

KBL Environmental Ltd.

Soil Treatment Facility
Inuvik, Northwest Territories



2022 Annual Report

Submitted To: Gwich'in Land and Water Board
License Number: G22L1-005
Version Number: V.1.0

March 2023

TABLE OF CONTENTS

| | | |
|-------|---|---|
| 1.0 | Introduction | 1 |
| 1.1. | Project Information | 1 |
| 1.2. | Purpose..... | 1 |
| 2.0 | Licence Schedule 1 – Annual Water Licence Report..... | 1 |
| 2.1. | 1. a) The generator, carrier, volume, and analytical results of soil, snow and water accepted at the Inuvik Soil Treatment Facility | 1 |
| 2.2. | 1. b) The generator, carrier, volume, and analytical results of soil, snow and water refused at the Inuvik Soil Treatment Facility | 2 |
| 2.3. | 1. c) The volume, analytical results, carrier, and destination of treated soil removed at the Inuvik Soil Treatment Facility..... | 2 |
| 2.4. | 1. d) The monthly and annual quantities in cubic meters of all effluent discharged from the Water Retention Pond and Water Holding Tanks | 2 |
| 2.5. | 1. e) The water level and remaining capacity of each of the Water Holding Tanks and Water Retention Pond 2 | |
| 2.6. | 1. f) A description and volume or quantity of process additives used, with MSDS provided | 2 |
| 2.7. | 1. g) Discharge location(s) and effluent quality test results (raw and summarized data) for each discharge event from the Water Retention Pond and Treated Water Tanks | 2 |
| 2.8. | 1. h) Tabular summaries of all data generated under the Surveillance Network Program (SNP) in accordance with Part 2, Item 3, and Annex A of this Licence | 2 |
| 2.9. | 1. i) Details and results of the Environmental Monitoring Program, in accordance with Part E, Item 6, and Schedule 2 of this Licence | 3 |
| 2.10. | 1. j) Laboratory reports for all samples collected for the Surveillance Network Program, attached as an appendix | 3 |
| 2.11. | 1. k) For parameters that exhibit on-going exceedances of compliance criteria, provide:..... | 3 |
| 2.12. | 1. l) A summary of Construction activities conducted in accordance with Part F of this Licence | 3 |
| 2.13. | 1. m) A summary of major maintenance activities carried out during previous calendar year..... | 3 |
| 2.14. | 1. n) A copy of facility inspection reports referred to in Part F, condition 7 of this Licence..... | 3 |
| 2.15. | 1. o) A list and description of all Unauthorized Discharges that occurred during the previous calendar year, including the date, MWT spill number, volume, location, and summary of the circumstances and follow-up actions taken, and the status (i.e. open or closed), in accordance with the reporting requirements referred to in Part H of this Licence..... | 3 |
| 2.16. | 1. p An outline of any spill training and communications exercises carried out during the previous calendar year | 3 |
| 2.17. | 1. q) A summary of any closure and reclamation work completed during the year and an outline of any work anticipated for the next year | 4 |

| | | |
|-------|---|---|
| 2.18. | 1. r) A summary of any studies requested by the Board that relate to Waste disposal or Reclamation, and a brief description of any future studies planned | 4 |
| 2.19. | 1. s) A summary of actions taken to address concerns, nonconformances, or deficiencies in any reports filed by an Inspector | 4 |
| 2.20. | 1. t) A summary of any updates or revisions to the Spill Contingency Plan, Waste Management Plan, Operations & Maintenance Plan, Environmental Monitoring Program, and Closure and Reclamation Plan | 4 |
| 2.21. | 1. u) A summary of any updates or revisions to the Engagement Plan, including records of any engagement carried out during the previous year | 4 |
| 2.22. | 1. v) Any other details on waste disposal, operating procedures, construction, maintenance work, or other topics, requested by the Board on or before November 1 of the year being reported. | 4 |

LIST OF TABLES

Table 2.1: Amount of soil accepted in 2022

Table 2.2: Amount of water accepted in 2022

APPENDICES

Appendix A: Accepted Soil and Water

Appendix B: Outgoing Soil and Water

Appendix C: SDS for Amendments

Appendix D: Facility inspections and summary of Corrective Actions

Appendix E: Engagement Activities

1.0 INTRODUCTION

1.1. Project Information

Corporate Office

KBL Environmental Ltd.
17 Cameron Road, Box 1895
Yellowknife, NT X1A 2P4

Project Location

Town of Inuvik Solid Waste Disposal Facility
Lot 65, Group 1355, CLSR 611339
Inuvik, NT

KBL Environmental Ltd.'s (KBL) Inuvik Soil Treatment Facility (the Facility) received renewed Water Licence G22L1-005 on November 23, 2022. The Licence was approved for a term of five (5) years effective November 18, 2022, and expiring November 17, 2027.

1.2. Purpose

This document fulfills the annual reporting requirements under Part B (6) and Schedule 1 of Water Licence G22L1-005.

2.0 LICENCE SCHEDULE 1 – ANNUAL WATER LICENCE REPORT

2.1. 1. a) The generator, carrier, volume, and analytical results of soil, snow and water accepted at the Inuvik Soil Treatment Facility

7077 tonnes of soil, 475 m³ of water and no snow was accepted at the facility in 2022. Analytical results are shown in Appendix A.

Table 2.1: Amount of soil accepted in 2022

| Generator | Date | Carrier | Volume (tonnes) |
|--------------|--------------------------|---------------------------|-----------------|
| NTPC | March 1 – April 17, 2022 | Northwind Industries Ltd. | 6,955 |
| NTPC | May 30, 2022 | Northwind Industries Ltd. | 83 |
| Parks Canada | December 2, 2022 | Northwind Industries Ltd. | 39 |

Table 2.2: Amount of water accepted in 2022.

| Generator | Date | Carrier | Volume (m ³) |
|-----------|--------------------------|---------------------------|--------------------------|
| NTPC | March 1 – April 17, 2022 | Northwind Industries Ltd. | 91 |

| | | | |
|------|------------------|---------------------------|-----|
| NTPC | May 6 – 30, 2022 | Northwind Industries Ltd. | 377 |
|------|------------------|---------------------------|-----|

2.2. 1. b) The generator, carrier, volume, and analytical results of soil, snow and water refused at the Inuvik Soil Treatment Facility

No soil, snow or water was refused at the facility in 2022.

2.3. 1. c) The volume, analytical results, carrier, and destination of treated soil removed at the Inuvik Soil Treatment Facility

A total of 6,568 m³ of soil was remediated to meet soil reuse criteria and was accepted by City of Inuvik in 2022. Copies of the analytical results and inspector correspondence is included in Appendix B.

2.4. 1. d) The monthly and annual quantities in cubic meters of all effluent discharged from the Water Retention Pond and Water Holding Tanks

A total of 98 m³ of treated water was discharged from the facility in 2022.

2.5. 1. e) The water level and remaining capacity of each of the Water Holding Tanks and Water Retention Pond

There are two water holding tanks in STF both tanks have approximately 40 m³ of water with the capacity of 60 m³. The retention pond has approximately 100m³ of water, a freeboard of 1.3m with a capacity of 205 m³.

2.6. 1. f) A description and volume or quantity of process additives used, with MSDS provided

In accordance with the approved Operations and Maintenance Plan, a surfactant (24, 5L pails of Iveysol) was used to treat the soil at the site and a coagulant (1 5L pail of KLARAID CDP131) was used to treat the water. Copies of the MSDS are included in Appendix C.

2.7. 1. g) Discharge location(s) and effluent quality test results (raw and summarized data) for each discharge event from the Water Retention Pond and Treated Water Tanks

98m³ of water was discharged to the receiving environment at the drainage ditch (SNP 0037-3). The volume of water discharged did not exceed 50 m³ per discharge event with a rate of no more than 300 L min⁻¹. Copies of the analytical results and inspector correspondence is included in Appendix B.

2.8. 1. h) Tabular summaries of all data generated under the Surveillance Network Program (SNP) in accordance with Part 2, Item 3, and Annex A of this Licence

KBL attempted to perform groundwater monitoring on June 26, 2022, July 29, 2022, and August 22, 2022. All monitoring wells were observed to be dry.

2.9. 1. i) Details and results of the Environmental Monitoring Program, in accordance with Part E, Item 6, and Schedule 2 of this Licence

Not applicable, there was only baseline monitoring completed in 2021. As part of the facility renewal in 2022, KBL included action levels and update the Environmental Monitoring Program for the facility.

KBL attempted to perform groundwater monitoring on June 26, 2022, July 29, 2022, and August 22, 2022. All monitoring wells were observed to be dry.

2.10. 1. j) Laboratory reports for all samples collected for the Surveillance Network Program, attached as an appendix

KBL attempted to perform groundwater monitoring on June 26, 2022, July 29, 2022, and August 22, 2022. All monitoring wells were observed to be dry.

2.11. 1. k) For parameters that exhibit on-going exceedances of compliance criteria, provide:

- i. additional data analysis
- ii. a comparison to monitoring data from previous years to detect trends or patterns, and
- iii. a review of field conditions in order to explain results

KBL attempted to perform groundwater monitoring on June 26, 2022 and again on July 29, 2022. All monitoring wells were observed to be dry.

2.12. 1. l) A summary of Construction activities conducted in accordance with Part F of this Licence

No construction work was completed in 2022 other than the installation of the fence around the perimeter of the facility.

2.13. 1. m) A summary of major maintenance activities carried out during previous calendar year

No major maintenance work was completed in 2022.

2.14. 1. n) A copy of facility inspection reports referred to in Part F, condition 7 of this Licence

Internal facility inspection reports are included in Appendix D.

2.15. 1. o) A list and description of all Unauthorized Discharges that occurred during the previous calendar year, including the date, MWT spill number, volume, location, and summary of the circumstances and follow-up actions taken, and the status (i.e. open or closed), in accordance with the reporting requirements referred to in Part H of this Licence

There were no Unauthorized Discharges.

2.16. 1. p) An outline of any spill training and communications exercises carried out during the previous calendar year

There were no spill training or communications exercises carried out in 2022 other than standard staff

first aid, WHIMIS, spills, and TDG Training.

2.17. 1. q) A summary of any closure and reclamation work completed during the year and an outline of any work anticipated for the next year

No closure or reclamation work was completed during 2022 and none is anticipated in 2023.

2.18. 1. r) A summary of any studies requested by the Board that relate to Waste disposal or Reclamation, and a brief description of any future studies planned

No studies were requested by the Board in 2022 relating to Waste disposal or Reclamation. There are no future studies planned at this time.

2.19. 1. s) A summary of actions taken to address concerns, nonconformances, or deficiencies in any reports filed by an Inspector

A summary of actions taken to address concerns, nonconformances, or deficiencies in any reports filed by the ENR Inspector is included in Appendix D.

2.20. 1. t) A summary of any updates or revisions to the Spill Contingency Plan, Waste Management Plan, Operations & Maintenance Plan, Environmental Monitoring Program, and Closure and Reclamation Plan

The Spill Contingency Plan, Waste Management Plan, Operations & Maintenance Plan, Environmental Monitoring Program, and Closure and Reclamation Plan were updated as part of the permit renewal process in 2022. Updates included the correction to references to step out sampling, updates to KBL contact information, wording to reflect construction of Facility in 2021, soil information to include 2017 sampling results, addition of groundwater sampling results, and addition of recommended action levels for groundwater.

2.21. 1. u) A summary of any updates or revisions to the Engagement Plan, including records of any engagement carried out during the previous year

The Engagement Plan was updated as part of the permit renewal process in 2022. Records of engagement carried out as part of the Plan are included in Appendix E.

2.22. 1. v) Any other details on waste disposal, operating procedures, construction, maintenance work, or other topics, requested by the Board on or before November 1 of the year being reported.

No additional information or details were requested by the Board before November 1st, 2022.

APPENDIX A

Appendix A: Accepted Soil and Water

| Pile Number | Re-Use Criteria (Coarse Grained) (mg/kg) (Water Licence) | P5 - Parks Canada Tuk Pingo Site | | | |
|---|--|----------------------------------|----------------------|------------------------|---------|
| Estimated Soil Volume (m ³) | | 22 | | | Average |
| Number of Samples Required | | 1 | | | |
| Sample ID | | 1 | 2 | 22102NT-STF Acceptance | |
| Lab ID | | Taiga Sample ID: 001 | Taiga Sample ID: 002 | YL2201870-001 | |
| Date | | 24-Jun-22 | 24-Jun-22 | 14-Oct-22 | |
| Particulate size | n/a | - | - | Coarse | Coarse |
| pH (CaCl2) | 6-8 | - | - | 7.65 | 7.65 |
| Antimony (Sb) | 40 | - | - | 0.38 | 0.38 |
| Arsenic (As) | 120 | - | - | 7.44 | 7.44 |
| Barium (Ba) | 2000 | - | - | 276.00 | 276.00 |
| Beryllium (Be) | 8 | - | - | 0.22 | 0.22 |
| Cadmium (Cd) | 22 | - | - | 0.16 | 0.16 |
| Total Chromium (Cr) | 87 | - | - | 9.80 | 9.80 |
| Cobalt (Co) | 300 | - | - | 4.39 | 4.39 |
| Copper (Cu) | 91 | - | - | 8.00 | 8.00 |
| Lead (Pb) | 600 | - | - | 6.33 | 6.33 |
| Mercury (Hg) | 50 | - | - | 0.02 | 0.02 |
| Molybdenum (Mo) | 40 | - | - | 2.1 | 2.10 |
| Nickel (Ni) | 89 | - | - | 16.80 | 16.80 |
| Selenium (Se) | 2.9 | - | - | 0.37 | 0.37 |
| Silver (Ag) | 40 | - | - | <0.10 | <0.10 |
| Thallium (Tl) | 1 | - | - | 0.12 | 0.12 |
| Tin (Sn) | 300 | - | - | <2.0 | <2.0 |
| Uranium (U) | 300 | - | - | 2.64 | 2.64 |
| Vanadium (V) | 130 | - | - | 18.9 | 18.90 |
| Zinc (Zn) | 360 | - | - | 44.30 | 44.30 |
| F1 (C6-C10) | < 3% dry weight | < 5 | < 5 | - | < 5 |
| F2 (C10-C16) | < 3% dry weight | < 25 | 34 | - | 34 |
| F3 (C16-C34) | < 3% dry weight | 8320 | 10800 | - | 9560 |
| F4 (C34-C50) | < 3% dry weight | 300 | 952 | - | 626 |
| Calculated Total PHC | Less than 30,000 PPM | 8620 | 11786 | - | 10203 |

| Pile Number | Acceptancve Criteria (Fine Grained) (mg/kg) (Water Licence) | Aklavic - NTPC | | K Plant & EMD - NTPC |
|---|---|-------------------|-------------------|----------------------|
| Estimated Soil Volume (m ³) | | 3960 | | 62 |
| Sample ID | | Max Concentration | Max Concentration | Max Concentration |
| Lab ID | | L2656073 | EO2202733-003 | EO2201713 |
| Date | | 24-Oct-21 | 20-Apr-22 | 11-Mar-22 |
| Particulate size | n/a | Fine | - | - |
| pH (CaCl ₂) | 6-8 | 7.99 | - | 8.73 |
| Antimony (Sb) | 40 | 0.72 | - | 1.43 |
| Arsenic (As) | 120 | 15.2 | - | 49.3 |
| Barium (Ba) | 2000 | 502 | - | 297 |
| Beryllium (Be) | 8 | 0.51 | - | 0.69 |
| Cadmium (Cd) | 22 | 0.63 | - | 0.428 |
| Total Chromium (Cr) | 87 | 17.60 | - | 37.6 |
| Cobalt (Co) | 300 | 10.1 | - | 17.3 |
| Copper (Cu) | 91 | 25.9 | - | 29.1 |
| Lead (Pb) | 600 | 14.2 | - | 18.4 |
| Mercury (Hg) | 50 | 0.13 | - | 0.135 |
| Molybdenum (Mo) | 40 | 2.02 | - | 3.4 |
| Nickel (Ni) | 89 | 32.30 | - | 53.3 |
| Selenium (Se) | 2.9 | 0.85 | - | 1.52 |
| Silver (Ag) | 40 | 0.17 | - | 0.19 |
| Thallium (Tl) | 1 | 0.16 | - | 0.254 |
| Tin (Sn) | 300 | <2.0 | - | <2.0 |
| Uranium (U) | 300 | 0.89 | - | 1.8 |
| Vanadium (V) | 130 | 42.2 | - | 68.2 |
| Zinc (Zn) | 360 | 118 | - | 248 |
| Benzene | - | - | 0.838 | 0.48 |
| Toluene | - | - | 1.67 | 14 |
| Ethylbenzene | - | - | 11.9 | 17.3 |
| Xylenes | - | - | 53.6 | 136 |
| F1 (C6-C10) | 3% dry weight | - | 1890 | 3630 |
| F2 (C10-C16) | 3% dry weight | 1310 | 13400 | 47000 |
| F3 (C16-C34) | 3% dry weight | 5190 | 13200 | 7130 |
| F4 (C34-C50) | 3% dry weight | 382 | 730 | 2640 |



KBL Environmental Ltd.
ATTN: David Vanderkley
3601, 75 Avenue
Leduc ab T9E 0Z5

Date Received: 26-OCT-21
Report Date: 16-NOV-21 13:03 (MT)
Version: FINAL REV. 2

Client Phone: 780-893-3305

Certificate of Analysis

Lab Work Order #: L2656073

Project P.O. #: MM025

Job Reference: 21-051NT

C of C Numbers:

Legal Site Desc:

Comments: ADDITIONAL 08-NOV-21 11:31



Oliver Gregg
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 314 Old Airport Road, Unit 116, Yellowknife, NT X1A 3T3 Canada | Phone: +1 867 873 5593 |
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

* 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 |
|---|--------|------------|------|-------|-----------|----------|-------|
| L2656073-2 21BH02 Sampled By: CLIENT on 24-OCT-21 Matrix: SOIL Metals in Soil by CRC ICPMS Silver (Ag) 0.15 0.10 mg/kg 04-NOV-21 04-NOV-21 R5636172 Thallium (Tl) 0.140 0.050 mg/kg 04-NOV-21 04-NOV-21 R5636172 Tin (Sn) <2.0 2.0 mg/kg 04-NOV-21 04-NOV-21 R5636172 Uranium (U) 0.750 0.050 mg/kg 04-NOV-21 04-NOV-21 R5636172 Vanadium (V) 37.2 0.20 mg/kg 04-NOV-21 04-NOV-21 R5636172 Zinc (Zn) 103 2.0 mg/kg 04-NOV-21 04-NOV-21 R5636172 Miscellaneous Parameters % Moisture 17.8 0.25 % 29-OCT-21 R5633079 pH (1:2 soil:water) 7.94 0.10 pH 04-NOV-21 R5636189 CCME Total Extractable Hydrocarbons Surrogate: 2-Bromobenzotrifluoride 91.7 70-130 % 31-OCT-21 31-OCT-21 R5633421 Chrom. to baseline at nC50 YES 31-OCT-21 31-OCT-21 R5633421 Prep/Analysis Dates 31-OCT-21 31-OCT-21 R5633421 CCME Total Hydrocarbons F2 (C10-C16) 975 20 mg/kg 31-OCT-21 F3 (C16-C34) 4870 20 mg/kg 31-OCT-21 F4 (C34-C50) 312 20 mg/kg 31-OCT-21 | | | | | | | |
| L2656073-3 21BH03 Sampled By: CLIENT on 24-OCT-21 Matrix: SOIL Metals in Soil by ICPMS (CCME) Mercury in Soil by CVAAS Mercury (Hg) 0.102 0.0050 mg/kg 04-NOV-21 04-NOV-21 R5636119 Metals in Soil by CRC ICPMS Antimony (Sb) 0.62 0.10 mg/kg 04-NOV-21 04-NOV-21 R5636172 Arsenic (As) 13.8 0.10 mg/kg 04-NOV-21 04-NOV-21 R5636172 Barium (Ba) 421 0.50 mg/kg 04-NOV-21 04-NOV-21 R5636172 Beryllium (Be) 0.45 0.10 mg/kg 04-NOV-21 04-NOV-21 R5636172 Cadmium (Cd) 0.488 0.020 mg/kg 04-NOV-21 04-NOV-21 R5636172 Chromium (Cr) 14.2 0.50 mg/kg 04-NOV-21 04-NOV-21 R5636172 Cobalt (Co) 8.57 0.10 mg/kg 04-NOV-21 04-NOV-21 R5636172 Copper (Cu) 20.6 0.50 mg/kg 04-NOV-21 04-NOV-21 R5636172 Lead (Pb) 11.5 0.50 mg/kg 04-NOV-21 04-NOV-21 R5636172 Molybdenum (Mo) 2.02 0.10 mg/kg 04-NOV-21 04-NOV-21 R5636172 Nickel (Ni) 27.0 0.50 mg/kg 04-NOV-21 04-NOV-21 R5636172 Selenium (Se) 0.76 0.20 mg/kg 04-NOV-21 04-NOV-21 R5636172 Silver (Ag) 0.14 0.10 mg/kg 04-NOV-21 04-NOV-21 R5636172 Thallium (Tl) 0.136 0.050 mg/kg 04-NOV-21 04-NOV-21 R5636172 Tin (Sn) <2.0 2.0 mg/kg 04-NOV-21 04-NOV-21 R5636172 Uranium (U) 0.725 0.050 mg/kg 04-NOV-21 04-NOV-21 R5636172 Vanadium (V) 36.5 0.20 mg/kg 04-NOV-21 04-NOV-21 R5636172 Zinc (Zn) 97.2 2.0 mg/kg 04-NOV-21 04-NOV-21 R5636172 Miscellaneous Parameters % Moisture 17.7 0.25 % 29-OCT-21 R5633079 pH (1:2 soil:water) 7.96 0.10 pH 04-NOV-21 R5636189 CCME Total Extractable Hydrocarbons Surrogate: 2-Bromobenzotrifluoride 90.0 70-130 % 31-OCT-21 31-OCT-21 R5633421 Chrom. to baseline at nC50 YES 31-OCT-21 31-OCT-21 R5633421 Prep/Analysis Dates 31-OCT-21 31-OCT-21 R5633421 CCME Total Hydrocarbons F2 (C10-C16) 1000 20 mg/kg 31-OCT-21 | | | | | | | |

* 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 |
|--|--|------------|---|--|---|--|--|
| L2656073-3 21BH03 Sampled By: CLIENT on 24-OCT-21 Matrix: SOIL CCME Total Hydrocarbons F3 (C16-C34) F4 (C34-C50) | 4810 382 | | 20 20 | mg/kg mg/kg | | 31-OCT-21 31-OCT-21 | |
| L2656073-4 21BH04 Sampled By: CLIENT on 24-OCT-21 Matrix: SOIL Metals in Soil by ICPMS (CCME) Mercury in Soil by CVAAS Mercury (Hg) Metals in Soil by CRC ICPMS Antimony (Sb) Arsenic (As) Barium (Ba) Beryllium (Be) Cadmium (Cd) Chromium (Cr) Cobalt (Co) Copper (Cu) Lead (Pb) Molybdenum (Mo) Nickel (Ni) Selenium (Se) Silver (Ag) Thallium (Tl) Tin (Sn) Uranium (U) Vanadium (V) Zinc (Zn) Miscellaneous Parameters % Moisture pH (1:2 soil:water) CCME Total Extractable Hydrocarbons Surrogate: 2-Bromobenzotrifluoride Chrom. to baseline at nC50 Prep/Analysis Dates CCME Total Hydrocarbons F2 (C10-C16) F3 (C16-C34) F4 (C34-C50) | 0.110 0.67 14.4 494 0.50 0.596 17.6 9.91 24.5 13.7 1.71 31.7 0.85 0.17 0.159 <2.0 0.886 40.9 114 19.8 7.94 93.1 YES 1270 4120 231 | | 0.0050 0.10 0.10 0.50 0.10 0.020 0.50 0.10 0.50 0.50 0.10 0.50 0.10 0.20 0.10 0.050 2.0 0.050 0.20 2.0 0.25 0.10 70-130 20 20 20 | mg/kg mg/kg % pH % mg/kg mg/kg mg/kg | 04-NOV-21 04-NOV-21 29-OCT-21 04-NOV-21 31-OCT-21 31-OCT-21 31-OCT-21 31-OCT-21 31-OCT-21 31-OCT-21 | 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 | R5636119 R5636172 R5636172 R5636172 R5636172 R5636172 R5636172 R5636172 R5636172 R5636172 R5636172 R5636172 R5636172 R5636172 R5636172 R5636172 R5636172 R5636172 R5636172 R5636172 R5633079 R5636189 R5633421 R5633421 R5633421 R5636172 R5636172 R5636172 |
| L2656073-5 21BH05 Sampled By: CLIENT on 24-OCT-21 Matrix: SOIL Metals in Soil by ICPMS (CCME) Mercury in Soil by CVAAS Mercury (Hg) Metals in Soil by CRC ICPMS Antimony (Sb) Arsenic (As) Barium (Ba) Beryllium (Be) Cadmium (Cd) Chromium (Cr) | 0.0959 0.62 13.1 427 0.46 0.502 15.7 | | 0.0050 0.10 0.10 0.50 0.10 0.020 0.50 | mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg | 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 | 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 04-NOV-21 | R5636119 R5636172 R5636172 R5636172 R5636172 R5636172 R5636172 R5636172 |

