Cambridge Bay Soil & Water Treatment Facility

2021 Annual Report

Nunavut Water Board Licence 1BR-CST1723

2021 Annual Report

Cambridge Bay SWTF 2021 Annual Report
Version Number: V.1.0

March 2022

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EXECUTIVE SUMMARY

The Kitikmeot Environmental Ltd. (KEL) soil and water treatment facility was licensed in 2017 by the Nunavut Water Board under water licence number 1BR-CST1723, and construction of the Facility was completed in October 2017.

The Facility consists of one soil treatment cell for the receipt of soil contaminated with petroleum hydrocarbons, one cell for the receipt of contaminated snow and water along with one cell for the storage of containerized hazardous waste material. The soil treatment cell dimensions are approximately 35 meters by 49 meters. The water cell and hazardous water storage cell dimensions are approximately 14 meters by 16 meters. The water cell is designed with a capacity of 170 cubic meters. In 2021 a total of approximately 12 cubic meters of soil and 0.2 cubic meters of water was deposited at the Facility and will undergo treatment in 2022.

1.0 INTRODUCTION

Licensee:

Kitikmeot Environmental Ltd. (KEL)
PO Box 92, 10 Omilik Road
Cambridge Bay, Nunavut
X0B 0C0

The Cambridge Bay Soil and Water Treatment Facility (the Facility) is operated under the Nunavut Water Board (NWB) water licence 1BR-CST1723.

This 2021 Annual Report satisfies the requirements outlined in Part B, Item 1 of the water licence. A copy of the completed NWB Annual Reporting Form for 2021 can be found in Appendix C.

2.0 PART B, ITEM 1 – ANNUAL REPORT

a. The monthly and annual quantities of material deposited in the on-site Waste Management Facility:

On September 16, 2021, 57 drums of hydrocarbon contaminated soil along with 9 drums and one pail of hydrocarbon contaminated water were deposited in the Facility. The soil was emptied from the drums into a pile on the pad and the water into the pond on September 27, 2021.

No other material was deposited in the on-site Waste Management Facility in 2021.

Table 2-1: Quantity of Waste Deposited in 2021

Waste Description	Generator Name	Generator Site	Date Received	Volume
Soil	Ikey Evalik	45 Natik Street, Cambridge Bay, NU, X0B 0C0	September 16, 2021	12 m^3
Water	Ikey Evalik	45 Natik Street, Cambridge Bay, NU, X0B 0C0	September 16, 2021	0.2 m^3

b. Characterization of soils treated at the Facility

A soil treatment event occurred on September 22, 2021. This involved treatment by manual aeration using an excavator of soil piles P2, P5, P6, and P8. On August 31 and September 1, 2021, samples were collected for piles P1, P2, P3, P4, P5, and P7 to characterize the soil and determine compliance with reuse criteria. P7 meets residential reuse criteria, P4 and P5 meet commercial reuse criteria, and P2 meets industrial reuse criteria. Piles P6, P8, and P9, were not sampled this year, and P1 and P3 contain hydrocarbon above reuse criteria. The analytical results for this sampling event are included in Appendix B.

Soil Pile Number	Generator Name	Hydrocarbon Characterization	Metals Characterization
1	Government of Nunavut Community and Government Services	Above Reuse Criteria	Meets Reuse Criteria
2	NSSI Tank Farm	Meets Reuse Criteria	Meets Reuse Criteria
3	Qulliq Energy Corporation	Above Reuse Criteria	Meets Reuse Criteria
4	Raytheon	Meets Reuse Criteria	Meets Reuse Criteria
5	Inukshuk	Meets Reuse Criteria	Meets Reuse Criteria
6	Kitnuna Projects	Not Analyzed	Meets Reuse Criteria
7	Qulliaq Energy Corporation	Meets Reuse Criteria	Meets Reuse Criteria
8	Raytheon	Not Analyzed	Meets Reuse Criteria
9	CHARS	Not Analyzed	Not Analyzed

c. The monthly and annual quantities of any effluent discharge from the Facility

Approval to discharge effluent water from the Facility was granted by Mr. Baba Pedersen on September 17, 2021. Approximately 454m^3 of water was discharged on September 21 and 22, 2020. Correspondence approving the discharge can be found in Appendix A. A copy of the analytical can be found in Appendix B.

d. Waste backhauled to any Nunavut Community in 2021

No waste was backhauled to any Nunavut community in 2021.

e. GPS coordinates of all waste associated with the Project

The coordinates of the Facility are 69°7.718' North and 105° 2.760 West.

f. Construction work, modification, and major maintenance work completed at the Facility

No construction work, modification, or major maintenance work was completed at the Facility in 2021.

g. Tabular summaries for all data and information generated under the "Monitoring Program"

A monitoring event occurred on August 31, 2021. All three monitoring wells had insufficient water levels for sampling. As a result, no groundwater samples were taken in 2021.

Surface water samples were collected from CST-1 W (pond 1), CST-1 E (pond 2), and CST-1 N (standing water on the soil pad). Tabulated results are included in Appendix D.

h. Monitoring Program Data Analysis

Groundwater monitoring wells were installed in 2018 at locations surrounding the Facility. The locations of these wells were established under Part K Item 1 of the water license. The requirements for the monitoring program were for one well to be installed upgradient of the Facility (CST-2) and two wells installed downgradient (CST-3, CST-4). The monitoring wells were installed by KEL on August 17-18, 2018. One of the groundwater monitoring wells, CST3, was damaged during the municipal construction of a road adjacent to the Facility. The well was decommissioned, and a new well designated CST3 was installed on August 5, 2020.

All monitoring wells were dry during the August sampling campaign. Due to all the monitoring wells being dry during the monitoring event that occurred, no groundwater samples were collected in 2021.

As per Part K Item 7 of the license, a Water Monitoring Plan (WMP) was created and submitted to the NWB on May 12, 2017. The WMP will be revised once the groundwater monitoring wells have been sampled for the first time in 2022.

i. Summary of Studies

No studies were requested by the Board in 2021.

j. Unauthorized Discharges

No unauthorized discharges occurred in 2021.

k. Description of trenches or sumps excavated

No trenches or sumps were excavated in 2021.

l. Public consultation/participation report

No public consultations occurred in 2021.

m. Summary of Inspection Reports and Corrective Actions

No inspections or reports were prepared by an inspector in 2021.

n. Executive summary in English and in Inuktitut of all plans, reports, or studies conducted under this Licence

No reports or studies were conducted in 2021.

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o. Additional details as requested by the Board

No additional details were requested by the Board in 2021.

APPENDIX A

Appendix A Inspector Approval to Discharge

From: Pedersen, Baba (AADNC/AANDC)
To: Katie Oliver
Subject: RE: Cambridge Bay STF - Discharge Approval Request
Date: September 17, 2021 09:11:45
Attachments: image002.jpg

Hello Katie,

All looks well for you to Decant

Koana,
Baba

Baba Pedersen
Resource Management/Water Resource Officer
CIRNAC - Kitikmeot Region
Kugluktuk, NU
Baba.pedersen@canada.ca
Cell 867-222-2839

From: Katie Oliver <koliver@kblenv.com>
Sent: Wednesday, September 15, 2021 11:19 AM
To: Pedersen, Baba (AADNC/AANDC) <baba.pedersen@canada.ca>
Subject: Cambridge Bay STF - Discharge Approval Request

Hi Baba,

This email is seeking approval to discharge water from the facility under NWB Water Licence No. 1BR-CST1723.

The table below summarizes recent samples from standing water results from snow melt in the soil treatment area, the facility drum storage area and the retention pond. Supporting certificate of analysis from the laboratory is attached for reference.

Parameter	Guideline mg/L	Soil Treatment Area (21CST1-N-210831)	Facility drum storage area (21CST1-W-210831)	Retention Pond (21CST1-E-210831)
pH	6.0-9.0	8.29	7.72	7.73
TSS	50	<3.0	<3.0	<3.0
Oil and Grease	15	<1.0	<1.0	<1.0
Total Lead	0.001	0.000059	0.000088	<0.000050
Benzene	0.37	<0.00050	<0.00050	<0.00050
Toluene	0.002	<0.00050	<0.00050	<0.00050

Ethylbenzene	0.09	<0.00050	<0.00050	<0.00050
Xylenes	0.18	<0.00071	<0.00071	<0.00071

Let me know if you have any questions,

Logo

Katie Oliver, MBA, CET, PMP

Manager, Environmental Consulting

m: 780.893.3305
d: 587.601.5736
p: 780.452.7779
f: 866.316.7991

3909, 68 Avenue
Leduc, AB T9E 0Z4

kblenv.com

APPENDIX B

Appendix B Laboratory Certificates of Analysis (COA)

KBL Environmental Ltd.
ATTN: Katie Oliver
3909, 68 Ave
Leduc AB T9E 0Z4

Date Received: 02-SEP-21
Report Date: 10-SEP-21 15:15 (MT)
Version: FINAL

Client Phone: 780-893-3305

Certificate of Analysis

Lab Work Order #: L2635000

Project P.O. #: JG018
Job Reference: 4300
C of C Numbers: 17-818604
Legal Site Desc:

Oliver Gregg
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2635000-1 21CST1-N-210831							
Sampled By: James Grousopoulos on 31-AUG-21 @ 17:03							
Matrix: WATER							
Single Metal in Water by ICPMS (Total)							
Total Metals in Water by CRC ICPMS							
Lead (Pb)-Total	0.000059		0.000050	mg/L		08-SEP-21	R5581249
Miscellaneous Parameters							
Oil & Grease-(IR)	<1.0		1.0	mg/L		09-SEP-21	R5581644
Oil And Grease (Visible Sheen)	ABSENT					07-SEP-21	R5581647
Total Suspended Solids	<3.0		3.0	mg/L		07-SEP-21	R5579881
pH	8.29		0.10	pH		07-SEP-21	R5580718
BTEX, Styrene and F1 (C6-C10)							
Benzene	<0.00050		0.00050	mg/L	03-SEP-21	09-SEP-21	R5543914
Toluene	<0.00050		0.00050	mg/L	03-SEP-21	09-SEP-21	R5543914
EthylBenzene	<0.00050		0.00050	mg/L	03-SEP-21	09-SEP-21	R5543914
m+p-Xylene	<0.00050		0.00050	mg/L	03-SEP-21	09-SEP-21	R5543914
o-Xylene	<0.00050		0.00050	mg/L	03-SEP-21	09-SEP-21	R5543914
Styrene	<0.00050		0.00050	mg/L	03-SEP-21	09-SEP-21	R5543914
F1(C6-C10)	<0.10		0.10	mg/L	03-SEP-21	09-SEP-21	R5543914
F1-BTEX	<0.10		0.10	mg/L	03-SEP-21	09-SEP-21	R5543914
Xylenes	<0.00071		0.00071	mg/L	03-SEP-21	09-SEP-21	R5543914
Surrogate: 1,4-Difluorobenzene (SS)	94.0		70-130	%	03-SEP-21	09-SEP-21	R5543914
Surrogate: 4-Bromofluorobenzene (SS)	85.0		70-130	%	03-SEP-21	09-SEP-21	R5543914
Surrogate: 3,4-Dichlorotoluene (SS)	101.6		70-130	%	03-SEP-21	09-SEP-21	R5543914
L2635000-2 21CST1-W-210831							
Sampled By: James Grousopoulos on 31-AUG-21 @ 16:37							
Matrix: WATER							
Single Metal in Water by ICPMS (Total)							
Total Metals in Water by CRC ICPMS							
Lead (Pb)-Total	0.000088		0.000050	mg/L		08-SEP-21	R5581249
Miscellaneous Parameters							
Oil & Grease-(IR)	<1.0		1.0	mg/L		09-SEP-21	R5581644
Oil And Grease (Visible Sheen)	ABSENT					07-SEP-21	R5581647
Total Suspended Solids	<3.0		3.0	mg/L		07-SEP-21	R5579881
pH	7.72		0.10	pH		07-SEP-21	R5580718
BTEX, Styrene and F1 (C6-C10)							
Benzene	<0.00050		0.00050	mg/L	03-SEP-21	09-SEP-21	R5543914
Toluene	<0.00050		0.00050	mg/L	03-SEP-21	09-SEP-21	R5543914
EthylBenzene	<0.00050		0.00050	mg/L	03-SEP-21	09-SEP-21	R5543914
m+p-Xylene	<0.00050		0.00050	mg/L	03-SEP-21	09-SEP-21	R5543914
o-Xylene	<0.00050		0.00050	mg/L	03-SEP-21	09-SEP-21	R5543914
Styrene	<0.00050		0.00050	mg/L	03-SEP-21	09-SEP-21	R5543914
F1(C6-C10)	<0.10		0.10	mg/L	03-SEP-21	09-SEP-21	R5543914
F1-BTEX	<0.10		0.10	mg/L	03-SEP-21	09-SEP-21	R5543914
Xylenes	<0.00071		0.00071	mg/L	03-SEP-21	09-SEP-21	R5543914
Surrogate: 1,4-Difluorobenzene (SS)	95.8		70-130	%	03-SEP-21	09-SEP-21	R5543914
Surrogate: 4-Bromofluorobenzene (SS)	85.7		70-130	%	03-SEP-21	09-SEP-21	R5543914
Surrogate: 3,4-Dichlorotoluene (SS)	106.5		70-130	%	03-SEP-21	09-SEP-21	R5543914
L2635000-3 21CST1-E-210831							
Sampled By: James Grousopoulos on 31-AUG-21 @ 16:45							
Matrix: WATER							
Single Metal in Water by ICPMS (Total)							
Total Metals in Water by CRC ICPMS							
Lead (Pb)-Total	<0.000050		0.000050	mg/L		08-SEP-21	R5581249

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2635000-3 21CST1-E-210831							
Sampled By: James Grousopoulos on 31-AUG-21 @ 16:45							
Matrix: WATER							
Miscellaneous Parameters							
Oil & Grease-(IR)	<1.0		1.0	mg/L		09-SEP-21	R5581644
Oil And Grease (Visible Sheen)	ABSENT					07-SEP-21	R5581647
Total Suspended Solids	<3.0		3.0	mg/L		07-SEP-21	R5579881
pH	7.73		0.10	pH		07-SEP-21	R5580718
BTEX, Styrene and F1 (C6-C10)							
Benzene	<0.00050		0.00050	mg/L	03-SEP-21	09-SEP-21	R5543914
Toluene	<0.00050		0.00050	mg/L	03-SEP-21	09-SEP-21	R5543914
EthylBenzene	<0.00050		0.00050	mg/L	03-SEP-21	09-SEP-21	R5543914
m+p-Xylene	<0.00050		0.00050	mg/L	03-SEP-21	09-SEP-21	R5543914
o-Xylene	<0.00050		0.00050	mg/L	03-SEP-21	09-SEP-21	R5543914
Styrene	<0.00050		0.00050	mg/L	03-SEP-21	09-SEP-21	R5543914
F1(C6-C10)	<0.10		0.10	mg/L	03-SEP-21	09-SEP-21	R5543914
F1-BTEX	<0.10		0.10	mg/L	03-SEP-21	09-SEP-21	R5543914
Xylenes	<0.00071		0.00071	mg/L	03-SEP-21	09-SEP-21	R5543914
Surrogate: 1,4-Difluorobenzene (SS)	95.2		70-130	%	03-SEP-21	09-SEP-21	R5543914
Surrogate: 4-Bromofluorobenzene (SS)	84.1		70-130	%	03-SEP-21	09-SEP-21	R5543914
Surrogate: 3,4-Dichlorotoluene (SS)	106.5		70-130	%	03-SEP-21	09-SEP-21	R5543914

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
BTXS,F1-ED	Water	BTEX, Styrene and F1 (C6-C10)	EPA 5021/8015&8260 GC-MS & FID

The water sample, with added reagents, is heated in a sealed vial to equilibrium. The headspace from the vial is transferred into a gas chromatograph. BTEX Target compound concentrations are measured using mass spectrometry detection. The instrumental portion of F1 analysis is carried out in accordance with the Canada Wide Standard for Petroleum Hydrocarbons in Soil - Tier 1 Method.

MET-T-CCMS-ED	Water	Total Metals in Water by CRC ICPMS	EPA 200.2/6020A (mod)

Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

OGG-IR-ED	Water	Oil & Grease-(IR)	APHA 5520 C. Partition-Infrared Method

Acidified water samples are extracted with tetrachloroethylene, prior to analysis by infrared spectrophotometry. Oil and Grease is quantified using the infrared absorbance of the carbon-hydrogen bond. Oil and Grease by IR includes heavy extractable hydrocarbons (oils and greases) as well as most volatile hydrocarbons (e.g. solvents).

OGG-VISIBLE-SHEEN-ED	Water	Oil and Grease - Visible Sheen	AER D50

"Visible Sheen" refers to a qualitative visual observation of the presence or absence of rainbow sheen, iridescence, or non-aqueous phase liquid (NAPL) on the surface of a drilling waste (fluid portion, clear liquid portion, or total waste) or on an aqueous sample. No hold time guidance is available for this test. Field observations should also be recorded, because sample characteristics may change between sampling and time of observation at the laboratory. This is a non-accredited test.

