLE DES	CRIPTION:	24-01	24-04	
		SAM	PLE TYPE:	Soil	Soil	
		DATE	SAMPLED:	2022-09-02 10:20	2022-09-02 10:40	
Parameter	Unit	G/S	RDL	4266910	4266912	
True Barium by Fusion ICP	mg/kg		50	4930	3650	

Comments:RDL - Reported Detection Limit;G / S - Guideline / Standard4266910-4266912Result is based on the dry weight of the sample.

Analysis performed at AGAT Calgary (unless marked by *)

Certified By:



2910 12TH STREET NE CALGARY, ALBERTA CANADA T2E 7P7 TEL (403)735-2005 FAX (403)735-2771 http://www.agatlabs.com

Quality Assurance

CLIENT NAME: BUREAU VERITAS CANADA (2019) INC

PROJECT: C260023

AGAT WORK ORDER: 22C940477

ATTENTION TO: Cynny Hagen

SAMPLING SITE:

SAMPLED BY:

Soil Analysis															
RPT Date: Sep 06, 2022			C	DUPLICAT	E		REFEREN	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
		là					Value	Lower	Upper		Lower	Upper		Lower	Upper
Metals - Barium by Fusion ICP Barium by Fusion ICP-OES	4266587		976	977	0.0%	< 40	95%	70%	130%				NA	70%	130%

Comments: Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated. Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.

Certified By:



AGAT QUALITY ASSURANCE REPORT (V1)

Page 3 of 7

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Method Summary

CLIENT NAME: BUREAU VERITAS CANA	DA (2019) INC	AGAT WORK ORE	AGAT WORK ORDER: 22C940477					
PROJECT: C260023		ATTENTION TO: Cynny Hagen						
SAMPLING SITE:		SAMPLED BY:						
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE					
Soil Analysis								
True Barium by Fusion ICP	SOIL- 0620, INST- 0140	ASTM D4503.08	ICP/OES					

1 -SEP -22 PM12:10

BUREAU VERITAS

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Sent To: AGAT - Calgary 2910 12th Street NE Calgary, AB, T2E 7P7 Tel: (403) 735-2005

CHAIN OF CUSTODY RECORD FOR SUBCONTRACTED WORK Page 01 of 01

COC # C260023-CAGT-01-01

226940477

REF	PORT INFORMATI	N													A	NALYS	IS REQU	ESTED							
Co	mpany:	Bure	au Ve	ritas														Τ				1			
Ad	dress:	4000	19st	N.E, Cal	lgary, A	lberta,	T2E 6P8																		
Col	ntact Name:	Cynn	y Hag	en								Extraction													
Em	ail:	Cynn	y.HAC	SEN@bi	ureauve	eritas.c	om, Cus	tomersolution	swest@bu	reauverita	as.co	Extra													
Pho	one:	(403)	735-	2273								using Fusion													
Lab	Project #:	C260	023									sing F													
#	SAMPLE ID						MATRIX	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	SAMPLER INITIALS		Barium on ICP us											ADDITIO	NAL SAN	IPLE INFORMATION
1	AZM220-BH22	-24-01					SOIL	2022/08/08	10:20	ML	1	x										(P:01)			
2	AZM223-BH22	-24-04					SOIL	2022/08/08	10:40	ML	1	х										(P:01)			
3																									
4																									
5																									
6																									
7														_	_			_							
8														_	_		_								
9														_		_	_	_							
10		_	_	_												_1_									
REG	ULATORY CRITER	A				_		SPECIAL INSTR			_														TURNAROUND TIME
								Please inform I • You are no • The hold ti **Please return	t accredited me is appro	for the rec aching for f	queste the re	ed tes equest	ted tes	st(s).											X Rush Required
coc	DLER ID:						1	COOLER ID:									DLER ID:							- 1	Date Required
Cust	ody Seal Present ody Seal Intact ing Media Present	YES	NO	Temp: (°C)	L.	ž.	10	Custody Seal Pre Custody Seal Inta Cooling Media Pr	oct	YES NO	Теп (°(L.	9	×	Cust	ody Seal ody Seal ing Medi	ntact		YES NO	Tem (°C)		2		Please inform us if rush charges will be incurred.
RELI	NOUISHED BY: (SI	N & PR						(YYYY/MM/DD)	TIME: (H		RECE	IVED	BY: (S	IGN & P	RINT)				l	DATE: ()	YYY/MN	/DD)	TIME: ()	HH:MM)	
1/	Bed 1	わか	11	Wibre	hhu	()	2021	109101	109:	30	1			lair	nC	RIA	le	th		2022			12:1	0	
2.											2.														

A A A A A A A A A A A A A A A A A A A	SAMPLE INTEGRITY RECEIPT
AGAT Lat	poratories
RECEIVING BASICS - Shipping	Temperature (Bottles/Jars only) N/A only Soil Bags Received
Company/Consultant: Bureau Veritas	FROZEN (Please Circle if samples received Frozen)
Courier: 0100 Prepaid Collect	1 (Bottle/Jar) <u>NASail =</u> °C 2(Bottle/Jar)++=°C
counci	3 (Bottle/Jar)++=°C 4 (Bottle/Jar)++=°C
Waybill#	5 (Bottle/Jar)++=°C 6 (Bottle/Jar)++=°C
Branch: EDM GP FN FM RD VAN LYD FSJ EST SASK Other:	7 (Bottle/Jar)++=°C 8 (Bottle/Jar)++=°C
If multiple sites were submitted at once: Yes No	9 (Bottle/Jar)++=°C 10 (Bottle/Jar)++=°C
Custody Seal Intact: Yes No NA	(If more than 10 coolers are received use another sheet of paper and attach)
TAT: <24hr 24-48hr 48-72hr Reg Other	LOGISTICS USE ONLY
Cooler Quantity:	Workorder No: <u>22C94047</u> 7
TIME SENSITIVE ISSUES - Shipping	Samples Damaged: Yes No If YES why?
	No Bubble Wrap Frozen Courier
ALREADY EXCEEDED HOLD TIME? Yes No	Other:
Inorganic Tests (Please Circle): Mibi , BOD , Nitrate/Nitrite , Turbidity , Color , Microtox , Ortho PO4 , Tedlar Bag , Residual Chlorine , Chlorophyll* ,	Account Project Manager:have they been notified of the above issues: Yes No
Chloroamines*	Whom spoken to: Date/Time:
Earliest Expiry:	CPM Initial
Hydrocarbons: Earliest Expiry	General Comments:
SAMPLE INTEGRITY - Shipping	
Hazardous Samples: YES NO Precaution Taken:	
Legal Samples: Yes No	
International Samples: Yes No	
Tape Sealed: Yes No	
Coolant Used: Icepack Bagged Ice Free Ice Free Water None	

* Subcontracted Analysis (See CPM)

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= IN - C174 -	JAZOO EXPRESS COURIER www.jazoocourier.com	CLIENT USE ONLY	Receiver Sample Reception Billed To: Bureau Veritas	Delivery From: Bureau Veritas Calgary	Delivery To: AGAT-Calgary 2910 12th street NE Calgary,AB, T2E 7P7		erivelupe, sm/med/lg box, cooler, efc	Jeb/PO/Refatence #:	DRIVER USE ONLY		D/O Time:	# Of Same Day		and and	D/O Driver Name:	LAN ()	HOTSHOT DETAILS	Or Total Charge (\$):	OFFICE USE ONLY	Invoiced By:	To schedule a pickup please contact dispatch at the city nearest vou:	403-660-5504 Fort McMurray 587-645-6364 780-903-3628 Grande Prairie 587-297-8406	CAL AND (
V.	JAZ00		Robel Mebrahmu		10/10/2202	c	\sim	Authorized Shipper Signature:	K	1 BY	6	1 # 0f TDG			Total # Items Dropped Off:	Authorized Receiver Signature:		a			To schedule a	Calgary Edmonton	THANK YOU FOR S
	A STORES COUNT		Sender Name:	Date:		Total # Items:		 Authorize		P/U Driver Name:	# Items P/U:	# Of Overweight	Additional Info:		Total # Item:	Authorized		Total Km:		Verified By:			

Page 7 of 7

-1

....