* 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 |
|--|---------------------|--------|------------|--------|-------|-----------|-----------|----------|
| L2656073-5 | 21BH05 | | | | | | | |
| Sampled By: | CLIENT on 24-OCT-21 | | | | | | | |
| Matrix: | SOIL | | | | | | | |
| Metals in Soil by CRC ICPMS | | | | | | | | |
| Cobalt (Co) | 8.68 | | | 0.10 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Copper (Cu) | 22.6 | | | 0.50 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Lead (Pb) | 12.2 | | | 0.50 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Molybdenum (Mo) | 1.61 | | | 0.10 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Nickel (Ni) | 28.0 | | | 0.50 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Selenium (Se) | 0.84 | | | 0.20 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Silver (Ag) | 0.15 | | | 0.10 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Thallium (Tl) | 0.143 | | | 0.050 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Tin (Sn) | <2.0 | | | 2.0 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Uranium (U) | 0.783 | | | 0.050 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Vanadium (V) | 36.2 | | | 0.20 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Zinc (Zn) | 99.8 | | | 2.0 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Miscellaneous Parameters | | | | | | | | |
| % Moisture | 20.9 | | | 0.25 | % | | 29-OCT-21 | R5633079 |
| pH (1:2 soil:water) | 7.99 | | | 0.10 | pH | | 04-NOV-21 | R5636189 |
| CCME Total Extractable Hydrocarbons | | | | | | | | |
| Surrogate: 2-Bromobenzotrifluoride | 90.1 | | | 70-130 | % | 31-OCT-21 | 31-OCT-21 | R5633421 |
| Chrom. to baseline at nC50 | YES | | | | | 31-OCT-21 | 31-OCT-21 | R5633421 |
| Prep/Analysis Dates | | | | | | 31-OCT-21 | 31-OCT-21 | R5633421 |
| CCME Total Hydrocarbons | | | | | | | | |
| F2 (C10-C16) | 768 | | | 20 | mg/kg | | 31-OCT-21 | |
| F3 (C16-C34) | 3390 | | | 20 | mg/kg | | 31-OCT-21 | |
| F4 (C34-C50) | 244 | | | 20 | mg/kg | | 31-OCT-21 | |
| L2656073-6 | 21BH06 | | | | | | | |
| Sampled By: | CLIENT on 24-OCT-21 | | | | | | | |
| Matrix: | SOIL | | | | | | | |
| Metals in Soil by ICPMS (CCME) | | | | | | | | |
| Mercury in Soil by CVAAS | | | | | | | | |
| Mercury (Hg) | 0.110 | | | 0.0050 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636119 |
| Metals in Soil by CRC ICPMS | | | | | | | | |
| Antimony (Sb) | 0.72 | | | 0.10 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Arsenic (As) | 15.2 | | | 0.10 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Barium (Ba) | 502 | | | 0.50 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Beryllium (Be) | 0.51 | | | 0.10 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Cadmium (Cd) | 0.627 | | | 0.020 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Chromium (Cr) | 17.5 | | | 0.50 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Cobalt (Co) | 10.1 | | | 0.10 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Copper (Cu) | 25.9 | | | 0.50 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Lead (Pb) | 14.2 | | | 0.50 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Molybdenum (Mo) | 1.90 | | | 0.10 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Nickel (Ni) | 32.3 | | | 0.50 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Selenium (Se) | 0.93 | | | 0.20 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Silver (Ag) | 0.17 | | | 0.10 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Thallium (Tl) | 0.164 | | | 0.050 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Tin (Sn) | <2.0 | | | 2.0 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Uranium (U) | 0.845 | | | 0.050 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Vanadium (V) | 42.2 | | | 0.20 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Zinc (Zn) | 118 | | | 2.0 | mg/kg | 04-NOV-21 | 04-NOV-21 | R5636172 |
| Miscellaneous Parameters | | | | | | | | |
| % Moisture | 20.7 | | | 0.25 | % | | 29-OCT-21 | R5633079 |
| pH (1:2 soil:water) | 7.93 | | | 0.10 | pH | | 04-NOV-21 | R5636189 |

* 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 |
|---|--|------------|--|--|---|---|--|
| L2656073-6 21BH06 Sampled By: CLIENT on 24-OCT-21 Matrix: SOIL CCME Total Extractable Hydrocarbons Surrogate: 2-Bromobenzotrifluoride Chrom. to baseline at nC50 Prep/Analysis Dates CCME Total Hydrocarbons F2 (C10-C16) F3 (C16-C34) F4 (C34-C50) | 86.6 YES 1170 4180 357 | | 70-130 20 20 20 | % mg/kg mg/kg mg/kg | 31-OCT-21 31-OCT-21 31-OCT-21 | 31-OCT-21 31-OCT-21 31-OCT-21 | R5633421 R5633421 R5633421 |
| L2656073-7 COMPOSITE Sampled By: CLIENT on 24-OCT-21 Matrix: SOIL % Particles > 75um (Coarse/Fine) % >75um General Texture Class | 35.1 Fine | | 1.0 | % | | 12-NOV-21 12-NOV-21 | R5646121 R5646121 |
| | | | | | | | |

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

Reference Information

Test Method References:

| ALS Test Code | Matrix | Test Description | Method Reference** |
|---------------|--------|------------------|--------------------|
|---------------|--------|------------------|--------------------|

| | | | |
|---------------------|------|-------------------------|-----------------------------------|
| 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.

| | | | |
|-----------|------|---------------------------------|-------------------------------------|
| PH-1:2-ED | Soil | pH 1:2 H ₂ O Extract | CSSS 16.2 - PH OF 1:2 WATER EXTRACT |
|-----------|------|---------------------------------|-------------------------------------|

Soil and de-ionized water (by volume) are mixed in a defined ratio. The slurry is allowed to stand, shaken, and then allowed to stand again prior to taking measurements. After equilibration, the pH of the liquid portion of the extract is measured by a pH meter. Field Measurement is recommended where accurate pH measurements are required, due to the 15 minute recommended hold time.

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

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.

| | | | |
|-------------------|------|----------------------------------|--------------------|
| PSA-75UM-SIEVE-ED | Soil | % Particles > 75um (Coarse/Fine) | ASTM D422-63-SIEVE |
|-------------------|------|----------------------------------|--------------------|

An air-dried sample is reduced to < 2 mm size and mixed with a dispersing agent (Calgon solution). The sample is washed through a 200 mesh (75

Reference Information

Test Method References:

| ALS Test Code | Matrix | Test Description | Method Reference** |
|---------------|--------|------------------|--------------------|
|---------------|--------|------------------|--------------------|

µm) sieve. The retained weight of sample is used to determine % sand fraction.
Reference: ASTM D422-63

** 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:

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 ww - 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: L2656073

Report Date: 16-NOV-21

Page 1 of 5

Client: KBL Environmental Ltd.

3601, 75 Avenue

Leduc ab T9E 0Z5

Contact: David Vanderkley

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|------------------------------------|-----------------|-------------------------|---------|-----------|-------|-----|--------|-----------|
| F2-4-TMB-ED | | Soil | | | | | | |
| Batch | R5633421 | | | | | | | |
| WG3648797-4 | DUP | L2656073-1 | | | | | | |
| F2 (C10-C16) | | 1310 | 1370 | | mg/kg | 4.7 | 40 | 31-OCT-21 |
| F3 (C16-C34) | | 5190 | 4990 | | mg/kg | 4.0 | 40 | 31-OCT-21 |
| F4 (C34-C50) | | 335 | 289 | | mg/kg | 15 | 40 | 31-OCT-21 |
| WG3648797-3 | IRM | ALS PHC RM3 | | | | | | |
| F2 (C10-C16) | | | 90.5 | | % | | 70-130 | 31-OCT-21 |
| F3 (C16-C34) | | | 90.8 | | % | | 70-130 | 31-OCT-21 |
| F4 (C34-C50) | | | 86.5 | | % | | 70-130 | 31-OCT-21 |
| WG3648797-2 | LCS | DIESEL/MOTOR OIL | | | | | | |
| F2 (C10-C16) | | | 108.0 | | % | | 70-130 | 31-OCT-21 |
| F3 (C16-C34) | | | 102.5 | | % | | 70-130 | 31-OCT-21 |
| F4 (C34-C50) | | | 102.9 | | % | | 70-130 | 31-OCT-21 |
| WG3648797-1 | MB | | | | | | | |
| F2 (C10-C16) | | | <20 | | mg/kg | | 20 | 31-OCT-21 |
| F3 (C16-C34) | | | <20 | | mg/kg | | 20 | 31-OCT-21 |
| F4 (C34-C50) | | | <20 | | mg/kg | | 20 | 31-OCT-21 |
| Surrogate: 2-Bromobenzotrifluoride | | | 93.9 | | % | | 70-130 | 31-OCT-21 |
| HG-200.2-CVAA-ED | | Soil | | | | | | |
| Batch | R5636119 | | | | | | | |
| WG3652321-3 | CRM | SCP_SS-2_SOIL | | | | | | |
| Mercury (Hg) | | | 98.6 | | % | | 70-130 | 04-NOV-21 |
| WG3652321-4 | DUP | L2656073-1 | | | | | | |
| Mercury (Hg) | | 0.101 | 0.0954 | | mg/kg | 6.1 | 40 | 04-NOV-21 |
| WG3652321-2 | LCS | | | | | | | |
| Mercury (Hg) | | | 89.0 | | % | | 80-120 | 04-NOV-21 |
| WG3652321-1 | MB | | | | | | | |
| Mercury (Hg) | | | <0.0050 | | mg/kg | | 0.005 | 04-NOV-21 |
| MET-200.2-CCMS-ED | | Soil | | | | | | |
| Batch | R5636172 | | | | | | | |
| WG3652321-3 | CRM | SCP_SS-2_SOIL | | | | | | |
| Antimony (Sb) | | | 98.2 | | % | | 70-130 | 04-NOV-21 |
| Arsenic (As) | | | 94.6 | | % | | 70-130 | 04-NOV-21 |
| Barium (Ba) | | | 96.7 | | % | | 70-130 | 04-NOV-21 |
| Beryllium (Be) | | | 92.8 | | % | | 70-130 | 04-NOV-21 |
| Cadmium (Cd) | | | 90.6 | | % | | 70-130 | 04-NOV-21 |
| Chromium (Cr) | | | 91.3 | | % | | 70-130 | 04-NOV-21 |
| Cobalt (Co) | | | 97.3 | | % | | 70-130 | 04-NOV-21 |

Quality Control Report

Workorder: L2656073

Report Date: 16-NOV-21

Page 2 of 5

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|--------------------------|-----------------|----------------------|--------|-----------|-------|-----|-------------|-----------|
| MET-200.2-CCMS-ED | | Soil | | | | | | |
| Batch | R5636172 | | | | | | | |
| WG3652321-3 | CRM | SCP_SS-2_SOIL | | | | | | |
| Copper (Cu) | | | 98.0 | | % | | 70-130 | 04-NOV-21 |
| Lead (Pb) | | | 92.4 | | % | | 70-130 | 04-NOV-21 |
| Molybdenum (Mo) | | | 93.2 | | % | | 70-130 | 04-NOV-21 |
| Nickel (Ni) | | | 97.8 | | % | | 70-130 | 04-NOV-21 |
| Selenium (Se) | | | 0.18 | | mg/kg | | 0-0.34 | 04-NOV-21 |
| Silver (Ag) | | | 133.9 | MES | % | | 70-130 | 04-NOV-21 |
| Thallium (Tl) | | | 0.080 | | mg/kg | | 0.029-0.129 | 04-NOV-21 |
| Tin (Sn) | | | 92.0 | | % | | 70-130 | 04-NOV-21 |
| Uranium (U) | | | 86.6 | | % | | 70-130 | 04-NOV-21 |
| Vanadium (V) | | | 94.7 | | % | | 70-130 | 04-NOV-21 |
| Zinc (Zn) | | | 89.2 | | % | | 70-130 | 04-NOV-21 |
| WG3652321-4 | DUP | L2656073-1 | | | | | | |
| Antimony (Sb) | | 0.64 | 0.59 | | mg/kg | 7.9 | 30 | 04-NOV-21 |
| Arsenic (As) | | 12.8 | 12.3 | | mg/kg | 3.6 | 30 | 04-NOV-21 |
| Barium (Ba) | | 381 | 361 | | mg/kg | 5.5 | 40 | 04-NOV-21 |
| Beryllium (Be) | | 0.43 | 0.40 | | mg/kg | 7.0 | 30 | 04-NOV-21 |
| Cadmium (Cd) | | 0.610 | 0.475 | | mg/kg | 25 | 30 | 04-NOV-21 |
| Chromium (Cr) | | 15.0 | 14.0 | | mg/kg | 6.9 | 30 | 04-NOV-21 |
| Cobalt (Co) | | 8.55 | 8.44 | | mg/kg | 1.2 | 30 | 04-NOV-21 |
| Copper (Cu) | | 25.0 | 25.5 | | mg/kg | 1.9 | 30 | 04-NOV-21 |
| Lead (Pb) | | 11.4 | 11.8 | | mg/kg | 3.3 | 40 | 04-NOV-21 |
| Molybdenum (Mo) | | 1.54 | 1.54 | | mg/kg | 0.1 | 40 | 04-NOV-21 |
| Nickel (Ni) | | 26.9 | 27.0 | | mg/kg | 0.2 | 30 | 04-NOV-21 |
| Selenium (Se) | | 0.78 | 0.70 | | mg/kg | 10 | 30 | 04-NOV-21 |
| Silver (Ag) | | 0.15 | 0.14 | | mg/kg | 3.4 | 40 | 04-NOV-21 |
| Thallium (Tl) | | 0.135 | 0.135 | | mg/kg | 0.3 | 30 | 04-NOV-21 |
| Tin (Sn) | | <2.0 | <2.0 | RPD-NA | mg/kg | N/A | 40 | 04-NOV-21 |
| Uranium (U) | | 0.709 | 0.798 | | mg/kg | 12 | 30 | 04-NOV-21 |
| Vanadium (V) | | 35.2 | 33.4 | | mg/kg | 5.4 | 30 | 04-NOV-21 |
| Zinc (Zn) | | 111 | 112 | | mg/kg | 0.7 | 30 | 04-NOV-21 |
| WG3652321-2 | LCS | | | | | | | |
| Antimony (Sb) | | | 98.2 | | % | | 80-120 | 04-NOV-21 |
| Arsenic (As) | | | 102.3 | | % | | 80-120 | 04-NOV-21 |
| Barium (Ba) | | | 100.4 | | % | | 80-120 | 04-NOV-21 |
| Beryllium (Be) | | | 97.9 | | % | | 80-120 | 04-NOV-21 |

Quality Control Report

Workorder: L2656073

Report Date: 16-NOV-21

Page 3 of 5

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|--------------------------|--------|-------------|--------|-----------|-------|-----|--------|-----------|
| MET-200.2-CCMS-ED | | Soil | | | | | | |
| Batch R5636172 | | | | | | | | |
| WG3652321-2 LCS | | | | | | | | |
| Cadmium (Cd) | | | 101.4 | | % | | 80-120 | 04-NOV-21 |
| Chromium (Cr) | | | 97.3 | | % | | 80-120 | 04-NOV-21 |
| Cobalt (Co) | | | 100.7 | | % | | 80-120 | 04-NOV-21 |
| Copper (Cu) | | | 100.6 | | % | | 80-120 | 04-NOV-21 |
| Lead (Pb) | | | 93.5 | | % | | 80-120 | 04-NOV-21 |
| Molybdenum (Mo) | | | 97.8 | | % | | 80-120 | 04-NOV-21 |
| Nickel (Ni) | | | 99.4 | | % | | 80-120 | 04-NOV-21 |
| Selenium (Se) | | | 102.5 | | % | | 80-120 | 04-NOV-21 |
| Silver (Ag) | | | 98.4 | | % | | 80-120 | 04-NOV-21 |
| Thallium (Tl) | | | 91.3 | | % | | 80-120 | 04-NOV-21 |
| Tin (Sn) | | | 96.4 | | % | | 80-120 | 04-NOV-21 |
| Uranium (U) | | | 93.9 | | % | | 80-120 | 04-NOV-21 |
| Vanadium (V) | | | 100.4 | | % | | 80-120 | 04-NOV-21 |
| Zinc (Zn) | | | 92.6 | | % | | 80-120 | 04-NOV-21 |
| WG3652321-1 MB | | | | | | | | |
| Antimony (Sb) | | | <0.10 | | mg/kg | | 0.1 | 04-NOV-21 |
| Arsenic (As) | | | <0.10 | | mg/kg | | 0.1 | 04-NOV-21 |
| Barium (Ba) | | | <0.50 | | mg/kg | | 0.5 | 04-NOV-21 |
| Beryllium (Be) | | | <0.10 | | mg/kg | | 0.1 | 04-NOV-21 |
| Cadmium (Cd) | | | <0.020 | | mg/kg | | 0.02 | 04-NOV-21 |
| Chromium (Cr) | | | <0.50 | | mg/kg | | 0.5 | 04-NOV-21 |
| Cobalt (Co) | | | <0.10 | | mg/kg | | 0.1 | 04-NOV-21 |
| Copper (Cu) | | | <0.50 | | mg/kg | | 0.5 | 04-NOV-21 |
| Lead (Pb) | | | <0.50 | | mg/kg | | 0.5 | 04-NOV-21 |
| Molybdenum (Mo) | | | <0.10 | | mg/kg | | 0.1 | 04-NOV-21 |
| Nickel (Ni) | | | <0.50 | | mg/kg | | 0.5 | 04-NOV-21 |
| Selenium (Se) | | | <0.20 | | mg/kg | | 0.2 | 04-NOV-21 |
| Silver (Ag) | | | <0.10 | | mg/kg | | 0.1 | 04-NOV-21 |
| Thallium (Tl) | | | <0.050 | | mg/kg | | 0.05 | 04-NOV-21 |
| Tin (Sn) | | | <2.0 | | mg/kg | | 2 | 04-NOV-21 |
| Uranium (U) | | | <0.050 | | mg/kg | | 0.05 | 04-NOV-21 |
| Vanadium (V) | | | <0.20 | | mg/kg | | 0.2 | 04-NOV-21 |
| Zinc (Zn) | | | <2.0 | | mg/kg | | 2 | 04-NOV-21 |

PH-1:2-ED

Soil

Quality Control Report

Workorder: L2656073

Report Date: 16-NOV-21

Page 4 of 5

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|--------------------------|------------|---------------------|--------|-----------|-------|------|-----------|-----------|
| PH-1:2-ED | | Soil | | | | | | |
| Batch R5636189 | | | | | | | | |
| WG3652602-2 | DUP | L2656073-3 | | | | | | |
| pH (1:2 soil:water) | | 7.96 | 7.94 | J | pH | 0.02 | 0.3 | 04-NOV-21 |
| WG3652602-1 | IRM | ALS SAL 2019 | | | | | | |
| pH (1:2 soil:water) | | | 7.79 | | pH | | 7.55-8.15 | 04-NOV-21 |
| WG3652602-3 | LCS | PH-6 | | | | | | |
| pH (1:2 soil:water) | | | 6.01 | | pH | | 5.8-6.2 | 04-NOV-21 |
| PREP-MOISTURE-ED | | Soil | | | | | | |
| Batch R5633079 | | | | | | | | |
| WG3648801-3 | DUP | L2656073-1 | | | | | | |
| % Moisture | | 18.1 | 18.5 | | % | 1.7 | 20 | 29-OCT-21 |
| WG3648801-2 | LCS | | | | | | | |
| % Moisture | | | 101.8 | | % | | 90-110 | 29-OCT-21 |
| WG3648801-1 | MB | | | | | | | |
| % Moisture | | | <0.25 | | % | | 0.25 | 29-OCT-21 |
| PSA-75UM-SIEVE-ED | | Soil | | | | | | |
| Batch R5646121 | | | | | | | | |
| WG3657382-2 | IRM | ALS SAL 2019 | | | | | | |
| % >75um | | | 34.6 | | % | | 29.1-39.1 | 12-NOV-21 |
| WG3657382-1 | MB | | | | | | | |
| % >75um | | | <1.0 | | % | | 1 | 12-NOV-21 |

Quality Control Report

Workorder: L2656073

Report Date: 16-NOV-21

Page 5 of 5

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 |
|-----------|---|
| J | Duplicate results and limits are expressed in terms of absolute difference. |
| 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.

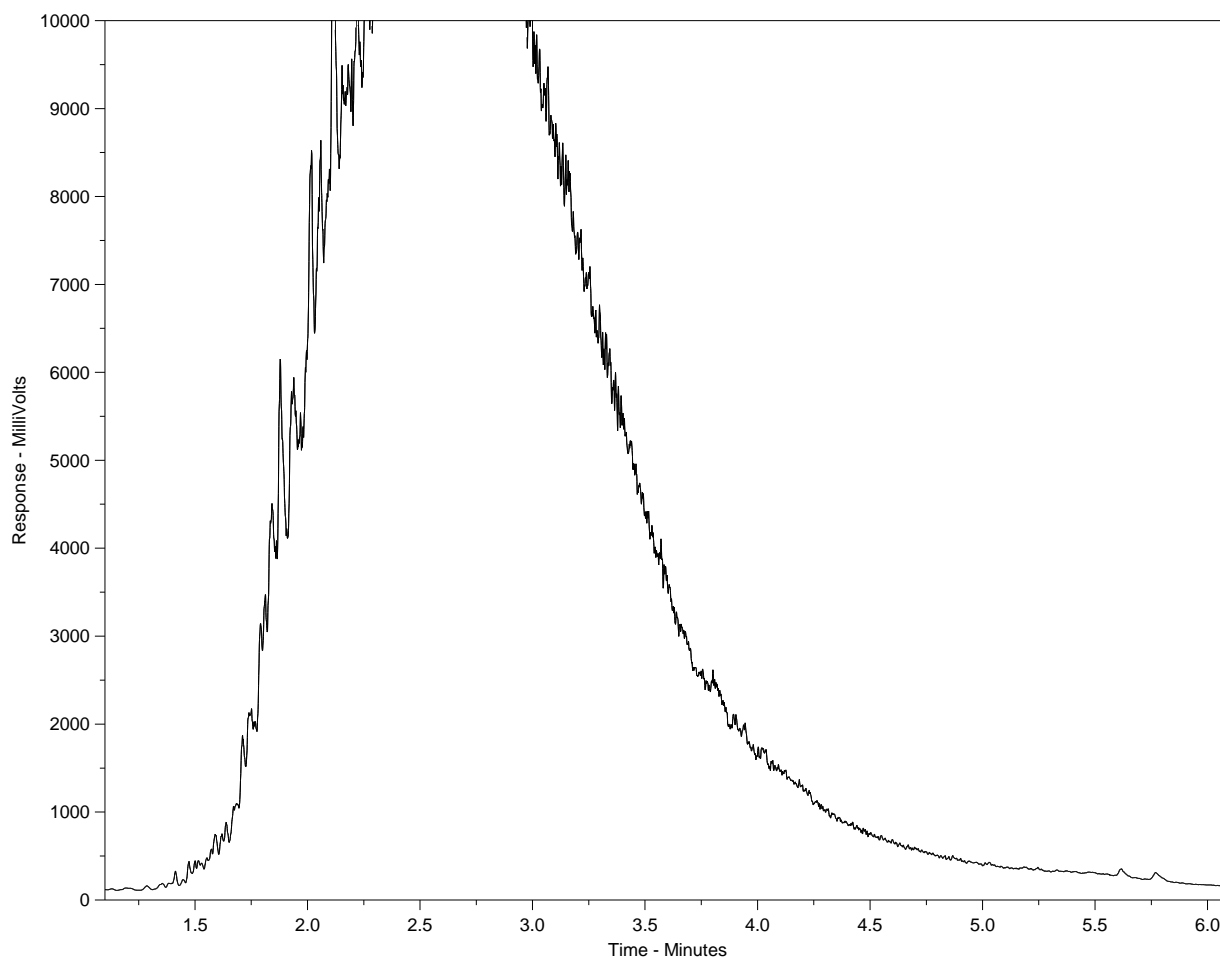
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide 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: L2656073-1
Client ID: 21BH01



| F2 | | F3 | | F4 | | >F4 |
|-------------------|-------|-------------------------------|-------|----|--------|-----|
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| Gasoline | | Motor Oils/ Lube Oils/ Grease | | | | |
| Diesel/ Jet Fuels | | | | | | |

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.