PH-ED	Water	pH	APHA 4500 H-Electrode

All samples analyzed by this method for pH will have exceeded the 15 minute recommended hold time from time of sampling (field analysis is recommended for pH where highly accurate results are needed)

SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric

Gravimetric determination of solids in waters by filtration and drying filter at 104 degrees Celsius.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA

Chain of Custody Numbers:

17-818604

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2635000 Report Date: 10-SEP-21

Client: KBL Environmental Ltd.
3909, 68 Ave
Leduc AB T9E 0Z4
Contact: Katie Oliver

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
BTXS,F1-ED	**Water**							
Batch R5543914								
WG3610429-2 LCS								
Benzene			99.6		%		70-130	09-SEP-21
Toluene			112.1		%		70-130	09-SEP-21
EthylBenzene			103.8		%		70-130	09-SEP-21
m+p-Xylene			110.3		%		70-130	09-SEP-21
o-Xylene			112.0		%		70-130	09-SEP-21
Styrene			113.0		%		70-130	09-SEP-21
WG3610429-3 LCS								
F1(C6-C10)			107.4		%		70-130	09-SEP-21
WG3610429-1 MB								
Benzene			<0.00050		mg/L		0.0005	09-SEP-21
Toluene			<0.00050		mg/L		0.0005	09-SEP-21
EthylBenzene			<0.00050		mg/L		0.0005	09-SEP-21
m+p-Xylene			<0.00050		mg/L		0.0005	09-SEP-21
o-Xylene			<0.00050		mg/L		0.0005	09-SEP-21
Styrene			<0.00050		mg/L		0.0005	09-SEP-21
F1(C6-C10)			<0.10		mg/L		0.1	09-SEP-21
Surrogate: 1,4-Difluorobenzene (SS)			93.3		%		70-130	09-SEP-21
Surrogate: 4-Bromofluorobenzene (SS)			82.3		%		70-130	09-SEP-21
Surrogate: 3,4-Dichlorotoluene (SS)			83.8		%		70-130	09-SEP-21
MET-T-CCMS-ED	**Water**							
Batch R5581249								
WG3612409-2 LCS		**HB_WATER**						
Lead (Pb)-Total			94.4		%		80-120	08-SEP-21
WG3612409-1 MB								
Lead (Pb)-Total			<0.000050		mg/L		0.00005	08-SEP-21
OGG-IR-ED	**Water**							
Batch R5581644								
WG3612318-2 LCS								
Oil & Grease-(IR)			111.2		%		70-130	09-SEP-21
WG3612318-1 MB								
Oil & Grease-(IR)			<1.0		mg/L		1	09-SEP-21
PH-ED	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH-ED	**Water**							
Batch R5580718								
WG3612672-2 LCS		**ED-PH6**						
pH			6.07		pH		5.8-6.2	07-SEP-21
SOLIDS-TOTSUS-ED	**Water**							
Batch R5579881								
WG3611960-3 DUP		**L2635000-1**						
Total Suspended Solids		<3.0	3.0	RPD-NA	mg/L	N/A	20	07-SEP-21
WG3611960-2 LCS								
Total Suspended Solids			95.5		%		85-115	07-SEP-21
WG3611960-1 MB								
Total Suspended Solids			<3.0		mg/L		3	07-SEP-21

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
pH							
	1	31-AUG-21 17:03	07-SEP-21 11:00	0.25	162	hours	EHTR-FM
	2	31-AUG-21 16:37	07-SEP-21 11:00	0.25	162	hours	EHTR-FM
	3	31-AUG-21 16:45	07-SEP-21 11:00	0.25	162	hours	EHTR-FM

Legend & Qualifier Definitions:

EHTR-FM:	Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR:	Exceeded ALS recommended hold time prior to sample receipt.
EHTL:	Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT:	Exceeded ALS recommended hold time prior to analysis.
Rec. HT:	ALS recommended hold time (see units).

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2635000 were received on 02-SEP-21 09:30.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

ALS Environmental
www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here (lab use only)

COC Number: 17 - 818604

Page of

Report To	Contact and company name below will appear on the final report	Report Format / Distribution	Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)
Company:	KBL Environmental	Select Report Format: ☒ PDF ☒ EXCEL ☒ EDD (DIGITAL)	Regular [R] ☐ Standard TAT if received by 3 pm - business days - no surcharges apply
Contact:	Katie Oliver	Quality Control (QC) Report with Report ☐ YES ☐ NO	PRIORITY (Business Days): 4 day [P4-20%] ☐ / 3 day [P3-25%] ☐ / 2 day [P2-50%] ☐
Phone:	780-893-3305	☐ Compare Results to Criteria on Report - provide details below if box checked	EMERGENCY: 1 Business day [E - 100%] ☐ / Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] ☐
	Company address below will appear on the final report	Select Distribution: ☐ EMAIL ☐ MAIL ☐ FAX	Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm
Street:	3909, 68 Ave	Email 1 or Fax: Koliver@Kblenv.com	For tests that can not be performed according to the service level selected, you will be contacted.
City/Province:	Leduc, AB	Email 2: jgrousopoulos@Kblenv.com	
Postal Code:	T9E 0Z4	Email 3:	

Invoice To		Invoice Distribution	
	Same as Report To ☒ YES ☐ NO	Select Invoice Distribution: ☐ EMAIL ☐ MAIL ☐ FAX	
	Copy of Invoice with Report ☐ YES ☐ NO	Email 1 or Fax: accounting@Kblenv.com	
Company:		Email 2:	
Contact:			

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:		AFE/Cost Center:	PO#:
Job #:	4300	Major/Minor Code:	Routing Code:
PO / AFE:	JG018	Requisitioner:	
LSD:		Location:	

ALS Lab Work Order # (lab use only): L2635000

ALS Contact: Oliver Gregg

Sampler: James Grousopoulos

Analysis Request — Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	pH	TSS	Oil and Grease	Total Lead	BTEX	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	21CST1-N-210831	31-Aug-21	1703	Water	6	X	X	X	X	X		
	21CST1-W-210831	31-Aug-21	1637	Water	6	X	X	X	X	X		
	21CST1-E-210831	31-Aug-21	1645	Water	6	X	X	X	X	X		

L2635000-COFC

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)
Are samples taken from a Regulated DW System? ☐ YES ☐ NO	
Are samples for human consumption/ use? ☐ YES ☐ NO	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐		SIF Observations	Yes ☐	No ☐	
Ice Packs ☐	Ice Cubes ☐	Custody seal intact	Yes ☐	No ☐	
Cooling Initiated ☐					

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
12.3							

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
James Grousopoulos	2021-Sep-02	0917		2Sep21	9:30			

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JUNE 2018 FRONT

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

GENERAL TERMS AND CONDITIONS:

These terms and conditions are incorporated in and form part of the Agreement between ALS Group's Environmental Division and the party named in the Offer (the "Client").

1. Definitions. Capitalized Terms not defined in these Terms and Conditions have the definitions set out in the other Agreement documents.
2. The Services. ALS will provide the Services to the Client as described in the Offer and in any chain of custody form provided with any sample.
3. Prices. ALS may review and change all prices, fees, surcharges or other charges set out in the Agreement if there are changes to ALS's cost beyond ALS's control, including changes in legislative requirements, Client variations of sample numbers and Client requests for changes to standard reporting requirements. Notwithstanding Condition 3, all quotations expire after three years.
4. Payment Terms. The Client shall pay ALS within 30 days of the invoice date OAC. ALS may, for reasonable business reasons, require the Client to arrange for payment in advance.
5. Quotation Numbers. The Client shall provide the quotation number to ALS (where applicable) to ensure correct pricing.
6. Taxes. Applicable taxes are not included in prices. Applicable surcharges and additional fees will be added at the time of invoicing.
7. Quality Control. ALS has an extensive QA/QC program. Clients' samples are analyzed using approved, referenced procedures followed by thorough data validation prior to reporting of the analytical results.
8. Test Results. Results are obtained from analytical measurements that are subject to inherent variability. Measurement results reflect characteristics of submitted test samples at time of analysis. The Client is responsible for informing itself on the limitation of test results and acknowledges that test results are not guaranteed. When statements of conformity are requested on test reports (e.g. within Criteria Reports), measurement uncertainty is not applied to test results prior to the evaluation.
9. Standard of Care. ALS will use reasonable care and diligence as required by the laws of the province or territory where the sample is tested.
10. Storage. Where possible, ALS will store; soil and water samples for 45 days from date of receipt, tissue/biota samples for 6 months from date of receipt, air samples or re-usable media for 14 days from date of receipt, and microbiological samples for 3 days from date of receipt.
11. Holds. If the Client requests a sample to be placed on hold, ALS will store the samples according to paragraph 10, after which ALS will invoice the Client and discard the sample. Each sample is subject to a minimum $5.00 hold fee. Longer hold periods are available upon request. See paragraph 12.
12. Archives. If the Client requests a sample be archived, ALS will invoice in advance and store the sample for the period requested, after which ALS may discard the sample.
13. Legal Sample Handling Protocol. Legal sample handling protocol must be arranged before samples are collected. ALS charges a surcharge on the list price plus the hourly technologist or chemist rates for legal sample protocol. Additional charges will apply for samples that require storage by ALS.
14. Samples. The quality, condition, content and source of samples stored and tested are not known to ALS except as declared and described on the chain of custody form completed and submitted by the Client and accompanying the sample.
15. Risk of Loss. ALS will use reasonable care to protect samples during storage, however all samples are stored at the Client's risk and the Client is responsible for obtaining appropriate insurance, if desired. The Client acknowledges that during the performance of the Services samples may be altered, lost, damaged, or destroyed and the Client releases ALS from any claim the Client may have for any loss or damage to the sample.
16. Environmental. The Client must comply with all applicable environment legislation, including labeling all hazardous samples to comply with GHS and TDG regulations, and must provide appropriate Safety Data that include the nature of the hazard and a contact name and phone number to call for information. The Client will indemnify ALS for all loss or damages, including any fine or cost of complying with an order of any government authority, resulting from the Client's breach of this paragraph.
17. Hazardous Materials Disposal. ALS may return, at the Client's cost, hazardous material to the Client for disposal.
18. Hazardous Materials Surcharge. ALS may apply an additional surcharge for handling of hazardous samples or samples with Naturally Occurring Radioactive Materials (NORM), H2S, CN, etc.
19. Sample Containers. ALS may ship sample containers to the Client's location by the most cost effective means using ALS preferred courier suppliers, within the specified project timeline.
20. Additional Charges. ALS may charge the Client (a) its cost for emergency bottle shipments and shipments to and from a remote site, and (b) where pick up and delivery services are provided, subject in each instance to a minimum charge of $25.00.
21. Re-Tests. ALS reserves the right to re-test any samples that remain in its possession. Re-tests requested by the Client may be subject to charges.
22. Waiver. The Client is responsible for making any assessment regarding the suitability of the Services and the intended results for the Client's purposes and waives any claims against ALS it may have as a result of the interpretation of the results. The Client shall indemnify ALS for all claims made by any third party against ALS in respect of all losses however arising from the performance of the Services or the use of any report provided in the performance of the Services.
23. Limitation of Liability. In no event shall ALS be liable for any consequential, indirect, incidental, special, exemplary, or punitive damages, whether foreseeable or unforeseeable (including claims for loss of profits or revenue or losses caused by stoppage of other work or impairment of other assets), incurred by the Client arising out of breach or failure of express or implied warranty, breach of contract, breach of warranty, misrepresentation, negligence, strict liability in tort or otherwise. In any event, the liability of ALS to the Client shall be limited to the cost of testing the sample as requested in the chain of custody form under which the sample was originally deposited. For the purposes of this paragraph and paragraphs 8, 15, 16, 22 and 24, as applicable, "ALS" includes without limitations its directors, officers, employees and affiliates and the "Client" includes without limitation any third party that may have a claim against ALS through the Client.
24. Notice of Liability. Notwithstanding paragraph 23, ALS shall not be liable to the Client unless the Client provides notice in writing to ALS of such loss or damage, together with full particulars thereof, within 30 days of the Client's receipt of the report of the analysis of the sample giving rise to such liability. The provisions of this paragraph allocate the risk under the Agreement between the Client and ALS, and the fees to be paid by the Client to ALS reflect this allocation of risks and the limitations of liability in this Agreement.
25. Third Party Service Provider Indemnity. For testing not performed at ALS, and where the Client requires ALS to forward samples to a third party service provider, the Client indemnifies ALS against any breach of this Agreement, all liabilities or losses incurred in connection with the third party service provider, including but not limited to courier services, testing turn-around time, and any additional costs associated with such third party.
26. Third Party Service Provider Indemnity. If ALS is required to engage a third party service provider for whatever reason, the Client indemnifies ALS against any breach of this Agreement, liabilities, or losses incurred in connection with the third party service provider, including but not limited to courier services, testing turn-around time, and any additional costs associated with such third party.
27. Entire Agreement. The Agreement is the entire agreement between the parties and supersedes and takes precedence over any terms and conditions contained in any documentation provided by the Client. ALS's execution of any subsequent documentation from the Client only acknowledges receipt and not acceptance of any terms or conditions therein. If there is a conflict between these terms and conditions and any other Agreement document, these terms and conditions prevail.
28. Term. Providing the first batch of samples to which this tender refers is submitted within three months of the starting date of this quotation, the following prices, terms and conditions will remain firm until the closing date. This offer, and its terms and conditions will automatically lapse if the offer has not been accepted and samples not delivered to ALS by the Closing Date.
29. Termination. (a) Either party may terminate this Agreement for any reason by giving the other party thirty (30) days written notice (Notice Period). (b) If the Agreement is terminated pursuant to clause (a), then the Client must pay ALS for all Services performed up to the expiry of the Notice Period.

KBL Environmental Ltd.
ATTN: Katie Oliver
3909, 68 Ave
Leduc AB T9E 0Z4

Date Received: 02-SEP-21
Report Date: 23-SEP-21 14:47 (MT)
Version: FINAL REV. 2

Client Phone: 780-893-3305

Certificate of Analysis

Lab Work Order #: L2635011

Project P.O. #: JG017
Job Reference: 4300
C of C Numbers: 17-818603
Legal Site Desc:

Comments: ADDITIONAL 15-SEP-21 13:09

Oliver Gregg
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2635011-1 21P1-210831							
Sampled By: JAMES GROUSOPOULOS on 31-AUG-21 @ 17:21							
Matrix: SOIL							
CCME BTEX, F1 TO F4							
BTEX and F1							
Benzene	<0.0050		0.0050	mg/kg	31-AUG-21	12-SEP-21	R5543914
Toluene	<0.050		0.050	mg/kg	31-AUG-21	12-SEP-21	R5543914
Ethylbenzene	<0.010		0.010	mg/kg	31-AUG-21	12-SEP-21	R5543914
Xylenes	<0.10		0.10	mg/kg	31-AUG-21	12-SEP-21	R5543914
m+p-Xylene	<0.050		0.050	mg/kg	31-AUG-21	12-SEP-21	R5543914
o-Xylene	<0.050		0.050	mg/kg	31-AUG-21	12-SEP-21	R5543914
Surrogate: 1,4-Difluorobenzene (SS)	101.3		70-130	%	31-AUG-21	12-SEP-21	R5543914
Surrogate: 4-Bromofluorobenzene (SS)	116.9		70-130	%	31-AUG-21	12-SEP-21	R5543914
Surrogate: 3,4-Dichlorotoluene (SS)	117.9		70-130	%	31-AUG-21	12-SEP-21	R5543914
CCME Total Extractable Hydrocarbons							
Surrogate: 2-Bromobenzotrifluoride	90.5		70-130	%	05-SEP-21	07-SEP-21	R5580966
Chrom. to baseline at nC50	YES				05-SEP-21	07-SEP-21	R5580966
Prep/Analysis Dates					05-SEP-21	07-SEP-21	R5580966
CCME Total Hydrocarbons							
F1 (C6-C10)	<10		10	mg/kg		13-SEP-21	
F1-BTEX	<10		10	mg/kg		13-SEP-21	
F2 (C10-C16)	2870		20	mg/kg		13-SEP-21	
F3 (C16-C34)	1540		20	mg/kg		13-SEP-21	
F4 (C34-C50)	395		20	mg/kg		13-SEP-21	
Total Hydrocarbons (C6-C50)	4810		20	mg/kg		13-SEP-21	
Metals in Soil by ICPMS (CCME)							
Mercury in Soil by CVAAS							
Mercury (Hg)	0.0070		0.0050	mg/kg	10-SEP-21	10-SEP-21	R5582609
Metals in Soil by CRC ICPMS							
Antimony (Sb)	0.10		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Arsenic (As)	3.31		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Barium (Ba)	40.6		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Beryllium (Be)	0.41		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Cadmium (Cd)	0.039		0.020	mg/kg	10-SEP-21	10-SEP-21	R5582389
Chromium (Cr)	21.1		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Cobalt (Co)	4.58		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Copper (Cu)	11.7		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Lead (Pb)	8.61		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Molybdenum (Mo)	0.89		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Nickel (Ni)	13.6		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Selenium (Se)	<0.20		0.20	mg/kg	10-SEP-21	10-SEP-21	R5582389
Silver (Ag)	<0.10		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Thallium (Tl)	0.076		0.050	mg/kg	10-SEP-21	10-SEP-21	R5582389
Tin (Sn)	<2.0		2.0	mg/kg	10-SEP-21	10-SEP-21	R5582389
Uranium (U)	0.881		0.050	mg/kg	10-SEP-21	10-SEP-21	R5582389
Vanadium (V)	17.6		0.20	mg/kg	10-SEP-21	10-SEP-21	R5582389
Zinc (Zn)	17.4		2.0	mg/kg	10-SEP-21	10-SEP-21	R5582389
Miscellaneous Parameters							
% Moisture	8.96		0.25	%		07-SEP-21	R5580159
Hexavalent Chromium	<0.10		0.10	mg/kg	16-SEP-21	16-SEP-21	R5585638
L2635011-2 21P3-1-210831							
Sampled By: JAMES GROUSOPOULOS on 31-AUG-21 @ 17:43							
Matrix: SOIL							
CCME BTEX, F1 TO F4							
BTEX and F1							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2635011-2 21P3-1-210831							
Sampled By: JAMES GROUSOPOULOS on 31-AUG-21 @ 17:43							
Matrix: SOIL							
BTEX and F1							
Benzene	<0.0050		0.0050	mg/kg	31-AUG-21	12-SEP-21	R5543914
Toluene	<0.050		0.050	mg/kg	31-AUG-21	12-SEP-21	R5543914
Ethylbenzene	<0.010		0.010	mg/kg	31-AUG-21	12-SEP-21	R5543914
Xylenes	<0.10		0.10	mg/kg	31-AUG-21	12-SEP-21	R5543914
m+p-Xylene	<0.050		0.050	mg/kg	31-AUG-21	12-SEP-21	R5543914
o-Xylene	<0.050		0.050	mg/kg	31-AUG-21	12-SEP-21	R5543914
Surrogate: 1,4-Difluorobenzene (SS)	96.3		70-130	%	31-AUG-21	12-SEP-21	R5543914
Surrogate: 4-Bromofluorobenzene (SS)	98.2		70-130	%	31-AUG-21	12-SEP-21	R5543914
Surrogate: 3,4-Dichlorotoluene (SS)	72.5		70-130	%	31-AUG-21	12-SEP-21	R5543914
CCME Total Extractable Hydrocarbons							
Surrogate: 2-Bromobenzotrifluoride	90.1		70-130	%	05-SEP-21	07-SEP-21	R5580966
Chrom. to baseline at nC50	YES				05-SEP-21	07-SEP-21	R5580966
Prep/Analysis Dates					05-SEP-21	07-SEP-21	R5580966
CCME Total Hydrocarbons							
F1 (C6-C10)	<10		10	mg/kg		13-SEP-21	
F1-BTEX	<10		10	mg/kg		13-SEP-21	
F2 (C10-C16)	360		20	mg/kg		13-SEP-21	
F3 (C16-C34)	3260		20	mg/kg		13-SEP-21	
F4 (C34-C50)	557		20	mg/kg		13-SEP-21	
Total Hydrocarbons (C6-C50)	4180		20	mg/kg		13-SEP-21	
Metals in Soil by ICPMS (CCME)							
Mercury in Soil by CVAAS							
Mercury (Hg)	0.0190		0.0050	mg/kg	10-SEP-21	10-SEP-21	R5582609
Metals in Soil by CRC ICPMS							
Antimony (Sb)	0.40		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Arsenic (As)	3.32		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Barium (Ba)	74.0		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Beryllium (Be)	0.31		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Cadmium (Cd)	0.067		0.020	mg/kg	10-SEP-21	10-SEP-21	R5582389
Chromium (Cr)	22.3		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Cobalt (Co)	3.66		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Copper (Cu)	9.47		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Lead (Pb)	17.4		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Molybdenum (Mo)	1.01		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Nickel (Ni)	12.8		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Selenium (Se)	<0.20		0.20	mg/kg	10-SEP-21	10-SEP-21	R5582389
Silver (Ag)	<0.10		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Thallium (Tl)	0.070		0.050	mg/kg	10-SEP-21	10-SEP-21	R5582389
Tin (Sn)	<2.0		2.0	mg/kg	10-SEP-21	10-SEP-21	R5582389
Uranium (U)	0.759		0.050	mg/kg	10-SEP-21	10-SEP-21	R5582389
Vanadium (V)	15.4		0.20	mg/kg	10-SEP-21	10-SEP-21	R5582389
Zinc (Zn)	21.7		2.0	mg/kg	10-SEP-21	10-SEP-21	R5582389
Miscellaneous Parameters							
% Moisture	8.76		0.25	%		07-SEP-21	R5580159
Hexavalent Chromium	<0.10		0.10	mg/kg	16-SEP-21	16-SEP-21	R5585638
L2635011-3 21P3-2-210831							
Sampled By: JAMES GROUSOPOULOS on 31-AUG-21 @ 18:05							
Matrix: SOIL							
CCME BTEX, F1 TO F4							
BTEX and F1							
Benzene	<0.0050		0.0050	mg/kg	31-AUG-21	12-SEP-21	R5543914