GOLDER DATA QUALITY REVIEW CHECKLIST

Site Location: Camp Farewell, NT			Sampling Date: August 8, 2022
Y		-	
Golder Project Number: 22525414	-1000	_	Laboratory: Bureau Veritas Edmonton
Lab Submission Number: C260023		-	
	1 1 1	,	4 1 10 X
Was the Cooler Received at the lab under a			
Was proper chain of custody of the samples		1	
Were sample temperatures acceptable when	•		Yes
Were all samples analyzed and extracted with			Yes
Has lab warranted all tests were in statistical			Yes
Was sufficient sample provided for the requ	•		Yes
Has lab warranted all samples were analyzed	d with limi	ted headsp	pace present?: Yes
Are All Laboratory QC Within Acceptance Yes Surrogate Recovery	Criteria (Y No X	res, No, No NA	Comments All remaining laboratory QC results are within
Method Blank Concentration		-	
	Х		acceptance criteria, please see QA/QC
Laboratory Duplicate RPD X			appendix.
Matrix Spike Recovery	X		
Blank Spike Recovery	Х		
Are All Field QC Samples Within Alert Lim	nits (Yes, N	No, Not Ap	pplicable)?
Yes	No	NA	Comments
Field Blank Concentration		Х	All field QC samples are within
Trip Blank Concentration		X	alert limits.
Field Duplicate RPD X			
Is data considered reliable (Yes/No/Suspect) If answer is "No" or "Suspect", describe and		ationale	Yes
IT answer is two of Suspect, describe and		anonaic.	
Data Reviewed by (Print): Anita Col	bert		Data Reviewed by (Signature): Onits Collect
Date: August	18, 2022	-	



Your P.O. #: 22525414-1100-1104 Your Project #: 22525414-1000 Site Location: CAMP FAREWELL,NT Your C.O.C. #: 1of 1, 1 OF 2, 2 of 2

Attention: Aurelie Bellavance

GOLDER ASSOCIATES LTD. 2800, 700 -2nd Street SW CALGARY, AB CANADA T2P 2W2

> Report Date: 2022/08/17 Report #: R3217435 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C260026 Received: 2022/08/12, 09:00

Sample Matrix: Soil # Samples Received: 14

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
Elements by ICPMS - Soils (1)	12	2022/08/16	2022/08/17	AB SOP-00001 / AB SOP- 00043	EPA 6020b R2 m
Elements by ICPMS - Soils (1)	2	2022/08/17	2022/08/17	AB SOP-00001 / AB SOP- 00043	EPA 6020b R2 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.

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



Your P.O. #: 22525414-1100-1104 Your Project #: 22525414-1000 Site Location: CAMP FAREWELL,NT Your C.O.C. #: 1of 1, 1 OF 2, 2 of 2

Attention: Aurelie Bellavance

GOLDER ASSOCIATES LTD. 2800, 700 -2nd Street SW CALGARY, AB CANADA T2P 2W2

> Report Date: 2022/08/17 Report #: R3217435 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C260026 Received: 2022/08/12, 09:00

Encryption Key



17 Aug 2022 16:37:26

Please direct all questions regarding this Certificate of Analysis to your Project Manager. Cynny Hagen, Key Account Specialist Email: Cynny.HAGEN@bureauveritas.com Phone# (403)735-2273 _____

This report has been generated and distributed using a secure automated process.

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 Signature Page.



ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

ampling Date						1231		AZN	.202	7.0211	1232		,	AZM2			
		2022/0				′08/08			/08/08		08/08		20	22/08			
		15:	-		_	:50			:00		:00			15:2	-		
OC Number		10	F 2		10)F 2		10)F 2	10				1 OF	2		
	UNITS	BH22-	35-01 C	C Batch	BH22	-35-02 Q	C Batch	BH22	-35-03	BH22- Lab-	·35-03 Dup	QC Ba	atch BH	122-34	4-01	RDL C	ጋር Bat
lements																	
otal Chromium (Cr)	mg/kg	8.	4 A	683218	6	.1 A	683223	6	.9	6	.7	A682	611	8.9		1.0 A	46832
otal Nickel (Ni)	mg/kg	7.	6 A	683218	6	.5 A	683223	1	.0	1	1	A682	611	8.0		1.0 A	468322
DL = Reportable Detection Li	mit				•			•									
ab-Dup = Laboratory Initiated	d Duplic	ate															
Bureau Veritas ID			AZM2	34		AZM23	35		AZIV	1236			AZM23	7			
			2022/08	-		2022/08			2022/				022/08/				-
Sampling Date			15:2	·		15:30				:15		-	15:00				
COC Number			1 OF	2		1 OF 2	2		10	F 2			1 OF 2				-
	ι	JNITS	BH22-34	1-02 Q	Batch	BH22-34	I-03 Q(Batch	BH22-	33-04	QC Ba	tch B	H22-33-	-01 R	DL C	C Bato	:h
Elements																	
Total Chromium (Cr)	r	ng/kg	9.4	A	583218	6.7	A6	84023	7	.3	A6838	801	8.2	1	.0 A	68321	.8
Total Nickel (Ni)		ng/kg	20	A	583218	11	A6	84023	1	3	A6838	801	7.5	1	.0 A	68321	.8
RDL = Reportable Detec	ction Lin	nit				1			1								
Dumoou Maritas ID			AZM238	4.71	V1239		0.70	//240	AZM	1244	AZM	242	AZM	244	1	1	
Bureau Veritas ID							_	-							<u> </u>		
Sampling Date		20	22/08/0 15:05		/08/08 5:10			/08/08 1:30	2022/	:40	2022/0 14:		2022/0				
COC Number			1 OF 2		OF 2		_	DF 2	-	F 2	2 0		2 0				
	UN	ITS BH	122-33-0	_	-	QC Batc	_	-32-01	-				-		RDL	QC B	atch
Elements		•		•		•	•		•				•		•	•	=
Total Chromium (Cr)	mg	/kg	9.1		13	A68261	1 9	9.6	8	.9	6.	9	8.	9	1.0	A683	3218
Total Nickel (Ni)	mg	-	8.0		16	A68261	1 8	3.3	9	.6	8.	8	8.	3	1.0	A683	3218
RDL = Reportable Detection						•			•				•		•	•	



GENERAL COMMENTS

Each te	emperature is the a	verage of up to th	nree cooler temperatures taken at receipt
	Package 1	6.0°C]
			-
Result	s relate only to the	items tested.	



QUALITY ASSURANCE REPORT

QA/QC		007	D			2		
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limit
A682611	MKJ	Matrix Spike	Total Chromium (Cr)	2022/08/17		113	%	75 - 125
		[AZM232-01]	Total Nickal (Ni)	2022/08/17		104	0/	75 125
1000011	NAIZI	OC Standard	Total Nickel (Ni)	2022/08/17		104	%	75 - 125
4682611	MKJ	QC Standard	Total Chromium (Cr)	2022/08/17		113	%	59 - 141
000044	N ALCI	Caller d Dlamb	Total Nickel (Ni)	2022/08/17		110	%	79 - 121
A682611	MKJ	Spiked Blank	Total Chromium (Cr)	2022/08/17		97	%	80 - 120
			Total Nickel (Ni)	2022/08/17		96	%	80 - 120
A682611	MKJ	Method Blank	Total Chromium (Cr)	2022/08/17	<1.0		mg/kg	
			Total Nickel (Ni)	2022/08/17	<1.0		mg/kg	
A682611	MKJ	RPD [AZM232-01]	Total Chromium (Cr)	2022/08/17	1.9		%	30
			Total Nickel (Ni)	2022/08/17	5.2		%	30
4683218	MKJ	Matrix Spike	Total Chromium (Cr)	2022/08/17		98	%	75 - 125
			Total Nickel (Ni)	2022/08/17		90	%	75 - 125
A683218	MKJ	QC Standard	Total Chromium (Cr)	2022/08/17		104	%	59 - 141
			Total Nickel (Ni)	2022/08/17		109	%	79 - 121
4683218	MKJ	Spiked Blank	Total Chromium (Cr)	2022/08/17		98	%	80 - 120
			Total Nickel (Ni)	2022/08/17		97	%	80 - 120
4683218	MKJ	Method Blank	Total Chromium (Cr)	2022/08/17	<1.0		mg/kg	
			Total Nickel (Ni)	2022/08/17	<1.0		mg/kg	
4683218	MKJ	RPD	Total Chromium (Cr)	2022/08/17	1.4		%	30
			Total Nickel (Ni)	2022/08/17	5.5		%	30
4683223	KH2	Matrix Spike	Total Chromium (Cr)	2022/08/17		113	%	75 - 125
			Total Nickel (Ni)	2022/08/17		106	%	75 - 125
4683223	KH2	QC Standard	Total Chromium (Cr)	2022/08/17		78	%	59 - 141
			Total Nickel (Ni)	2022/08/17		81	%	79 - 121
4683223	KH2	Spiked Blank	Total Chromium (Cr)	2022/08/17		97	%	80 - 120
			Total Nickel (Ni)	2022/08/17		96	%	80 - 120
4683223	KH2	Method Blank	Total Chromium (Cr)	2022/08/17	<1.0		mg/kg	
			Total Nickel (Ni)	2022/08/17	<1.0		mg/kg	
4683223	KH2	RPD	Total Chromium (Cr)	2022/08/17	7.9		%	30
			Total Nickel (Ni)	2022/08/17	4.8		%	30
A683801	MKJ	Matrix Spike	Total Chromium (Cr)	2022/08/17		104	%	75 - 125
			Total Nickel (Ni)	2022/08/17		90	%	75 - 125
4683801	MKJ	QC Standard	Total Chromium (Cr)	2022/08/17		92	%	59 - 141
			Total Nickel (Ni)	2022/08/17		104	%	79 - 121
4683801	MKJ	Spiked Blank	Total Chromium (Cr)	2022/08/17		99	%	80 - 120
			Total Nickel (Ni)	2022/08/17		98	%	80 - 120
4683801	MKJ	Method Blank	Total Chromium (Cr)	2022/08/17	<1.0		mg/kg	
			Total Nickel (Ni)	2022/08/17	<1.0		mg/kg	
4683801	MKJ	RPD	Total Chromium (Cr)	2022/08/17	5.9		%	30
			Total Nickel (Ni)	2022/08/17	8.0		%	30
4684023	KH2	Matrix Spike	Total Chromium (Cr)	2022/08/17		120	%	75 - 125
		-	Total Nickel (Ni)	2022/08/17		106	%	75 - 125
4684023	KH2	QC Standard	Total Chromium (Cr)	2022/08/17		99	%	59 - 141
			Total Nickel (Ni)	2022/08/17		110	%	79 - 121
4684023	KH2	Spiked Blank	Total Chromium (Cr)	2022/08/17		101	%	80 - 120
			Total Nickel (Ni)	2022/08/17		100	%	80 - 120
4684023	KH2	Method Blank	Total Chromium (Cr)	2022/08/17	<1.0		mg/kg	
			Total Nickel (Ni)	2022/08/17	<1.0		mg/kg	
A684023	KH2	RPD	Total Chromium (Cr)	2022/08/17	10		%	30



QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Nickel (Ni)	2022/08/17	5.9		%	30
Duplicate	e: Paire	d analysis of a sepa	rate portion of the same sample. Used to eval	luate the variance in the measure	ment.			
Matrix S	pike: A	sample to which a	known amount of the analyte of interest has b	een added. Used to evaluate sam	ple matrix inte	rference.		
QC Stand	dard: A s	ample of known co	ncentration prepared by an external agency u	under stringent conditions. Used a	is an independ	lent check of me	thod accur	acy.
Spiked B	lank: A k	olank matrix sample	e to which a known amount of the analyte, us	ually from a second source, has be	en added. Use	d to evaluate m	ethod accu	iracy.
Method	Blank: A	A blank matrix cont	aining all reagents used in the analytical proce	edure. Used to identify laboratory	contaminatior	۱.		



VALIDATION SIGNATURE PAGE

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

ayon -

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

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 Signature Page.

Page 1 of 2		12-Aug-22 02:00	Cynny Hagen		C 200020	TNIS-0475			Turnarour	5 to 7 Day10 Day	urnaround urcharges	Same Day 1 Day		Pate Required: Comments	email reart to	ald. SHELLOQR & POINS. com	ald i of -equise wighter	Walsond to Pacifi the cole		Received in Yellowknife	BY: C) MENCITIO	@ 9:00 Ar-	AUG 12 2022	116-212/13-45	Temp: 6/2 /9		IECT TO BUREAU YERITAS STANDARD TERMS AND CONDITIONS' SIGNING OF THIS CHAIN OF CUSTOPY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH- ING AT WWW BVIAL COM/TERMS-AND-CONDITIONS OR BY CALLING THE LABORATORY LISTED ABOVE TO OBITAIN A COPY	Temperature reading by:	2	pecial in	0
	-		Cynny			11711		Kaur	7 18 19 20 21 22		oar Gar	1	AJNIAT		2 X X	X 2	(X 2	XX 2	2 X	X X N	XX	XX 2	XX 2	X X 2	(X 2	XX 2	NOWLEDGMENT AND ACCEP	Yes No	•	Time HH MM	<u> </u>
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539		Quotation #:	P.O. #/ AFE#:	Project #:	Site #:	Site Location:	Site Location Province:	Sampled By:	4 5 6 7 8			ЛАТС	2: TRUE TO	втех ғ.т. 2НА9 ВТЕХ ғ.т МUIЯА8 V BABIUM													ND CONDITIONS ² SIGNING (TIONS ₍ OR BY CALLING THE				hav
hoose Lacation: Calgary, AB: 4000 13th St. NE, T2E 6F8 Toll Free (800) 386-7247 Edmonton, AB: 9331-48 St. T68 2R4 Toll Free (800) 386-7247 Winnipeg, MB: D-675 Berry St. R3H 1A7 Toll Free (866) 800-6208	Report Information (if differs from invoice)	Golder Associates	Aurelie Bellavance		Calgary AB Postal T2P 4K3 Code: T2P 4K3	403-299-5600	awalie. bellar anceowig. com	tan owsp. com	1 2 3	Drinking Water - Manitoba	Sother AMSRP	JREAU VERITAS	IJVAJ23		08 08 is 45 Soil	08 08 15 50	08 08 16 00 Soil	08 US 15 20 Soil	22 08 08 15 25 Sail	220808 1530 Soil	28 08 15 15 Soil	08 08 15 00 Soil	28 08 15 05 Soil	08 68 15 10 Sail	08 08 14 30 501	0808 14 40 501		LAB USE ONLY Yes No	Seal present *C Seal Intact *C Conline media precent 1	HH Time Received by: (Signature/ Print)	00 1 Meg
ation: , AB: 4000 19th St ton, AB: 9331-48 S eg, MB: D-675 Ber		Company:	Contact Name:	Street Address:	City:	Phone:	Email:	Copies:			3	SAMPLING UNTIL	Date	*	22	22	22 (22	22 (220	1 2208	22 (2208	22 (22 (22	N THIS CHAIN OF C ARE AVAI	١	$\frac{\sqrt{5}}{\sqrt{5}}$		0
Choose Location: Calgary, AB: 4 Edmonton, AE Winnipeg, M	nation Invoice to (requires report)	Client #254, Golder Associates	237 - 4 Ave SW Suite 3300		Calgary Prov: AB Postal Code:		Canada Account Payable		Regulatory Criteria	CCME	Saskatchewan	samples must be kept cool (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BI		Sample identification	BH22-35-01	BH 22-35-02	BH 22-35-03	BH22-34-01	BH22-34-02	BH22-34-03	WANNOUN RANNAR RAN BH 22-33-04	BH22-33-01	BH22-33-02	BH22-33-03	22-3	BH22-32-02	" UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUB ARE AVAILABLE FOR VIEV		· 2.5	Relinquished by: (Signature/ Print)	of O. Of Melissa lad 22
	Invoice Information	Company :	Contact Name:	Street Address:	City:	Phone:	Email:	Copies:		□ AT1	Saska				1 BIH	2 BH	= BH	4 BH	= BH	• BH	7 10010	8 10H	° BH	10 BH	II BH	12 BH	•UNLESS OTH	LAB U	Seal present Seal intact Cooline media present	Reli	2 Mal

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Page 2 of 2	12-Aug-22 09-00	Cynny Hagen	CORDOC	0700070	IKU INS-0475																												
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GOLDER DATA QUALITY REVIEW CHECKLIST

Site Location: Camp Farewell, NT		Sampling Date: August 8, 2022
Golder Project Number: 22525414-1000		Laboratory: Bureau Veritas Edmonton
Lab Submission Number: <u>C260026</u>		
Was the Cooler Received at the lab under a sealed an		-
Was proper chain of custody of the samples documer		pt? Yes
Were sample temperatures acceptable when they read		Yes
Were all samples analyzed and extracted within hold		Yes
Has lab warranted all tests were in statistical control		Yes
Was sufficient sample provided for the requested ana	•	Yes
Has lab warranted all samples were analyzed with lin	nited heads	pace present?: Yes
Are All Laboratory QC Within Acceptance Criteria (Yes, No, N	lot Applicable)?
Yes No	NA	Comments
Surrogate Recovery	Х	All laboratory QC results are within
Method Blank Concentration X		acceptance criteria.
Laboratory Duplicate RPD X		
Matrix Spike Recovery X		
Blank Spike Recovery X		
Are All Field QC Samples Within Alert Limits (Yes,	No, Not A	pplicable)?
Yes No	NA	Comments
Field Blank Concentration	X	All field QC samples are within
Trip Blank Concentration	Х	alert limits.
Field Duplicate RPD X		
Is data considered reliable (Yes/No/Suspect)?:		Yes
If answer is "No" or "Suspect", describe and provide	rationale:	
1 7 1		
Data Reviewed by (Print): Anita Colbert		Data Reviewed by (Signature):
Date: August 18, 2022		



Your P.O. #: 22525414-1100-1104 Your Project #: 22525414-1000 Site Location: CAMP FAREWELL,NT Your C.O.C. #: 1 of 1

Attention: Aurelie Bellavance

GOLDER ASSOCIATES LTD. 2800, 700 -2nd Street SW CALGARY, AB CANADA T2P 2W2

> Report Date: 2022/09/06 Report #: R3226583 Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C260028 Received: 2022/08/12, 09:00

Sample Matrix: Soil # Samples Received: 11

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
Boron (Hot Water Soluble) (1)	4	2022/08/16	2022/08/16	AB SOP-00034 / AB SOP- 00042	EPA 6010d R5 m
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1, 3)	11	N/A	2022/08/16	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX (1)	11	N/A	2022/08/17		Auto Calc
Hexavalent Chromium (1, 4)	4	2022/08/16	2022/08/16	AB SOP-00063	SM 23 3500-Cr B m
Barium on ICP using Fusion Extraction (2)	4	N/A	2022/09/06		
CCME Hydrocarbons (F2-F4 in soil) (1, 5)	3	2022/08/15	2022/08/15	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2-F4 in soil) (1, 5)	8	2022/08/15	2022/08/16	AB SOP-00036	CCME PHC-CWS m
Elements by ICPMS - Soils (1)	4	2022/08/16	2022/08/17	AB SOP-00001 / AB SOP- 00043	EPA 6020b R2 m
Moisture (1)	11	N/A	2022/08/16	AB SOP-00002	CCME PHC-CWS 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.