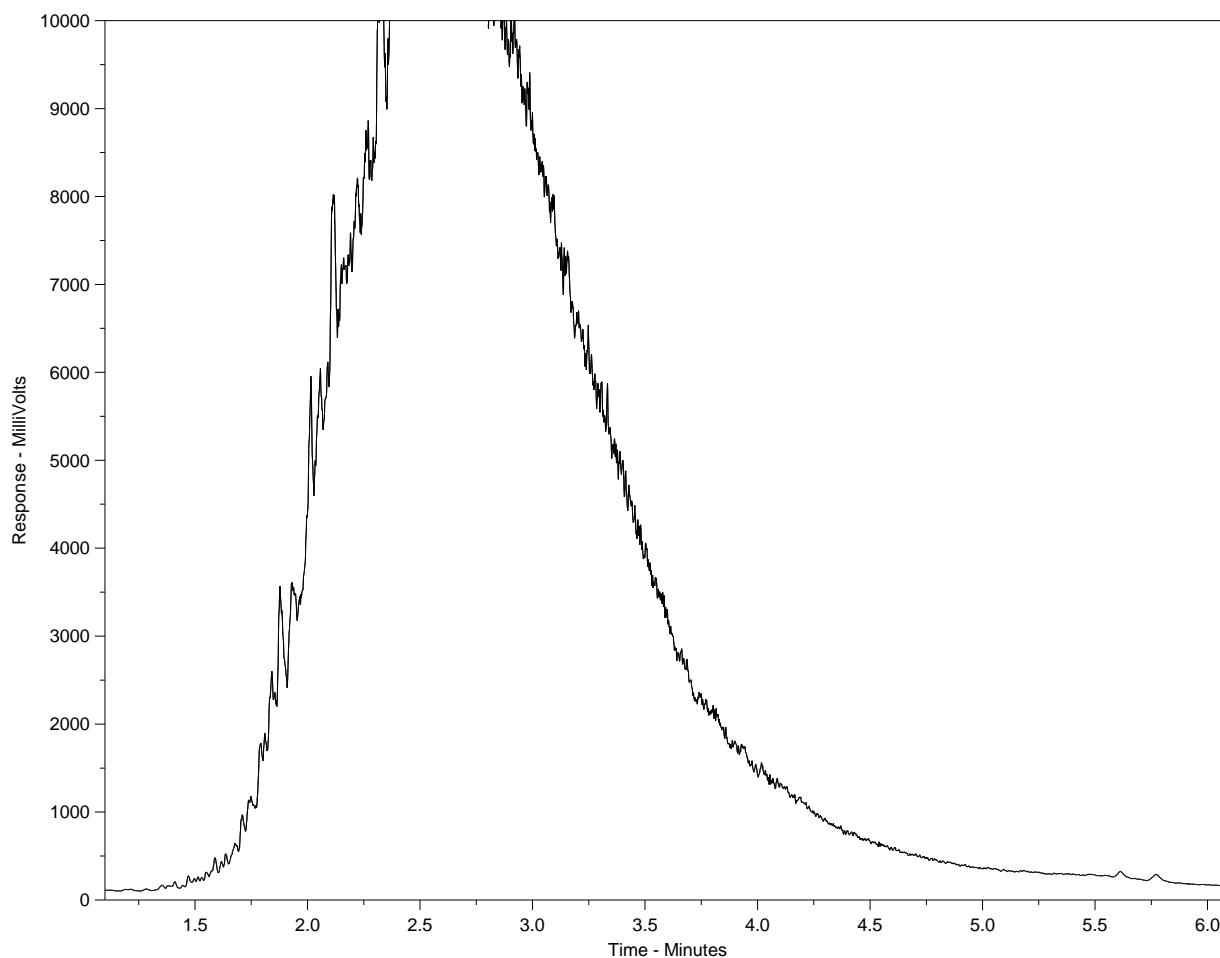
Note:

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: L2656073-2
Client ID: 21BH02



| F2 | | F3 | | F4 | | >F4 |
|-------------------|-------|-------------------------------|-------|----|--------|-----|
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| Gasoline | | Motor Oils/ Lube Oils/ Grease | | | | |
| Diesel/ Jet Fuels | | | | | | |

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.

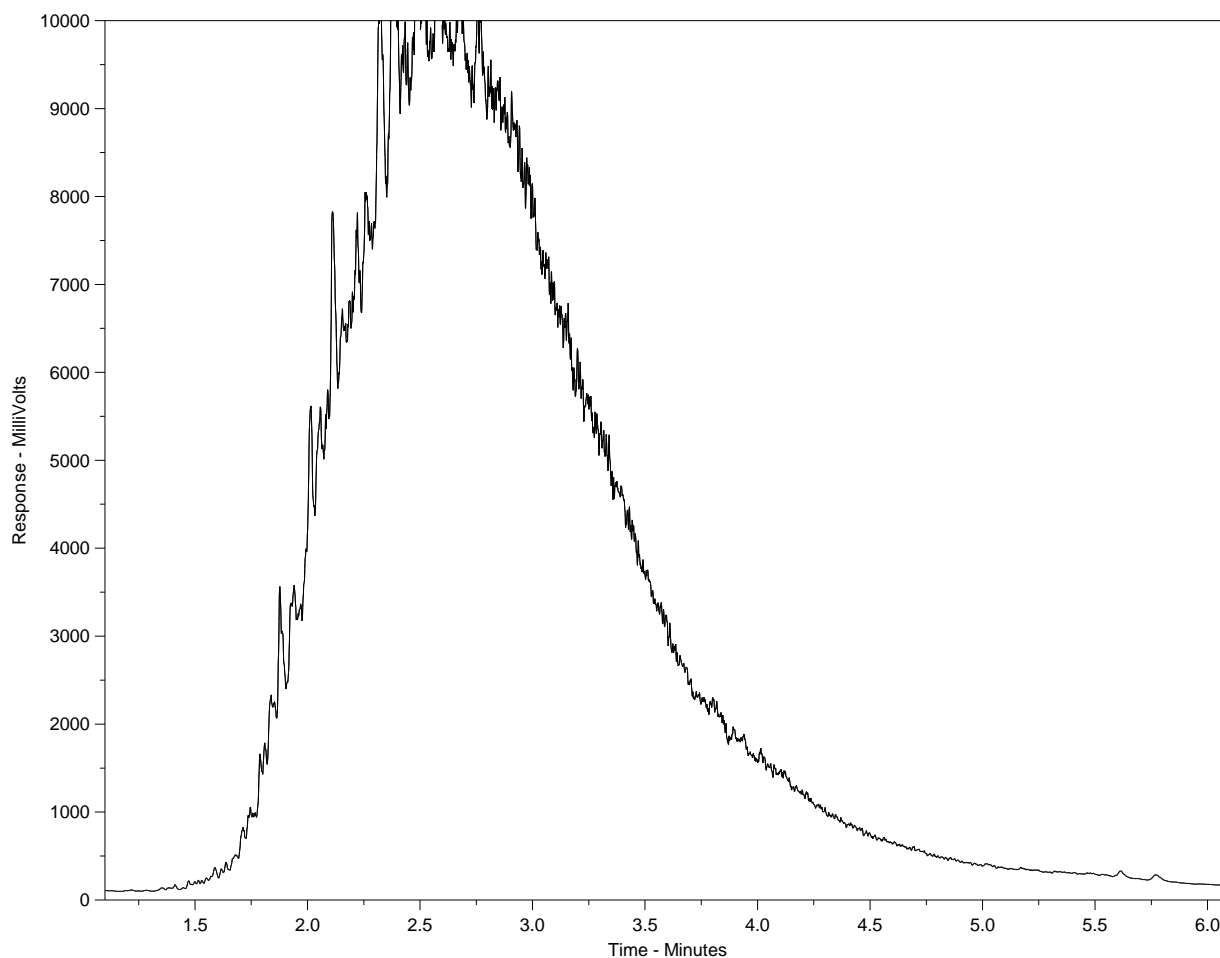
Note:

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: L2656073-3
Client ID: 21BH03



| F2 | | F3 | | F4 | >F4 |
|-------------------|-------|-------------------------------|-------|--------|-----|
| nC10 | nC16 | | nC34 | nC50 | |
| 174°C | 287°C | | 481°C | 575°C | |
| 346°F | 549°F | | 898°F | 1067°F | |
| Gasoline | | Motor Oils/ Lube Oils/ Grease | | | |
| Diesel/ Jet Fuels | | | | | |

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.

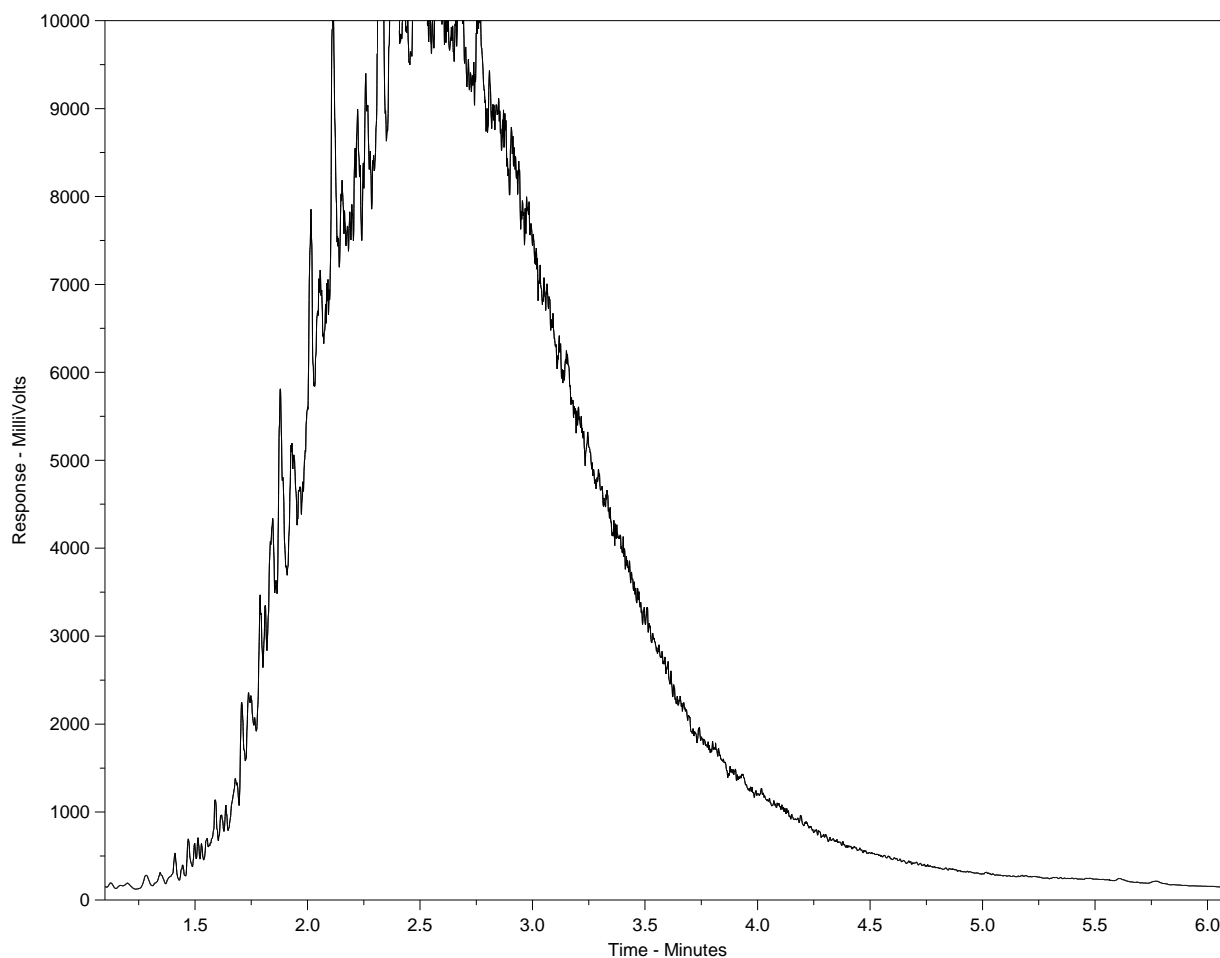
Note:

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: L2656073-4
Client ID: 21BH04



| F2 | | F3 | | F4 | | >F4 |
|-------------------|-------|-------------------------------|-------|----|--------|-----|
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| Gasoline | | Motor Oils/ Lube Oils/ Grease | | | | |
| Diesel/ Jet Fuels | | | | | | |

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.

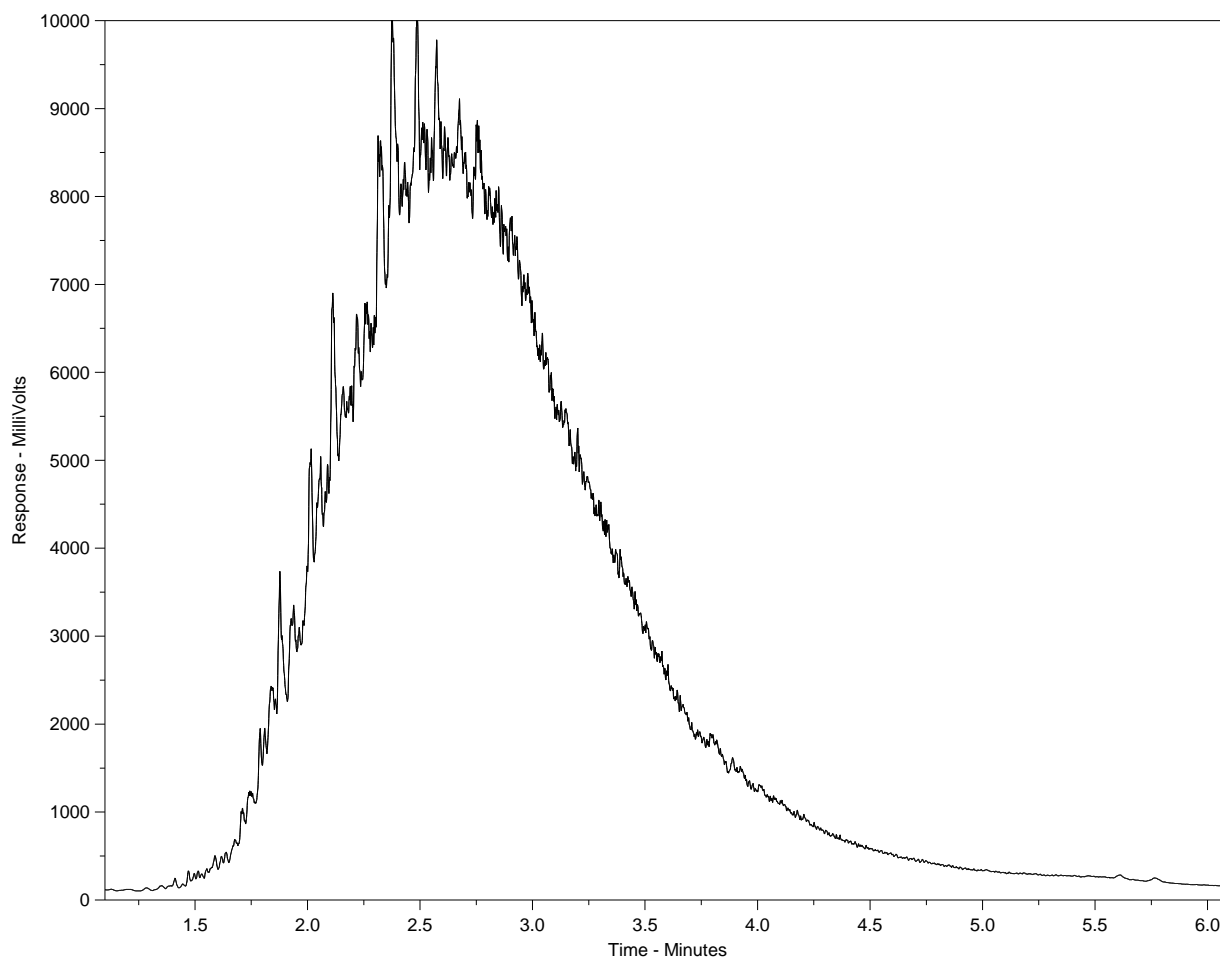
Note:

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: L2656073-5
Client ID: 21BH05



| F2 | | F3 | | F4 | >F4 |
|-------------------|-------|-------------------------------|-------|----|--------|
| nC10 | nC16 | | nC34 | | nC50 |
| 174°C | 287°C | | 481°C | | 575°C |
| 346°F | 549°F | | 898°F | | 1067°F |
| Gasoline | | Motor Oils/ Lube Oils/ Grease | | | |
| Diesel/ Jet Fuels | | | | | |

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.

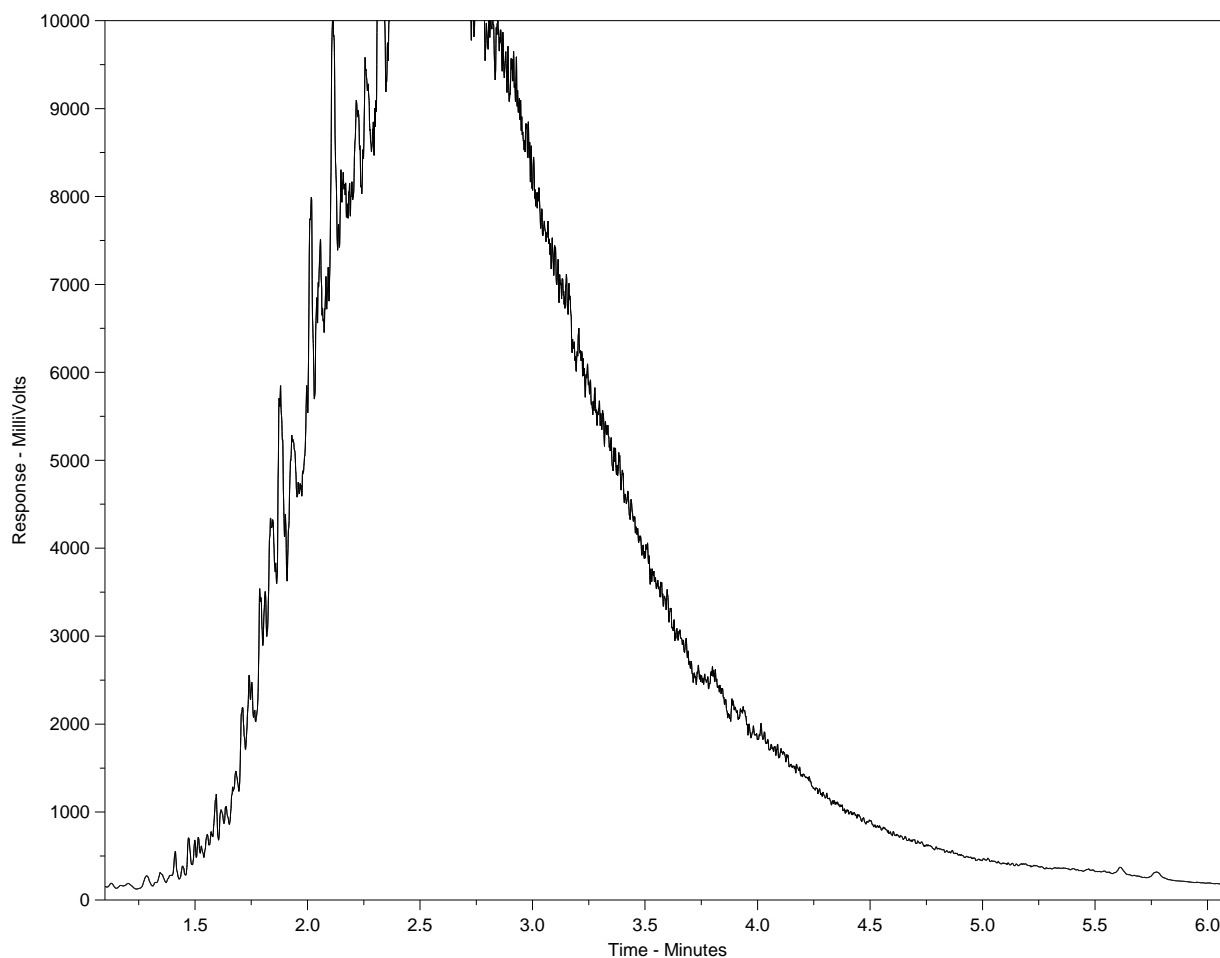
Note:

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: L2656073-6
Client ID: 21BH06



| F2 | | F3 | | F4 | | >F4 |
|-------------------|-------|-------------------------------|-------|----|--------|-----|
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| Gasoline | | Motor Oils/ Lube Oils/ Grease | | | | |
| Diesel/ Jet Fuels | | | | | | |

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.