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2635011-3 21P3-2-210831							
Sampled By: JAMES GROUSOPOULOS on 31-AUG-21 @ 18:05							
Matrix: SOIL							
BTEX and F1							
Toluene	<0.050		0.050	mg/kg	31-AUG-21	12-SEP-21	R5543914
Ethylbenzene	<0.010		0.010	mg/kg	31-AUG-21	12-SEP-21	R5543914
Xylenes	<0.10		0.10	mg/kg	31-AUG-21	12-SEP-21	R5543914
m+p-Xylene	<0.050		0.050	mg/kg	31-AUG-21	12-SEP-21	R5543914
o-Xylene	<0.050		0.050	mg/kg	31-AUG-21	12-SEP-21	R5543914
Surrogate: 1,4-Difluorobenzene (SS)	101.9		70-130	%	31-AUG-21	12-SEP-21	R5543914
Surrogate: 4-Bromofluorobenzene (SS)	103.2		70-130	%	31-AUG-21	12-SEP-21	R5543914
Surrogate: 3,4-Dichlorotoluene (SS)	87.4		70-130	%	31-AUG-21	12-SEP-21	R5543914
CCME Total Extractable Hydrocarbons							
Surrogate: 2-Bromobenzotrifluoride	89.1		70-130	%	05-SEP-21	07-SEP-21	R5580966
Chrom. to baseline at nC50	YES				05-SEP-21	07-SEP-21	R5580966
Prep/Analysis Dates					05-SEP-21	07-SEP-21	R5580966
CCME Total Hydrocarbons							
F1 (C6-C10)	<10		10	mg/kg		13-SEP-21	
F1-BTEX	<10		10	mg/kg		13-SEP-21	
F2 (C10-C16)	175		20	mg/kg		13-SEP-21	
F3 (C16-C34)	290		20	mg/kg		13-SEP-21	
F4 (C34-C50)	<20		20	mg/kg		13-SEP-21	
Total Hydrocarbons (C6-C50)	465		20	mg/kg		13-SEP-21	
Metals in Soil by ICPMS (CCME)							
Mercury in Soil by CVAAS							
Mercury (Hg)	0.0071		0.0050	mg/kg	10-SEP-21	10-SEP-21	R5582609
Metals in Soil by CRC ICPMS							
Antimony (Sb)	0.28		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Arsenic (As)	3.22		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Barium (Ba)	43.0		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Beryllium (Be)	0.35		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Cadmium (Cd)	0.035		0.020	mg/kg	10-SEP-21	10-SEP-21	R5582389
Chromium (Cr)	29.5		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Cobalt (Co)	3.46		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Copper (Cu)	8.98		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Lead (Pb)	9.70		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Molybdenum (Mo)	0.89		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Nickel (Ni)	14.8		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Selenium (Se)	<0.20		0.20	mg/kg	10-SEP-21	10-SEP-21	R5582389
Silver (Ag)	<0.10		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Thallium (Tl)	0.056		0.050	mg/kg	10-SEP-21	10-SEP-21	R5582389
Tin (Sn)	<2.0		2.0	mg/kg	10-SEP-21	10-SEP-21	R5582389
Uranium (U)	0.734		0.050	mg/kg	10-SEP-21	10-SEP-21	R5582389
Vanadium (V)	14.9		0.20	mg/kg	10-SEP-21	10-SEP-21	R5582389
Zinc (Zn)	13.5		2.0	mg/kg	10-SEP-21	10-SEP-21	R5582389
Miscellaneous Parameters							
% Moisture	6.51		0.25	%		07-SEP-21	R5580159
Hexavalent Chromium	<0.10		0.10	mg/kg	22-SEP-21	22-SEP-21	R5591105
L2635011-4 21P4-1-210901							
Sampled By: JAMES GROUSOPOULOS on 01-SEP-21 @ 06:41							
Matrix: SOIL							
CCME BTEX, F1 TO F4							
BTEX and F1							
Benzene	<0.0050		0.0050	mg/kg	01-SEP-21	12-SEP-21	R5543914
Toluene	<0.050		0.050	mg/kg	01-SEP-21	12-SEP-21	R5543914

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2635011-4 21P4-1-210901							
Sampled By: JAMES GROUSOPOULOS on 01-SEP-21 @ 06:41							
Matrix: SOIL							
BTEX and F1							
Ethylbenzene	<0.010		0.010	mg/kg	01-SEP-21	12-SEP-21	R5543914
Xylenes	<0.10		0.10	mg/kg	01-SEP-21	12-SEP-21	R5543914
m+p-Xylene	<0.050		0.050	mg/kg	01-SEP-21	12-SEP-21	R5543914
o-Xylene	<0.050		0.050	mg/kg	01-SEP-21	12-SEP-21	R5543914
Surrogate: 1,4-Difluorobenzene (SS)	97.7		70-130	%	01-SEP-21	12-SEP-21	R5543914
Surrogate: 4-Bromofluorobenzene (SS)	99.9		70-130	%	01-SEP-21	12-SEP-21	R5543914
Surrogate: 3,4-Dichlorotoluene (SS)	83.3		70-130	%	01-SEP-21	12-SEP-21	R5543914
CCME Total Extractable Hydrocarbons							
Surrogate: 2-Bromobenzotrifluoride	90.5		70-130	%	05-SEP-21	07-SEP-21	R5580966
Chrom. to baseline at nC50	YES				05-SEP-21	07-SEP-21	R5580966
Prep/Analysis Dates					05-SEP-21	07-SEP-21	R5580966
CCME Total Hydrocarbons							
F1 (C6-C10)	<10		10	mg/kg		13-SEP-21	
F1-BTEX	<10		10	mg/kg		13-SEP-21	
F2 (C10-C16)	130		20	mg/kg		13-SEP-21	
F3 (C16-C34)	402		20	mg/kg		13-SEP-21	
F4 (C34-C50)	70		20	mg/kg		13-SEP-21	
Total Hydrocarbons (C6-C50)	602		20	mg/kg		13-SEP-21	
Metals in Soil by ICPMS (CCME)							
Mercury in Soil by CVAAS							
Mercury (Hg)	0.0102		0.0050	mg/kg	10-SEP-21	10-SEP-21	R5582609
Metals in Soil by CRC ICPMS							
Antimony (Sb)	0.23		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Arsenic (As)	3.18		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Barium (Ba)	54.5		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Beryllium (Be)	0.31		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Cadmium (Cd)	0.063		0.020	mg/kg	10-SEP-21	10-SEP-21	R5582389
Chromium (Cr)	22.3		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Cobalt (Co)	3.98		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Copper (Cu)	9.86		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Lead (Pb)	16.7		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Molybdenum (Mo)	0.81		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Nickel (Ni)	13.0		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Selenium (Se)	<0.20		0.20	mg/kg	10-SEP-21	10-SEP-21	R5582389
Silver (Ag)	<0.10		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Thallium (Tl)	0.065		0.050	mg/kg	10-SEP-21	10-SEP-21	R5582389
Tin (Sn)	<2.0		2.0	mg/kg	10-SEP-21	10-SEP-21	R5582389
Uranium (U)	0.711		0.050	mg/kg	10-SEP-21	10-SEP-21	R5582389
Vanadium (V)	15.9		0.20	mg/kg	10-SEP-21	10-SEP-21	R5582389
Zinc (Zn)	27.8		2.0	mg/kg	10-SEP-21	10-SEP-21	R5582389
Miscellaneous Parameters							
% Moisture	8.04		0.25	%		07-SEP-21	R5580283
Hexavalent Chromium	<0.10		0.10	mg/kg	22-SEP-21	22-SEP-21	R5591105
L2635011-5 21P4-2-210831							
Sampled By: JAMES GROUSOPOULOS on 31-AUG-21 @ 18:31							
Matrix: SOIL							
CCME BTEX, F1 TO F4							
BTEX and F1							
Benzene	<0.0050		0.0050	mg/kg	31-AUG-21	12-SEP-21	R5543914
Toluene	<0.050		0.050	mg/kg	31-AUG-21	12-SEP-21	R5543914
Ethylbenzene	<0.010		0.010	mg/kg	31-AUG-21	12-SEP-21	R5543914

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2635011-5 21P4-2-210831							
Sampled By: JAMES GROUSOPOULOS on 31-AUG-21 @ 18:31							
Matrix: SOIL							
BTEX and F1							
Xylenes	<0.10		0.10	mg/kg	31-AUG-21	12-SEP-21	R5543914
m+p-Xylene	<0.050		0.050	mg/kg	31-AUG-21	12-SEP-21	R5543914
o-Xylene	<0.050		0.050	mg/kg	31-AUG-21	12-SEP-21	R5543914
Surrogate: 1,4-Difluorobenzene (SS)	86.6		70-130	%	31-AUG-21	12-SEP-21	R5543914
Surrogate: 4-Bromofluorobenzene (SS)	92.1		70-130	%	31-AUG-21	12-SEP-21	R5543914
Surrogate: 3,4-Dichlorotoluene (SS)	80.7		70-130	%	31-AUG-21	12-SEP-21	R5543914
CCME Total Extractable Hydrocarbons							
Surrogate: 2-Bromobenzotrifluoride	89.0		70-130	%	05-SEP-21	07-SEP-21	R5580966
Chrom. to baseline at nC50	YES				05-SEP-21	07-SEP-21	R5580966
Prep/Analysis Dates					05-SEP-21	07-SEP-21	R5580966
CCME Total Hydrocarbons							
F1 (C6-C10)	<10		10	mg/kg		13-SEP-21	
F1-BTEX	<10		10	mg/kg		13-SEP-21	
F2 (C10-C16)	249		20	mg/kg		13-SEP-21	
F3 (C16-C34)	424		20	mg/kg		13-SEP-21	
F4 (C34-C50)	60		20	mg/kg		13-SEP-21	
Total Hydrocarbons (C6-C50)	733		20	mg/kg		13-SEP-21	
Metals in Soil by ICPMS (CCME)							
Mercury in Soil by CVAAS							
Mercury (Hg)	0.0106		0.0050	mg/kg	10-SEP-21	10-SEP-21	R5582609
Metals in Soil by CRC ICPMS							
Antimony (Sb)	0.25		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Arsenic (As)	3.06		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Barium (Ba)	57.8		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Beryllium (Be)	0.34		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Cadmium (Cd)	0.048		0.020	mg/kg	10-SEP-21	10-SEP-21	R5582389
Chromium (Cr)	15.7		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Cobalt (Co)	3.86		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Copper (Cu)	8.04		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Lead (Pb)	10.5		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Molybdenum (Mo)	0.58		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Nickel (Ni)	9.83		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Selenium (Se)	<0.20		0.20	mg/kg	10-SEP-21	10-SEP-21	R5582389
Silver (Ag)	<0.10		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Thallium (Tl)	0.063		0.050	mg/kg	10-SEP-21	10-SEP-21	R5582389
Tin (Sn)	<2.0		2.0	mg/kg	10-SEP-21	10-SEP-21	R5582389
Uranium (U)	0.657		0.050	mg/kg	10-SEP-21	10-SEP-21	R5582389
Vanadium (V)	14.7		0.20	mg/kg	10-SEP-21	10-SEP-21	R5582389
Zinc (Zn)	16.9		2.0	mg/kg	10-SEP-21	10-SEP-21	R5582389
Miscellaneous Parameters							
% Moisture	6.82		0.25	%		07-SEP-21	R5580283
Hexavalent Chromium	<0.10		0.10	mg/kg	22-SEP-21	22-SEP-21	R5591105
L2635011-6 21P7-210901							
Sampled By: JAMES GROUSOPOULOS on 01-SEP-21 @ 06:28							
Matrix: SOIL							
CCME BTEX, F1 TO F4							
BTEX and F1							
Benzene	<0.0050		0.0050	mg/kg	01-SEP-21	12-SEP-21	R5543914
Toluene	<0.050		0.050	mg/kg	01-SEP-21	12-SEP-21	R5543914
Ethylbenzene	<0.010		0.010	mg/kg	01-SEP-21	12-SEP-21	R5543914
Xylenes	<0.10		0.10	mg/kg	01-SEP-21	12-SEP-21	R5543914

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2635011-6 21P7-210901							
Sampled By: JAMES GROUSOPOULOS on 01-SEP-21 @ 06:28							
Matrix: SOIL							
BTEX and F1							
m+p-Xylene	<0.050		0.050	mg/kg	01-SEP-21	12-SEP-21	R5543914
o-Xylene	<0.050		0.050	mg/kg	01-SEP-21	12-SEP-21	R5543914
Surrogate: 1,4-Difluorobenzene (SS)	92.3		70-130	%	01-SEP-21	12-SEP-21	R5543914
Surrogate: 4-Bromofluorobenzene (SS)	94.2		70-130	%	01-SEP-21	12-SEP-21	R5543914
Surrogate: 3,4-Dichlorotoluene (SS)	81.8		70-130	%	01-SEP-21	12-SEP-21	R5543914
CCME Total Extractable Hydrocarbons							
Surrogate: 2-Bromobenzotrifluoride	119.7		70-130	%	05-SEP-21	07-SEP-21	R5580966
Chrom. to baseline at nC50	YES				05-SEP-21	07-SEP-21	R5580966
Prep/Analysis Dates					05-SEP-21	07-SEP-21	R5580966
CCME Total Hydrocarbons							
F1 (C6-C10)	<10		10	mg/kg		13-SEP-21	
F1-BTEX	<10		10	mg/kg		13-SEP-21	
F2 (C10-C16)	<20		20	mg/kg		13-SEP-21	
F3 (C16-C34)	132		20	mg/kg		13-SEP-21	
F4 (C34-C50)	54		20	mg/kg		13-SEP-21	
Total Hydrocarbons (C6-C50)	186		20	mg/kg		13-SEP-21	
Metals in Soil by ICPMS (CCME)							
Mercury in Soil by CVAAS							
Mercury (Hg)	0.0115		0.0050	mg/kg	10-SEP-21	10-SEP-21	R5582609
Metals in Soil by CRC ICPMS							
Antimony (Sb)	<0.10		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Arsenic (As)	2.72		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Barium (Ba)	40.4		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Beryllium (Be)	0.33		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Cadmium (Cd)	0.082		0.020	mg/kg	10-SEP-21	10-SEP-21	R5582389
Chromium (Cr)	22.3		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Cobalt (Co)	4.88		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Copper (Cu)	9.92		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Lead (Pb)	5.81		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Molybdenum (Mo)	0.72		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Nickel (Ni)	13.5		0.50	mg/kg	10-SEP-21	10-SEP-21	R5582389
Selenium (Se)	<0.20		0.20	mg/kg	10-SEP-21	10-SEP-21	R5582389
Silver (Ag)	<0.10		0.10	mg/kg	10-SEP-21	10-SEP-21	R5582389
Thallium (Tl)	0.094		0.050	mg/kg	10-SEP-21	10-SEP-21	R5582389
Tin (Sn)	<2.0		2.0	mg/kg	10-SEP-21	10-SEP-21	R5582389
Uranium (U)	1.48		0.050	mg/kg	10-SEP-21	10-SEP-21	R5582389
Vanadium (V)	22.7		0.20	mg/kg	10-SEP-21	10-SEP-21	R5582389
Zinc (Zn)	25.4		2.0	mg/kg	10-SEP-21	10-SEP-21	R5582389
Miscellaneous Parameters							
% Moisture	25.9		0.25	%		07-SEP-21	R5580283
Hexavalent Chromium	<0.10		0.10	mg/kg	22-SEP-21	22-SEP-21	R5591105
L2635011-7 21P2-210901							
Sampled By: JAMES GROUSOPOULOS on 01-SEP-21 @ 06:44							
Matrix: SOIL							
CCME BTEX, F1 TO F4							
BTEX and F1							
Benzene	<0.0050		0.0050	mg/kg	01-SEP-21	12-SEP-21	R5543914
Toluene	<0.050		0.050	mg/kg	01-SEP-21	12-SEP-21	R5543914
Ethylbenzene	<0.010		0.010	mg/kg	01-SEP-21	12-SEP-21	R5543914
Xylenes	<0.10		0.10	mg/kg	01-SEP-21	12-SEP-21	R5543914
m+p-Xylene	<0.050		0.050	mg/kg	01-SEP-21	12-SEP-21	R5543914