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



Your P.O. #: 22525414-1100-1104 Your Project #: 22525414-1000 Site Location: CAMP FAREWELL,NT Your C.O.C. #: 1 of 1

Attention: Aurelie Bellavance

GOLDER ASSOCIATES LTD. 2800, 700 -2nd Street SW CALGARY, AB CANADA T2P 2W2

> Report Date: 2022/09/06 Report #: R3226583 Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C260028 Received: 2022/08/12. 09:00

(2) This test was performed by AGAT - Calgary, 2910 12th Street NE , Calgary, AB, T2E 7P7

(3) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is date sampled unless otherwise stated.

(4) Some soil samples may react with the Cr(VI) spike reducing it to Cr(III). These samples are highly unlikely to contain native hexavalent chromium. Thus a failed spike recovery does not invalidate a negative result on the native sample.

(5) All CCME results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil, Validation of Performance-Based Alternative Methods September 2003. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.



AUTHORIZED REPORT RAPPORT AUTORISE

Please direct all questions regarding this Certificate of Analysis to your Project Manager. Cynny Hagen, Key Account Specialist

Email: Cynny.HAGEN@bureauveritas.com

Phone# (403)735-2273

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 Signature Page.



AT1 BTEX AND F1-F4 IN SOIL (VIALS)

	,		,				r	r	r	r
Bureau Veritas ID		AZM245		AZM246		AZM247	AZM248	AZM249		
Sampling Date		2022/08/09 13:30		2022/08/09 13:40		2022/08/09 13:50	2022/08/09 09:20	2022/08/09 09:10		
COC Number		1 of 1		1 of 1		1 of 1	1 of 1	1 of 1		
	UNITS	BH22-28-01	RDL	BH22-28-02	RDL	BH22-28-03	BH22-40-04	BH22-40-03	RDL	QC Batch
Ext. Pet. Hydrocarbon	<u> </u>							·		
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	10	<10	10	<10	37	<10	10	A681077
F3 (C16-C34 Hydrocarbons)	mg/kg	180	50	110	50	<50	<50	<50	50	A681077
F4 (C34-C50 Hydrocarbons)	mg/kg	97	50	<50	50	<50	<50	<50	50	A681077
Reached Baseline at C50	mg/kg	Yes	N/A	Yes	N/A	Yes	Yes	Yes	N/A	A681077
Physical Properties	<u> </u>									
Moisture	%	5.7	0.30	22	0.30	4.8	17	16	0.30	A681090
Volatiles	<u> </u>									
Xylenes (Total)	mg/kg	<0.045	0.045	<0.11	0.11	<0.045	<0.045	<0.045	0.045	A679841
F1 (C6-C10) - BTEX	mg/kg	<10	10	<24	24	<10	<10	<10	10	A679841
Field Preserved Volatiles	· · · ·				-					
Benzene	mg/kg	<0.0050	0.0050	<0.010 (1)	0.010	<0.0050	<0.0050	0.016	0.0050	A680674
Toluene	mg/kg	<0.050	0.050	<0.050 (1)	0.050	<0.050	<0.050	<0.050	0.050	A680674
Ethylbenzene	mg/kg	<0.010	0.010	<0.019 (1)	0.019	<0.010	<0.010	0.025	0.010	A680674
m & p-Xylene	mg/kg	<0.040	0.040	<0.095 (2)	0.095	<0.040	<0.040	<0.040	0.040	A680674
o-Xylene	mg/kg	<0.020	0.020	<0.048 (2)	0.048	<0.020	<0.020	0.031	0.020	A680674
F1 (C6-C10)	mg/kg	<10	10	<24 (2)	24	<10	<10	<10	10	A680674
Surrogate Recovery (%)	<u> </u>									
1,4-Difluorobenzene (sur.)	%	84	N/A	83	N/A	86	83	85	N/A	A680674
4-Bromofluorobenzene (sur.)	%	94	N/A	95	N/A	95	93	92	N/A	A680674
D10-o-Xylene (sur.)	%	102	N/A	107	N/A	96	97	100	N/A	A680674
D4-1,2-Dichloroethane (sur.)	%	85	N/A	85	N/A	86	83	84	N/A	A680674
O-TERPHENYL (sur.)	%	98	N/A	84	N/A	83	98	93	N/A	A681077
BDL = Reportable Detection Li	mit			-			•		•	

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Detection limit reported based on MDL and sample weight used for analysis.

(2) Detection limits raised based on sample weight used for analysis.



AT1 BTEX AND F1-F4 IN SOIL (VIALS)

Bureau Veritas ID		AZM250		AZM251	AZM251	AZM252	AZM253	AZM254		
Sampling Date		2022/08/09 09:00		2022/08/09 09:10	2022/08/09 09:10	2022/08/09 14:00	2022/08/09 14:10	2022/08/09 14:20		
COC Number		1 of 1		1 of 1						
	UNITS	BH22-40-02	RDL	DUP G	DUP G Lab-Dup	BH22-26-01	BH22-26-02	BH22-26-03	RDL	QC Batc
Ext. Pet. Hydrocarbon										
F2 (C10-C16 Hydrocarbons)	mg/kg	17000	10	<10	N/A	15	22	22	10	A681077
F3 (C16-C34 Hydrocarbons)	mg/kg	1300	50	<50	N/A	80	130	130	50	A681077
F4 (C34-C50 Hydrocarbons)	mg/kg	470	50	<50	N/A	<50	<50	<50	50	A681077
Reached Baseline at C50	mg/kg	Yes	N/A	Yes	N/A	Yes	Yes	Yes	N/A	A681077
Physical Properties	•									
Moisture	%	40	0.30	20	19	3.6	15	9.8	0.30	A681090
Volatiles	•									
Xylenes (Total)	mg/kg	57	0.11	<0.045	N/A	<0.045	<0.045	<0.045	0.045	A679841
F1 (C6-C10) - BTEX	mg/kg	2200	24	<10	N/A	<10	<10	<10	10	A679841
Field Preserved Volatiles										
Benzene	mg/kg	0.88 (1)	0.012	0.022	N/A	<0.0050	<0.0050	<0.0050	0.0050	A680674
Toluene	mg/kg	16 (1)	0.12	<0.050	N/A	<0.050	<0.050	<0.050	0.050	A680674
Ethylbenzene	mg/kg	12 (1)	0.024	0.020	N/A	<0.010	<0.010	<0.010	0.010	A680674
m & p-Xylene	mg/kg	37 (1)	0.094	<0.040	N/A	<0.040	<0.040	<0.040	0.040	A680674
o-Xylene	mg/kg	19 (1)	0.047	0.040 (2)	N/A	<0.020	<0.020	<0.020	0.020	A680674
F1 (C6-C10)	mg/kg	2300 (1)	24	<10	N/A	<10	<10	<10	10	A680674
Surrogate Recovery (%)										
1,4-Difluorobenzene (sur.)	%	86	N/A	85	N/A	89	83	86	N/A	A680674
4-Bromofluorobenzene (sur.)	%	99	N/A	90	N/A	96	90	90	N/A	A680674
D10-o-Xylene (sur.)	%	112	N/A	104	N/A	94	101	89	N/A	A680674
D4-1,2-Dichloroethane (sur.)	%	84	N/A	84	N/A	87	80	93	N/A	A680674
O-TERPHENYL (sur.)	%	98	N/A	103	N/A	95	89	96	N/A	A681077
PDL - Poportable Detection Li	mit									-

RDL = Reportable Detection Limit

Lab-Dup = Laboratory Initiated Duplicate

N/A = Not Applicable

(1) Detection limits raised based on sample weight used for analysis.

(2) Qualifying ion outside of acceptance criteria. Results are tentatively identified and potentially biased high.