L2656073-COFC



L2656073-COFC

AUG 2023 EDITION




KBL Environmental Ltd.
ATTN: David Vanderkley
3601, 75 Avenue
Leduc ab T9E 0Z5

Date Received: 26-OCT-21
Report Date: 08-NOV-21 10:38 (MT)
Version: FINAL

Client Phone: 780-893-3305

Certificate of Analysis

Lab Work Order #: L2655550
Project P.O. #: NOT SUBMITTED
Job Reference:
C of C Numbers:
Legal Site Desc:



Oliver Gregg
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 314 Old Airport Road, Unit 116, Yellowknife, NT X1A 3T3 Canada | Phone: +1 867 873 5593 |
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

| Sample Details/Parameters | | Result | Qualifier* | D.L. | Units | Extracted | Analyzed | Batch |
|--------------------------------------|---------------|--------|------------|--------|-------|-----------|-----------|----------|
| L2655550-1 | 21EX01-211018 | | | | | | | |
| Sampled By: CLIENT on 18-OCT-21 | | | | | | | | |
| Matrix: SOIL | | | | | | | | |
| CCME BTEX, F1 TO F4 | | | | | | | | |
| BTEX and F1 | | | | | | | | |
| Benzene | <0.0050 | | | 0.0050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Toluene | <0.050 | | | 0.050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Ethylbenzene | <0.010 | | | 0.010 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Xylenes | <0.10 | | | 0.10 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| m+p-Xylene | <0.050 | | | 0.050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| o-Xylene | <0.050 | | | 0.050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 1,4-Difluorobenzene (SS) | 114.6 | | | 70-130 | % | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 4-Bromofluorobenzene (SS) | 75.4 | | | 70-130 | % | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 3,4-Dichlorotoluene (SS) | 78.5 | | | 70-130 | % | 18-OCT-21 | 29-OCT-21 | R5607508 |
| CCME Total Extractable Hydrocarbons | | | | | | | | |
| Surrogate: 2-Bromobenzotrifluoride | 89.4 | | | 70-130 | % | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Chrom. to baseline at nC50 | YES | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Prep/Analysis Dates | | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| CCME Total Hydrocarbons | | | | | | | | |
| F1 (C6-C10) | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F1-BTEX | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F2 (C10-C16) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| F3 (C16-C34) | 27 | | | 20 | mg/kg | | 02-NOV-21 | |
| F4 (C34-C50) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| Total Hydrocarbons (C6-C50) | 27 | | | 20 | mg/kg | | 02-NOV-21 | |
| Miscellaneous Parameters | | | | | | | | |
| % Moisture | 13.6 | | | 0.25 | % | | 28-OCT-21 | R5632117 |
| L2655550-2 | 21EX02-211018 | | | | | | | |
| Sampled By: CLIENT on 18-OCT-21 | | | | | | | | |
| Matrix: SOIL | | | | | | | | |
| CCME BTEX, F1 TO F4 | | | | | | | | |
| BTEX and F1 | | | | | | | | |
| Benzene | <0.0050 | | | 0.0050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Toluene | <0.050 | | | 0.050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Ethylbenzene | <0.010 | | | 0.010 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Xylenes | <0.10 | | | 0.10 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| m+p-Xylene | <0.050 | | | 0.050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| o-Xylene | <0.050 | | | 0.050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 1,4-Difluorobenzene (SS) | 115.8 | | | 70-130 | % | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 4-Bromofluorobenzene (SS) | 88.4 | | | 70-130 | % | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 3,4-Dichlorotoluene (SS) | 94.2 | | | 70-130 | % | 18-OCT-21 | 29-OCT-21 | R5607508 |
| CCME Total Extractable Hydrocarbons | | | | | | | | |
| Surrogate: 2-Bromobenzotrifluoride | 82.7 | | | 70-130 | % | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Chrom. to baseline at nC50 | YES | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Prep/Analysis Dates | | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| CCME Total Hydrocarbons | | | | | | | | |
| F1 (C6-C10) | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F1-BTEX | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F2 (C10-C16) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| F3 (C16-C34) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| F4 (C34-C50) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| Total Hydrocarbons (C6-C50) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| Miscellaneous Parameters | | | | | | | | |
| % Moisture | 15.7 | | | 0.25 | % | | 28-OCT-21 | R5632117 |
| | | | | | | | | |

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

| Sample Details/Parameters | | Result | Qualifier* | D.L. | Units | Extracted | Analyzed | Batch |
|--------------------------------------|---------------------|--------|------------|--------|-------|-----------|-----------|----------|
| L2655550-3 | 21EX04-211018 | | | | | | | |
| Sampled By: CLIENT on 18-OCT-21 | | | | | | | | |
| Matrix: SOIL | | | | | | | | |
| CCME BTEX, F1 TO F4 | | | | | | | | |
| BTEX and F1 | | | | | | | | |
| Benzene | <0.0050 | | | 0.0050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Toluene | <0.050 | | | 0.050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Ethylbenzene | <0.010 | | | 0.010 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Xylenes | <0.10 | | | 0.10 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| m+p-Xylene | <0.050 | | | 0.050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| o-Xylene | <0.050 | | | 0.050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 1,4-Difluorobenzene (SS) | 113.5 | | | 70-130 | % | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 4-Bromofluorobenzene (SS) | 89.2 | | | 70-130 | % | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 3,4-Dichlorotoluene (SS) | 90.3 | | | 70-130 | % | 18-OCT-21 | 29-OCT-21 | R5607508 |
| CCME Total Extractable Hydrocarbons | | | | | | | | |
| Surrogate: 2-Bromobenzotrifluoride | 87.7 | | | 70-130 | % | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Chrom. to baseline at nC50 | YES | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Prep/Analysis Dates | | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| CCME Total Hydrocarbons | | | | | | | | |
| F1 (C6-C10) | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F1-BTEX | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F2 (C10-C16) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| F3 (C16-C34) | 28 | | | 20 | mg/kg | | 02-NOV-21 | |
| F4 (C34-C50) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| Total Hydrocarbons (C6-C50) | 28 | | | 20 | mg/kg | | 02-NOV-21 | |
| Miscellaneous Parameters | | | | | | | | |
| % Moisture | 10.4 | | | 0.25 | % | | 28-OCT-21 | R5632117 |
| L2655550-4 | 21EX05-211018 (DUP) | | | | | | | |
| Sampled By: CLIENT on 18-OCT-21 | | | | | | | | |
| Matrix: SOIL | | | | | | | | |
| CCME BTEX, F1 TO F4 | | | | | | | | |
| BTEX and F1 | | | | | | | | |
| Benzene | 0.0105 | | | 0.0050 | mg/kg | 18-OCT-21 | 02-NOV-21 | R5607508 |
| Toluene | <0.050 | | | 0.050 | mg/kg | 18-OCT-21 | 02-NOV-21 | R5607508 |
| Ethylbenzene | 0.018 | | | 0.010 | mg/kg | 18-OCT-21 | 02-NOV-21 | R5607508 |
| Xylenes | <0.10 | | | 0.10 | mg/kg | 18-OCT-21 | 02-NOV-21 | R5607508 |
| m+p-Xylene | <0.050 | | | 0.050 | mg/kg | 18-OCT-21 | 02-NOV-21 | R5607508 |
| o-Xylene | <0.050 | | | 0.050 | mg/kg | 18-OCT-21 | 02-NOV-21 | R5607508 |
| Surrogate: 1,4-Difluorobenzene (SS) | 94.2 | | | 70-130 | % | 18-OCT-21 | 02-NOV-21 | R5607508 |
| Surrogate: 4-Bromofluorobenzene (SS) | 89.0 | | | 70-130 | % | 18-OCT-21 | 02-NOV-21 | R5607508 |
| Surrogate: 3,4-Dichlorotoluene (SS) | 82.4 | | | 70-130 | % | 18-OCT-21 | 02-NOV-21 | R5607508 |
| CCME Total Extractable Hydrocarbons | | | | | | | | |
| Surrogate: 2-Bromobenzotrifluoride | 88.9 | | | 70-130 | % | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Chrom. to baseline at nC50 | YES | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Prep/Analysis Dates | | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| CCME Total Hydrocarbons | | | | | | | | |
| F1 (C6-C10) | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F1-BTEX | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F2 (C10-C16) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| F3 (C16-C34) | 29 | | | 20 | mg/kg | | 02-NOV-21 | |
| F4 (C34-C50) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| Total Hydrocarbons (C6-C50) | 29 | | | 20 | mg/kg | | 02-NOV-21 | |
| Miscellaneous Parameters | | | | | | | | |
| % Moisture | 9.78 | | | 0.25 | % | | 28-OCT-21 | R5632117 |
| | | | | | | | | |

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

| Sample Details/Parameters | | Result | Qualifier* | D.L. | Units | Extracted | Analyzed | Batch |
|--------------------------------------|---------------|--------|------------|--------|-------|-----------|-----------|----------|
| L2655550-5 | 21EX07-211018 | | | | | | | |
| Sampled By: CLIENT on 18-OCT-21 | | | | | | | | |
| Matrix: SOIL | | | | | | | | |
| CCME BTEX, F1 TO F4 | | | | | | | | |
| BTEX and F1 | | | | | | | | |
| Benzene | <0.0050 | | | 0.0050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Toluene | <0.050 | | | 0.050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Ethylbenzene | <0.010 | | | 0.010 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Xylenes | <0.10 | | | 0.10 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| m+p-Xylene | <0.050 | | | 0.050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| o-Xylene | <0.050 | | | 0.050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 1,4-Difluorobenzene (SS) | 119.0 | | | 70-130 | % | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 4-Bromofluorobenzene (SS) | 109.7 | | | 70-130 | % | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 3,4-Dichlorotoluene (SS) | 106.7 | | | 70-130 | % | 18-OCT-21 | 29-OCT-21 | R5607508 |
| CCME Total Extractable Hydrocarbons | | | | | | | | |
| Surrogate: 2-Bromobenzotrifluoride | 91.8 | | | 70-130 | % | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Chrom. to baseline at nC50 | YES | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Prep/Analysis Dates | | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| CCME Total Hydrocarbons | | | | | | | | |
| F1 (C6-C10) | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F1-BTEX | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F2 (C10-C16) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| F3 (C16-C34) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| F4 (C34-C50) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| Total Hydrocarbons (C6-C50) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| Miscellaneous Parameters | | | | | | | | |
| % Moisture | 9.60 | | | 0.25 | % | | 28-OCT-21 | R5632117 |
| L2655550-6 | 21EX08-211018 | | | | | | | |
| Sampled By: CLIENT on 18-OCT-21 | | | | | | | | |
| Matrix: SOIL | | | | | | | | |
| CCME BTEX, F1 TO F4 | | | | | | | | |
| BTEX and F1 | | | | | | | | |
| Benzene | <0.0050 | | | 0.0050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Toluene | <0.050 | | | 0.050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Ethylbenzene | 0.014 | | | 0.010 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Xylenes | <0.10 | | | 0.10 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| m+p-Xylene | <0.050 | | | 0.050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| o-Xylene | <0.050 | | | 0.050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 1,4-Difluorobenzene (SS) | 103.0 | | | 70-130 | % | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 4-Bromofluorobenzene (SS) | 109.4 | | | 70-130 | % | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 3,4-Dichlorotoluene (SS) | 92.0 | | | 70-130 | % | 18-OCT-21 | 29-OCT-21 | R5607508 |
| CCME Total Extractable Hydrocarbons | | | | | | | | |
| Surrogate: 2-Bromobenzotrifluoride | 88.1 | | | 70-130 | % | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Chrom. to baseline at nC50 | YES | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Prep/Analysis Dates | | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| CCME Total Hydrocarbons | | | | | | | | |
| F1 (C6-C10) | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F1-BTEX | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F2 (C10-C16) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| F3 (C16-C34) | 37 | | | 20 | mg/kg | | 02-NOV-21 | |
| F4 (C34-C50) | 21 | | | 20 | mg/kg | | 02-NOV-21 | |
| Total Hydrocarbons (C6-C50) | 58 | | | 20 | mg/kg | | 02-NOV-21 | |
| Miscellaneous Parameters | | | | | | | | |
| % Moisture | 9.93 | | | 0.25 | % | | 28-OCT-21 | R5632117 |
| | | | | | | | | |

* 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 |
|--|---------|------------|--------|-------|-----------|-----------|----------|
| L2655550-7 21EX09-211018 | | | | | | | |
| Sampled By: CLIENT on 18-OCT-21 | | | | | | | |
| Matrix: SOIL | | | | | | | |
| CCME BTEX, F1 TO F4 | | | | | | | |
| BTEX and F1 | | | | | | | |
| Benzene | <0.0050 | | 0.0050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Toluene | <0.050 | | 0.050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Ethylbenzene | <0.010 | | 0.010 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Xylenes | <0.10 | | 0.10 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| m+p-Xylene | <0.050 | | 0.050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| o-Xylene | <0.050 | | 0.050 | mg/kg | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 1,4-Difluorobenzene (SS) | 118.5 | | 70-130 | % | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 4-Bromofluorobenzene (SS) | 105.0 | | 70-130 | % | 18-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 3,4-Dichlorotoluene (SS) | 107.5 | | 70-130 | % | 18-OCT-21 | 29-OCT-21 | R5607508 |
| CCME Total Extractable Hydrocarbons | | | | | | | |
| Surrogate: 2-Bromobenzotrifluoride | 91.2 | | 70-130 | % | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Chrom. to baseline at nC50 | YES | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Prep/Analysis Dates | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| CCME Total Hydrocarbons | | | | | | | |
| F1 (C6-C10) | <10 | | 10 | mg/kg | | 02-NOV-21 | |
| F1-BTEX | <10 | | 10 | mg/kg | | 02-NOV-21 | |
| F2 (C10-C16) | <20 | | 20 | mg/kg | | 02-NOV-21 | |
| F3 (C16-C34) | 34 | | 20 | mg/kg | | 02-NOV-21 | |
| F4 (C34-C50) | <20 | | 20 | mg/kg | | 02-NOV-21 | |
| Total Hydrocarbons (C6-C50) | 34 | | 20 | mg/kg | | 02-NOV-21 | |
| Metals in Soil by ICPMS (CCME) | | | | | | | |
| Mercury in Soil by CVAAS | | | | | | | |
| Mercury (Hg) | 0.173 | | 0.0050 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5636119 |
| Metals in Soil by CRC ICPMS | | | | | | | |
| Antimony (Sb) | 1.47 | | 0.10 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Arsenic (As) | 66.4 | | 0.10 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Barium (Ba) | 226 | | 0.50 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Beryllium (Be) | 0.67 | | 0.10 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Cadmium (Cd) | 0.421 | | 0.020 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Chromium (Cr) | 30.1 | | 0.50 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Cobalt (Co) | 17.9 | | 0.10 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Copper (Cu) | 28.9 | | 0.50 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Lead (Pb) | 18.7 | | 0.50 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Molybdenum (Mo) | 4.39 | | 0.10 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Nickel (Ni) | 47.0 | | 0.50 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Selenium (Se) | 2.32 | | 0.20 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Silver (Ag) | 0.21 | | 0.10 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Thallium (Tl) | 0.326 | | 0.050 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Tin (Sn) | <2.0 | | 2.0 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Uranium (U) | 1.43 | | 0.050 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Vanadium (V) | 69.4 | | 0.20 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Zinc (Zn) | 117 | | 2.0 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Miscellaneous Parameters | | | | | | | |
| % Moisture | 16.1 | | 0.25 | % | | 28-OCT-21 | R5632117 |
| pH (1:2 soil:water) | 7.46 | | 0.10 | pH | | 04-NOV-21 | R5636189 |
| % Particles > 75um (Coarse/Fine) | | | | | | | |
| % >75um | 67.8 | | 1.0 | % | | 05-NOV-21 | R5636609 |
| General Texture Class | Coarse | | | | | 05-NOV-21 | R5636609 |
| | | | | | | | |

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

| Sample Details/Parameters | | Result | Qualifier* | D.L. | Units | Extracted | Analyzed | Batch |
|--------------------------------------|---------------|--------|------------|--------|-------|-----------|-----------|----------|
| L2655550-8 | 21EX10-211019 | | | | | | | |
| Sampled By: CLIENT on 19-OCT-21 | | | | | | | | |
| Matrix: SOIL | | | | | | | | |
| CCME BTEX, F1 TO F4 | | | | | | | | |
| BTEX and F1 | | | | | | | | |
| Benzene | <0.0050 | | | 0.0050 | mg/kg | 19-OCT-21 | 02-NOV-21 | R5607508 |
| Toluene | <0.050 | | | 0.050 | mg/kg | 19-OCT-21 | 02-NOV-21 | R5607508 |
| Ethylbenzene | <0.010 | | | 0.010 | mg/kg | 19-OCT-21 | 02-NOV-21 | R5607508 |
| Xylenes | <0.10 | | | 0.10 | mg/kg | 19-OCT-21 | 02-NOV-21 | R5607508 |
| m+p-Xylene | <0.050 | | | 0.050 | mg/kg | 19-OCT-21 | 02-NOV-21 | R5607508 |
| o-Xylene | <0.050 | | | 0.050 | mg/kg | 19-OCT-21 | 02-NOV-21 | R5607508 |
| Surrogate: 1,4-Difluorobenzene (SS) | 106.5 | | | 70-130 | % | 19-OCT-21 | 02-NOV-21 | R5607508 |
| Surrogate: 4-Bromofluorobenzene (SS) | 89.3 | | | 70-130 | % | 19-OCT-21 | 02-NOV-21 | R5607508 |
| Surrogate: 3,4-Dichlorotoluene (SS) | 92.0 | | | 70-130 | % | 19-OCT-21 | 02-NOV-21 | R5607508 |
| CCME Total Extractable Hydrocarbons | | | | | | | | |
| Surrogate: 2-Bromobenzotrifluoride | 93.3 | | | 70-130 | % | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Chrom. to baseline at nC50 | YES | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Prep/Analysis Dates | | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| CCME Total Hydrocarbons | | | | | | | | |
| F1 (C6-C10) | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F1-BTEX | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F2 (C10-C16) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| F3 (C16-C34) | 27 | | | 20 | mg/kg | | 02-NOV-21 | |
| F4 (C34-C50) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| Total Hydrocarbons (C6-C50) | 27 | | | 20 | mg/kg | | 02-NOV-21 | |
| Miscellaneous Parameters | | | | | | | | |
| % Moisture | 10.7 | | | 0.25 | % | | 28-OCT-21 | R5632117 |
| L2655550-9 | 21EX11-211019 | | | | | | | |
| Sampled By: CLIENT on 19-OCT-21 | | | | | | | | |
| Matrix: SOIL | | | | | | | | |
| CCME BTEX, F1 TO F4 | | | | | | | | |
| BTEX and F1 | | | | | | | | |
| Benzene | <0.0050 | | | 0.0050 | mg/kg | 19-OCT-21 | 29-OCT-21 | R5607508 |
| Toluene | <0.050 | | | 0.050 | mg/kg | 19-OCT-21 | 29-OCT-21 | R5607508 |
| Ethylbenzene | <0.010 | | | 0.010 | mg/kg | 19-OCT-21 | 29-OCT-21 | R5607508 |
| Xylenes | <0.10 | | | 0.10 | mg/kg | 19-OCT-21 | 29-OCT-21 | R5607508 |
| m+p-Xylene | <0.050 | | | 0.050 | mg/kg | 19-OCT-21 | 29-OCT-21 | R5607508 |
| o-Xylene | <0.050 | | | 0.050 | mg/kg | 19-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 1,4-Difluorobenzene (SS) | 121.7 | | | 70-130 | % | 19-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 4-Bromofluorobenzene (SS) | 126.5 | | | 70-130 | % | 19-OCT-21 | 29-OCT-21 | R5607508 |
| Surrogate: 3,4-Dichlorotoluene (SS) | 106.0 | | | 70-130 | % | 19-OCT-21 | 29-OCT-21 | R5607508 |
| CCME Total Extractable Hydrocarbons | | | | | | | | |
| Surrogate: 2-Bromobenzotrifluoride | 87.7 | | | 70-130 | % | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Chrom. to baseline at nC50 | YES | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Prep/Analysis Dates | | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| CCME Total Hydrocarbons | | | | | | | | |
| F1 (C6-C10) | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F1-BTEX | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F2 (C10-C16) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| F3 (C16-C34) | 29 | | | 20 | mg/kg | | 02-NOV-21 | |
| F4 (C34-C50) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| Total Hydrocarbons (C6-C50) | 29 | | | 20 | mg/kg | | 02-NOV-21 | |
| Miscellaneous Parameters | | | | | | | | |
| % Moisture | 12.8 | | | 0.25 | % | | 28-OCT-21 | R5632117 |
| | | | | | | | | |

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

| Sample Details/Parameters | Result | Qualifier* | D.L. | Units | Extracted | Analyzed | Batch |
|---|--------|------------|------|-------|-----------|----------|-------|
| L2655550-10 21EX12-211021 Sampled By: CLIENT on 21-OCT-21 Matrix: SOIL CCME BTEX, F1 TO F4 BTEX and F1 Benzene <0.0050 0.0050 mg/kg 21-OCT-21 29-OCT-21 R5607508 Toluene <0.050 0.050 mg/kg 21-OCT-21 29-OCT-21 R5607508 Ethylbenzene <0.010 0.010 mg/kg 21-OCT-21 29-OCT-21 R5607508 Xylenes <0.10 0.10 mg/kg 21-OCT-21 29-OCT-21 R5607508 m+p-Xylene <0.050 0.050 mg/kg 21-OCT-21 29-OCT-21 R5607508 o-Xylene <0.050 0.050 mg/kg 21-OCT-21 29-OCT-21 R5607508 Surrogate: 1,4-Difluorobenzene (SS) 125.1 70-130 % 21-OCT-21 29-OCT-21 R5607508 Surrogate: 4-Bromofluorobenzene (SS) 101.9 70-130 % 21-OCT-21 29-OCT-21 R5607508 Surrogate: 3,4-Dichlorotoluene (SS) 98.1 70-130 % 21-OCT-21 29-OCT-21 R5607508 CCME Total Extractable Hydrocarbons Surrogate: 2-Bromobenzotrifluoride 86.8 70-130 % 29-OCT-21 29-OCT-21 R5632912 Chrom. to baseline at nC50 YES 29-OCT-21 29-OCT-21 R5632912 Prep/Analysis Dates 29-OCT-21 29-OCT-21 R5632912 CCME Total Hydrocarbons F1 (C6-C10) <10 10 mg/kg 02-NOV-21 F1-BTEX <10 10 mg/kg 02-NOV-21 F2 (C10-C16) <20 20 mg/kg 02-NOV-21 F3 (C16-C34) 34 20 mg/kg 02-NOV-21 F4 (C34-C50) <20 20 mg/kg 02-NOV-21 Total Hydrocarbons (C6-C50) 34 20 mg/kg 02-NOV-21 Miscellaneous Parameters % Moisture 14.8 0.25 % 28-OCT-21 R5632117 | | | | | | | |
| L2655550-11 21EX13-211021 Sampled By: CLIENT on 21-OCT-21 Matrix: SOIL CCME BTEX, F1 TO F4 BTEX and F1 Benzene <0.0050 0.0050 mg/kg 21-OCT-21 29-OCT-21 R5607508 Toluene <0.050 0.050 mg/kg 21-OCT-21 29-OCT-21 R5607508 Ethylbenzene <0.010 0.010 mg/kg 21-OCT-21 29-OCT-21 R5607508 Xylenes <0.10 0.10 mg/kg 21-OCT-21 29-OCT-21 R5607508 m+p-Xylene <0.050 0.050 mg/kg 21-OCT-21 29-OCT-21 R5607508 o-Xylene <0.050 0.050 mg/kg 21-OCT-21 29-OCT-21 R5607508 Surrogate: 1,4-Difluorobenzene (SS) 112.9 70-130 % 21-OCT-21 29-OCT-21 R5607508 Surrogate: 4-Bromofluorobenzene (SS) 95.0 70-130 % 21-OCT-21 29-OCT-21 R5607508 Surrogate: 3,4-Dichlorotoluene (SS) 97.8 70-130 % 21-OCT-21 29-OCT-21 R5607508 CCME Total Extractable Hydrocarbons Surrogate: 2-Bromobenzotrifluoride 91.9 70-130 % 29-OCT-21 29-OCT-21 R5632912 Chrom. to baseline at nC50 YES 29-OCT-21 29-OCT-21 R5632912 Prep/Analysis Dates 29-OCT-21 29-OCT-21 R5632912 CCME Total Hydrocarbons F1 (C6-C10) <10 10 mg/kg 02-NOV-21 F1-BTEX <10 10 mg/kg 02-NOV-21 F2 (C10-C16) <20 20 mg/kg 02-NOV-21 F3 (C16-C34) 35 20 mg/kg 02-NOV-21 F4 (C34-C50) <20 20 mg/kg 02-NOV-21 Total Hydrocarbons (C6-C50) 35 20 mg/kg 02-NOV-21 Miscellaneous Parameters % Moisture 19.0 0.25 % 28-OCT-21 R5632117 | | | | | | | |
| | | | | | | | |