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2635011-7 21P2-210901							
Sampled By: JAMES GROUSOPOULOS on 01-SEP-21 @ 06:44							
Matrix: SOIL							
BTEX and F1							
o-Xylene	<0.050		0.050	mg/kg	01-SEP-21	12-SEP-21	R5543914
Surrogate: 1,4-Difluorobenzene (SS)	86.7		70-130	%	01-SEP-21	12-SEP-21	R5543914
Surrogate: 4-Bromofluorobenzene (SS)	73.4		70-130	%	01-SEP-21	12-SEP-21	R5543914
Surrogate: 3,4-Dichlorotoluene (SS)	84.7		70-130	%	01-SEP-21	12-SEP-21	R5543914
CCME Total Extractable Hydrocarbons							
Surrogate: 2-Bromobenzotrifluoride	88.9		70-130	%	05-SEP-21	07-SEP-21	R5580966
Chrom. to baseline at nC50	YES				05-SEP-21	07-SEP-21	R5580966
Prep/Analysis Dates					05-SEP-21	07-SEP-21	R5580966
CCME Total Hydrocarbons							
F1 (C6-C10)	<10		10	mg/kg		13-SEP-21	
F1-BTEX	<10		10	mg/kg		13-SEP-21	
F2 (C10-C16)	479		20	mg/kg		13-SEP-21	
F3 (C16-C34)	67		20	mg/kg		13-SEP-21	
F4 (C34-C50)	<20		20	mg/kg		13-SEP-21	
Total Hydrocarbons (C6-C50)	546		20	mg/kg		13-SEP-21	
Metals in Soil by ICPMS (CCME)							
Mercury in Soil by CVAAS							
Mercury (Hg)	0.0099		0.0050	mg/kg	16-SEP-21	16-SEP-21	R5585690
Metals in Soil by CRC ICPMS							
Antimony (Sb)	<0.10		0.10	mg/kg	16-SEP-21	16-SEP-21	R5585226
Arsenic (As)	2.97		0.10	mg/kg	16-SEP-21	16-SEP-21	R5585226
Barium (Ba)	71.1		0.50	mg/kg	16-SEP-21	16-SEP-21	R5585226
Beryllium (Be)	0.61		0.10	mg/kg	16-SEP-21	16-SEP-21	R5585226
Cadmium (Cd)	0.021		0.020	mg/kg	16-SEP-21	16-SEP-21	R5585226
Chromium (Cr)	19.9		0.50	mg/kg	16-SEP-21	16-SEP-21	R5585226
Cobalt (Co)	7.40		0.10	mg/kg	16-SEP-21	16-SEP-21	R5585226
Copper (Cu)	16.9		0.50	mg/kg	16-SEP-21	16-SEP-21	R5585226
Lead (Pb)	7.29		0.50	mg/kg	16-SEP-21	16-SEP-21	R5585226
Molybdenum (Mo)	0.72		0.10	mg/kg	16-SEP-21	16-SEP-21	R5585226
Nickel (Ni)	14.3		0.50	mg/kg	16-SEP-21	16-SEP-21	R5585226
Selenium (Se)	<0.20		0.20	mg/kg	16-SEP-21	16-SEP-21	R5585226
Silver (Ag)	<0.10		0.10	mg/kg	16-SEP-21	16-SEP-21	R5585226
Thallium (Tl)	0.116		0.050	mg/kg	16-SEP-21	16-SEP-21	R5585226
Tin (Sn)	<2.0		2.0	mg/kg	16-SEP-21	16-SEP-21	R5585226
Uranium (U)	1.04		0.050	mg/kg	16-SEP-21	16-SEP-21	R5585226
Vanadium (V)	17.9		0.20	mg/kg	16-SEP-21	16-SEP-21	R5585226
Zinc (Zn)	17.2		2.0	mg/kg	16-SEP-21	16-SEP-21	R5585226
Miscellaneous Parameters							
% Moisture	7.65		0.25	%		07-SEP-21	R5580283
Hexavalent Chromium	<0.10		0.10	mg/kg	22-SEP-21	22-SEP-21	R5591105
L2635011-8 21P5-210901							
Sampled By: JAMES GROUSOPOULOS on 01-SEP-21 @ 06:57							
Matrix: SOIL							
CCME BTEX, F1 TO F4							
BTEX and F1							
Benzene	<0.0050		0.0050	mg/kg	01-SEP-21	12-SEP-21	R5543914
Toluene	<0.050		0.050	mg/kg	01-SEP-21	12-SEP-21	R5543914
Ethylbenzene	<0.010		0.010	mg/kg	01-SEP-21	12-SEP-21	R5543914
Xylenes	<0.10		0.10	mg/kg	01-SEP-21	12-SEP-21	R5543914
m+p-Xylene	<0.050		0.050	mg/kg	01-SEP-21	12-SEP-21	R5543914
o-Xylene	<0.050		0.050	mg/kg	01-SEP-21	12-SEP-21	R5543914

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2635011-8 21P5-210901							
Sampled By: JAMES GROUSOPOULOS on 01-SEP-21 @ 06:57							
Matrix: SOIL							
BTEX and F1							
Surrogate: 1,4-Difluorobenzene (SS)	98.3		70-130	%	01-SEP-21	12-SEP-21	R5543914
Surrogate: 4-Bromofluorobenzene (SS)	97.8		70-130	%	01-SEP-21	12-SEP-21	R5543914
Surrogate: 3,4-Dichlorotoluene (SS)	83.9		70-130	%	01-SEP-21	12-SEP-21	R5543914
CCME Total Extractable Hydrocarbons							
Surrogate: 2-Bromobenzotrifluoride	90.0		70-130	%	05-SEP-21	07-SEP-21	R5580966
Chrom. to baseline at nC50	YES				05-SEP-21	07-SEP-21	R5580966
Prep/Analysis Dates					05-SEP-21	07-SEP-21	R5580966
CCME Total Hydrocarbons							
F1 (C6-C10)	10		10	mg/kg		13-SEP-21	
F1-BTEX	10		10	mg/kg		13-SEP-21	
F2 (C10-C16)	248		20	mg/kg		13-SEP-21	
F3 (C16-C34)	1670		20	mg/kg		13-SEP-21	
F4 (C34-C50)	458		20	mg/kg		13-SEP-21	
Total Hydrocarbons (C6-C50)	2390		20	mg/kg		13-SEP-21	
Metals in Soil by ICPMS (CCME)							
Mercury in Soil by CVAAS							
Mercury (Hg)	0.0108		0.0050	mg/kg	16-SEP-21	16-SEP-21	R5585690
Metals in Soil by CRC ICPMS							
Antimony (Sb)	0.17		0.10	mg/kg	16-SEP-21	16-SEP-21	R5585226
Arsenic (As)	2.90		0.10	mg/kg	16-SEP-21	16-SEP-21	R5585226
Barium (Ba)	54.7		0.50	mg/kg	16-SEP-21	16-SEP-21	R5585226
Beryllium (Be)	0.34		0.10	mg/kg	16-SEP-21	16-SEP-21	R5585226
Cadmium (Cd)	0.059		0.020	mg/kg	16-SEP-21	16-SEP-21	R5585226
Chromium (Cr)	14.2		0.50	mg/kg	16-SEP-21	16-SEP-21	R5585226
Cobalt (Co)	3.82		0.10	mg/kg	16-SEP-21	16-SEP-21	R5585226
Copper (Cu)	9.28		0.50	mg/kg	16-SEP-21	16-SEP-21	R5585226
Lead (Pb)	10.1		0.50	mg/kg	16-SEP-21	16-SEP-21	R5585226
Molybdenum (Mo)	0.71		0.10	mg/kg	16-SEP-21	16-SEP-21	R5585226
Nickel (Ni)	9.56		0.50	mg/kg	16-SEP-21	16-SEP-21	R5585226
Selenium (Se)	<0.20		0.20	mg/kg	16-SEP-21	16-SEP-21	R5585226
Silver (Ag)	<0.10		0.10	mg/kg	16-SEP-21	16-SEP-21	R5585226
Thallium (Tl)	0.072		0.050	mg/kg	16-SEP-21	16-SEP-21	R5585226
Tin (Sn)	<2.0		2.0	mg/kg	16-SEP-21	16-SEP-21	R5585226
Uranium (U)	0.860		0.050	mg/kg	16-SEP-21	16-SEP-21	R5585226
Vanadium (V)	17.1		0.20	mg/kg	16-SEP-21	16-SEP-21	R5585226
Zinc (Zn)	20.1		2.0	mg/kg	16-SEP-21	16-SEP-21	R5585226
Miscellaneous Parameters							
% Moisture	7.78		0.25	%		07-SEP-21	R5580283
Hexavalent Chromium	<0.10		0.10	mg/kg	22-SEP-21	22-SEP-21	R5591105

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
BTXS,F1-MEOH-ED	Soil	BTEX and F1	EPA 8260C/5021A and CWS PHC Tier 1

This analysis involves the extraction of a subsample of the sediment/soil with methanol added in the field at the time of subsampling. The soil methanol extract is added to water and reagents, then heated in a sealed vial to equilibrium. The headspace from the vial is transferred into a gas chromatograph. BTX Target compound concentrations are measured using mass spectrometry detection. The instrumental portion of F1 analysis is carried out in accordance with the Canada Wide Standard for Petroleum Hydrocarbons in Soil - Tier 1 Method (2001).

CR-CR6-3060-ED	Soil	Chromium, Hexavalent (Cr +6)	APHA 3500-CR C, EPA 3060A ALKALINE

Field moist samples are digested with a sodium hydroxide/sodium carbonate solution. After cooling and filtration, the rinsate is adjusted to pH 9, and injected on an ion chromatograph to separate the hexavalent chromium ion. A post column color reaction with diphenylcarbohydrazide and absorbance measurement at 530 nm completes the quantitation.

ETL-TVH,TEH-CCME-ED	Soil	CCME Total Hydrocarbons	CCME CWS-PHC, Pub #1310, Dec 2001

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.
In samples where BTEX and F1 were analyzed , F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:
1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:
1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F2-4-TMB-ED	Soil	CCME Total Extractable Hydrocarbons	CCME Tier 1

This analysis is carried out in accordance with the "Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil - Tier 1 Method, Canadian Council of Ministers of the Environment" For C10 to C50 hydrocarbons (F2, F3, F4) and gravimetric heavy hydrocarbons (F4G-sg), a subsample of the sediment/soil is extracted with 1:1 hexane:acetone using a rotary extractor. The extract undergoes a silica-gel clean-up to remove polar compounds. F2, F3 & F4 are analyzed by on-column GC/FID, and F4G-sg is analyzed gravimetrically.

Notes:
1. F2 (C10-C16): Sum of all hydrocarbons that elute between nC10 and nC16.
2. F3 (C16-C34): Sum of all hydrocarbons that elute between nC16 and nC34.
3. F4 (C34-C50): Sum of all hydrocarbons that elute between nC34 and nC50.
4. F4G: Gravimetric Heavy Hydrocarbons
5. F4G-sg: Gravimetric Heavy Hydrocarbons (F4G) after silica gel treatment.
6. Where F4 (C34-C50) and F4G-sg results are reported for a sample, the larger of the reported values is used for comparison against the relevant CCME standard for F4.
7. The gravimetric heavy hydrocarbon results (F4G-sg), cannot be added to the C6 to C50 hydrocarbon results.
8. This method is validated for use.
9. Data from analysis of quality control samples is available upon request.
10. Reported results are expressed as milligrams per dry kilogram.

HG-200.2-CVAA-ED	Soil	Mercury in Soil by CVAAS	EPA 200.2/1631E (Mod)

Soil samples are digested with nitric and hydrochloric acids, followed by analysis by CVAAS.

MET-200.2-CCMS-ED	Soil	Metals in Soil by CRC ICPMS	EPA 200.2/6020A (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H2S) may be excluded if lost during sampling, storage, or digestion.

PREP-MOISTURE-ED	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**

The weighed portion of soil is placed in a 105°C oven to dry to a constant weight; the drying time will vary based on the moisture content of the soil. The dried soil weight is then used to calculate % moisture.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA

Chain of Custody Numbers:

17-818603

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Client: KBL Environmental Ltd.
3909, 68 Ave
Leduc AB T9E 0Z4
Contact: Katie Oliver

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
BTXS,F1-MEOH-ED	**Soil**							
Batch R5543914								
WG3611430-4 DUP		**L2635011-1**						
Benzene		<0.0050	<0.0050	RPD-NA	mg/kg	N/A	30	12-SEP-21
Toluene		<0.050	<0.050	RPD-NA	mg/kg	N/A	30	12-SEP-21
Ethylbenzene		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	12-SEP-21
m+p-Xylene		<0.050	<0.050	RPD-NA	mg/kg	N/A	30	12-SEP-21
o-Xylene		<0.050	<0.050	RPD-NA	mg/kg	N/A	30	12-SEP-21
WG3611430-2 LCS								
Benzene			101.0		%		70-130	05-SEP-21
Toluene			109.5		%		70-130	05-SEP-21
Ethylbenzene			85.6		%		70-130	05-SEP-21
m+p-Xylene			107.3		%		70-130	05-SEP-21
o-Xylene			97.2		%		70-130	05-SEP-21
WG3611430-1 MB								
Benzene			<0.0050		mg/kg		0.005	05-SEP-21
Toluene			<0.050		mg/kg		0.05	05-SEP-21
Ethylbenzene			<0.010		mg/kg		0.01	05-SEP-21
m+p-Xylene			<0.050		mg/kg		0.05	05-SEP-21
o-Xylene			<0.050		mg/kg		0.05	05-SEP-21
Surrogate: 1,4-Difluorobenzene (SS)			97.5		%		70-130	05-SEP-21
Surrogate: 4-Bromofluorobenzene (SS)			78.2		%		70-130	05-SEP-21
Surrogate: 3,4-Dichlorotoluene (SS)			111.7		%		70-130	05-SEP-21
WG3611430-5 MS		**L2635011-8**						
Benzene			125.6		%		60-140	12-SEP-21
Toluene			120.4		%		60-140	12-SEP-21
Ethylbenzene			99.3		%		60-140	12-SEP-21
m+p-Xylene			106.4		%		60-140	12-SEP-21
o-Xylene			114.2		%		60-140	12-SEP-21
CR-CR6-3060-ED	**Soil**							
Batch R5585638								
WG3618627-3 CRM		**CR6-3060_SOIL**						
Hexavalent Chromium			95.0		%		80-120	16-SEP-21
WG3618627-2 LCS								
Hexavalent Chromium			93.5		%		80-120	16-SEP-21
WG3618627-1 MB								
Hexavalent Chromium			<0.10		mg/kg		0.1	16-SEP-21

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CR-CR6-3060-ED	**Soil**							
Batch R5591105								
WG3622920-3 CRM		**CR6-3060_SOIL**						
Hexavalent Chromium			81.5		%		80-120	22-SEP-21
WG3622920-2 LCS								
Hexavalent Chromium			102.1		%		80-120	22-SEP-21
WG3622920-1 MB								
Hexavalent Chromium			<0.10		mg/kg		0.1	22-SEP-21
F2-4-TMB-ED	**Soil**							
Batch R5580966								
WG3611948-4 DUP		**L2635011-8**						
F2 (C10-C16)		248	260		mg/kg	4.8	40	07-SEP-21
F3 (C16-C34)		1670	1890		mg/kg	13	40	07-SEP-21
F4 (C34-C50)		458	522		mg/kg	13	40	07-SEP-21
WG3611948-3 IRM		**ALS PHC RM3**						
F2 (C10-C16)			95.6		%		70-130	07-SEP-21
F3 (C16-C34)			96.0		%		70-130	07-SEP-21
F4 (C34-C50)			102.8		%		70-130	07-SEP-21
WG3611948-2 LCS								
F2 (C10-C16)			107.0		%		70-130	07-SEP-21
F3 (C16-C34)			110.8		%		70-130	07-SEP-21
F4 (C34-C50)			115.4		%		70-130	07-SEP-21
WG3611948-1 MB								
F2 (C10-C16)			<20		mg/kg		20	07-SEP-21
F3 (C16-C34)			<20		mg/kg		20	07-SEP-21
F4 (C34-C50)			<20		mg/kg		20	07-SEP-21
Surrogate: 2-Bromobenzotrifluoride			88.9		%		70-130	07-SEP-21
HG-200.2-CVAA-ED	**Soil**							
Batch R5582609								
WG3614780-3 CRM		**SCP_SS-2_SOIL**						
Mercury (Hg)			112.2		%		70-130	10-SEP-21
WG3614780-4 DUP		**L2635011-1**						
Mercury (Hg)		0.0070	0.0067		mg/kg	4.3	40	10-SEP-21
WG3614780-2 LCS								
Mercury (Hg)			91.0		%		80-120	10-SEP-21
WG3614780-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	10-SEP-21