Bureau Veritas ID		AZM255		
Sampling Date		2022/08/09		
		14:30		
COC Number		1 of 1		
	UNITS	BH22-26-04	RDL	QC Batch
Ext. Pet. Hydrocarbon				
F2 (C10-C16 Hydrocarbons)	mg/kg	38	10	A681077
F3 (C16-C34 Hydrocarbons)	mg/kg	220	50	A681077
F4 (C34-C50 Hydrocarbons)	mg/kg	100	50	A681077
Reached Baseline at C50	mg/kg	Yes	N/A	A681077
Physical Properties				
Moisture	%	21	0.30	A681090
Volatiles			•	
Xylenes (Total)	mg/kg	<0.045	0.045	A679841
F1 (C6-C10) - BTEX	mg/kg	<10	10	A679841
Field Preserved Volatiles				
Benzene	mg/kg	<0.0050	0.0050	A680674
Toluene	mg/kg	<0.050	0.050	A680674
Ethylbenzene	mg/kg	<0.010	0.010	A680674
m & p-Xylene	mg/kg	<0.040	0.040	A680674
o-Xylene	mg/kg	<0.020	0.020	A680674
F1 (C6-C10)	mg/kg	<10	10	A680674
Surrogate Recovery (%)				
1,4-Difluorobenzene (sur.)	%	88	N/A	A680674
4-Bromofluorobenzene (sur.)	%	92	N/A	A680674
D10-o-Xylene (sur.)	%	108	N/A	A680674
D4-1,2-Dichloroethane (sur.)	%	90	N/A	A680674
O-TERPHENYL (sur.)	%	102	N/A	A681077
RDL = Reportable Detection Lir N/A = Not Applicable	nit			

AT1 BTEX AND F1-F4 IN SOIL (VIALS)



CCME REGULATED METALS - SOILS (SOIL)

Bureau Veritas ID		AZM252		AZM253	AZM254	AZM254	AZM255	AZM255		
Sampling Date		2022/08/09		2022/08/09	2022/08/09	2022/08/09	2022/08/09	2022/08/09		
		14:00		14:10	14:20	14:20	14:30	14:30		
COC Number		1 of 1		1 of 1	1 of 1	1 of 1	1 of 1	1 of 1		
	UNITS	BH22-26-01	QC Batch	BH22-26-02	BH22-26-03	BH22-26-03 Lab-Dup	BH22-26-04	BH22-26-04 Lab-Dup	RDL	QC Batch
Elements										
Soluble (Hot water) Boron (B)	mg/kg	0.12	A683007	1.2	0.77	N/A	0.77	0.80	0.10	A683000
Hex. Chromium (Cr 6+)	mg/kg	<0.080	A682697	<0.080	<0.080	<0.080	<0.080	N/A	0.080	A682697
Total Antimony (Sb)	mg/kg	<0.50	A682611	<0.50	<0.50	N/A	<0.50	N/A	0.50	A683223
Total Arsenic (As)	mg/kg	5.3	A682611	4.6	4.8	N/A	4.5	N/A	1.0	A683223
Total Barium (Ba)	mg/kg	1600	A682611	1200	1500	N/A	1400	N/A	1.0	A683223
Total Beryllium (Be)	mg/kg	<0.40	A682611	<0.40	<0.40	N/A	<0.40	N/A	0.40	A683223
Total Cadmium (Cd)	mg/kg	0.19	A682611	0.19	0.19	N/A	0.15	N/A	0.050	A683223
Total Chromium (Cr)	mg/kg	7.8	A682611	15	27	N/A	20	N/A	1.0	A683223
Total Cobalt (Co)	mg/kg	2.2	A682611	2.8	3.2	N/A	3.1	N/A	0.50	A683223
Total Copper (Cu)	mg/kg	7.9	A682611	7.6	7.5	N/A	6.5	N/A	1.0	A683223
Total Lead (Pb)	mg/kg	19	A682611	14	15	N/A	11	N/A	0.50	A683223
Total Mercury (Hg)	mg/kg	0.054	A682611	<0.050	0.055	N/A	0.058	N/A	0.050	A683223
Total Molybdenum (Mo)	mg/kg	0.41	A682611	0.87	1.3	N/A	0.98	N/A	0.40	A683223
Total Nickel (Ni)	mg/kg	5.5	A682611	10	16	N/A	13	N/A	1.0	A683223
Total Selenium (Se)	mg/kg	<0.50	A682611	<0.50	<0.50	N/A	<0.50	N/A	0.50	A683223
Total Silver (Ag)	mg/kg	<0.20	A682611	<0.20	<0.20	N/A	<0.20	N/A	0.20	A683223
Total Thallium (Tl)	mg/kg	<0.10	A682611	<0.10	<0.10	N/A	<0.10	N/A	0.10	A683223
Total Tin (Sn)	mg/kg	<1.0	A682611	<1.0	<1.0	N/A	<1.0	N/A	1.0	A683223
Total Uranium (U)	mg/kg	0.40	A682611	0.46	0.44	N/A	0.43	N/A	0.20	A683223
Total Vanadium (V)	mg/kg	16	A682611	12	12	N/A	14	N/A	1.0	A683223
Total Zinc (Zn)	mg/kg	81	A682611	44	42	N/A	37	N/A	10	A683223
RDL = Reportable Detection Lir	nit	-			-	-	-	-	•	
Lab-Dup = Laboratory Initiated	Duplica	te								

N/A = Not Applicable



RESULTS OF CHEMICAL ANALYSES OF SOIL

Bureau Veritas ID		AZM252	AZM253	AZM254	AZM255	
Sampling Date		2022/08/09 14:00	2022/08/09 14:10	2022/08/09 14:20	2022/08/09 14:30	
COC Number		1 of 1	1 of 1	1 of 1	1 of 1	
	UNITS	BH22-26-01	BH22-26-02	BH22-26-03	BH22-26-04	QC Batch
Parameter						
Subcontract Parameter	N/A	ATTACHED	ATTACHED	ATTACHED	ATTACHED	A705525



GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt
Package 15.7°C
Version 2: Report reissued to include results for Barium - True Total on below samples as per client request received 2022/08/24. BH22-26-01/AZM252 BH22-26-02/AZM253
BH22-26-03/AZM254 BH22-26-04/AZM255
Sample AZM252 [BH22-26-01] : Please see attachment for Barium on ICP using Fusion Extraction results.
Sample AZM253 [BH22-26-02] : Please see attachment for Barium on ICP using Fusion Extraction results.
Sample AZM254 [BH22-26-03] : Please see attachment for Barium on ICP using Fusion Extraction results.
Sample AZM255 [BH22-26-04] : Please see attachment for Barium on ICP using Fusion Extraction results.
Results relate only to the items tested.



QUALITY ASSURANCE REPORT

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A680674	D01	Matrix Spike	1,4-Difluorobenzene (sur.)	2022/08/16		85	%	50 - 140
			4-Bromofluorobenzene (sur.)	2022/08/16		93	%	50 - 140
			D10-o-Xylene (sur.)	2022/08/16		113	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2022/08/16		86	%	50 - 140
			Benzene	2022/08/16		71	%	50 - 140
			Toluene	2022/08/16		83	%	50 - 140
			Ethylbenzene	2022/08/16		86	%	50 - 140
			m & p-Xylene	2022/08/16		88	%	50 - 140
			o-Xylene	2022/08/16		86	%	50 - 140
			F1 (C6-C10)	2022/08/16		106	%	60 - 140
A680674	D01	Spiked Blank	1,4-Difluorobenzene (sur.)	2022/08/16		87	%	50 - 140
			4-Bromofluorobenzene (sur.)	2022/08/16		90	%	50 - 140
			D10-o-Xylene (sur.)	2022/08/16		98	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2022/08/16		86	%	50 - 140
			Benzene	2022/08/16		73	%	60 - 130
			Toluene	2022/08/16		80	%	60 - 130
			Ethylbenzene	2022/08/16		86	%	60 - 130
			m & p-Xylene	2022/08/16		86	%	60 - 130
			o-Xylene	2022/08/16		86	%	60 - 130
			F1 (C6-C10)	2022/08/16		97	%	60 - 140
A680674	D01	Method Blank	1,4-Difluorobenzene (sur.)	2022/08/16		82	%	50 - 140
			4-Bromofluorobenzene (sur.)	2022/08/16		94	%	50 - 140
			D10-o-Xylene (sur.)	2022/08/16		90	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2022/08/16		85	%	50 - 140
			Benzene	2022/08/16	<0.0050		mg/kg	
			Toluene	2022/08/16	<0.050		mg/kg	
			Ethylbenzene	2022/08/16	<0.010		mg/kg	
			m & p-Xylene	2022/08/16	<0.040		mg/kg	
			o-Xylene	2022/08/16	<0.020		mg/kg	
			F1 (C6-C10)	2022/08/16	<10		mg/kg	
A680674	D01	RPD	Benzene	2022/08/16	NC		%	50
			Toluene	2022/08/16	NC		%	50
			Ethylbenzene	2022/08/16	14		%	50
			m & p-Xylene	2022/08/16	NC		%	50
			o-Xylene	2022/08/16	NC		%	50
			F1 (C6-C10)	2022/08/16	NC		%	30
A681077	GG3	Matrix Spike	O-TERPHENYL (sur.)	2022/08/15		81	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2022/08/15		77	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2022/08/15		77	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2022/08/15		72	%	60 - 140
A681077	GG3	Spiked Blank	O-TERPHENYL (sur.)	2022/08/15		81	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2022/08/15		78	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2022/08/15		79	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2022/08/15		74	%	60 - 140
A681077	GG3	Method Blank	O-TERPHENYL (sur.)	2022/08/15		83	%	60 - 140
	000		F2 (C10-C16 Hydrocarbons)	2022/08/15	<10	00	mg/kg	00 140
			F3 (C16-C34 Hydrocarbons)	2022/08/15	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2022/08/15	<50		mg/kg	
A681077	GG3	RPD	F2 (C10-C16 Hydrocarbons)	2022/08/15	NC		тт <u>е</u> /ке %	40
,,,0010//	005		F3 (C16-C34 Hydrocarbons)	2022/08/15	NC		%	40
			F4 (C34-C50 Hydrocarbons)	2022/08/15	NC		%	40 40
A681090	A1H	Method Blank		2022/08/15	<0.30		%	+0
H001030	ATU		Moisture	2022/08/10	NU.30		70	