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

| Sample Details/Parameters | Result | Qualifier* | D.L. | Units | Extracted | Analyzed | Batch |
|--|--------|------------|------|-------|-----------|----------|-------|
| L2655550-12 21EX14-211022 Sampled By: CLIENT on 22-OCT-21 Matrix: SOIL CCME BTEX, F1 TO F4 BTEX and F1 Benzene <0.0050 0.0050 mg/kg 22-OCT-21 29-OCT-21 R5607508 Toluene <0.050 0.050 mg/kg 22-OCT-21 29-OCT-21 R5607508 Ethylbenzene <0.010 0.010 mg/kg 22-OCT-21 29-OCT-21 R5607508 Xylenes <0.10 0.10 mg/kg 22-OCT-21 29-OCT-21 R5607508 m+p-Xylene <0.050 0.050 mg/kg 22-OCT-21 29-OCT-21 R5607508 o-Xylene <0.050 0.050 mg/kg 22-OCT-21 29-OCT-21 R5607508 Surrogate: 1,4-Difluorobenzene (SS) 109.2 70-130 % 22-OCT-21 29-OCT-21 R5607508 Surrogate: 4-Bromofluorobenzene (SS) 92.1 70-130 % 22-OCT-21 29-OCT-21 R5607508 Surrogate: 3,4-Dichlorotoluene (SS) 79.3 70-130 % 22-OCT-21 29-OCT-21 R5607508 CCME Total Extractable Hydrocarbons Surrogate: 2-Bromobenzotrifluoride 89.4 70-130 % 29-OCT-21 29-OCT-21 R5632912 Chrom. to baseline at nC50 YES 29-OCT-21 29-OCT-21 R5632912 Prep/Analysis Dates 29-OCT-21 29-OCT-21 R5632912 CCME Total Hydrocarbons F1 (C6-C10) <10 10 mg/kg 02-NOV-21 F1-BTEX <10 10 mg/kg 02-NOV-21 F2 (C10-C16) <20 20 mg/kg 02-NOV-21 F3 (C16-C34) 30 20 mg/kg 02-NOV-21 F4 (C34-C50) <20 20 mg/kg 02-NOV-21 Total Hydrocarbons (C6-C50) 30 20 mg/kg 02-NOV-21 Miscellaneous Parameters % Moisture 12.6 0.25 % 28-OCT-21 R5632117 | | | | | | | |
| L2655550-13 21EX15-211023 Sampled By: CLIENT on 23-OCT-21 Matrix: SOIL CCME BTEX, F1 TO F4 BTEX and F1 Benzene <0.0050 0.0050 mg/kg 23-OCT-21 30-OCT-21 R5607508 Toluene <0.050 0.050 mg/kg 23-OCT-21 30-OCT-21 R5607508 Ethylbenzene <0.010 0.010 mg/kg 23-OCT-21 30-OCT-21 R5607508 Xylenes <0.10 0.10 mg/kg 23-OCT-21 30-OCT-21 R5607508 m+p-Xylene <0.050 0.050 mg/kg 23-OCT-21 30-OCT-21 R5607508 o-Xylene <0.050 0.050 mg/kg 23-OCT-21 30-OCT-21 R5607508 Surrogate: 1,4-Difluorobenzene (SS) 119.9 70-130 % 23-OCT-21 30-OCT-21 R5607508 Surrogate: 4-Bromofluorobenzene (SS) 98.1 70-130 % 23-OCT-21 30-OCT-21 R5607508 Surrogate: 3,4-Dichlorotoluene (SS) 86.4 70-130 % 23-OCT-21 30-OCT-21 R5607508 CCME Total Extractable Hydrocarbons Surrogate: 2-Bromobenzotrifluoride 88.2 70-130 % 29-OCT-21 29-OCT-21 R5632912 Chrom. to baseline at nC50 YES 29-OCT-21 29-OCT-21 R5632912 Prep/Analysis Dates 29-OCT-21 29-OCT-21 R5632912 CCME Total Hydrocarbons F1 (C6-C10) <10 10 mg/kg 02-NOV-21 F1-BTEX <10 10 mg/kg 02-NOV-21 F2 (C10-C16) <20 20 mg/kg 02-NOV-21 F3 (C16-C34) <20 20 mg/kg 02-NOV-21 F4 (C34-C50) <20 20 mg/kg 02-NOV-21 Total Hydrocarbons (C6-C50) <20 20 mg/kg 02-NOV-21 Miscellaneous Parameters % Moisture 15.4 0.25 % 28-OCT-21 R5632117 | | | | | | | |
| | | | | | | | |

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

| Sample Details/Parameters | Result | Qualifier* | D.L. | Units | Extracted | Analyzed | Batch |
|--|--------|------------|------|-------|-----------|----------|-------|
| L2655550-14 21EX16-211023 Sampled By: CLIENT on 23-OCT-21 Matrix: SOIL CCME BTEX, F1 TO F4 BTEX and F1 Benzene <0.0050 0.0050 mg/kg 23-OCT-21 30-OCT-21 R5607508 Toluene <0.050 0.050 mg/kg 23-OCT-21 30-OCT-21 R5607508 Ethylbenzene <0.010 0.010 mg/kg 23-OCT-21 30-OCT-21 R5607508 Xylenes <0.10 0.10 mg/kg 23-OCT-21 30-OCT-21 R5607508 m+p-Xylene <0.050 0.050 mg/kg 23-OCT-21 30-OCT-21 R5607508 o-Xylene <0.050 0.050 mg/kg 23-OCT-21 30-OCT-21 R5607508 Surrogate: 1,4-Difluorobenzene (SS) 116.8 70-130 % 23-OCT-21 30-OCT-21 R5607508 Surrogate: 4-Bromofluorobenzene (SS) 92.6 70-130 % 23-OCT-21 30-OCT-21 R5607508 Surrogate: 3,4-Dichlorotoluene (SS) 90.5 70-130 % 23-OCT-21 30-OCT-21 R5607508 CCME Total Extractable Hydrocarbons Surrogate: 2-Bromobenzotrifluoride 88.8 70-130 % 29-OCT-21 29-OCT-21 R5632912 Chrom. to baseline at nC50 YES 29-OCT-21 29-OCT-21 R5632912 Prep/Analysis Dates 29-OCT-21 29-OCT-21 R5632912 CCME Total Hydrocarbons F1 (C6-C10) <10 10 mg/kg 02-NOV-21 F1-BTEX <10 10 mg/kg 02-NOV-21 F2 (C10-C16) <20 20 mg/kg 02-NOV-21 F3 (C16-C34) <20 20 mg/kg 02-NOV-21 F4 (C34-C50) <20 20 mg/kg 02-NOV-21 Total Hydrocarbons (C6-C50) <20 20 mg/kg 02-NOV-21 Miscellaneous Parameters % Moisture 15.4 0.25 % 28-OCT-21 R5632117 | | | | | | | |
| L2655550-15 21EX17-211022 Sampled By: CLIENT on 22-OCT-21 Matrix: SOIL CCME BTEX, F1 TO F4 BTEX and F1 Benzene <0.0050 0.0050 mg/kg 22-OCT-21 30-OCT-21 R5607508 Toluene <0.050 0.050 mg/kg 22-OCT-21 30-OCT-21 R5607508 Ethylbenzene <0.010 0.010 mg/kg 22-OCT-21 30-OCT-21 R5607508 Xylenes <0.10 0.10 mg/kg 22-OCT-21 30-OCT-21 R5607508 m+p-Xylene <0.050 0.050 mg/kg 22-OCT-21 30-OCT-21 R5607508 o-Xylene <0.050 0.050 mg/kg 22-OCT-21 30-OCT-21 R5607508 Surrogate: 1,4-Difluorobenzene (SS) 124.4 70-130 % 22-OCT-21 30-OCT-21 R5607508 Surrogate: 4-Bromofluorobenzene (SS) 107.4 70-130 % 22-OCT-21 30-OCT-21 R5607508 Surrogate: 3,4-Dichlorotoluene (SS) 96.8 70-130 % 22-OCT-21 30-OCT-21 R5607508 CCME Total Extractable Hydrocarbons Surrogate: 2-Bromobenzotrifluoride 86.4 70-130 % 29-OCT-21 29-OCT-21 R5632912 Chrom. to baseline at nC50 YES 29-OCT-21 29-OCT-21 R5632912 Prep/Analysis Dates 29-OCT-21 29-OCT-21 R5632912 CCME Total Hydrocarbons F1 (C6-C10) <10 10 mg/kg 02-NOV-21 F1-BTEX <10 10 mg/kg 02-NOV-21 F2 (C10-C16) <20 20 mg/kg 02-NOV-21 F3 (C16-C34) <20 20 mg/kg 02-NOV-21 F4 (C34-C50) <20 20 mg/kg 02-NOV-21 Total Hydrocarbons (C6-C50) <20 20 mg/kg 02-NOV-21 Miscellaneous Parameters % Moisture 16.1 0.25 % 28-OCT-21 R5632117 | | | | | | | |
| | | | | | | | |

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

| Sample Details/Parameters | | Result | Qualifier* | D.L. | Units | Extracted | Analyzed | Batch |
|--------------------------------------|---------------------|--------|------------|--------|-------|-----------|-----------|----------|
| L2655550-16 | 21EX18-211022 | | | | | | | |
| Sampled By: CLIENT on 22-OCT-21 | | | | | | | | |
| Matrix: SOIL | | | | | | | | |
| CCME BTEX, F1 TO F4 | | | | | | | | |
| BTEX and F1 | | | | | | | | |
| Benzene | <0.0050 | | | 0.0050 | mg/kg | 22-OCT-21 | 30-OCT-21 | R5607508 |
| Toluene | <0.050 | | | 0.050 | mg/kg | 22-OCT-21 | 30-OCT-21 | R5607508 |
| Ethylbenzene | <0.010 | | | 0.010 | mg/kg | 22-OCT-21 | 30-OCT-21 | R5607508 |
| Xylenes | <0.10 | | | 0.10 | mg/kg | 22-OCT-21 | 30-OCT-21 | R5607508 |
| m+p-Xylene | <0.050 | | | 0.050 | mg/kg | 22-OCT-21 | 30-OCT-21 | R5607508 |
| o-Xylene | <0.050 | | | 0.050 | mg/kg | 22-OCT-21 | 30-OCT-21 | R5607508 |
| Surrogate: 1,4-Difluorobenzene (SS) | 127.8 | | | 70-130 | % | 22-OCT-21 | 30-OCT-21 | R5607508 |
| Surrogate: 4-Bromofluorobenzene (SS) | 104.0 | | | 70-130 | % | 22-OCT-21 | 30-OCT-21 | R5607508 |
| Surrogate: 3,4-Dichlorotoluene (SS) | 87.7 | | | 70-130 | % | 22-OCT-21 | 30-OCT-21 | R5607508 |
| CCME Total Extractable Hydrocarbons | | | | | | | | |
| Surrogate: 2-Bromobenzotrifluoride | 89.2 | | | 70-130 | % | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Chrom. to baseline at nC50 | YES | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Prep/Analysis Dates | | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| CCME Total Hydrocarbons | | | | | | | | |
| F1 (C6-C10) | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F1-BTEX | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F2 (C10-C16) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| F3 (C16-C34) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| F4 (C34-C50) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| Total Hydrocarbons (C6-C50) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| Miscellaneous Parameters | | | | | | | | |
| % Moisture | 14.7 | | | 0.25 | % | | 28-OCT-21 | R5632117 |
| L2655550-17 | 21EX19-211023 (DUP) | | | | | | | |
| Sampled By: CLIENT on 23-OCT-21 | | | | | | | | |
| Matrix: SOIL | | | | | | | | |
| CCME BTEX, F1 TO F4 | | | | | | | | |
| BTEX and F1 | | | | | | | | |
| Benzene | <0.0050 | | | 0.0050 | mg/kg | 23-OCT-21 | 30-OCT-21 | R5607508 |
| Toluene | <0.050 | | | 0.050 | mg/kg | 23-OCT-21 | 30-OCT-21 | R5607508 |
| Ethylbenzene | <0.010 | | | 0.010 | mg/kg | 23-OCT-21 | 30-OCT-21 | R5607508 |
| Xylenes | <0.10 | | | 0.10 | mg/kg | 23-OCT-21 | 30-OCT-21 | R5607508 |
| m+p-Xylene | <0.050 | | | 0.050 | mg/kg | 23-OCT-21 | 30-OCT-21 | R5607508 |
| o-Xylene | <0.050 | | | 0.050 | mg/kg | 23-OCT-21 | 30-OCT-21 | R5607508 |
| Surrogate: 1,4-Difluorobenzene (SS) | 121.4 | | | 70-130 | % | 23-OCT-21 | 30-OCT-21 | R5607508 |
| Surrogate: 4-Bromofluorobenzene (SS) | 85.0 | | | 70-130 | % | 23-OCT-21 | 30-OCT-21 | R5607508 |
| Surrogate: 3,4-Dichlorotoluene (SS) | 85.6 | | | 70-130 | % | 23-OCT-21 | 30-OCT-21 | R5607508 |
| CCME Total Extractable Hydrocarbons | | | | | | | | |
| Surrogate: 2-Bromobenzotrifluoride | 90.7 | | | 70-130 | % | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Chrom. to baseline at nC50 | YES | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Prep/Analysis Dates | | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| CCME Total Hydrocarbons | | | | | | | | |
| F1 (C6-C10) | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F1-BTEX | <10 | | | 10 | mg/kg | | 02-NOV-21 | |
| F2 (C10-C16) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| F3 (C16-C34) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| F4 (C34-C50) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| Total Hydrocarbons (C6-C50) | <20 | | | 20 | mg/kg | | 02-NOV-21 | |
| Miscellaneous Parameters | | | | | | | | |
| % Moisture | 15.6 | | | 0.25 | % | | 28-OCT-21 | R5632117 |
| | | | | | | | | |

* 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 |
|--|---------|------------|--------|-------|-----------|-----------|----------|
| L2655550-18 21EX20-211022 | | | | | | | |
| Sampled By: CLIENT on 22-OCT-21 | | | | | | | |
| Matrix: SOIL | | | | | | | |
| CCME BTEX, F1 TO F4 | | | | | | | |
| BTEX and F1 | | | | | | | |
| Benzene | <0.0050 | | 0.0050 | mg/kg | 22-OCT-21 | 30-OCT-21 | R5607508 |
| Toluene | <0.050 | | 0.050 | mg/kg | 22-OCT-21 | 30-OCT-21 | R5607508 |
| Ethylbenzene | <0.010 | | 0.010 | mg/kg | 22-OCT-21 | 30-OCT-21 | R5607508 |
| Xylenes | <0.10 | | 0.10 | mg/kg | 22-OCT-21 | 30-OCT-21 | R5607508 |
| m+p-Xylene | <0.050 | | 0.050 | mg/kg | 22-OCT-21 | 30-OCT-21 | R5607508 |
| o-Xylene | <0.050 | | 0.050 | mg/kg | 22-OCT-21 | 30-OCT-21 | R5607508 |
| Surrogate: 1,4-Difluorobenzene (SS) | 88.1 | | 70-130 | % | 22-OCT-21 | 30-OCT-21 | R5607508 |
| Surrogate: 4-Bromofluorobenzene (SS) | 74.0 | | 70-130 | % | 22-OCT-21 | 30-OCT-21 | R5607508 |
| Surrogate: 3,4-Dichlorotoluene (SS) | 73.4 | | 70-130 | % | 22-OCT-21 | 30-OCT-21 | R5607508 |
| CCME Total Extractable Hydrocarbons | | | | | | | |
| Surrogate: 2-Bromobenzotrifluoride | 84.7 | | 70-130 | % | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Chrom. to baseline at nC50 | YES | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| Prep/Analysis Dates | | | | | 29-OCT-21 | 29-OCT-21 | R5632912 |
| CCME Total Hydrocarbons | | | | | | | |
| F1 (C6-C10) | <10 | | 10 | mg/kg | | 02-NOV-21 | |
| F1-BTEX | <10 | | 10 | mg/kg | | 02-NOV-21 | |
| F2 (C10-C16) | <20 | | 20 | mg/kg | | 02-NOV-21 | |
| F3 (C16-C34) | 43 | | 20 | mg/kg | | 02-NOV-21 | |
| F4 (C34-C50) | 21 | | 20 | mg/kg | | 02-NOV-21 | |
| Total Hydrocarbons (C6-C50) | 64 | | 20 | mg/kg | | 02-NOV-21 | |
| Metals in Soil by ICPMS (CCME) | | | | | | | |
| Mercury in Soil by CVAAS | | | | | | | |
| Mercury (Hg) | 0.239 | | 0.0050 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5636119 |
| Metals in Soil by CRC ICPMS | | | | | | | |
| Antimony (Sb) | 2.75 | | 0.10 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Arsenic (As) | 142 | | 0.10 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Barium (Ba) | 238 | | 0.50 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Beryllium (Be) | 0.75 | | 0.10 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Cadmium (Cd) | 0.558 | | 0.020 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Chromium (Cr) | 28.0 | | 0.50 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Cobalt (Co) | 26.4 | | 0.10 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Copper (Cu) | 28.2 | | 0.50 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Lead (Pb) | 16.7 | | 0.50 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Molybdenum (Mo) | 5.62 | | 0.10 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Nickel (Ni) | 63.8 | | 0.50 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Selenium (Se) | 5.10 | | 0.20 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Silver (Ag) | 0.22 | | 0.10 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Thallium (Tl) | 0.561 | | 0.050 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Tin (Sn) | <2.0 | | 2.0 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Uranium (U) | 1.43 | | 0.050 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Vanadium (V) | 73.3 | | 0.20 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Zinc (Zn) | 146 | | 2.0 | mg/kg | 03-NOV-21 | 04-NOV-21 | R5635391 |
| Miscellaneous Parameters | | | | | | | |
| % Moisture | 18.7 | | 0.25 | % | | 28-OCT-21 | R5632117 |
| pH (1:2 soil:water) | 7.44 | | 0.10 | pH | | 04-NOV-21 | R5636189 |
| % Particles > 75um (Coarse/Fine) | | | | | | | |
| % >75um | 80.8 | | 1.0 | % | | 05-NOV-21 | R5636609 |
| General Texture Class | Coarse | | | | | 05-NOV-21 | R5636609 |
| | | | | | | | |

* 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). | | | |
| 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. | | | |
| PH-1:2-ED | Soil | pH 1:2 H2O Extract | CSSS 16.2 - PH OF 1:2 WATER EXTRACT |
| Soil and de-ionized water (by volume) are mixed in a defined ratio. The slurry is allowed to stand, shaken, and then allowed to stand again prior to taking measurements. After equilibration, the pH of the liquid portion of the extract is measured by a pH meter. Field Measurement is recommended where accurate pH measurements are required, due to the 15 minute recommended hold time. | | | |
| 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.

| | | | |
|-------------------|------|----------------------------------|--------------------|
| PSA-75UM-SIEVE-ED | Soil | % Particles > 75um (Coarse/Fine) | ASTM D422-63-SIEVE |
|-------------------|------|----------------------------------|--------------------|

An air-dried sample is reduced to < 2 mm size and mixed with a dispersing agent (Calgon solution). The sample is washed through a 200 mesh (75 µm) sieve. The retained weight of sample is used to determine % sand fraction.

Reference: ASTM D422-63

** 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:

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 ww - 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: L2655550

Report Date: 08-NOV-21

Page 1 of 6

Client: KBL Environmental Ltd.

3601, 75 Avenue

Leduc ab T9E 0Z5

Contact: David Vanderkley

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|--------------------------------------|-----------------|--------------------|---------|-----------|-------|-----|--------|-----------|
| BTXS,F1-MEOH-ED | | Soil | | | | | | |
| Batch | R5607508 | | | | | | | |
| WG3647509-4 | DUP | L2655550-1 | | | | | | |
| Benzene | | <0.0050 | <0.0050 | RPD-NA | mg/kg | N/A | 30 | 29-OCT-21 |
| Toluene | | <0.050 | <0.050 | RPD-NA | mg/kg | N/A | 30 | 29-OCT-21 |
| Ethylbenzene | | <0.010 | <0.010 | RPD-NA | mg/kg | N/A | 30 | 29-OCT-21 |
| m+p-Xylene | | <0.050 | <0.050 | RPD-NA | mg/kg | N/A | 30 | 29-OCT-21 |
| o-Xylene | | <0.050 | <0.050 | RPD-NA | mg/kg | N/A | 30 | 29-OCT-21 |
| WG3647826-4 | DUP | L2655550-13 | | | | | | |
| Benzene | | <0.0050 | <0.0050 | RPD-NA | mg/kg | N/A | 30 | 30-OCT-21 |
| Toluene | | <0.050 | <0.050 | RPD-NA | mg/kg | N/A | 30 | 30-OCT-21 |
| Ethylbenzene | | <0.010 | <0.010 | RPD-NA | mg/kg | N/A | 30 | 30-OCT-21 |
| m+p-Xylene | | <0.050 | <0.050 | RPD-NA | mg/kg | N/A | 30 | 30-OCT-21 |
| o-Xylene | | <0.050 | <0.050 | RPD-NA | mg/kg | N/A | 30 | 30-OCT-21 |
| WG3647509-2 | LCS | | | | | | | |
| Benzene | | | 101.5 | | % | | 70-130 | 29-OCT-21 |
| Toluene | | | 93.9 | | % | | 70-130 | 29-OCT-21 |
| Ethylbenzene | | | 88.9 | | % | | 70-130 | 29-OCT-21 |
| m+p-Xylene | | | 84.0 | | % | | 70-130 | 29-OCT-21 |
| o-Xylene | | | 83.0 | | % | | 70-130 | 29-OCT-21 |
| WG3647826-2 | LCS | | | | | | | |
| Benzene | | | 95.9 | | % | | 70-130 | 30-OCT-21 |
| Toluene | | | 101.1 | | % | | 70-130 | 30-OCT-21 |
| Ethylbenzene | | | 105.3 | | % | | 70-130 | 30-OCT-21 |
| m+p-Xylene | | | 90.2 | | % | | 70-130 | 30-OCT-21 |
| o-Xylene | | | 94.1 | | % | | 70-130 | 30-OCT-21 |
| WG3647509-1 | MB | | | | | | | |
| Benzene | | | <0.0050 | | mg/kg | | 0.005 | 29-OCT-21 |
| Toluene | | | <0.050 | | mg/kg | | 0.05 | 29-OCT-21 |
| Ethylbenzene | | | <0.010 | | mg/kg | | 0.01 | 29-OCT-21 |
| m+p-Xylene | | | <0.050 | | mg/kg | | 0.05 | 29-OCT-21 |
| o-Xylene | | | <0.050 | | mg/kg | | 0.05 | 29-OCT-21 |
| Surrogate: 1,4-Difluorobenzene (SS) | | | 101.2 | | % | | 70-130 | 29-OCT-21 |
| Surrogate: 4-Bromofluorobenzene (SS) | | | 74.0 | | % | | 70-130 | 29-OCT-21 |
| Surrogate: 3,4-Dichlorotoluene (SS) | | | 70.7 | | % | | 70-130 | 29-OCT-21 |
| WG3647826-1 | MB | | | | | | | |
| Benzene | | | <0.0050 | | mg/kg | | 0.005 | 30-OCT-21 |
| Toluene | | | <0.050 | | mg/kg | | 0.05 | 30-OCT-21 |