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAA-ED	**Soil**							
Batch R5585690								
WG3618551-3 CRM		**SCP_SS-2_SOIL**						
Mercury (Hg)			119.9		%		70-130	16-SEP-21
WG3618551-4 DUP		**L2635011-7**						
Mercury (Hg)		0.0099	0.0101		mg/kg	1.7	40	16-SEP-21
WG3618551-2 LCS								
Mercury (Hg)			97.0		%		80-120	16-SEP-21
WG3618551-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	16-SEP-21
MET-200.2-CCMS-ED	**Soil**							
Batch R5582389								
WG3614780-3 CRM		**SCP_SS-2_SOIL**						
Antimony (Sb)			91.6		%		70-130	10-SEP-21
Arsenic (As)			98.5		%		70-130	10-SEP-21
Barium (Ba)			100.1		%		70-130	10-SEP-21
Beryllium (Be)			96.9		%		70-130	10-SEP-21
Cadmium (Cd)			92.8		%		70-130	10-SEP-21
Chromium (Cr)			96.1		%		70-130	10-SEP-21
Cobalt (Co)			99.1		%		70-130	10-SEP-21
Copper (Cu)			103.1		%		70-130	10-SEP-21
Lead (Pb)			93.1		%		70-130	10-SEP-21
Molybdenum (Mo)			98.4		%		70-130	10-SEP-21
Nickel (Ni)			99.3		%		70-130	10-SEP-21
Selenium (Se)			0.12		mg/kg		0-0.34	10-SEP-21
Silver (Ag)			78.3		%		70-130	10-SEP-21
Thallium (Tl)			0.073		mg/kg		0.029-0.129	10-SEP-21
Tin (Sn)			95.8		%		70-130	10-SEP-21
Uranium (U)			90.0		%		70-130	10-SEP-21
Vanadium (V)			98.8		%		70-130	10-SEP-21
Zinc (Zn)			92.0		%		70-130	10-SEP-21
WG3614780-4 DUP		**L2635011-1**						
Antimony (Sb)		0.10	<0.10	RPD-NA	mg/kg	N/A	30	10-SEP-21
Arsenic (As)		3.31	2.92		mg/kg	13	30	10-SEP-21
Barium (Ba)		40.6	43.1		mg/kg	6.1	40	10-SEP-21
Beryllium (Be)		0.41	0.36		mg/kg	11	30	10-SEP-21
Cadmium (Cd)		0.039	0.034		mg/kg	13	30	10-SEP-21
Chromium (Cr)		21.1	18.2		mg/kg	15	30	10-SEP-21

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-ED	**Soil**							
Batch R5582389								
WG3614780-4 DUP		**L2635011-1**						
Cobalt (Co)		4.58	3.99		mg/kg	14	30	10-SEP-21
Copper (Cu)		11.7	9.48		mg/kg	21	30	10-SEP-21
Lead (Pb)		8.61	7.81		mg/kg	9.7	40	10-SEP-21
Molybdenum (Mo)		0.89	0.82		mg/kg	8.5	40	10-SEP-21
Nickel (Ni)		13.6	11.5		mg/kg	16	30	10-SEP-21
Selenium (Se)		<0.20	<0.20	RPD-NA	mg/kg	N/A	30	10-SEP-21
Silver (Ag)		<0.10	<0.10	RPD-NA	mg/kg	N/A	40	10-SEP-21
Thallium (Tl)		0.076	0.064		mg/kg	16	30	10-SEP-21
Tin (Sn)		<2.0	<2.0	RPD-NA	mg/kg	N/A	40	10-SEP-21
Uranium (U)		0.881	0.809		mg/kg	8.4	30	10-SEP-21
Vanadium (V)		17.6	16.2		mg/kg	8.3	30	10-SEP-21
Zinc (Zn)		17.4	14.0		mg/kg	22	30	10-SEP-21
WG3614780-2 LCS								
Antimony (Sb)			103.7		%		80-120	10-SEP-21
Arsenic (As)			107.6		%		80-120	10-SEP-21
Barium (Ba)			103.5		%		80-120	10-SEP-21
Beryllium (Be)			106.0		%		80-120	10-SEP-21
Cadmium (Cd)			98.0		%		80-120	10-SEP-21
Chromium (Cr)			103.4		%		80-120	10-SEP-21
Cobalt (Co)			103.1		%		80-120	10-SEP-21
Copper (Cu)			103.4		%		80-120	10-SEP-21
Lead (Pb)			98.7		%		80-120	10-SEP-21
Molybdenum (Mo)			107.2		%		80-120	10-SEP-21
Nickel (Ni)			101.4		%		80-120	10-SEP-21
Selenium (Se)			106.8		%		80-120	10-SEP-21
Silver (Ag)			101.1		%		80-120	10-SEP-21
Thallium (Tl)			100.4		%		80-120	10-SEP-21
Tin (Sn)			102.4		%		80-120	10-SEP-21
Uranium (U)			99.99		%		80-120	10-SEP-21
Vanadium (V)			105.3		%		80-120	10-SEP-21
Zinc (Zn)			99.0		%		80-120	10-SEP-21
WG3614780-1 MB								
Antimony (Sb)			<0.10		mg/kg		0.1	10-SEP-21
Arsenic (As)			<0.10		mg/kg		0.1	10-SEP-21
Barium (Ba)			<0.50		mg/kg		0.5	10-SEP-21

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-ED	**Soil**							
Batch R5582389								
WG3614780-1 MB								
Beryllium (Be)			<0.10		mg/kg		0.1	10-SEP-21
Cadmium (Cd)			<0.020		mg/kg		0.02	10-SEP-21
Chromium (Cr)			<0.50		mg/kg		0.5	10-SEP-21
Cobalt (Co)			<0.10		mg/kg		0.1	10-SEP-21
Copper (Cu)			<0.50		mg/kg		0.5	10-SEP-21
Lead (Pb)			<0.50		mg/kg		0.5	10-SEP-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	10-SEP-21
Nickel (Ni)			<0.50		mg/kg		0.5	10-SEP-21
Selenium (Se)			<0.20		mg/kg		0.2	10-SEP-21
Silver (Ag)			<0.10		mg/kg		0.1	10-SEP-21
Thallium (Tl)			<0.050		mg/kg		0.05	10-SEP-21
Tin (Sn)			<2.0		mg/kg		2	10-SEP-21
Uranium (U)			<0.050		mg/kg		0.05	10-SEP-21
Vanadium (V)			<0.20		mg/kg		0.2	10-SEP-21
Zinc (Zn)			<2.0		mg/kg		2	10-SEP-21
Batch R5585226								
WG3618551-3 CRM		**SCP_SS-2_SOIL**						
Antimony (Sb)			90.3		%		70-130	16-SEP-21
Arsenic (As)			94.9		%		70-130	16-SEP-21
Barium (Ba)			94.9		%		70-130	16-SEP-21
Beryllium (Be)			93.8		%		70-130	16-SEP-21
Cadmium (Cd)			96.8		%		70-130	16-SEP-21
Chromium (Cr)			91.9		%		70-130	16-SEP-21
Cobalt (Co)			95.9		%		70-130	16-SEP-21
Copper (Cu)			94.4		%		70-130	16-SEP-21
Lead (Pb)			93.7		%		70-130	16-SEP-21
Molybdenum (Mo)			93.3		%		70-130	16-SEP-21
Nickel (Ni)			96.3		%		70-130	16-SEP-21
Selenium (Se)			0.12		mg/kg		0-0.34	16-SEP-21
Silver (Ag)			142.2	MES	%		70-130	16-SEP-21
Thallium (Tl)			0.077		mg/kg		0.029-0.129	16-SEP-21
Tin (Sn)			92.5		%		70-130	16-SEP-21
Uranium (U)			97.5		%		70-130	16-SEP-21
Vanadium (V)			94.7		%		70-130	16-SEP-21

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-ED	**Soil**							
Batch R5585226								
WG3618551-3 CRM		**SCP_SS-2_SOIL**						
Zinc (Zn)			86.3		%		70-130	16-SEP-21
WG3618551-4 DUP		**L2635011-7**						
Antimony (Sb)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	16-SEP-21
Arsenic (As)		2.97	2.85		mg/kg	4.2	30	16-SEP-21
Barium (Ba)		71.1	87.1		mg/kg	20	40	16-SEP-21
Beryllium (Be)		0.61	0.60		mg/kg	1.4	30	16-SEP-21
Cadmium (Cd)		0.021	<0.020	RPD-NA	mg/kg	N/A	30	16-SEP-21
Chromium (Cr)		19.9	22.0		mg/kg	10	30	16-SEP-21
Cobalt (Co)		7.40	7.72		mg/kg	4.3	30	16-SEP-21
Copper (Cu)		16.9	17.6		mg/kg	3.9	30	16-SEP-21
Lead (Pb)		7.29	7.81		mg/kg	7.0	40	16-SEP-21
Molybdenum (Mo)		0.72	0.73		mg/kg	1.4	40	16-SEP-21
Nickel (Ni)		14.3	15.5		mg/kg	7.9	30	16-SEP-21
Selenium (Se)		<0.20	<0.20	RPD-NA	mg/kg	N/A	30	16-SEP-21
Silver (Ag)		<0.10	<0.10	RPD-NA	mg/kg	N/A	40	16-SEP-21
Thallium (Tl)		0.116	0.122		mg/kg	5.0	30	16-SEP-21
Tin (Sn)		<2.0	<2.0	RPD-NA	mg/kg	N/A	40	16-SEP-21
Uranium (U)		1.04	1.08		mg/kg	3.7	30	16-SEP-21
Vanadium (V)		17.9	18.7		mg/kg	4.5	30	16-SEP-21
Zinc (Zn)		17.2	13.6		mg/kg	24	30	16-SEP-21
WG3618551-2 LCS								
Antimony (Sb)			106.5		%		80-120	16-SEP-21
Arsenic (As)			107.1		%		80-120	16-SEP-21
Barium (Ba)			107.0		%		80-120	16-SEP-21
Beryllium (Be)			99.9		%		80-120	16-SEP-21
Cadmium (Cd)			104.5		%		80-120	16-SEP-21
Chromium (Cr)			106.1		%		80-120	16-SEP-21
Cobalt (Co)			106.0		%		80-120	16-SEP-21
Copper (Cu)			105.3		%		80-120	16-SEP-21
Lead (Pb)			100.7		%		80-120	16-SEP-21
Molybdenum (Mo)			102.2		%		80-120	16-SEP-21
Nickel (Ni)			104.2		%		80-120	16-SEP-21
Selenium (Se)			110.1		%		80-120	16-SEP-21
Silver (Ag)			107.1		%		80-120	16-SEP-21
Thallium (Tl)			100.8		%		80-120	16-SEP-21

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-ED	**Soil**							
Batch R5585226								
WG3618551-2 LCS								
Tin (Sn)			104.0		%		80-120	16-SEP-21
Uranium (U)			100.2		%		80-120	16-SEP-21
Vanadium (V)			108.9		%		80-120	16-SEP-21
Zinc (Zn)			99.3		%		80-120	16-SEP-21
WG3618551-1 MB								
Antimony (Sb)			<0.10		mg/kg		0.1	16-SEP-21
Arsenic (As)			<0.10		mg/kg		0.1	16-SEP-21
Barium (Ba)			<0.50		mg/kg		0.5	16-SEP-21
Beryllium (Be)			<0.10		mg/kg		0.1	16-SEP-21
Cadmium (Cd)			<0.020		mg/kg		0.02	16-SEP-21
Chromium (Cr)			<0.50		mg/kg		0.5	16-SEP-21
Cobalt (Co)			<0.10		mg/kg		0.1	16-SEP-21
Copper (Cu)			<0.50		mg/kg		0.5	16-SEP-21
Lead (Pb)			<0.50		mg/kg		0.5	16-SEP-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	16-SEP-21
Nickel (Ni)			<0.50		mg/kg		0.5	16-SEP-21
Selenium (Se)			<0.20		mg/kg		0.2	16-SEP-21
Silver (Ag)			<0.10		mg/kg		0.1	16-SEP-21
Thallium (Tl)			<0.050		mg/kg		0.05	16-SEP-21
Tin (Sn)			<2.0		mg/kg		2	16-SEP-21
Uranium (U)			<0.050		mg/kg		0.05	16-SEP-21
Vanadium (V)			<0.20		mg/kg		0.2	16-SEP-21
Zinc (Zn)			<2.0		mg/kg		2	16-SEP-21
PREP-MOISTURE-ED	**Soil**							
Batch R5580159								
WG3612317-2 LCS								
% Moisture			100.2		%		90-110	07-SEP-21
WG3612317-1 MB								
% Moisture			<0.25		%		0.25	07-SEP-21
Batch R5580283								
WG3612388-3 DUP		**L2635011-4**						
% Moisture		8.04	7.51		%	6.8	20	07-SEP-21
WG3612388-2 LCS								
% Moisture			100.0		%		90-110	07-SEP-21
WG3612388-1 MB								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PREP-MOISTURE-ED	**Soil**							
Batch R5580283								
WG3612388-1 MB								
% Moisture			<0.25		%		0.25	07-SEP-21

Quality Control Report

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

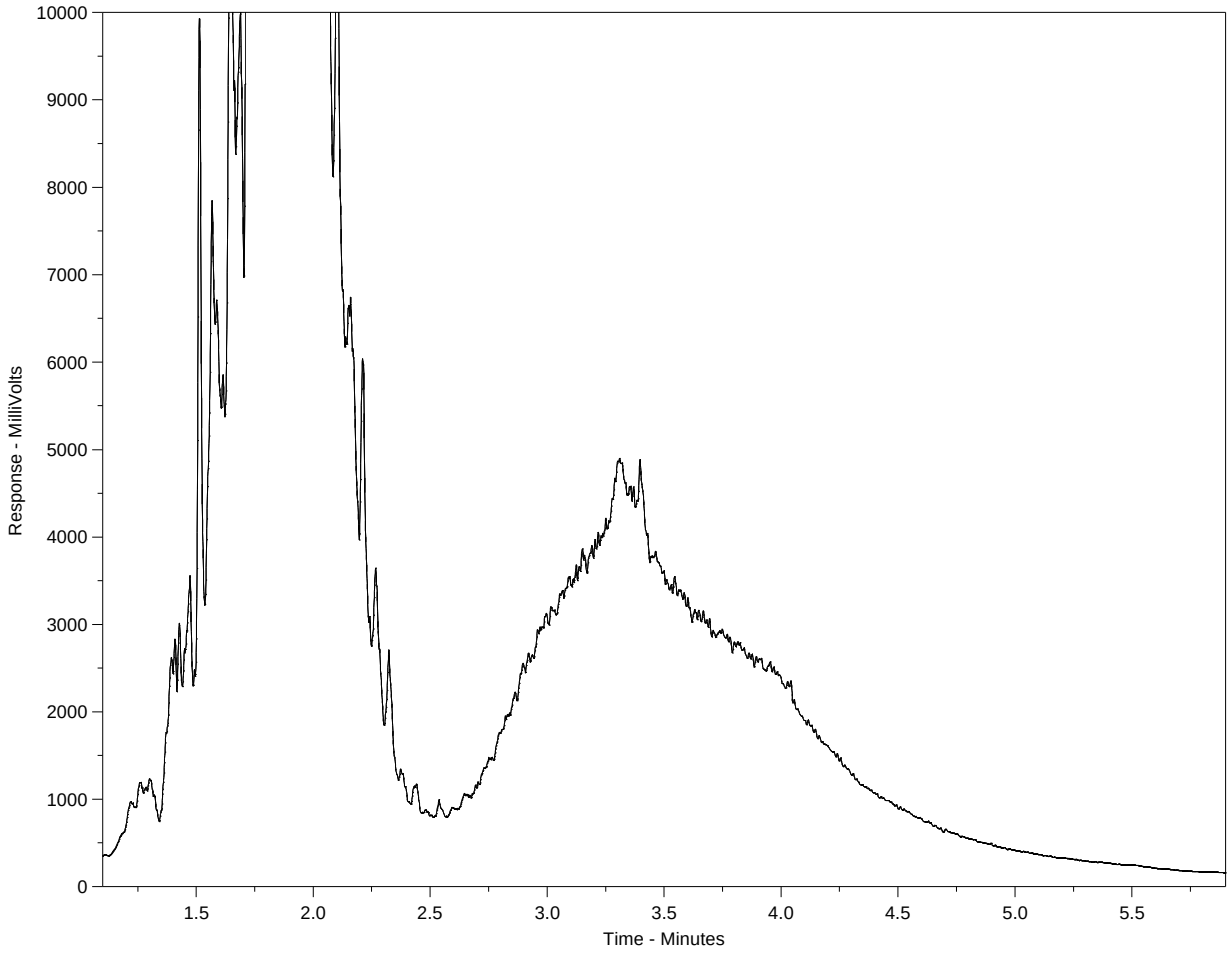
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

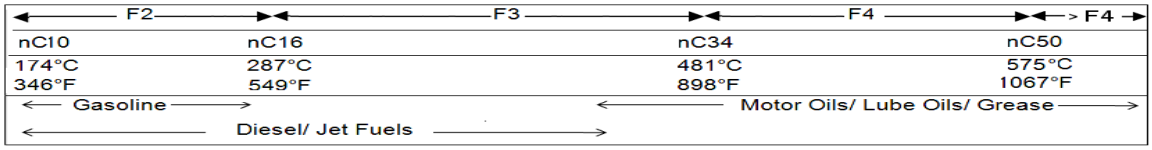
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Hydrocarbon Distribution Report