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QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A681090	A1H	RPD [AZM251-01]	Moisture	2022/08/16	2.1		%	20
A682611	MKJ	Matrix Spike	Total Antimony (Sb)	2022/08/17		101	%	75 - 125
		·	Total Arsenic (As)	2022/08/17		97	%	75 - 125
			Total Barium (Ba)	2022/08/17		NC	%	75 - 125
			Total Beryllium (Be)	2022/08/17		96	%	75 - 125
			Total Cadmium (Cd)	2022/08/17		98	%	75 - 125
			Total Chromium (Cr)	2022/08/17		113	%	75 - 125
			Total Cobalt (Co)	2022/08/17		99	%	75 - 125
			Total Copper (Cu)	2022/08/17		100	%	75 - 125
			Total Lead (Pb)	2022/08/17		99	%	75 - 125
			Total Mercury (Hg)	2022/08/17		96	%	75 - 125
			Total Molybdenum (Mo)	2022/08/17		101	%	75 - 125
			Total Nickel (Ni)	2022/08/17		104	%	75 - 125
			Total Selenium (Se)	2022/08/17		100	%	75 - 125
			Total Silver (Ag)	2022/08/17		99	%	75 - 125
			Total Thallium (TI)	2022/08/17		98	%	75 - 125
			Total Tin (Sn)	2022/08/17		102	%	75 - 125
			Total Uranium (U)	2022/08/17		95	%	75 - 125
			Total Vanadium (V)	2022/08/17		140 (1)	%	75 - 125
			Total Zinc (Zn)	2022/08/17		102	%	75 - 125
A682611	MKJ	QC Standard	Total Antimony (Sb)	2022/08/17		109	%	15 - 182
		de otaliaa a	Total Arsenic (As)	2022/08/17		103	%	53 - 147
			Total Barium (Ba)	2022/08/17		103	%	80 - 119
			Total Cadmium (Cd)	2022/08/17		94	%	72 - 128
			Total Chromium (Cr)	2022/08/17		113	%	59 - 141
			Total Cobalt (Co)	2022/08/17		101	%	58 - 142
			Total Copper (Cu)	2022/08/17		103	%	83 - 117
			Total Lead (Pb)	2022/08/17		111	%	79 - 121
			Total Molybdenum (Mo)	2022/08/17		122	%	67 - 133
			Total Nickel (Ni)	2022/08/17		110	%	79 - 121
			Total Silver (Ag)	2022/08/17		89	%	47 - 153
			Total Tin (Sn)	2022/08/17		98	%	67 - 133
			Total Uranium (U)	2022/08/17		98	%	77 - 123
			Total Vanadium (V)	2022/08/17		111	%	79 - 121
			Total Zinc (Zn)	2022/08/17		103	%	79 - 121
A682611	MKJ	Spiked Blank	Total Antimony (Sb)	2022/08/17		102	%	80 - 120
1002011	1011G	Spined Blank	Total Arsenic (As)	2022/08/17		95	%	80 - 120
			Total Barium (Ba)	2022/08/17		96	%	80 - 120
			Total Beryllium (Be)	2022/08/17		92	%	80 - 120
			Total Cadmium (Cd)	2022/08/17		95	%	80 - 120
			Total Chromium (Cr)	2022/08/17		97	%	80 - 120
			Total Cobalt (Co)	2022/08/17		97	%	80 - 120
			Total Copper (Cu)	2022/08/17		97	%	80 - 120
			Total Lead (Pb)	2022/08/17		97	%	80 - 120
			Total Mercury (Hg)	2022/08/17		100	%	80 - 120
			Total Molybdenum (Mo)	2022/08/17		96	%	80 - 120 80 - 120
			Total Nickel (Ni)	2022/08/17		96	%	80 - 120 80 - 120
			Total Selenium (Se)	2022/08/17		96		80 - 120 80 - 120
							%	
			Total Silver (Ag)	2022/08/17		96 07	%	80 - 120
			Total Thallium (Tl)	2022/08/17		97	%	80 - 120
			Total Tin (Sn)	2022/08/17		96	%	80 - 120
			Total Uranium (U)	2022/08/17		97	%	80 - 120



QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Vanadium (V)	2022/08/17		97	%	80 - 120
			Total Zinc (Zn)	2022/08/17		97	%	80 - 120
A682611	MKJ	Method Blank	Total Antimony (Sb)	2022/08/17	<0.50		mg/kg	
			Total Arsenic (As)	2022/08/17	<1.0		mg/kg	
			Total Barium (Ba)	2022/08/17	<1.0		mg/kg	
			Total Beryllium (Be)	2022/08/17	<0.40		mg/kg	
			Total Cadmium (Cd)	2022/08/17	<0.050		mg/kg	
			Total Chromium (Cr)	2022/08/17	<1.0		mg/kg	
			Total Cobalt (Co)	2022/08/17	<0.50		mg/kg	
			Total Copper (Cu)	2022/08/17	<1.0		mg/kg	
			Total Lead (Pb)	2022/08/17	<0.50		mg/kg	
			Total Mercury (Hg)	2022/08/17	<0.050		mg/kg	
			Total Molybdenum (Mo)	2022/08/17	<0.40		mg/kg	
			Total Nickel (Ni)	2022/08/17	<1.0		mg/kg	
			Total Selenium (Se)	2022/08/17	<0.50		mg/kg	
			Total Silver (Ag)	2022/08/17	<0.20		mg/kg	
			Total Thallium (TI)	2022/08/17	<0.10		mg/kg	
			Total Tin (Sn)	2022/08/17	<1.0		mg/kg	
			Total Uranium (U)	2022/08/17	<0.20		mg/kg	
			Total Vanadium (V)	2022/08/17	<1.0		mg/kg	
			Total Zinc (Zn)	2022/08/17	<10		mg/kg	
A682611	MKJ	RPD	Total Chromium (Cr)	2022/08/17	1.9		%	30
			Total Nickel (Ni)	2022/08/17	5.2		%	30
A682697	FM0	Matrix Spike [AZM254-03]	Hex. Chromium (Cr 6+)	2022/08/16		97	%	75 - 125
A682697	FM0	Spiked Blank	Hex. Chromium (Cr 6+)	2022/08/16		98	%	80 - 120
A682697	FM0	Method Blank	Hex. Chromium (Cr 6+)	2022/08/16	<0.080		mg/kg	
A682697	FM0	RPD [AZM254-03]	Hex. Chromium (Cr 6+)	2022/08/16	NC		%	35
A683000	MPU	Matrix Spike [AZM255-03]	Soluble (Hot water) Boron (B)	2022/08/16		95	%	75 - 125
A683000	MPU	Spiked Blank	Soluble (Hot water) Boron (B)	2022/08/16		89	%	80 - 120
A683000	MPU	Method Blank	Soluble (Hot water) Boron (B)	2022/08/16	<0.10		mg/kg	
A683000	MPU	RPD [AZM255-03]	Soluble (Hot water) Boron (B)	2022/08/16	4.3		%	35
A683007	MPU	Matrix Spike	Soluble (Hot water) Boron (B)	2022/08/16		91	%	75 - 125
A683007	MPU	Spiked Blank	Soluble (Hot water) Boron (B)	2022/08/16		94	%	80 - 120
A683007	MPU	Method Blank	Soluble (Hot water) Boron (B)	2022/08/16	<0.10		mg/kg	
A683007	MPU	RPD	Soluble (Hot water) Boron (B)	2022/08/16	6.8		%	35
A683223	KH2	Matrix Spike	Total Antimony (Sb)	2022/08/17		104	%	75 - 125
			Total Arsenic (As)	2022/08/17		100	%	75 - 125
			Total Barium (Ba)	2022/08/17		NC	%	75 - 125
			Total Beryllium (Be)	2022/08/17		105	%	75 - 125
			Total Cadmium (Cd)	2022/08/17		101	%	75 - 125
			Total Chromium (Cr)	2022/08/17		113	%	75 - 125
			Total Cobalt (Co)	2022/08/17		102	%	75 - 125
			Total Copper (Cu)	2022/08/17		101	%	75 - 125
			Total Lead (Pb)	2022/08/17		103	%	75 - 125
			Total Mercury (Hg)	2022/08/17		101	%	75 - 125
			Total Molybdenum (Mo)	2022/08/17		106	%	75 - 125
			Total Nickel (Ni)	2022/08/17		106	%	75 - 125
			Total Selenium (Se)	2022/08/17		100	%	75 - 125
			Total Silver (Ag)	2022/08/17		104	%	75 - 125
			Total Thallium (Tl)	2022/08/17		102	%	75 - 125



QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Tin (Sn)	2022/08/17		105	%	75 - 125
			Total Uranium (U)	2022/08/17		101	%	75 - 125
			Total Vanadium (V)	2022/08/17		131 (1)	%	75 - 125
			Total Zinc (Zn)	2022/08/17		113	%	75 - 125
A683223	KH2	QC Standard	Total Antimony (Sb)	2022/08/17		96	%	15 - 182
			Total Arsenic (As)	2022/08/17		73	%	53 - 147
			Total Barium (Ba)	2022/08/17		89	%	80 - 119
			Total Cadmium (Cd)	2022/08/17		85	%	72 - 128
			Total Chromium (Cr)	2022/08/17		78	%	59 - 141
			Total Cobalt (Co)	2022/08/17		73	%	58 - 142
			Total Copper (Cu)	2022/08/17		101	%	83 - 117
			Total Lead (Pb)	2022/08/17		98	%	79 - 121
			Total Molybdenum (Mo)	2022/08/17		112	%	67 - 133
			Total Nickel (Ni)	2022/08/17		81	%	79 - 121
			Total Silver (Ag)	2022/08/17		80	%	47 - 153
			Total Tin (Sn)	2022/08/17		86	%	67 - 133
			Total Uranium (U)	2022/08/17		81	%	77 - 123
			Total Vanadium (V)	2022/08/17		79	%	79 - 121
			Total Zinc (Zn)	2022/08/17		101	%	79 - 121
A683223	KH2	Spiked Blank	Total Antimony (Sb)	2022/08/17		101	%	80 - 120
			Total Arsenic (As)	2022/08/17		94	%	80 - 120
			Total Barium (Ba)	2022/08/17		97	%	80 - 120
			Total Beryllium (Be)	2022/08/17		98	%	80 - 120
			Total Cadmium (Cd)	2022/08/17		96	%	80 - 120
			Total Chromium (Cr)	2022/08/17		97	%	80 - 120
			Total Cobalt (Co)	2022/08/17		97	%	80 - 120
			Total Copper (Cu)	2022/08/17		97	%	80 - 120
			Total Lead (Pb)	2022/08/17		97	%	80 - 120
			Total Mercury (Hg)	2022/08/17		102	%	80 - 120
			Total Molybdenum (Mo)	2022/08/17		99	%	80 - 120
			Total Nickel (Ni)	2022/08/17		96	%	80 - 120
			Total Selenium (Se)	2022/08/17		96	%	80 - 120
			Total Silver (Ag)	2022/08/17		98	%	80 - 120
			Total Thallium (TI)	2022/08/17		98	%	80 - 120
			Total Tin (Sn)	2022/08/17		97	%	80 - 120
			Total Uranium (U)	2022/08/17		98	%	80 - 120
			Total Vanadium (V)	2022/08/17		98	%	80 - 120
			Total Zinc (Zn)	2022/08/17		95	%	80 - 120
A683223	KH2	Method Blank	Total Antimony (Sb)	2022/08/17	<0.50		mg/kg	
			Total Arsenic (As)	2022/08/17	<1.0		mg/kg	
			Total Barium (Ba)	2022/08/17	<1.0		mg/kg	
			Total Beryllium (Be)	2022/08/17	<0.40		mg/kg	
			Total Cadmium (Cd)	2022/08/17	< 0.050		mg/kg	
			Total Chromium (Cr)	2022/08/17	<1.0		mg/kg	
			Total Cobalt (Co)	2022/08/17	<0.50		mg/kg	
			Total Copper (Cu)	2022/08/17	<1.0		mg/kg	
			Total Lead (Pb)	2022/08/17	<0.50		mg/kg	
			Total Mercury (Hg)	2022/08/17	<0.050		mg/kg	
			Total Molybdenum (Mo)	2022/08/17	<0.40		mg/kg	
			Total Nickel (Ni)	2022/08/17	<1.0		mg/kg	
			Total Selenium (Se)	2022/08/17	<0.50		mg/kg	
			Total Silver (Ag)	2022/08/17	<0.20		mg/kg	



QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
Daten	iiiit	de rype	Total Thallium (TI)	2022/08/17	<0.10	Recovery	mg/kg	QC LITIILS
			Total Tin (Sn)	2022/08/17	<1.0		mg/kg	
			Total Uranium (U)	2022/08/17	<0.20		mg/kg	
			Total Vanadium (V)	2022/08/17	<1.0		mg/kg	
			Total Zinc (Zn)	2022/08/17	<10		mg/kg	
A683223	KH2	RPD	Total Antimony (Sb)	2022/08/17	NC		%	30
			Total Arsenic (As)	2022/08/17	10		%	30
			Total Barium (Ba)	2022/08/17	14		%	35
			Total Beryllium (Be)	2022/08/17	NC		%	30
			Total Cadmium (Cd)	2022/08/17	0.64		%	30
			Total Chromium (Cr)	2022/08/17	7.9		%	30
			Total Cobalt (Co)	2022/08/17	7.9		%	30
			Total Copper (Cu)	2022/08/17	5.9		%	30
			Total Lead (Pb)	2022/08/17	3.3		%	35
			Total Mercury (Hg)	2022/08/17	NC		%	35
			Total Molybdenum (Mo)	2022/08/17	2.7		%	35
			Total Nickel (Ni)	2022/08/17	4.8		%	30
			Total Selenium (Se)	2022/08/17	NC		%	30
			Total Silver (Ag)	2022/08/17	NC		%	35
			Total Thallium (Tl)	2022/08/17	NC		%	30
			Total Tin (Sn)	2022/08/17	NC		%	35
			Total Uranium (U)	2022/08/17	5.0		%	30
			Total Vanadium (V)	2022/08/17	11		%	30
			Total Zinc (Zn)	2022/08/17	6.1		%	30

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.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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



VALIDATION SIGNATURE PAGE

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

Chantal Vincent, Customer Solutions Representative

agm

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Junzhi Gao

Janet Gao, B.Sc., QP, Supervisor, Organics

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

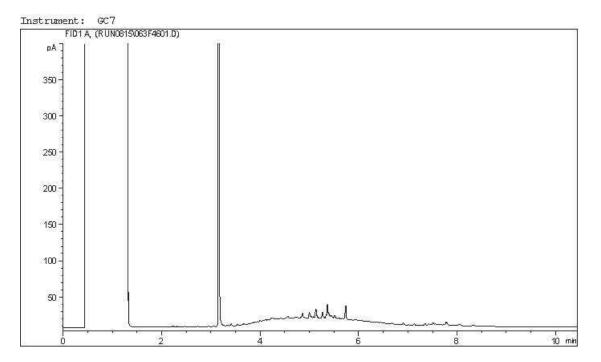
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Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

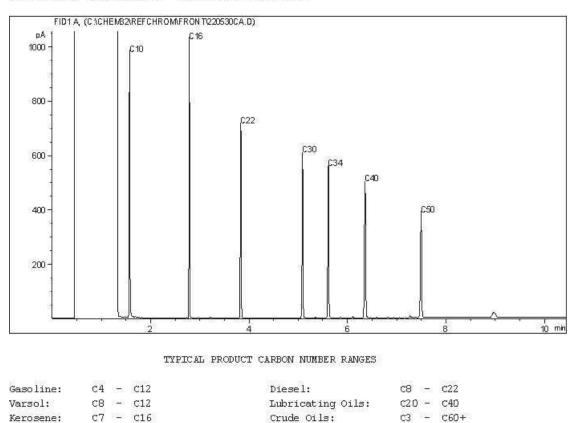
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