Workorder: L2655550

Page 2 of 6

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|--------------------------------------|----------|------------------|---------|-----------|-------|-----|--------|-----------|
| BTXS,F1-MEOH-ED | | Soil | | | | | | |
| Batch | R5607508 | | | | | | | |
| WG3647826-1 | MB | | | | | | | |
| Ethylbenzene | | | <0.010 | | mg/kg | | 0.01 | 30-OCT-21 |
| m+p-Xylene | | | <0.050 | | mg/kg | | 0.05 | 30-OCT-21 |
| o-Xylene | | | <0.050 | | mg/kg | | 0.05 | 30-OCT-21 |
| Surrogate: 1,4-Difluorobenzene (SS) | | | 89.8 | | % | | 70-130 | 30-OCT-21 |
| Surrogate: 4-Bromofluorobenzene (SS) | | | 79.7 | | % | | 70-130 | 30-OCT-21 |
| Surrogate: 3,4-Dichlorotoluene (SS) | | | 70.7 | | % | | 70-130 | 30-OCT-21 |
| F2-4-TMB-ED | | Soil | | | | | | |
| Batch | R5632912 | | | | | | | |
| WG3647393-4 | DUP | L2655550-1 | | | | | | |
| F2 (C10-C16) | | <20 | <20 | RPD-NA | mg/kg | N/A | 40 | 29-OCT-21 |
| F3 (C16-C34) | | 27 | <20 | RPD-NA | mg/kg | N/A | 40 | 29-OCT-21 |
| F4 (C34-C50) | | <20 | <20 | RPD-NA | mg/kg | N/A | 40 | 29-OCT-21 |
| WG3647393-3 | IRM | ALS PHC RM3 | | | | | | |
| F2 (C10-C16) | | | 90.4 | | % | | 70-130 | 29-OCT-21 |
| F3 (C16-C34) | | | 96.6 | | % | | 70-130 | 29-OCT-21 |
| F4 (C34-C50) | | | 86.3 | | % | | 70-130 | 29-OCT-21 |
| WG3647393-2 | LCS | DIESEL/MOTOR OIL | | | | | | |
| F2 (C10-C16) | | | 104.6 | | % | | 70-130 | 29-OCT-21 |
| F3 (C16-C34) | | | 107.5 | | % | | 70-130 | 29-OCT-21 |
| F4 (C34-C50) | | | 109.5 | | % | | 70-130 | 29-OCT-21 |
| WG3647393-1 | MB | | | | | | | |
| F2 (C10-C16) | | | <20 | | mg/kg | | 20 | 29-OCT-21 |
| F3 (C16-C34) | | | <20 | | mg/kg | | 20 | 29-OCT-21 |
| F4 (C34-C50) | | | <20 | | mg/kg | | 20 | 29-OCT-21 |
| Surrogate: 2-Bromobenzotrifluoride | | | 97.3 | | % | | 70-130 | 29-OCT-21 |
| HG-200.2-CVAA-ED | | Soil | | | | | | |
| Batch | R5636119 | | | | | | | |
| WG3651539-3 | CRM | SCP_SS-2_SOIL | | | | | | |
| Mercury (Hg) | | | 99.1 | | % | | 70-130 | 04-NOV-21 |
| WG3651539-2 | LCS | | | | | | | |
| Mercury (Hg) | | | 108.5 | | % | | 80-120 | 04-NOV-21 |
| WG3651539-1 | MB | | | | | | | |
| Mercury (Hg) | | | <0.0050 | | mg/kg | | 0.005 | 04-NOV-21 |
| MET-200.2-CCMS-ED | | Soil | | | | | | |

Quality Control Report

Workorder: L2655550

Report Date: 08-NOV-21

Page 3 of 6

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|--------------------------|-----------------|----------------------|--------|-----------|-------|-----|-------------|-----------|
| MET-200.2-CCMS-ED | | Soil | | | | | | |
| Batch | R5635391 | | | | | | | |
| WG3651539-3 | CRM | SCP_SS-2_SOIL | | | | | | |
| Antimony (Sb) | | | 85.2 | | % | | 70-130 | 04-NOV-21 |
| Arsenic (As) | | | 104.4 | | % | | 70-130 | 04-NOV-21 |
| Barium (Ba) | | | 101.8 | | % | | 70-130 | 04-NOV-21 |
| Beryllium (Be) | | | 93.4 | | % | | 70-130 | 04-NOV-21 |
| Cadmium (Cd) | | | 102.2 | | % | | 70-130 | 04-NOV-21 |
| Chromium (Cr) | | | 100.5 | | % | | 70-130 | 04-NOV-21 |
| Cobalt (Co) | | | 103.3 | | % | | 70-130 | 04-NOV-21 |
| Copper (Cu) | | | 108.3 | | % | | 70-130 | 04-NOV-21 |
| Lead (Pb) | | | 89.9 | | % | | 70-130 | 04-NOV-21 |
| Molybdenum (Mo) | | | 90.8 | | % | | 70-130 | 04-NOV-21 |
| Nickel (Ni) | | | 106.0 | | % | | 70-130 | 04-NOV-21 |
| Selenium (Se) | | | 0.16 | | mg/kg | | 0-0.34 | 04-NOV-21 |
| Silver (Ag) | | | 89.7 | | % | | 70-130 | 04-NOV-21 |
| Thallium (Tl) | | | 0.076 | | mg/kg | | 0.029-0.129 | 04-NOV-21 |
| Tin (Sn) | | | 88.0 | | % | | 70-130 | 04-NOV-21 |
| Uranium (U) | | | 90.5 | | % | | 70-130 | 04-NOV-21 |
| Vanadium (V) | | | 100.4 | | % | | 70-130 | 04-NOV-21 |
| Zinc (Zn) | | | 92.9 | | % | | 70-130 | 04-NOV-21 |
| WG3651539-2 | LCS | | | | | | | |
| Antimony (Sb) | | | 98.1 | | % | | 80-120 | 04-NOV-21 |
| Arsenic (As) | | | 118.5 | | % | | 80-120 | 04-NOV-21 |
| Barium (Ba) | | | 117.0 | | % | | 80-120 | 04-NOV-21 |
| Beryllium (Be) | | | 104.3 | | % | | 80-120 | 04-NOV-21 |
| Cadmium (Cd) | | | 98.6 | | % | | 80-120 | 04-NOV-21 |
| Chromium (Cr) | | | 115.6 | | % | | 80-120 | 04-NOV-21 |
| Cobalt (Co) | | | 116.1 | | % | | 80-120 | 04-NOV-21 |
| Copper (Cu) | | | 116.5 | | % | | 80-120 | 04-NOV-21 |
| Lead (Pb) | | | 99.8 | | % | | 80-120 | 04-NOV-21 |
| Molybdenum (Mo) | | | 102.1 | | % | | 80-120 | 04-NOV-21 |
| Nickel (Ni) | | | 113.6 | | % | | 80-120 | 04-NOV-21 |
| Selenium (Se) | | | 111.7 | | % | | 80-120 | 04-NOV-21 |
| Silver (Ag) | | | 103.0 | | % | | 80-120 | 04-NOV-21 |
| Thallium (Tl) | | | 97.0 | | % | | 80-120 | 04-NOV-21 |
| Tin (Sn) | | | 98.2 | | % | | 80-120 | 04-NOV-21 |

Quality Control Report

Workorder: L2655550

Report Date: 08-NOV-21

Page 4 of 6

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|--------------------------|-----------------|---------------------|--------|-----------|-------|-----|-----------|-----------|
| MET-200.2-CCMS-ED | Soil | | | | | | | |
| Batch | R5635391 | | | | | | | |
| WG3651539-2 | LCS | | | | | | | |
| Uranium (U) | | | 96.5 | | % | | 80-120 | 04-NOV-21 |
| Vanadium (V) | | | 116.3 | | % | | 80-120 | 04-NOV-21 |
| Zinc (Zn) | | | 103.9 | | % | | 80-120 | 04-NOV-21 |
| WG3651539-1 | MB | | | | | | | |
| Antimony (Sb) | | | <0.10 | | mg/kg | | 0.1 | 04-NOV-21 |
| Arsenic (As) | | | <0.10 | | mg/kg | | 0.1 | 04-NOV-21 |
| Barium (Ba) | | | <0.50 | | mg/kg | | 0.5 | 04-NOV-21 |
| Beryllium (Be) | | | <0.10 | | mg/kg | | 0.1 | 04-NOV-21 |
| Cadmium (Cd) | | | <0.020 | | mg/kg | | 0.02 | 04-NOV-21 |
| Chromium (Cr) | | | <0.50 | | mg/kg | | 0.5 | 04-NOV-21 |
| Cobalt (Co) | | | <0.10 | | mg/kg | | 0.1 | 04-NOV-21 |
| Copper (Cu) | | | <0.50 | | mg/kg | | 0.5 | 04-NOV-21 |
| Lead (Pb) | | | <0.50 | | mg/kg | | 0.5 | 04-NOV-21 |
| Molybdenum (Mo) | | | <0.10 | | mg/kg | | 0.1 | 04-NOV-21 |
| Nickel (Ni) | | | <0.50 | | mg/kg | | 0.5 | 04-NOV-21 |
| Selenium (Se) | | | <0.20 | | mg/kg | | 0.2 | 04-NOV-21 |
| Silver (Ag) | | | <0.10 | | mg/kg | | 0.1 | 04-NOV-21 |
| Thallium (Tl) | | | <0.050 | | mg/kg | | 0.05 | 04-NOV-21 |
| Tin (Sn) | | | <2.0 | | mg/kg | | 2 | 04-NOV-21 |
| Uranium (U) | | | <0.050 | | mg/kg | | 0.05 | 04-NOV-21 |
| Vanadium (V) | | | <0.20 | | mg/kg | | 0.2 | 04-NOV-21 |
| Zinc (Zn) | | | <2.0 | | mg/kg | | 2 | 04-NOV-21 |
| PH-1:2-ED | Soil | | | | | | | |
| Batch | R5636189 | | | | | | | |
| WG3652602-1 | IRM | ALS SAL 2019 | | | | | | |
| pH (1:2 soil:water) | | | 7.79 | | pH | | 7.55-8.15 | 04-NOV-21 |
| WG3652602-3 | LCS | PH-6 | | | | | | |
| pH (1:2 soil:water) | | | 6.01 | | pH | | 5.8-6.2 | 04-NOV-21 |
| PREP-MOISTURE-ED | Soil | | | | | | | |
| Batch | R5632117 | | | | | | | |
| WG3647512-2 | LCS | | | | | | | |
| % Moisture | | | 100.7 | | % | | 90-110 | 28-OCT-21 |
| WG3647512-1 | MB | | | | | | | |
| % Moisture | | | <0.25 | | % | | 0.25 | 28-OCT-21 |
| PSA-75UM-SIEVE-ED | Soil | | | | | | | |



Quality Control Report

Workorder: L2655550

Report Date: 08-NOV-21

Page 5 of 6

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|-------------------|----------|-----------|--------|-----------|-------|-----|-------|-----------|
| PSA-75UM-SIEVE-ED | Soil | | | | | | | |
| Batch | R5636609 | | | | | | | |
| WG3652675-1 | MB | | | | | | | |
| % >75um | | | <1.0 | | % | | 1 | 05-NOV-21 |

Quality Control Report

Workorder: L2655550

Report Date: 08-NOV-21

Page 6 of 6

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. |

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.

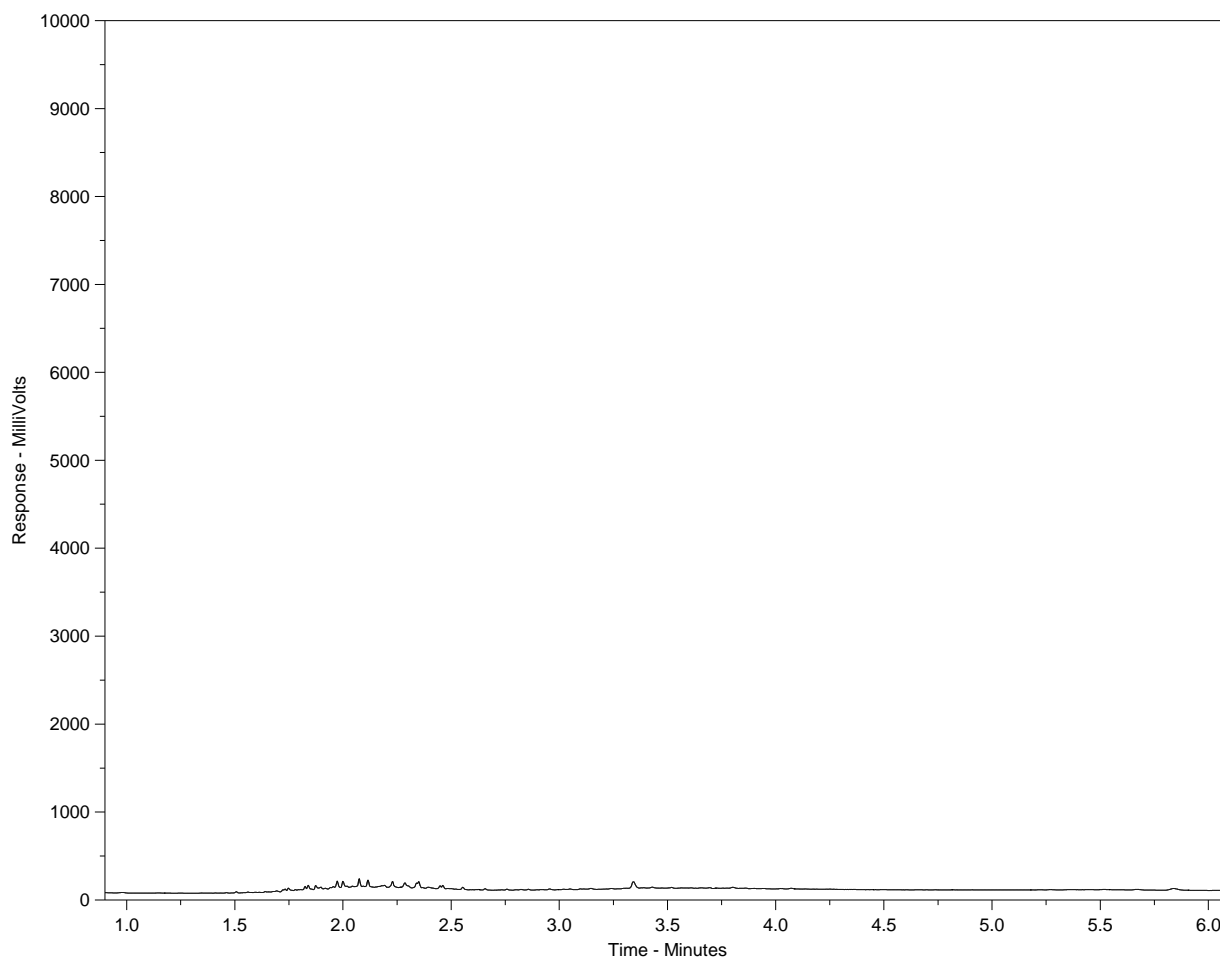
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide 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: L2655550-1
Client ID: 21EX01-211018



| F2 | | F3 | | F4 | | F4 |
|-------------------|-------|-------------------------------|-------|----|--------|----|
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| Gasoline | | Motor Oils/ Lube Oils/ Grease | | | | |
| Diesel/ Jet Fuels | | | | | | |

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.

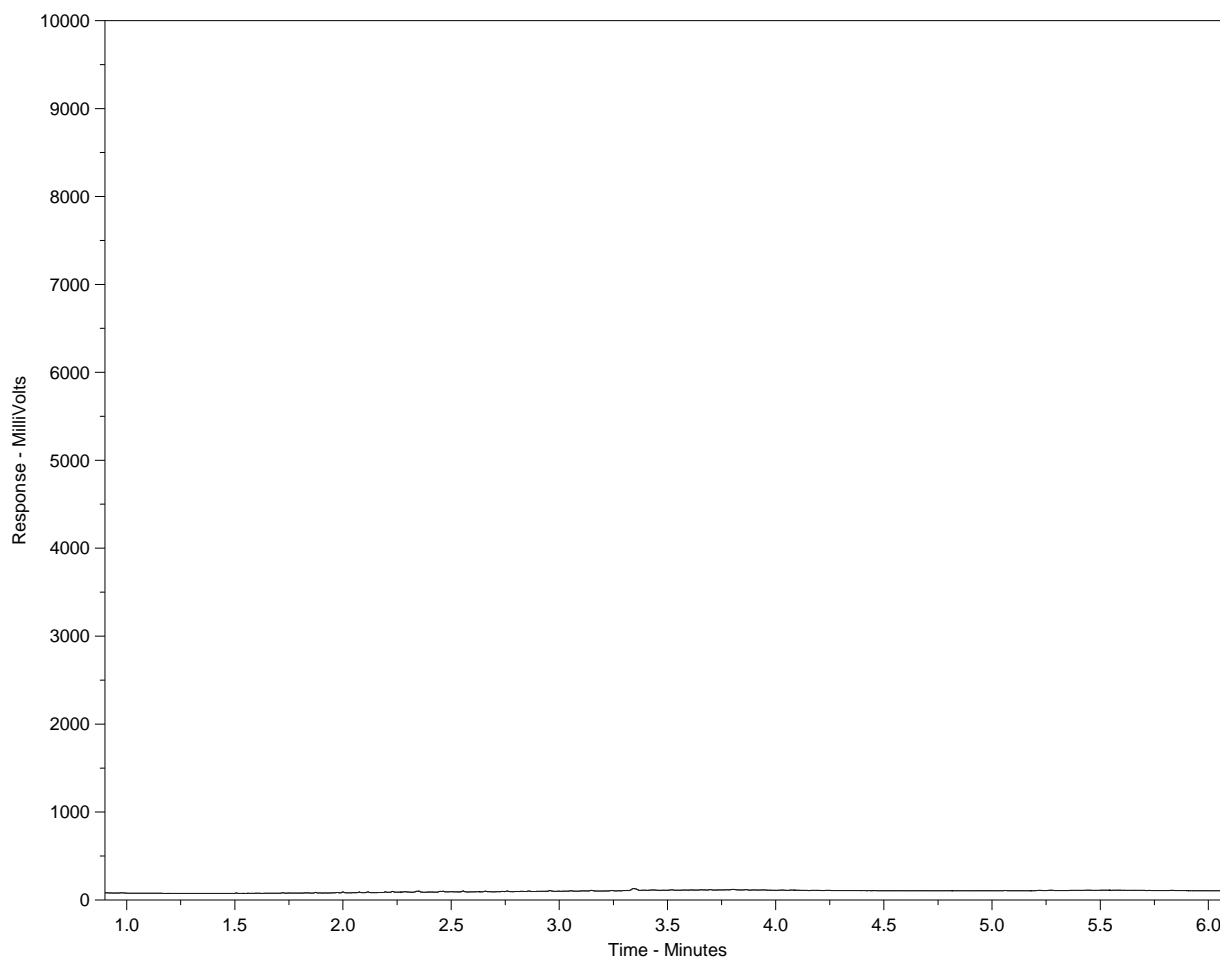
Note:

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: L2655550-2
 Client ID: 21EX02-211018



| | | | | | | |
|-----------------------|-------|-----------------------------------|-------|--------|--------|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | ← F4 → |
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| ← Gasoline → | | ← Motor Oils/ Lube Oils/ Grease → | | | | |
| ← Diesel/ Jet Fuels → | | | | | | |

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.

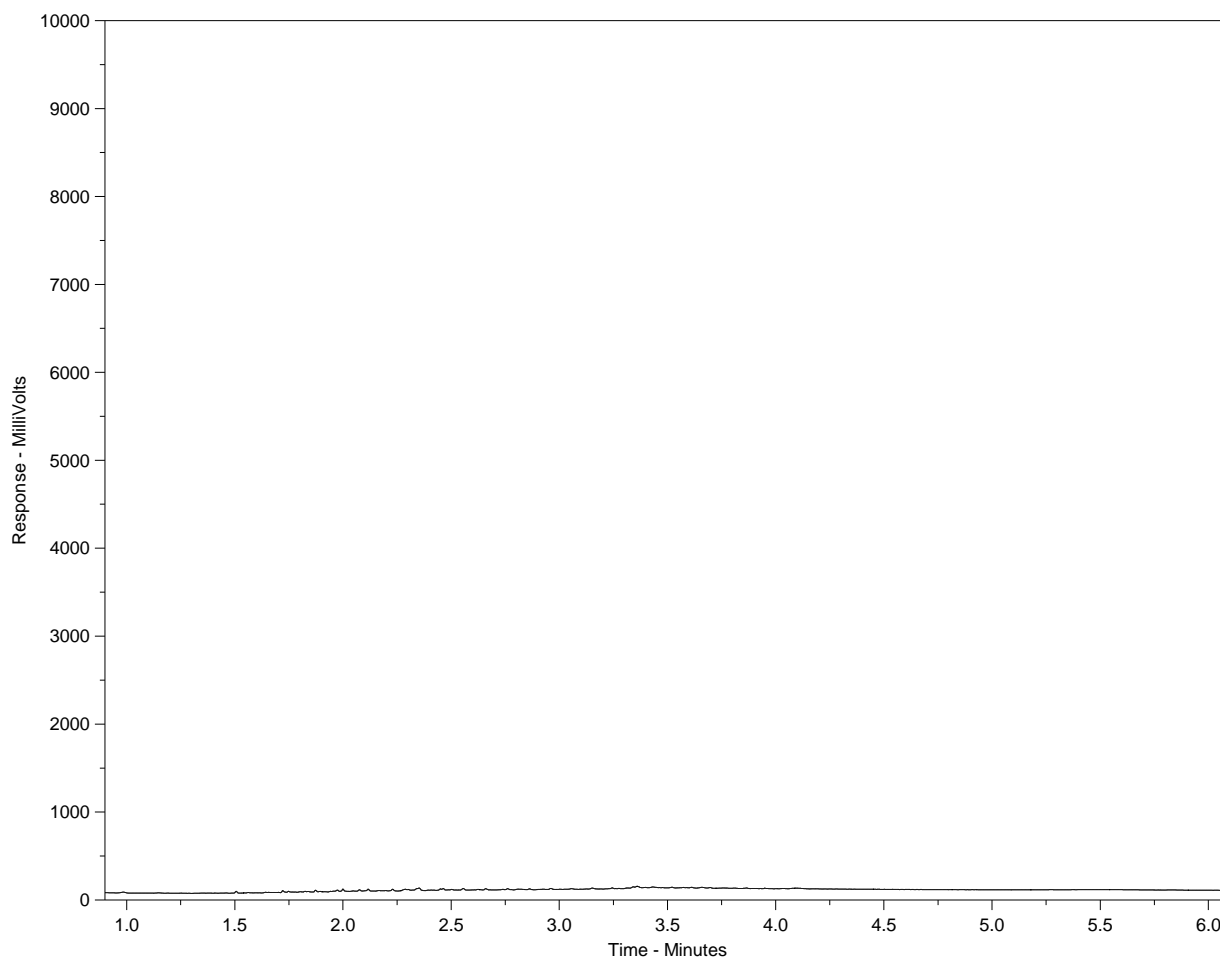
Note:

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: L2655550-3
Client ID: 21EX04-211018



| | | | | | | |
|-----------------------|-------|-----------------------------------|--------|--------|--|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | ← F4 → |
| nC10 | nC16 | nC34 | nC50 | | | |
| 174°C | 287°C | 481°C | 575°C | | | |
| 346°F | 549°F | 898°F | 1067°F | | | |
| ← Gasoline → | | ← Motor Oils/ Lube Oils/ Grease → | | | | |
| ← Diesel/ Jet Fuels → | | | | | | |

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.