ALS Sample ID: L2635011-1
Client ID: 21P1-210831





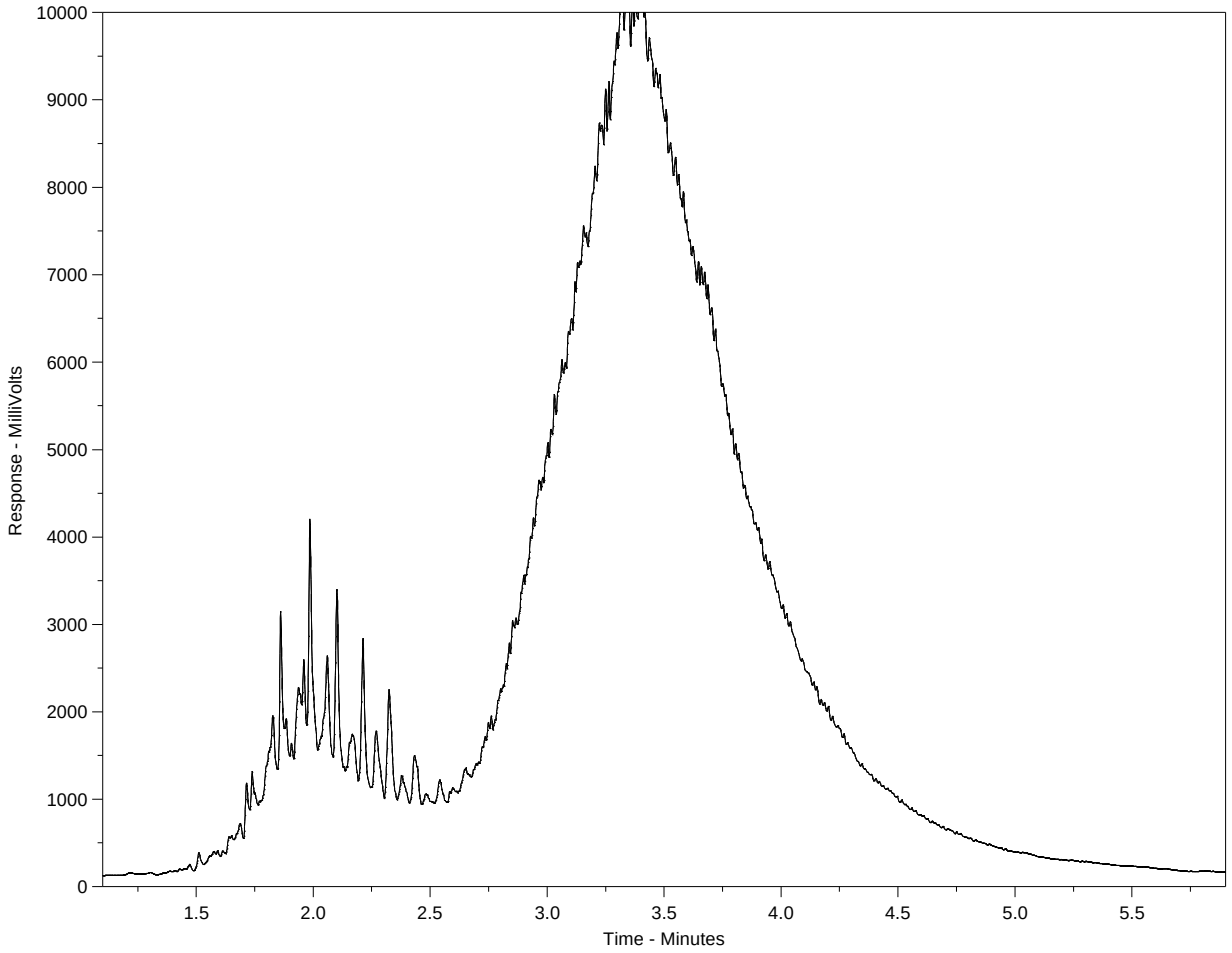
The Canada Wide Standard Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products as well as a number of specified n-alkane hydrocarbon marker compounds. Comparison of this report with those of reference standards may also assist in characterizing hydrocarbons present in the sample.

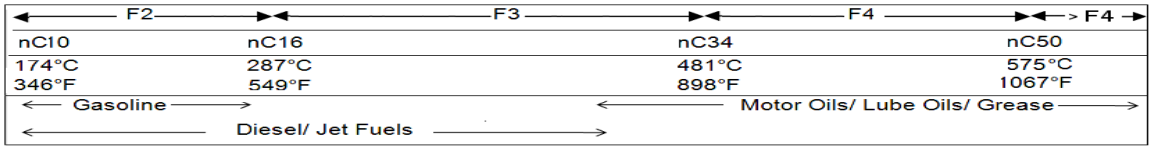
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.

Note:
This chromatogram was produced with a high temperature GC method that is specific to the Canada-Wide Standard method. Note that retention times and distribution profiles from reports produced using different GC programs will differ.

Hydrocarbon Distribution Report

ALS Sample ID: L2635011-2
Client ID: 21P3-1-210831





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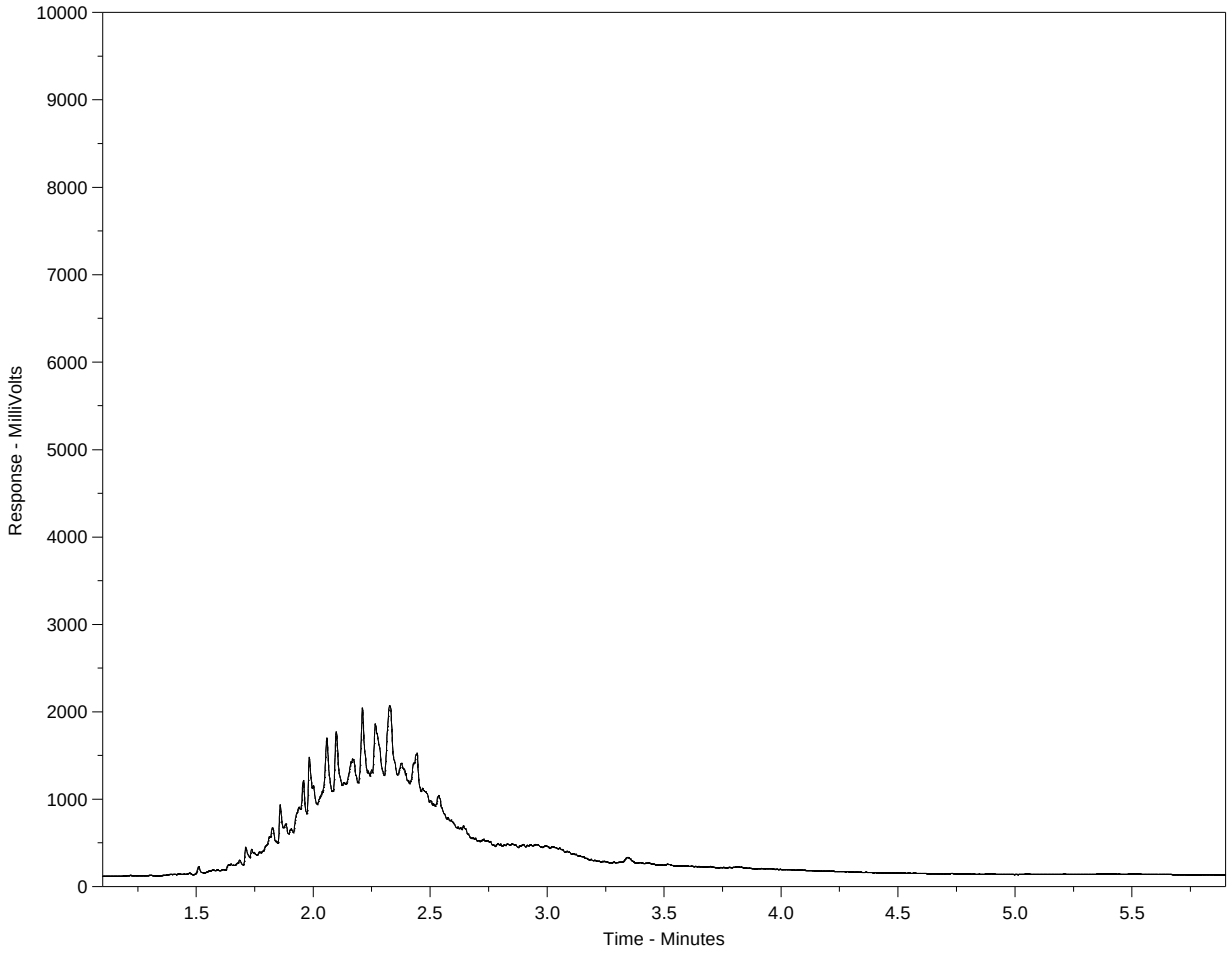
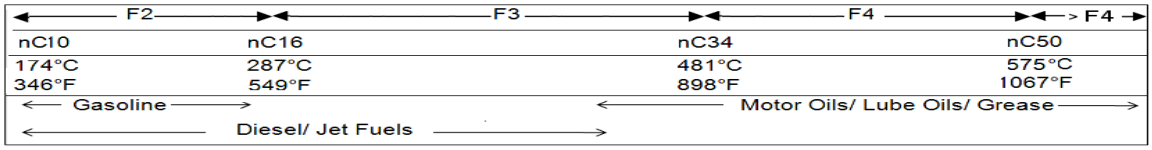
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.

Note:
This chromatogram was produced with a high temperature GC method that is specific to the Canada-Wide Standard method. Note that retention times and distribution profiles from reports produced using different GC programs will differ.

Hydrocarbon Distribution Report

ALS Sample ID: L2635011-3
Client ID: 21P3-2-210831





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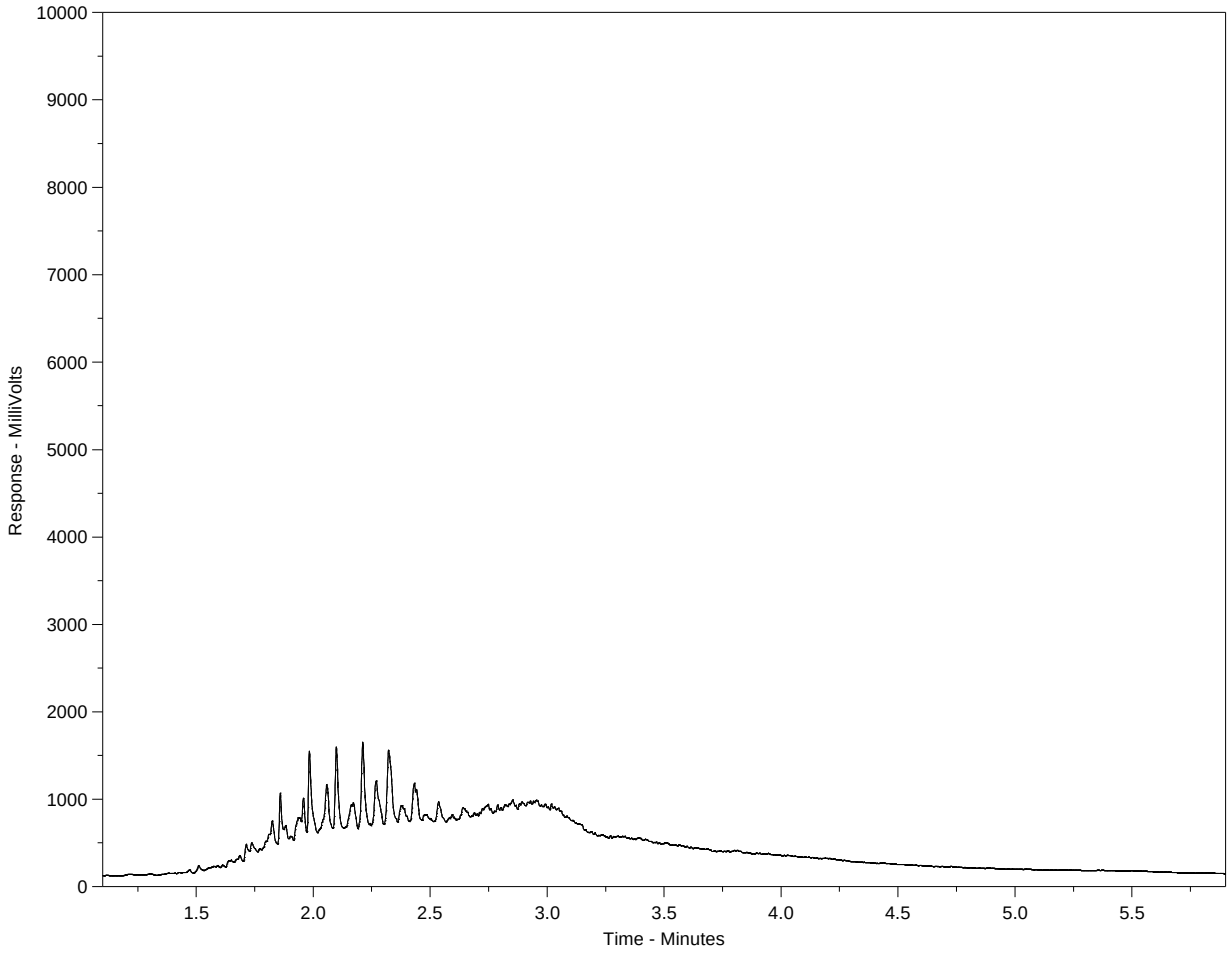
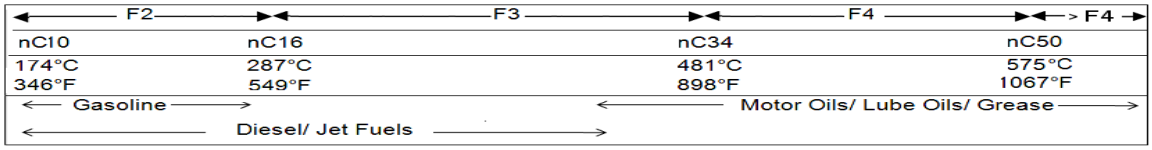
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.

Note:
This chromatogram was produced with a high temperature GC method that is specific to the Canada-Wide Standard method. Note that retention times and distribution profiles from reports produced using different GC programs will differ.

Hydrocarbon Distribution Report

ALS Sample ID: L2635011-4
Client ID: 21P4-1-210831





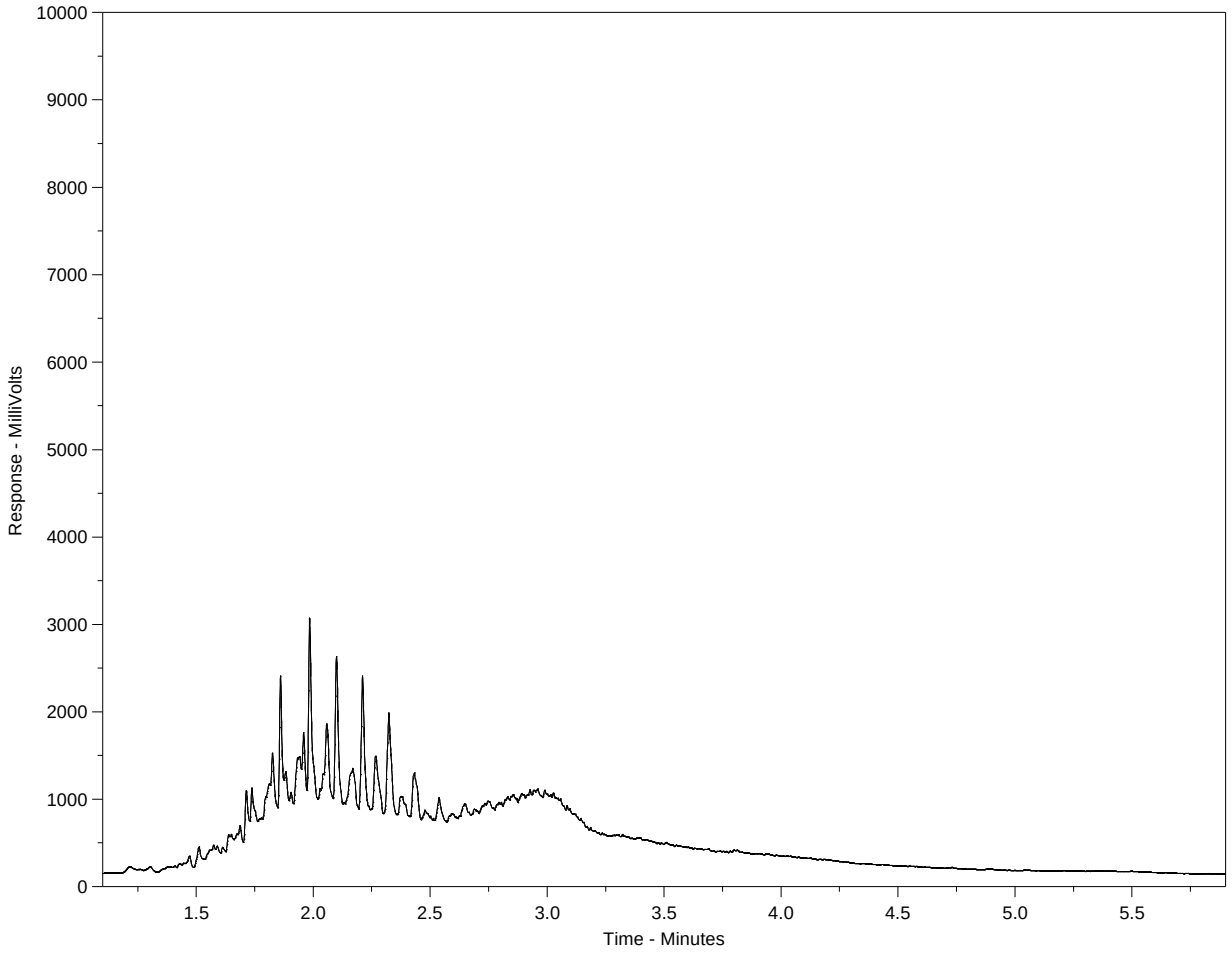
The Canada Wide Standard Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products as well as a number of specified n-alkane hydrocarbon marker compounds. Comparison of this report with those of reference standards may also assist in characterizing hydrocarbons present in the sample.