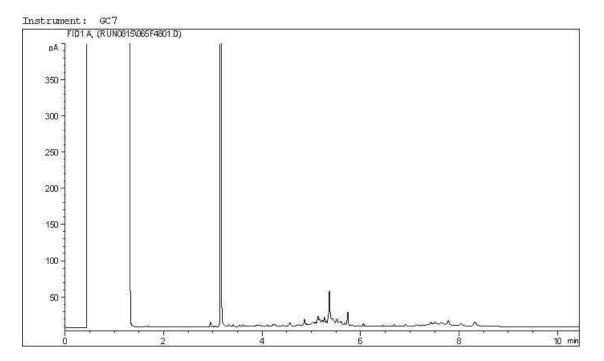
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Page 1 of		СЗ 6 ФОД 8 на исе онит- риде sticker неке					Rush Confirmation #: 0 21 22 Regular Turnstonnd Time (TAT)			ителиекся зивміттер оо пот кили у Сарані Саранії С Саранії Саранії Саранії Саранії Саранії С				HOLD - C	3 email report to:	ELLDOR DEGUNS.	0	to facility col	3 41259544	3	3 Peceived in Vallows	ш	5 Qq 100	5 AUG 12 2022	5 160-45/cs-4	Temp: 4 / S	AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH	Temperature reading by:		pecial in	03	
CHAIN OF CUSTODY RECORD ENV COC - 00013v3	Project Information	Shell	22525414-8100-\$104	22525414-4000	AN ILanimore and	CP WEST CHANNEL, NT	NT	Melissa Lata, Harmanieet Kaun	-		۸)	n) t, silt, cla	b meta etam b data - total total dissol di dissol dissol dissol dissol dissol diss	Regulate Regulate Mercury Sialinity 4 Sieve (75 Texture Basic cla									X	X	X		CT TO BUREAU VERTAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTOOP DOCUMENT IS ÀRMOWLEDGMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH NG AT WWW, BWNA.COM/TERMS-AND-CONDITIONS OR BY CALLING THE LARDRATORY LISTED ABOVE TO OBTAIN A COPY	LAB USE ONLY Yes No Seal present	Seal Intact Cooline media present	vooning incura present Time Date Date HH Time	2 08 13 15	-
03	ce)	Quotation #:	P.O. #/ AFE#:	Project #:	Postal T2P 4K3 Site #:	Site Location:	Site Location	Sampled By:	1 2 3 4 5 6 7 8		Q	ואבסטואז	ауяага иоітая ғ4 га талат	яге сія гіг рабо рабо са са с	×	X	×	X	X	X	×	×	X	X	X		NDARD TERMS AND CONDITIONS. SIGNIN SRMS-AND-CONDITIONS OR BY CALLING TH		۳ ۲ ۲	14 nature/ Print)	a fer Megan f	
hoose location: Calgary, A8: 4000 19th St. NE, TZE EPB Toll Free (800) 386-7247 Edmonton, A8: 9331-48 St. T68 284 Toll Free (800) 386-7247 Winnuber, MB: D-675 Berry St. R131 JJ-701 Free (866) 800-5208	Report Information (if differs from invoice)		Aurelie Bellavance		Calgary AB	403-299-5600	annotio hollaxamonine	A 1		Drinking Water - Manitoba	P-other AMSRP	IL DELIVERY TO BUREAU VERITAS	Date Sampled Time (24hr)	ž	08 09 13 30 Soil	1 1 13 40 Soil	13 50 Soil	1 og ap Soil	1 09 10 Soil	09 00 Soil	OR to Soil	iy oo Soil	14 10 Soil	1 14/20 Sail	4 H 30 Soil		CUSTODY IS SUBJECT TO BUREAU VERITAS STAI AILABLE FOR VIEWING AT WWW_BVNA.COM/TE	LAB USE ONLY Yes No	seal present. Seal intact Cooling media meant	Doling media present	8	1 12 1
Choose Location: Calgary, AB: 4000 19th Si Edmontory, AB: 9331-48: Minnipeg, MB: D-675 Ber		es company:		Street	City:	Phone:	Email:	Copies:	Regulatory Criteria			IME OF SAMPLING UNTI	Date	**	22										4		ITTED ON THIS CHAIN OF ARE AV	110	, Q		10	-
Chic Chic	Invoice to (requires report	Client #254, Golder Associa	237 - 4 Ave SW Suite 3300		Calgary Prov: AB 2.4		Canada Account Payable		Regu	CCME	Saskatchewan	samples must be kept cool (<10°C) from time of sampling until delivery to BUR		Sample Identification	RH22-28-01	22-28-02	22-28-03	2-40	122-40-03	H22-40-02	RP G	BH22-26-01	20-92-22	22-26-03	22-		UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBLE ARE AVAILABLE FOR VIEWI	LAB USE ONLY Yes No	- - - - - - - - - - - - - - - - - - -	by: (Sign	5	-
	Invoice Information	Company :	Contact Nome:	Street	Address: City:	Phone:	Email:	Copies:	の日本の	LTA	Sask				1 BH	2 BH 22-	3 BH22	+ Rt	= BH	• BH	- DUI	• BH	° R#	"BH	Hg n	12	•UNLESS O	LAB	Seal present Seal intact	Cooling media present Relinquished	AM.	2

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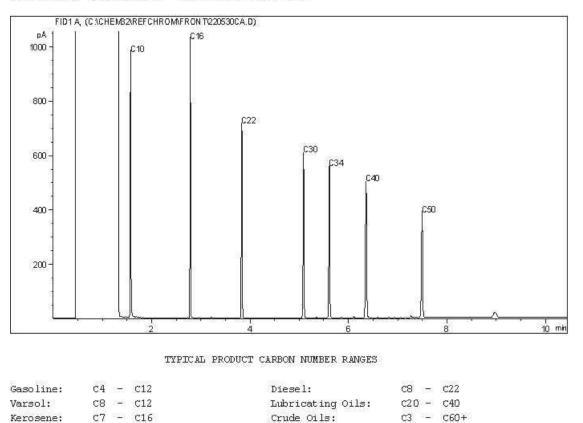


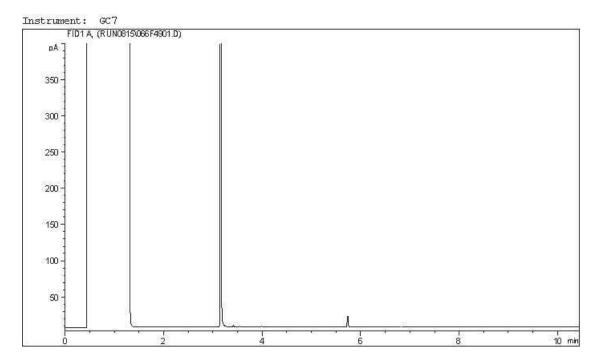
Carbon Range Distribution - Reference Chromatogram



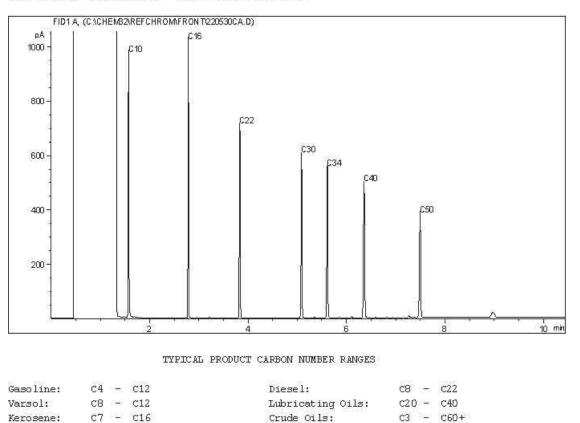


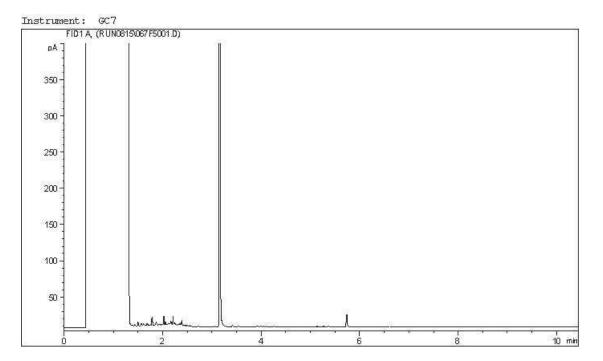
Carbon Range Distribution - Reference Chromatogram



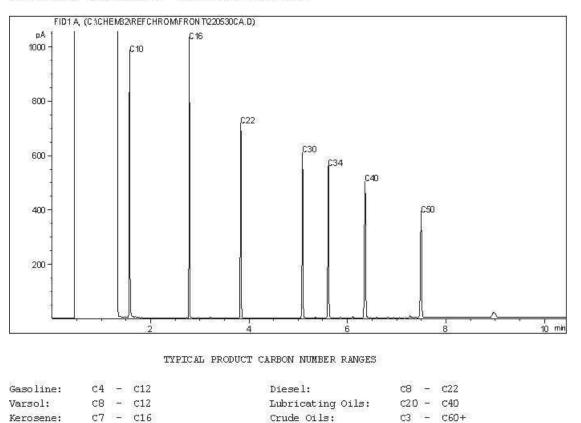


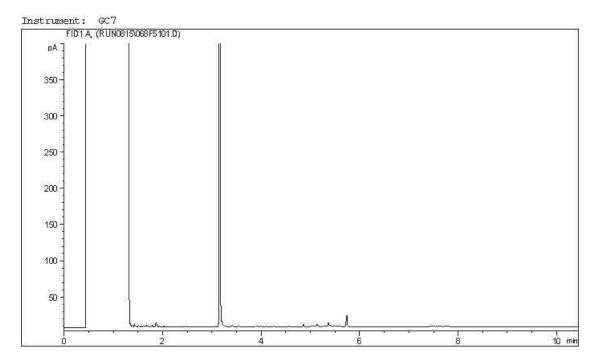
Carbon Range Distribution - Reference Chromatogram





Carbon Range Distribution - Reference Chromatogram





Carbon Range Distribution - Reference Chromatogram