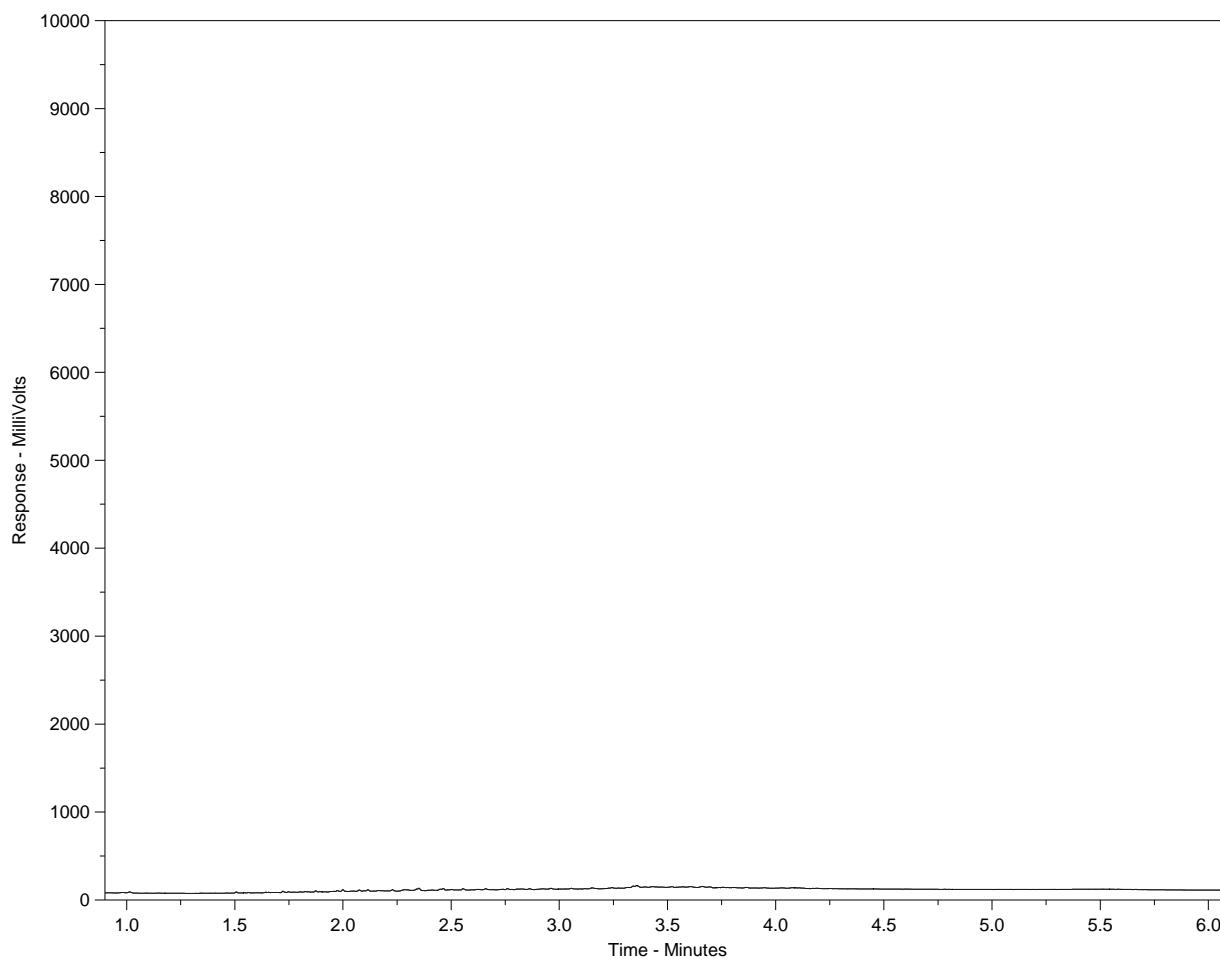
Note:

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: L2655550-4
 Client ID: 21EX05-211018 (DUP)



| | | | | | | |
|-----------------------|-------|-----------------------------------|-------|--------|--------|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | ← F4 → |
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| ← Gasoline → | | ← Motor Oils/ Lube Oils/ Grease → | | | | |
| ← Diesel/ Jet Fuels → | | | | | | |

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.

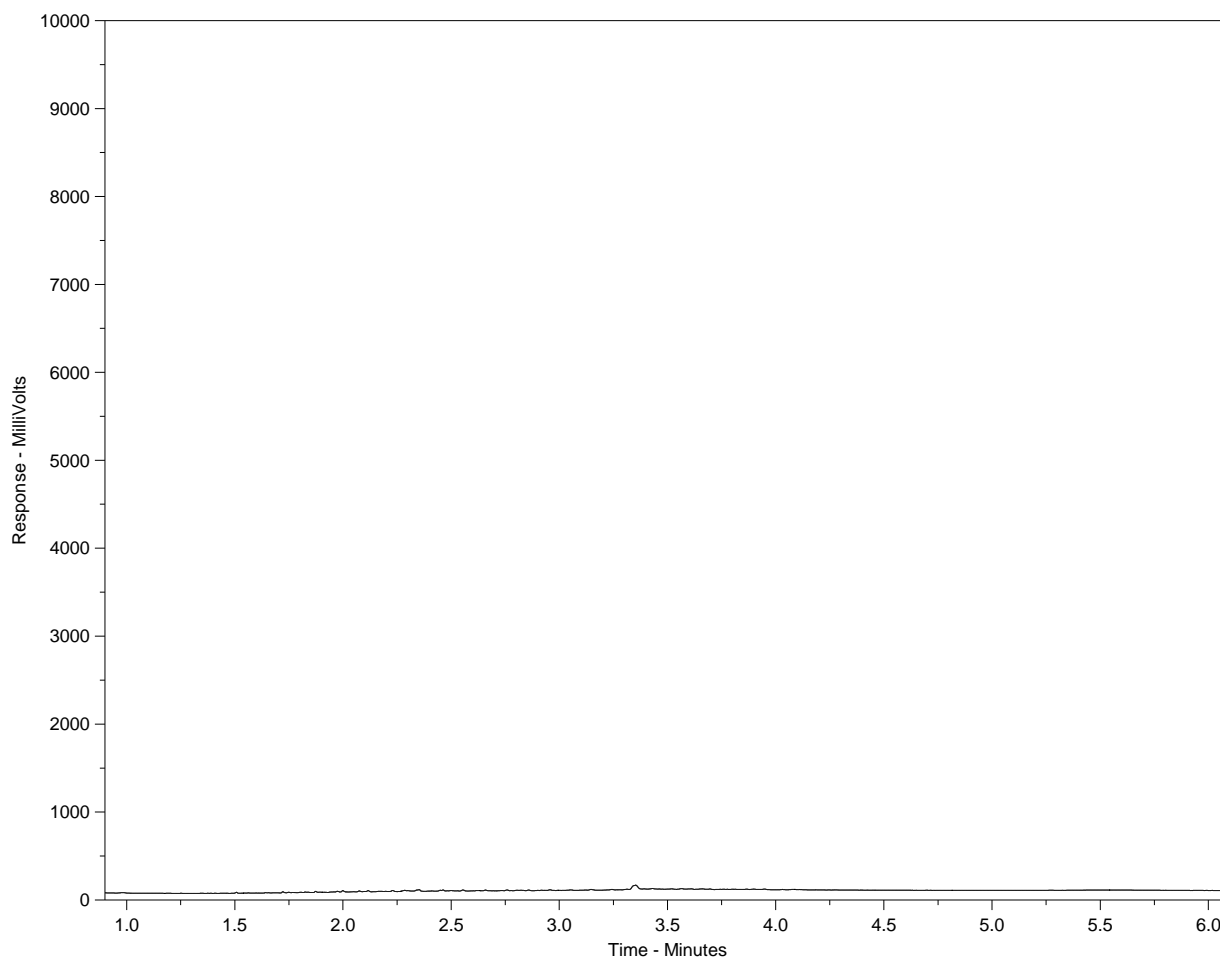
Note:

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: L2655550-5
Client ID: 21EX07-211018



| | | | | | | |
|-----------------------|-------|-----------------------------------|-------|--------|--------|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | ← F4 → |
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| ← Gasoline → | | ← Motor Oils/ Lube Oils/ Grease → | | | | |
| ← Diesel/ Jet Fuels → | | | | | | |

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.

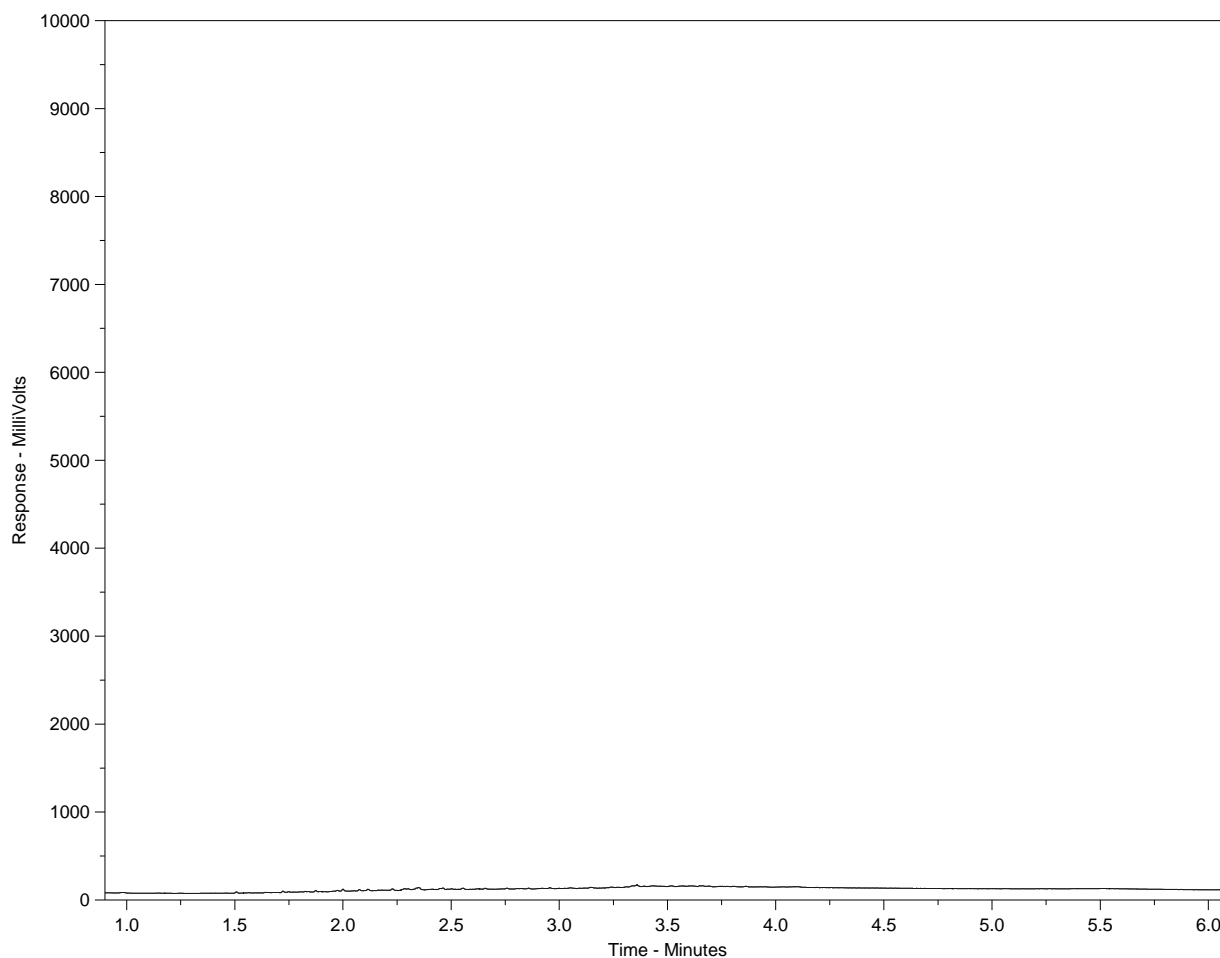
Note:

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: L2655550-6
 Client ID: 21EX08-211018



| | | | | | | |
|-----------------------|-------|-----------------------------------|-------|--------|--------|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | ← F4 → |
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| ← Gasoline → | | ← Motor Oils/ Lube Oils/ Grease → | | | | |
| ← Diesel/ Jet Fuels → | | | | | | |

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.

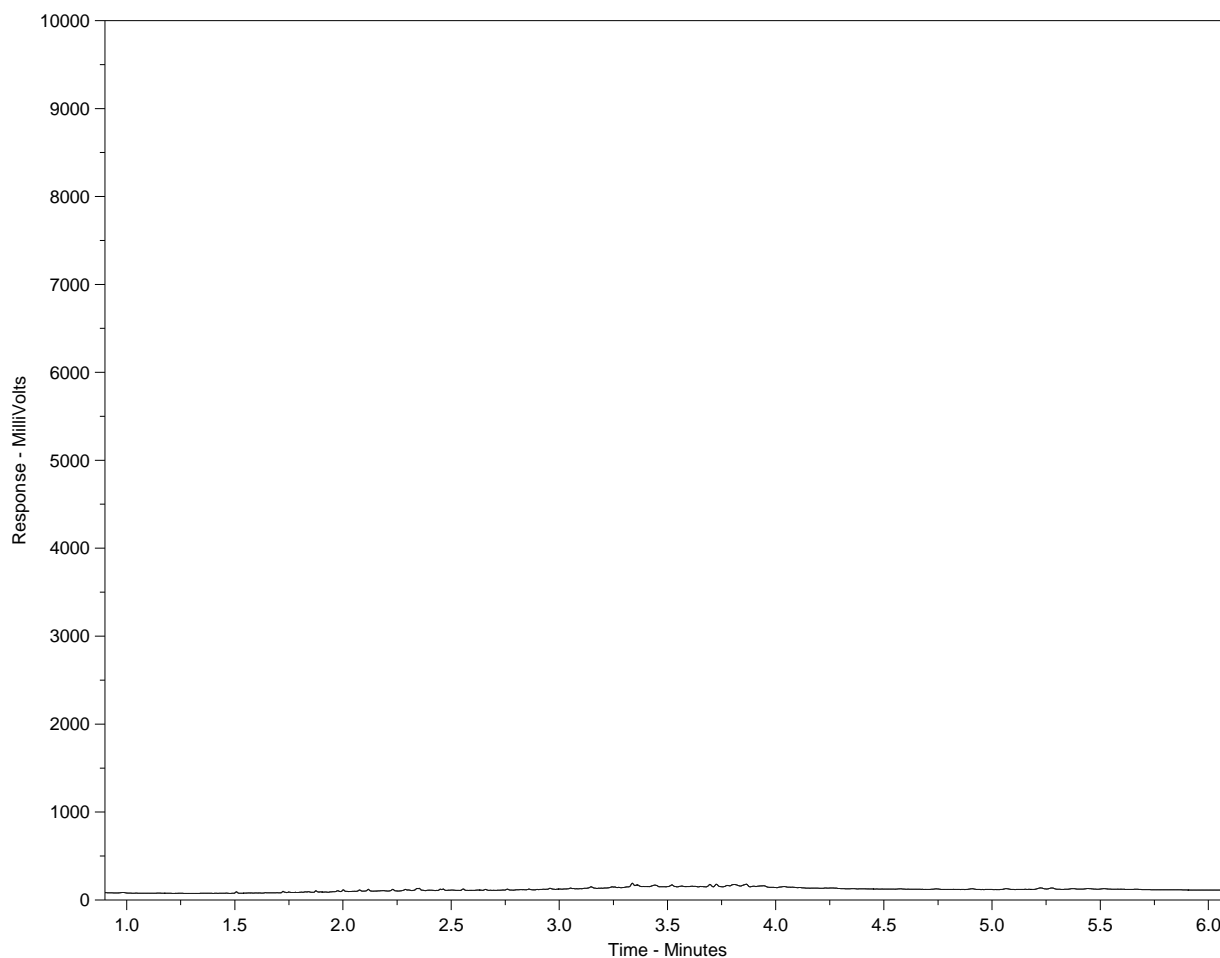
Note:

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: L2655550-7
Client ID: 21EX09-211018



| | | | | | | |
|-----------------------|-------|-----------------------------------|-------|--------|--------|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | ← F4 → |
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| ← Gasoline → | | ← Motor Oils/ Lube Oils/ Grease → | | | | |
| ← Diesel/ Jet Fuels → | | | | | | |

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.

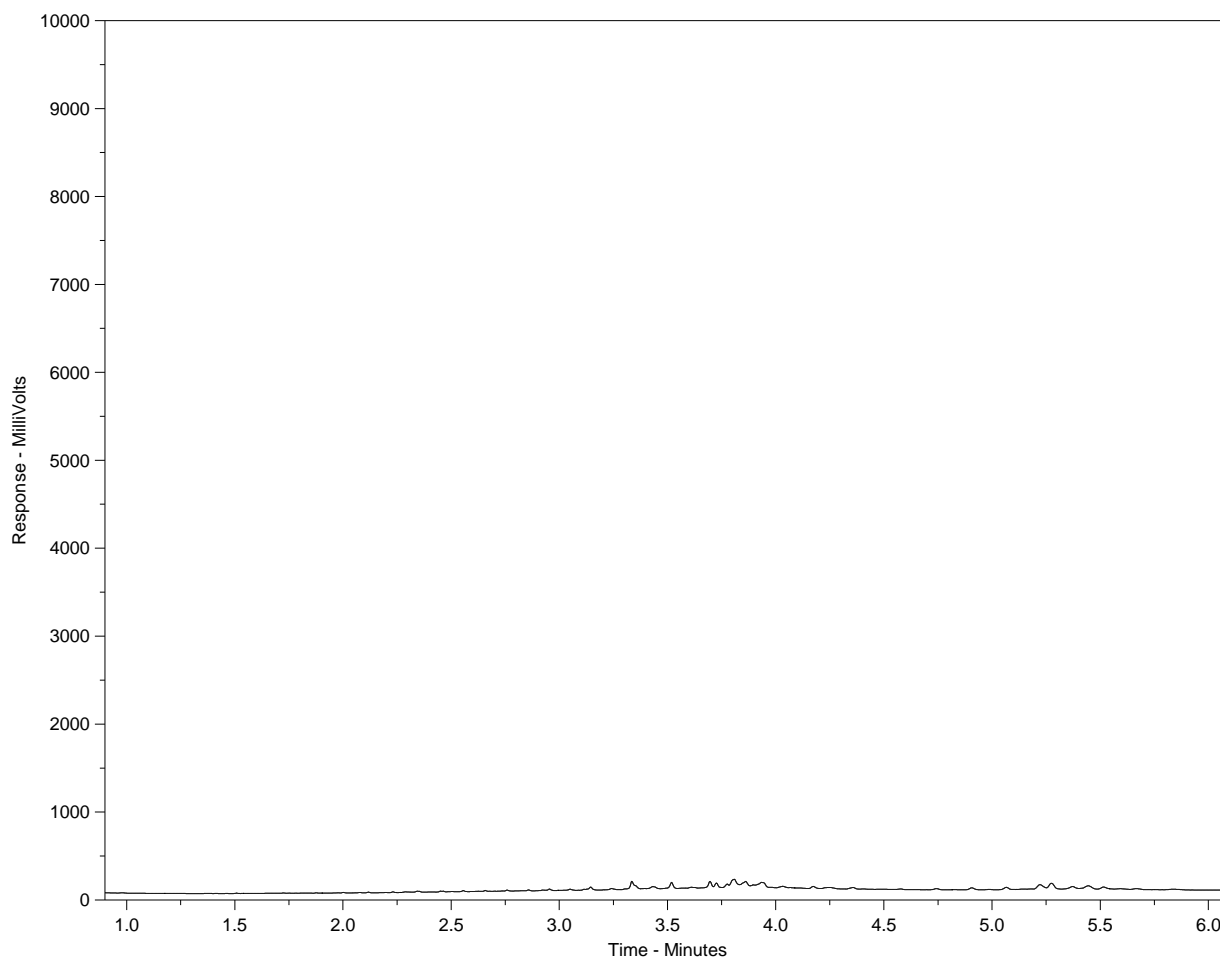
Note:

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: L2655550-8
 Client ID: 21EX10-211019



| F2 | | F3 | | F4 | | F4 |
|-------------------|-------|-------------------------------|-------|----|--------|----|
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| Gasoline | | Motor Oils/ Lube Oils/ Grease | | | | |
| Diesel/ Jet Fuels | | | | | | |

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.

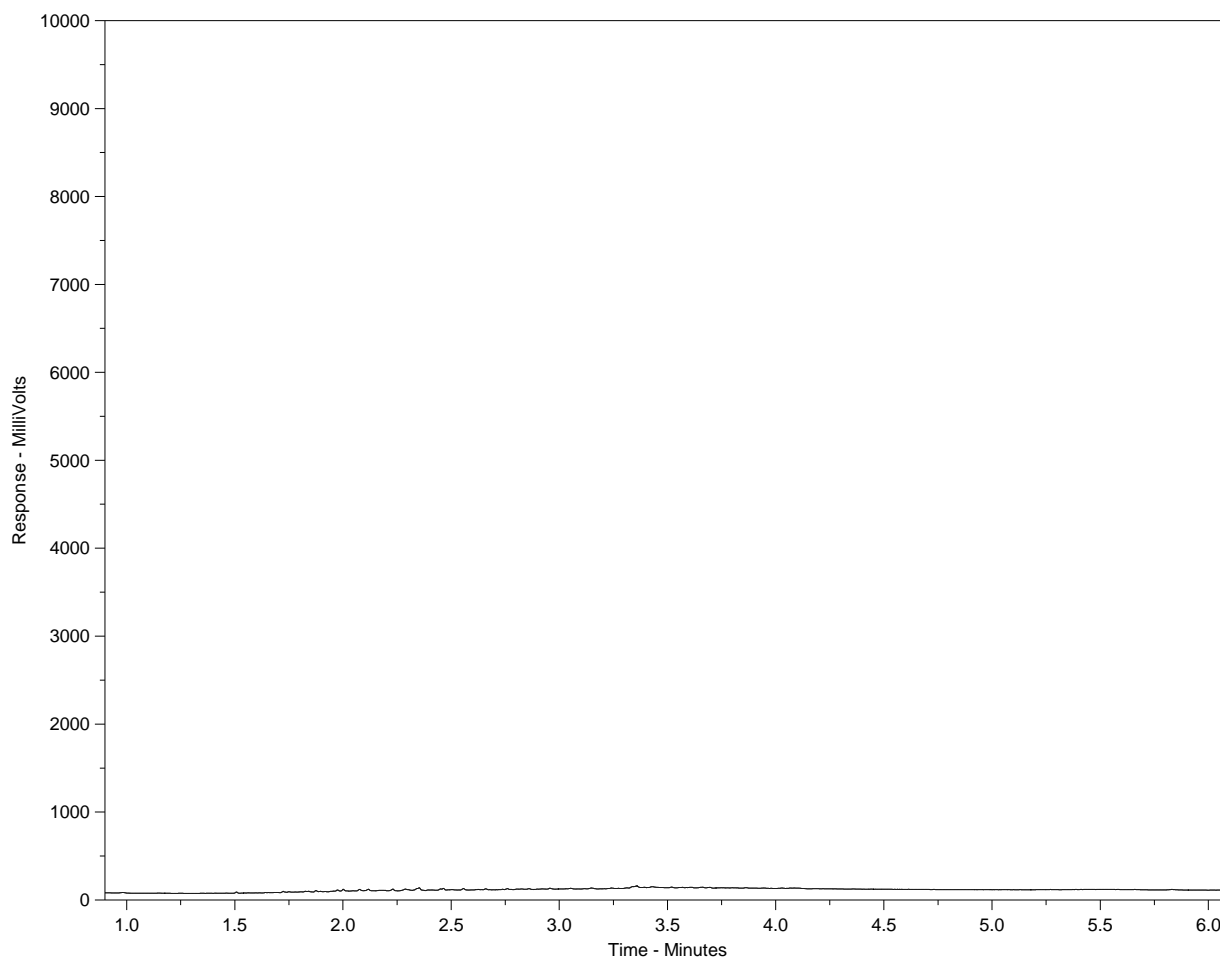
Note:

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: L2655550-9
Client ID: 21EX11-211019



| F2 | | F3 | | F4 | | F4 |
|-------------------|-------|-------------------------------|-------|----|--------|----|
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| Gasoline | | Motor Oils/ Lube Oils/ Grease | | | | |
| Diesel/ Jet Fuels | | | | | | |

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.