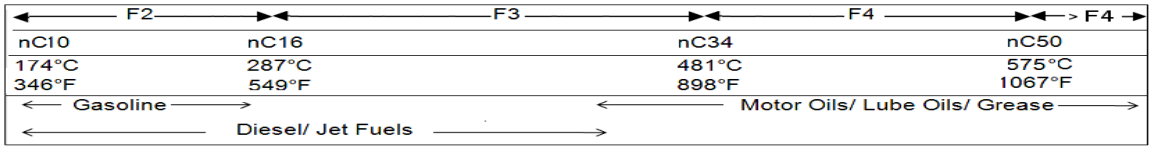
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.

Note:
This chromatogram was produced with a high temperature GC method that is specific to the Canada-Wide Standard method. Note that retention times and distribution profiles from reports produced using different GC programs will differ.

Hydrocarbon Distribution Report

ALS Sample ID: L2635011-5
Client ID: 21P4-2-210831





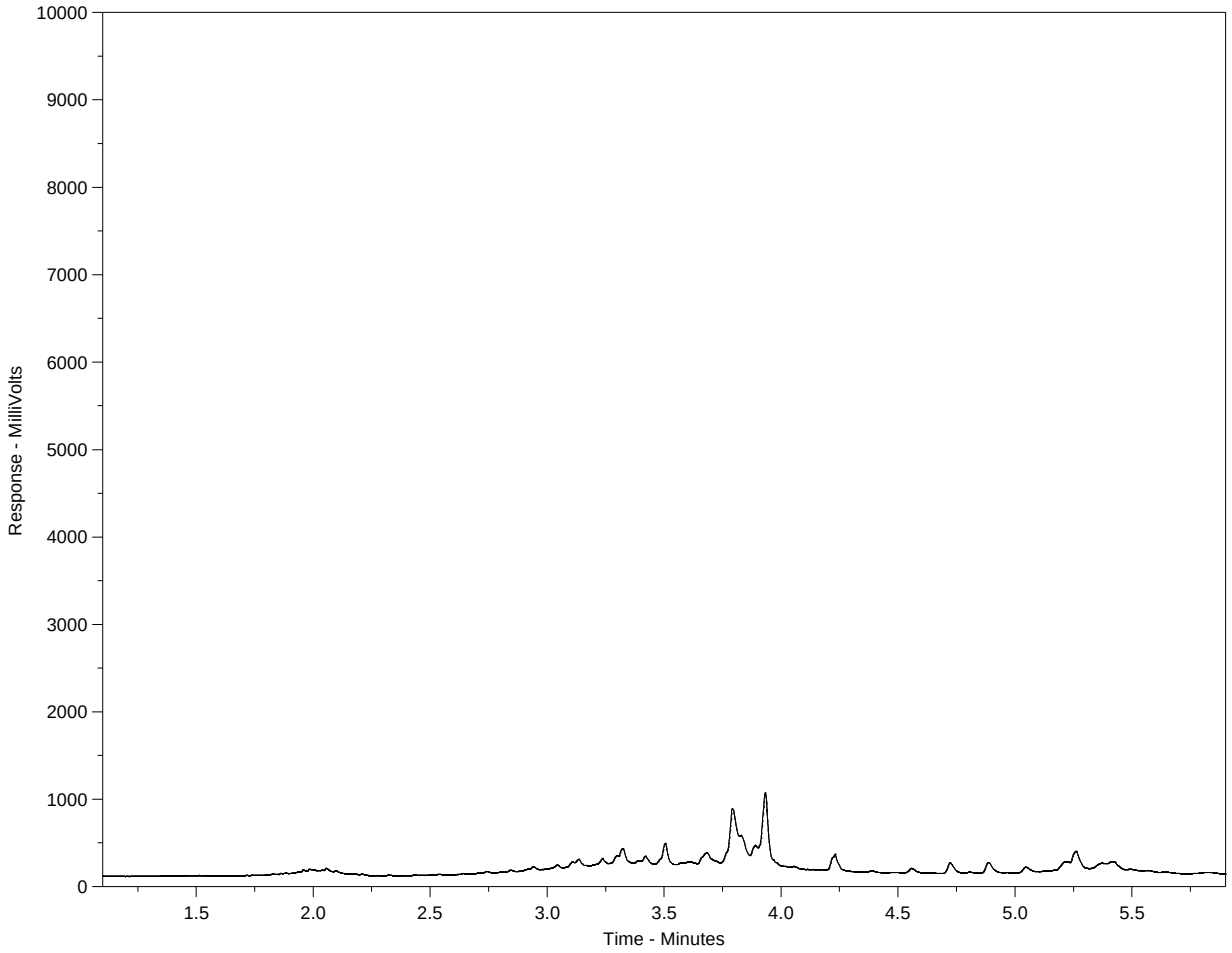
The Canada Wide Standard Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products as well as a number of specified n-alkane hydrocarbon marker compounds. Comparison of this report with those of reference standards may also assist in characterizing hydrocarbons present in the sample.

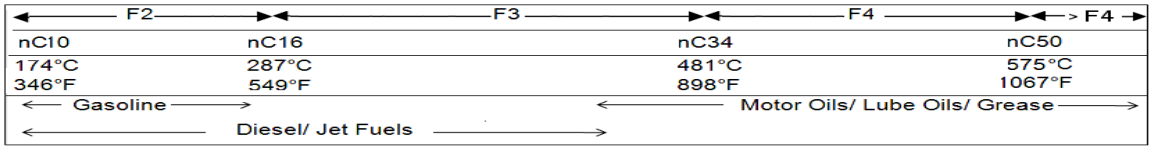
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.

Note:
This chromatogram was produced with a high temperature GC method that is specific to the Canada-Wide Standard method. Note that retention times and distribution profiles from reports produced using different GC programs will differ.

Hydrocarbon Distribution Report

ALS Sample ID: L2635011-6
Client ID: 21P7-210831





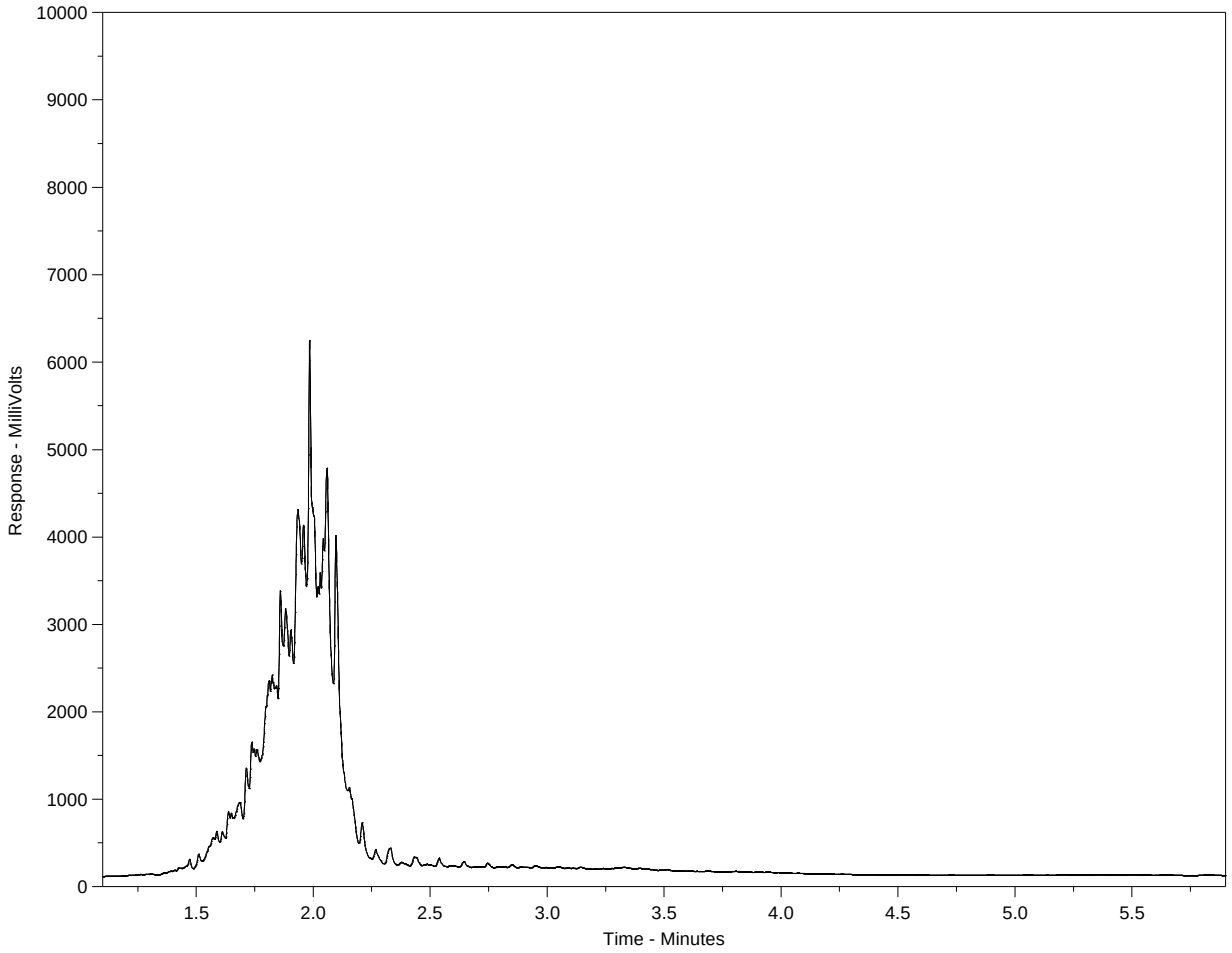
The Canada Wide Standard Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products as well as a number of specified n-alkane hydrocarbon marker compounds. Comparison of this report with those of reference standards may also assist in characterizing hydrocarbons present in the sample.

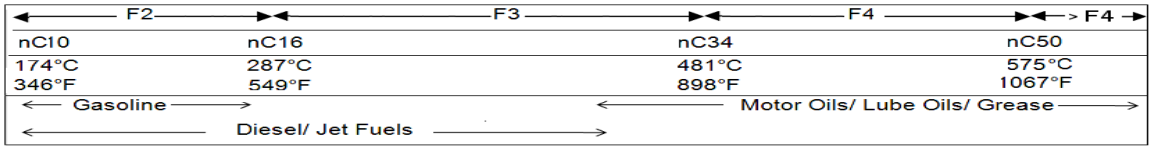
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.

Note:
This chromatogram was produced with a high temperature GC method that is specific to the Canada-Wide Standard method. Note that retention times and distribution profiles from reports produced using different GC programs will differ.

Hydrocarbon Distribution Report

ALS Sample ID: L2635011-7
Client ID: 21P2-210831





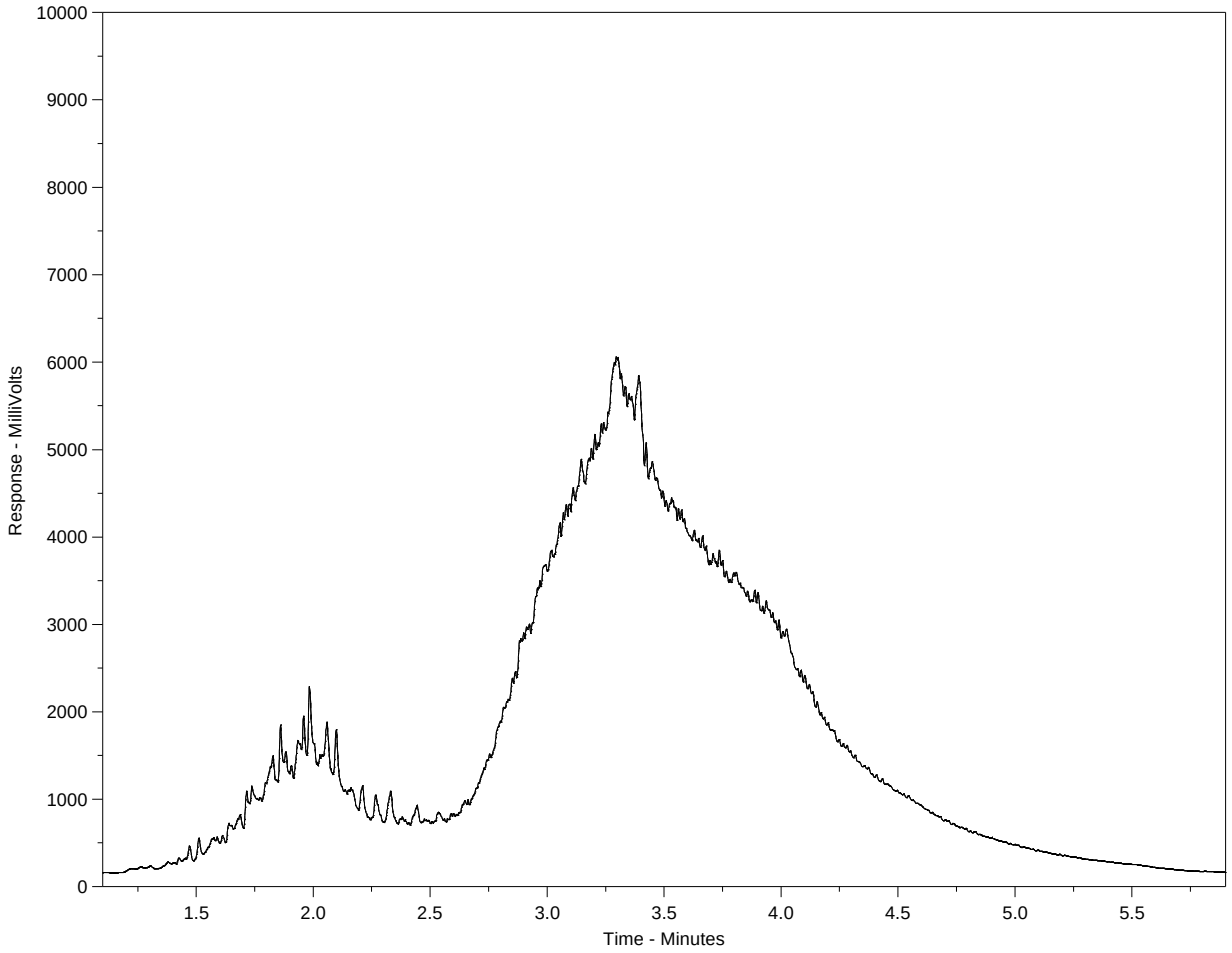
The Canada Wide Standard Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products as well as a number of specified n-alkane hydrocarbon marker compounds. Comparison of this report with those of reference standards may also assist in characterizing hydrocarbons present in the sample.

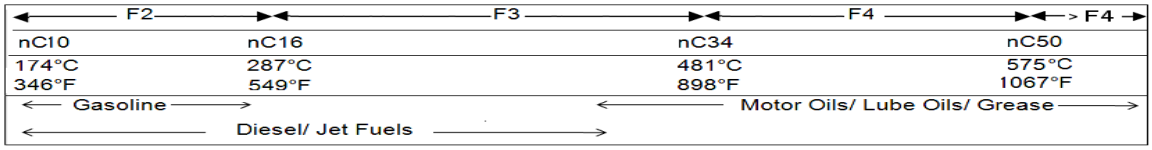
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.

Note:
This chromatogram was produced with a high temperature GC method that is specific to the Canada-Wide Standard method. Note that retention times and distribution profiles from reports produced using different GC programs will differ.

Hydrocarbon Distribution Report

ALS Sample ID: L2635011-8
Client ID: 21P5-210831





The Canada Wide Standard Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products as well as a number of specified n-alkane hydrocarbon marker compounds. Comparison of this report with those of reference standards may also assist in characterizing hydrocarbons present in the sample.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.

Note:
This chromatogram was produced with a high temperature GC method that is specific to the Canada-Wide Standard method. Note that retention times and distribution profiles from reports produced using different GC programs will differ.

ALS Environmental
www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here (lab use only)

COC Number: 17 - 818603

Page of

Report To	Contact and company name below will appear on the final report
Company:	KBL Environmental
Contact:	Katie Oliver
Phone:	780-893-3305
Company address below will appear on the final report	
Street:	3909, 68 Ave
City/Province:	Leduc, AB
Postal Code:	T9E 0Z4
Invoice To	Same as Report To [X] YES [ ] NO
	Copy of Invoice with Report [ ] YES [ ] NO
Company:	
Contact:	

Report Format / Distribution

Select Report Format: [X] PDF [X] EXCEL [X] EDD (DIGITAL)
Quality Control (QC) Report with Report [ ] YES [ ] NO
[ ] Compare Results to Criteria on Report - provide details below if box checked
Select Distribution: [ ] EMAIL [ ] MAIL [ ] FAX
Email 1 or Fax: Koliver@Kblenv.com
Email 2: Jgrousopoulos@Kblenv.com
Email 3:

Invoice Distribution

Select Invoice Distribution: [ ] EMAIL [ ] MAIL [ ] FAX
Email 1 or Fax: accounting@Kblenv.com
Email 2:

Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)

Regular [R] [ ] Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4-20%] [ ] | 3 day [P3-25%] [ ] | 2 day [P2-50%] [ ]

EMERGENCY: 1 Business day [E - 100%] [ ] | Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] [ ]

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Project Information

ALS Account # / Quote #:
Job #: 4300
PO / AFE: JG017
LSD:

Oil and Gas Required Fields (client use)

AFE/Cost Center: PO#
Major/Minor Code: Routing Code:
Requisitioner:
Location:

ALS Lab Work Order # (lab use only): L2635011

ALS Contact: Oliver Gregg Sampler: James Grousopoulos

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	CCME Metals +(Cr(VI))	BTEX, F1-F4	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
1	21P1-210831	31-Aug-21	1721	Soil	4	X	X		
2	21P3-1-210831	31-Aug-21	1743	Soil	4	X	X		
3	21P3-2-210831	31-Aug-21	1805	Soil	4	X	X		
4	21P4-1-210901	01-Sep-21	0641	Soil	4	X	X		
5	21P4-2-210831	31-Aug-21	1831	Soil	4	X	X		
6	21P7-210901	01-Sep-21	0628	Soil	4	X	X		
7	21P2-210901	01-Sep-21	0644	Soil	4		X		
8	21P5-210901	01-Sep-21	0657	Soil	4		X		

L2635011-COFC

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? [ ] YES [ ] NO
Are samples for human consumption/ use? [ ] YES [ ] NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen [ ] SIF Observations Yes [ ] No [ ]
Ice Packs [ ] Ice Cubes [ ] Custody seal intact Yes [ ] No [ ]
Cooling Initiated [ ]

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
12.3							

SHIPMENT RELEASE (client use)

Released by: James Grousopoulos Date: 2021-Sep-02 Time: 0917

INITIAL SHIPMENT RECEPTION (lab use only)

Received by: Date: 2Sep21 Time: 9:30

FINAL SHIPMENT RECEPTION (lab use only)

Received by: Date: Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JUNE 2018 FRONT

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

GENERAL TERMS AND CONDITIONS:

These terms and conditions are incorporated in and form part of the Agreement between ALS Group's Environmental Division and the party named in the Offer (the "Client").

1. Definitions. Capitalized Terms not defined in these Terms and Conditions have the definitions set out in the other Agreement documents.
2. The Services. ALS will provide the Services to the Client as described in the Offer and in any chain of custody form provided with any sample.
3. Prices. ALS may review and change all prices, fees, surcharges or other charges set out in the Agreement if there are changes to ALS's cost beyond ALS's control, including changes in legislative requirements, Client variations of sample numbers and Client requests for changes to standard reporting requirements. Notwithstanding Condition 3, all quotations expire after three years.
4. Payment Terms. The Client shall pay ALS within 30 days of the invoice date OAC. ALS may, for reasonable business reasons, require the Client to arrange for payment in advance.
5. Quotation Numbers. The Client shall provide the quotation number to ALS (where applicable) to ensure correct pricing.
6. Taxes. Applicable taxes are not included in prices. Applicable surcharges and additional fees will be added at the time of invoicing.
7. Quality Control. ALS has an extensive QA/QC program. Clients' samples are analyzed using approved, referenced procedures followed by thorough data validation prior to reporting of the analytical results.
8. Test Results. Results are obtained from analytical measurements that are subject to inherent variability. Measurement results reflect characteristics of submitted test samples at time of analysis. The Client is responsible for informing itself on the limitation of test results and acknowledges that test results are not guaranteed. When statements of conformity are requested on test reports (e.g. within Criteria Reports), measurement uncertainty is not applied to test results prior to the evaluation.
9. Standard of Care. ALS will use reasonable care and diligence as required by the laws of the province or territory where the sample is tested.
10. Storage. Where possible, ALS will store; soil and water samples for 45 days from date of receipt, tissue/biota samples for 6 months from date of receipt, air samples or re-usable media for 14 days from date of receipt, and microbiological samples for 3 days from date of receipt.
11. Holds. If the Client requests a sample to be placed on hold, ALS will store the samples according to paragraph 10, after which ALS will invoice the Client and discard the sample. Each sample is subject to a minimum $5.00 hold fee. Longer hold periods are available upon request. See paragraph 12.
12. Archives. If the Client requests a sample be archived, ALS will invoice in advance and store the sample for the period requested, after which ALS may discard the sample.
13. Legal Sample Handling Protocol. Legal sample handling protocol must be arranged before samples are collected. ALS charges a surcharge on the list price plus the hourly technologist or chemist rates for legal sample protocol. Additional charges will apply for samples that require storage by ALS.
14. Samples. The quality, condition, content and source of samples stored and tested are not known to ALS except as declared and described on the chain of custody form completed and submitted by the Client and accompanying the sample.
15. Risk of Loss. ALS will use reasonable care to protect samples during storage, however all samples are stored at the Client's risk and the Client is responsible for obtaining appropriate insurance, if desired. The Client acknowledges that during the performance of the Services samples may be altered, lost, damaged, or destroyed and the Client releases ALS from any claim the Client may have for any loss or damage to the sample.
16. Environmental. The Client must comply with all applicable environment legislation, including labeling all hazardous samples to comply with GHS and TDG regulations, and must provide appropriate Safety Data that include the nature of the hazard and a contact name and phone number to call for information. The Client will indemnify ALS for all loss or damages, including any fine or cost of complying with an order of any government authority, resulting from the Client's breach of this paragraph.
17. Hazardous Materials Disposal. ALS may return, at the Client's cost, hazardous material to the Client for disposal.
18. Hazardous Materials Surcharge. ALS may apply an additional surcharge for handling of hazardous samples or samples with Naturally Occurring Radioactive Materials (NORM), H2S, CN, etc.
19. Sample Containers. ALS may ship sample containers to the Client's location by the most cost effective means using ALS preferred courier suppliers, within the specified project timeline.
20. Additional Charges. ALS may charge the Client (a) its cost for emergency bottle shipments and shipments to and from a remote site, and (b) where pick up and delivery services are provided, subject in each instance to a minimum charge of $25.00.
21. Re-Tests. ALS reserves the right to re-test any samples that remain in its possession. Re-tests requested by the Client may be subject to charges.
22. Waiver. The Client is responsible for making any assessment regarding the suitability of the Services and the intended results for the Client's purposes and waives any claims against ALS it may have as a result of the interpretation of the results. The Client shall indemnify ALS for all claims made by any third party against ALS in respect of all losses however arising from the performance of the Services or the use of any report provided in the performance of the Services.
23. Limitation of Liability. In no event shall ALS be liable for any consequential, indirect, incidental, special, exemplary, or punitive damages, whether foreseeable or unforeseeable (including claims for loss of profits or revenue or losses caused by stoppage of other work or impairment of other assets), incurred by the Client arising out of breach or failure of express or implied warranty, breach of contract, breach of warranty, misrepresentation, negligence, strict liability in tort or otherwise. In any event, the liability of ALS to the Client shall be limited to the cost of testing the sample as requested in the chain of custody form under which the sample was originally deposited. For the purposes of this paragraph and paragraphs 3, 15, 16, 22 and 24, as applicable, "ALS" includes without limitations its directors, officers, employees and affiliates and the "Client" includes without limitation any third party that may have a claim against ALS through the Client.
24. Notice of Liability. Notwithstanding paragraph 23, ALS shall not be liable to the Client unless the Client provides notice in writing to ALS of such loss or damage, together with full particulars thereof, within 30 days of the Client's receipt of the report of the analysis of the sample giving rise to such liability. The provisions of this paragraph allocate the risk under the Agreement between the Client and ALS, and the fees to be paid by the Client to ALS reflect this allocation of risks and the limitations of liability in this Agreement.
25. Third Party Service Provider Indemnity. For testing not performed at ALS, and where the Client requires ALS to forward samples to a third party service provider, the Client indemnifies ALS against any breach of this Agreement, all liabilities or losses incurred in connection with the third party service provider, including but not limited to courier services, testing turn-around time, and any additional costs associated with such third party.
26. Third Party Service Provider Indemnity. If ALS is required to engage a third party service provider for whatever reason, the Client indemnifies ALS against any breach of this Agreement, liabilities, or losses incurred in connection with the third party service provider, including but not limited to courier services, testing turn-around time, and any additional costs associated with such third party.
27. Entire Agreement. The Agreement is the entire agreement between the parties and supersedes and takes precedence over any terms and conditions contained in any documentation provided by the Client. ALS's execution of any subsequent documentation from the Client only acknowledges receipt and not acceptance of any terms or conditions therein. If there is a conflict between these terms and conditions and any other Agreement document, these terms and conditions prevail.
28. Term. Providing the first batch of samples to which this tender refers is submitted within three months of the starting date of this quotation, the following prices, terms and conditions will remain firm until the closing date. This offer, and its terms and conditions will automatically lapse if the offer has not been accepted and samples not delivered to ALS by the Closing Date.
29. Termination. (a) Either party may terminate this Agreement for any reason by giving the other party thirty (30) days written notice (Notice Period). (b) If the Agreement is terminated pursuant to clause (a), then the Client must pay ALS for all Services performed up to the expiry of the Notice Period.

APPENDIX C

Appendix C Nunavut Water Board Annual Reporting Form

NWB Annual Report **Year being reported:** Select 2021

License No: 1BR-CST1723 **Issued Date:** March 23, 2017
Expiry Date: March 22, 2023

Project Name: Cambridge Bay Soil and Water Treatment Facility Project

Licensee: Kitikmeot Environmental Ltd.

Mailing Address: P.O. Box 92, OMILIK Cambridge Bay, NU, X0B 0C0

Name of Company filing Annual Report (if different from Name of Licensee please clarify relationship between the two entities, if applicable):

Kitikmeot Environmental Ltd.

General Background Information on the Project (*optional):

Licence Requirements: the licensee must provide the following information in accodance with

Part B Item 1

A summary report of water use and waste disposal activities, including, but not limited to: methods of obtaining water; sewage and greywater management; drill waste management; solid and hazardous waste management.

Water Source(s):

Water Quantity:

	Quantity Allowable Domestic (cu.m)
	Actual Quantity Used Domestic (cu.m)
	Quantity Allowable Drilling (cu.m)
	Total Quantity Used Drilling (cu.m)

Waste Management and/or Disposal

- ☐ Solid Waste Disposal
- ☐ Sewage
- ☐ Drill Waste
- ☐ Greywater
- ☐ Hazardous
- ☑ Other: Soil and water treatment facility

Additional Details:

Please refer to 2021 Annual Report

A list of unauthorized discharges and a summary of follow-up actions taken.

Spill No.: NA (as reported to the Spill Hot-line)

Date of Spill:
Date of Notification to an Inspector:
Additional Details: (impacts to water, mitigation measures, short/long term monitoring, etc)

Revisions to the Spill Contingency Plan

SCP submitted and approved - no revision required or proposed

Additional Details:

Revisions to the Abandonment and Restoration Plan

AR plan submitted and approved - no revision required or proposed

Additional Details:

Progressive Reclamation Work Undertaken

Additional Details (i.e., work completed and future works proposed)

Results of the Monitoring Program including:

The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where sources of water are utilized;

Details attached

Additional Details:

The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where wastes associated with the licence are deposited;

Details attached

Additional Details:

Results of any additional sampling and/or analysis that was requested by an Inspector

No additional sampling requested by an Inspector or the Board

Additional Details: (date of request, analysis of results, data attached, etc)

Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported.

No additional sampling requested by an Inspector or the Board

Additional Details: (Attached or provided below)

Any responses or follow-up actions on inspection/compliance reports

No inspection and/or compliance report issued by INAC

Additional Details: (Dates of Report, Follow-up by the Licensee)

Any additional comments or information for the Board to consider

Date Submitted:	March 31, 2022	
Submitted/Prepared by:	Katie Oliver	
Contact Information:	**Tel:**	780.452.7779
	Fax:	866.316.7991
	email:	koliver@kblenv.com

APPENDIX D

Appendix D Tabulated Results of Monitoring Program

4300

			PHCs					BTEX					
			F1	F1 minus BTEX	F2	F3	F4	Total Hydrocarbons (C6-C50)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NU STF Soil Discharge Standard Commercial			320		260	2,500	6,600		5	0.8	20			20
NU STF Soil Discharge Standard Industrial			660		1,500	2,500	6,600		5	0.8	20			20
NU STF Soil Discharge Standard Residential			210		150	1,300	5,600		5	0.8	20			20
Sample Code	**Date**	**Field ID**												
L2635011-1	**08-31-2021**	**21P1-210831**	<10	<10	2,870	1,540	395	4,810	<0.0050	<0.050	<0.010	<0.050	<0.050	<0.10
L2635011-2	**08-31-2021**	**21P3-1-210831**	<10	<10	360	3,260	557	4,180	<0.0050	<0.050	<0.010	<0.050	<0.050	<0.10
L2635011-3	**08-31-2021**	**21P3-2-210831**	<10	<10	175	290	<20	465	<0.0050	<0.050	<0.010	<0.050	<0.050	<0.10
L2635011-4	**09-01-2021**	**21P4-1-210901**	<10	<10	130	402	70	602	<0.0050	<0.050	<0.010	<0.050	<0.050	<0.10
L2635011-5	**08-31-2021**	**21P4-2-210831**	<10	<10	249	424	60	733	<0.0050	<0.050	<0.010	<0.050	<0.050	<0.10
L2635011-6	**09-01-2021**	**21P7-210901**	<10	<10	<20	132	54	186	<0.0050	<0.050	<0.010	<0.050	<0.050	<0.10
L2635011-7	**09-01-2021**	**21P2-210901**	<10	<10	479	67	<20	546	<0.0050	<0.050	<0.010	<0.050	<0.050	<0.10
L2635011-8	**09-01-2021**	**21P5-210901**	10	10	248	1,670	458	2,390	<0.0050	<0.050	<0.010	<0.050	<0.050	<0.10

	Inorganics	Metals									
	Moisture	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Cobalt	Copper	Lead	Mercury
	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NU STF Soil Discharge Standard Commercial		40	12	2,000	8	22	1.4	87	300	91	600	50
NU STF Soil Discharge Standard Industrial		40	12	2,000	8	22	1.4	87	300	91	600	50
NU STF Soil Discharge Standard Residential		40	12	2,000	8	22	1.4	87	300	91	600	50
Sample Code	**Date**	**Field ID**										
L2635011-1	**08-31-2021**	**21P1-210831**	8.96	0.10	3.31	40.6	0.41	0.039	<0.10	21.1	4.58	11.7	8.61	0.0070
L2635011-2	**08-31-2021**	**21P3-1-210831**	8.76	0.40	3.32	74.0	0.31	0.067	<0.10	22.3	3.66	9.47	17.4	0.0190
L2635011-3	**08-31-2021**	**21P3-2-210831**	6.51	0.28	3.22	43.0	0.35	0.035	<0.10	29.5	3.46	8.98	9.70	0.0071
L2635011-4	**09-01-2021**	**21P4-1-210901**	8.04	0.23	3.18	54.5	0.31	0.063	<0.10	22.3	3.98	9.86	16.7	0.0102
L2635011-5	**08-31-2021**	**21P4-2-210831**	6.82	0.25	3.06	57.8	0.34	0.048	<0.10	15.7	3.86	8.04	10.5	0.0106
L2635011-6	**09-01-2021**	**21P7-210901**	25.9	<0.10	2.72	40.4	0.33	0.082	<0.10	22.3	4.88	9.92	5.81	0.0115
L2635011-7	**09-01-2021**	**21P2-210901**	7.65	<0.10	2.97	71.1	0.61	0.021	<0.10	19.9	7.40	16.9	7.29	0.0099
L2635011-8	**09-01-2021**	**21P5-210901**	7.78	0.17	2.90	54.7	0.34	0.059	<0.10	14.2	3.82	9.28	10.1	0.0108

	Molybdenum	Nickel	Selenium	Silver	Thallium	Tin	Uranium	Vanadium	Zinc
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NU STF Soil Discharge Standard Commercial	40	89	2.9	40	1	300	300	130	360
NU STF Soil Discharge Standard Industrial	40	89	2.9	40	1	300	300	130	360
NU STF Soil Discharge Standard Residential	40	89	2.9	40	1	300	300	130	360

Sample Code	Date	Field ID								
L2635011-1	08-31-2021	21P1-210831	0.89	13.6	<0.20	<0.10	0.076	<2.0	0.881	17.6	17.4
L2635011-2	08-31-2021	21P3-1-210831	1.01	12.8	<0.20	<0.10	0.070	<2.0	0.759	15.4	21.7
L2635011-3	08-31-2021	21P3-2-210831	0.89	14.8	<0.20	<0.10	0.056	<2.0	0.734	14.9	13.5
L2635011-4	09-01-2021	21P4-1-210901	0.81	13.0	<0.20	<0.10	0.065	<2.0	0.711	15.9	27.8
L2635011-5	08-31-2021	21P4-2-210831	0.58	9.83	<0.20	<0.10	0.063	<2.0	0.657	14.7	16.9
L2635011-6	09-01-2021	21P7-210901	0.72	13.5	<0.20	<0.10	0.094	<2.0	1.48	22.7	25.4
L2635011-7	09-01-2021	21P2-210901	0.72	14.3	<0.20	<0.10	0.116	<2.0	1.04	17.9	17.2
L2635011-8	09-01-2021	21P5-210901	0.71	9.56	<0.20	<0.10	0.072	<2.0	0.860	17.1	20.1

			PHCs			BTEX						Inorganics		Metals	MAH
			F1	F1 minus BTEX	Oil and Grease	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	pH (Lab)	Total Suspended Solids (Lab)	Lead	Styrene
			µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	-	mg/L	mg/L	µg/L
NU STF Water Discharge Standard			150		15	370	2	90			30	6.0 - 9.0	50	0.001	
Sample Code	**Date**	**Field ID**													
L2635000-1	**08-31-2021**	**21CST1-N-210831**	<100	<100	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.71	8.29	<3	0.000059	<0.5
L2635000-2	**08-31-2021**	**21CST1-W-210831**	<100	<100	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.71	7.72	<3	0.000088	<0.5
L2635000-3	**08-31-2021**	**21CST1-E-210831**	<100	<100	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.71	7.73	<3	<0.00005	<0.5