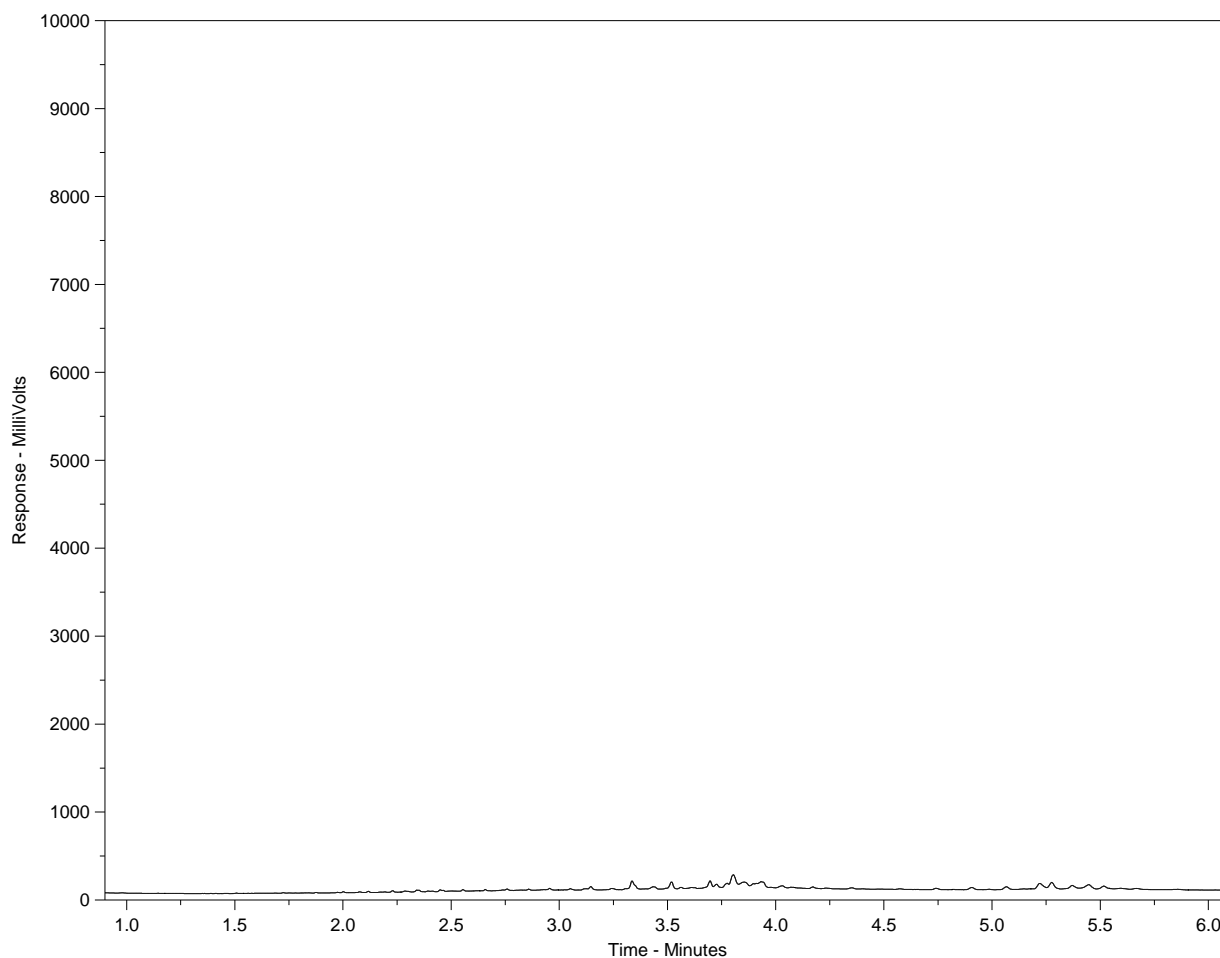
Note:

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: L2655550-10
Client ID: 21EX12-211021



| | | | | | | |
|-----------------------|-------|-----------------------------------|-------|--------|--------|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | ← F4 → |
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| ← Gasoline → | | ← Motor Oils/ Lube Oils/ Grease → | | | | |
| ← Diesel/ Jet Fuels → | | | | | | |

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.

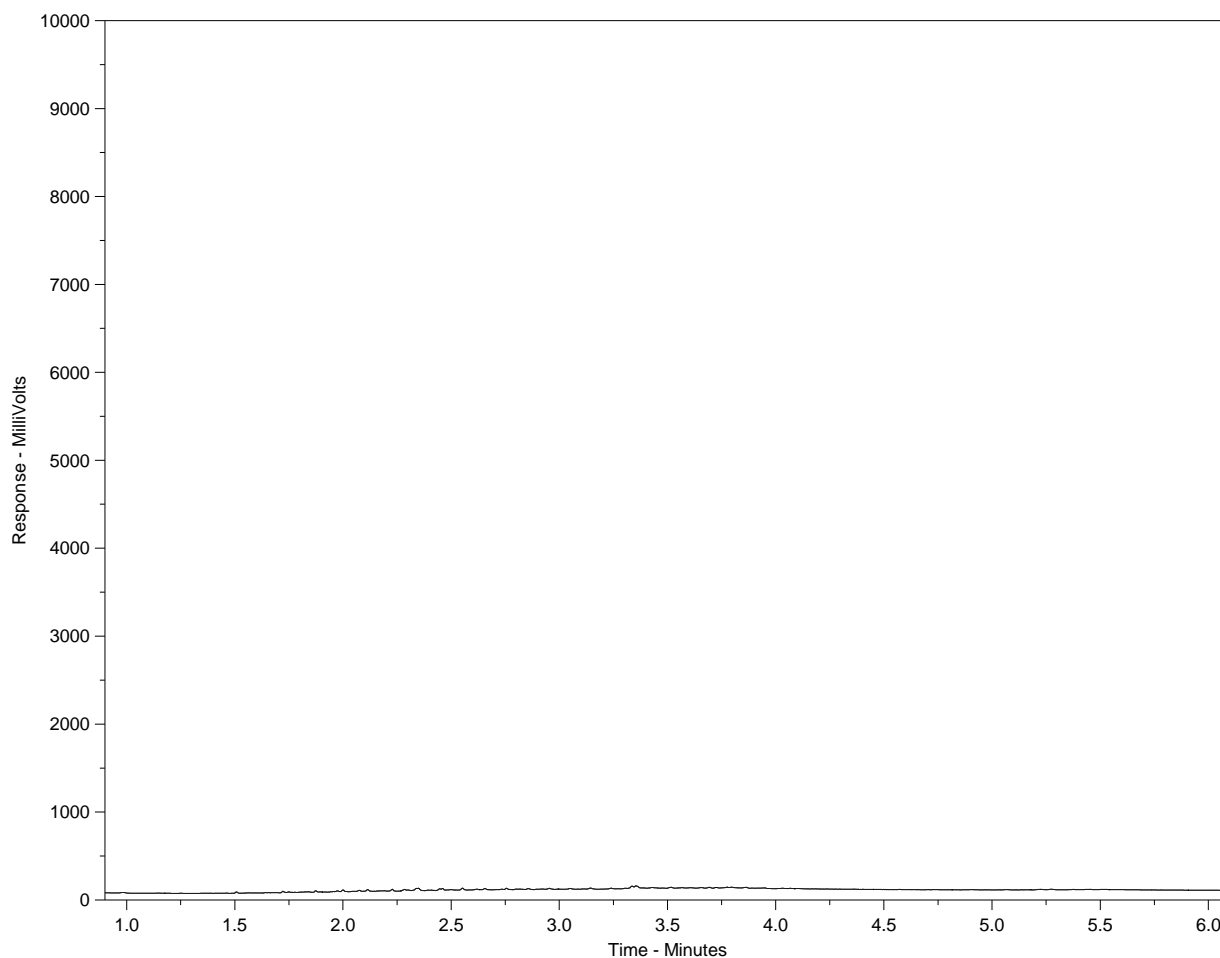
Note:

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: L2655550-11
Client ID: 21EX13-211021



| | | | | | | |
|-----------------------|-------|-----------------------------------|-------|--------|--------|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | ← F4 → |
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| ← Gasoline → | | ← Motor Oils/ Lube Oils/ Grease → | | | | |
| ← Diesel/ Jet Fuels → | | | | | | |

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.

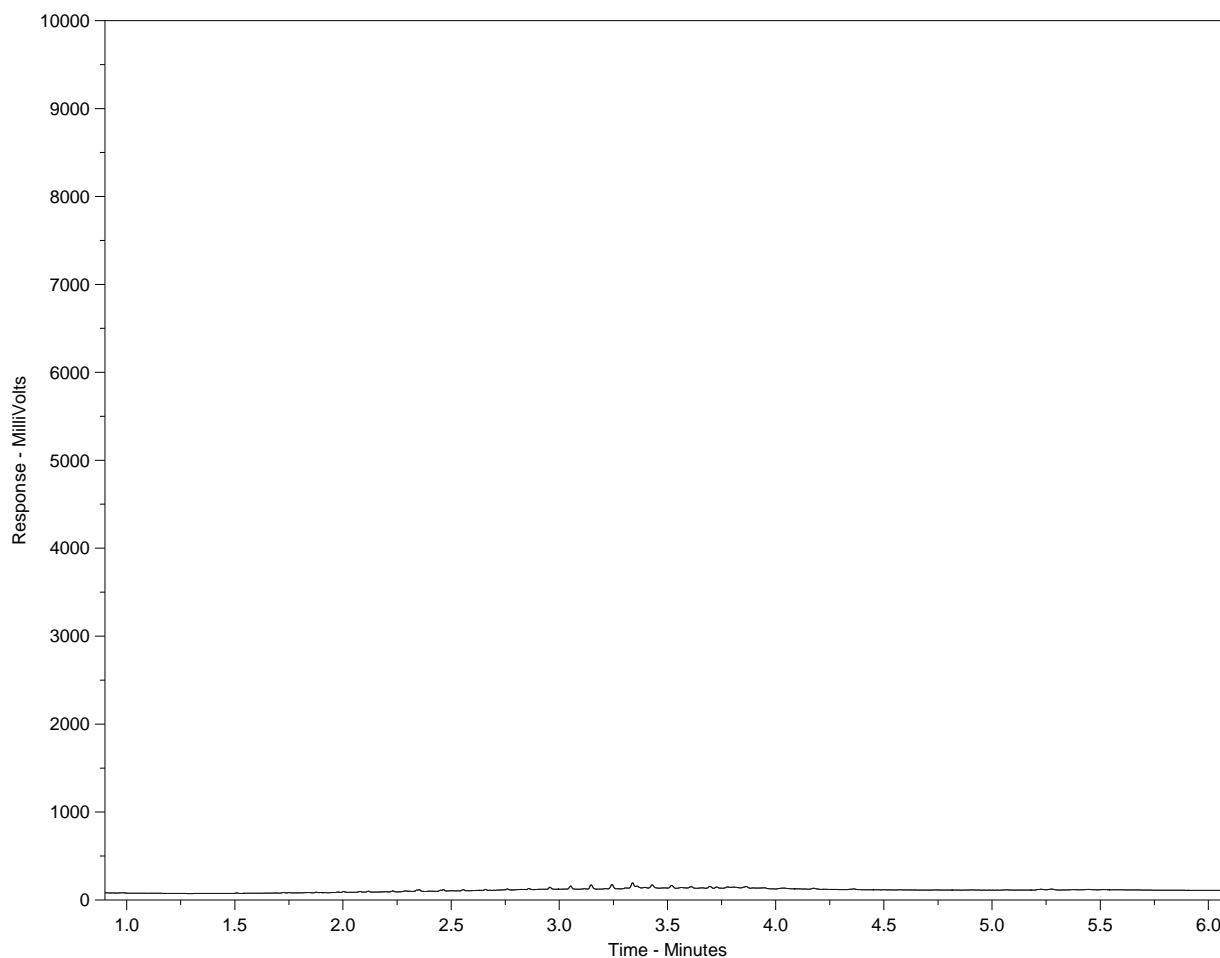
Note:

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: L2655550-12
 Client ID: 21EX14-211022



| | | | | | | |
|-----------------------|-------|-----------------------------------|-------|--------|--------|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | ← F4 → |
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| ← Gasoline → | | ← Motor Oils/ Lube Oils/ Grease → | | | | |
| ← Diesel/ Jet Fuels → | | | | | | |

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.

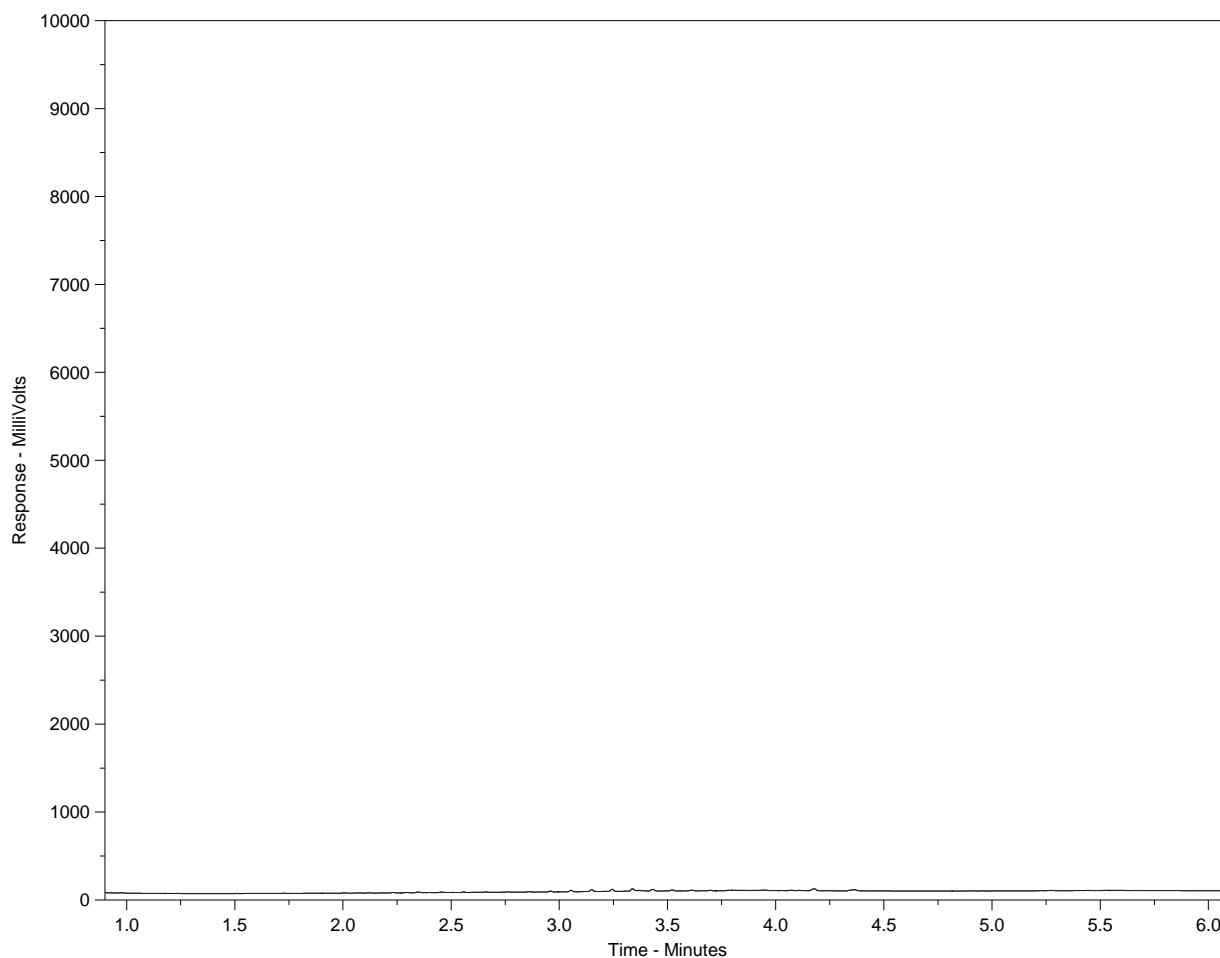
Note:

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: L2655550-13
Client ID: 21EX15-211023



| | | | | | | |
|-----------------------|-------|-----------------------------------|--------|--------|--|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | ← F4 → |
| nC10 | nC16 | nC34 | nC50 | | | |
| 174°C | 287°C | 481°C | 575°C | | | |
| 346°F | 549°F | 898°F | 1067°F | | | |
| ← Gasoline → | | ← Motor Oils/ Lube Oils/ Grease → | | | | |
| ← Diesel/ Jet Fuels → | | | | | | |

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.

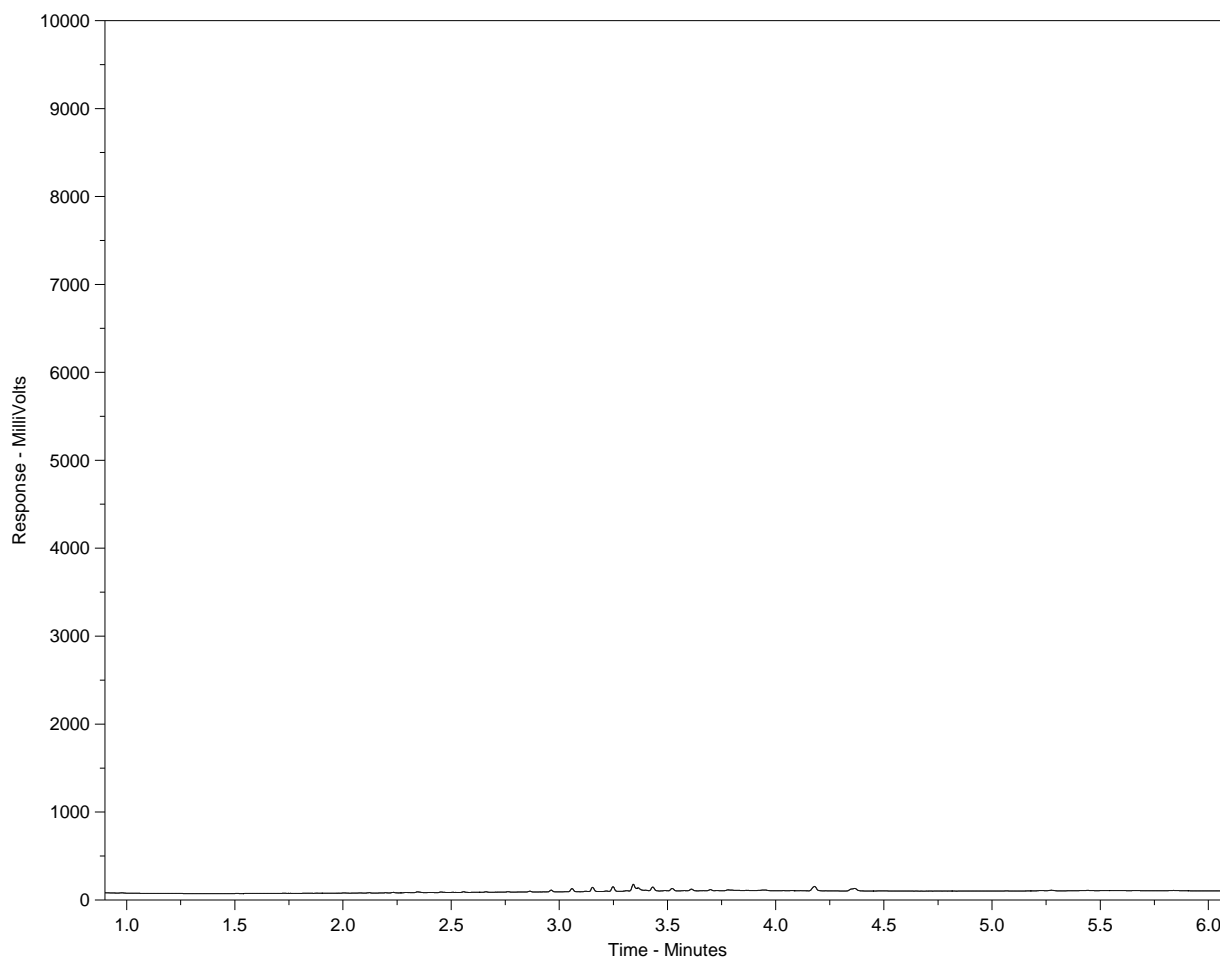
Note:

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: L2655550-14
Client ID: 21EX16-211023



| | | | | | | |
|-----------------------|-------|-----------------------------------|--------|--------|--|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | ← F4 → |
| nC10 | nC16 | nC34 | nC50 | | | |
| 174°C | 287°C | 481°C | 575°C | | | |
| 346°F | 549°F | 898°F | 1067°F | | | |
| ← Gasoline → | | ← Motor Oils/ Lube Oils/ Grease → | | | | |
| ← Diesel/ Jet Fuels → | | | | | | |

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.

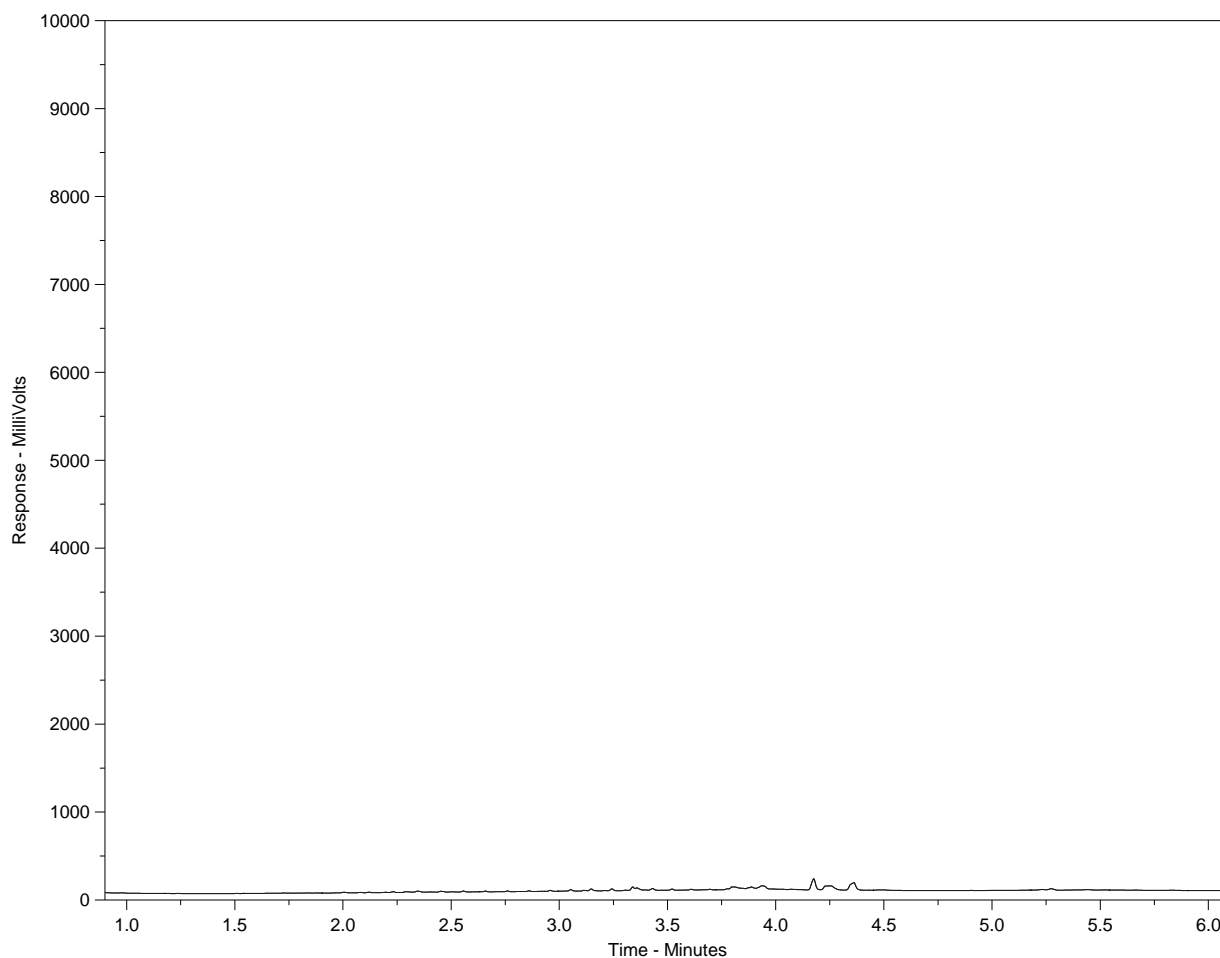
Note:

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: L2655550-15
Client ID: 21EX17-211022



| | | | | | | |
|-----------------------|-------|-----------------------------------|-------|--------|--------|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | ← F4 → |
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| ← Gasoline → | | ← Motor Oils/ Lube Oils/ Grease → | | | | |
| ← Diesel/ Jet Fuels → | | | | | | |

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.

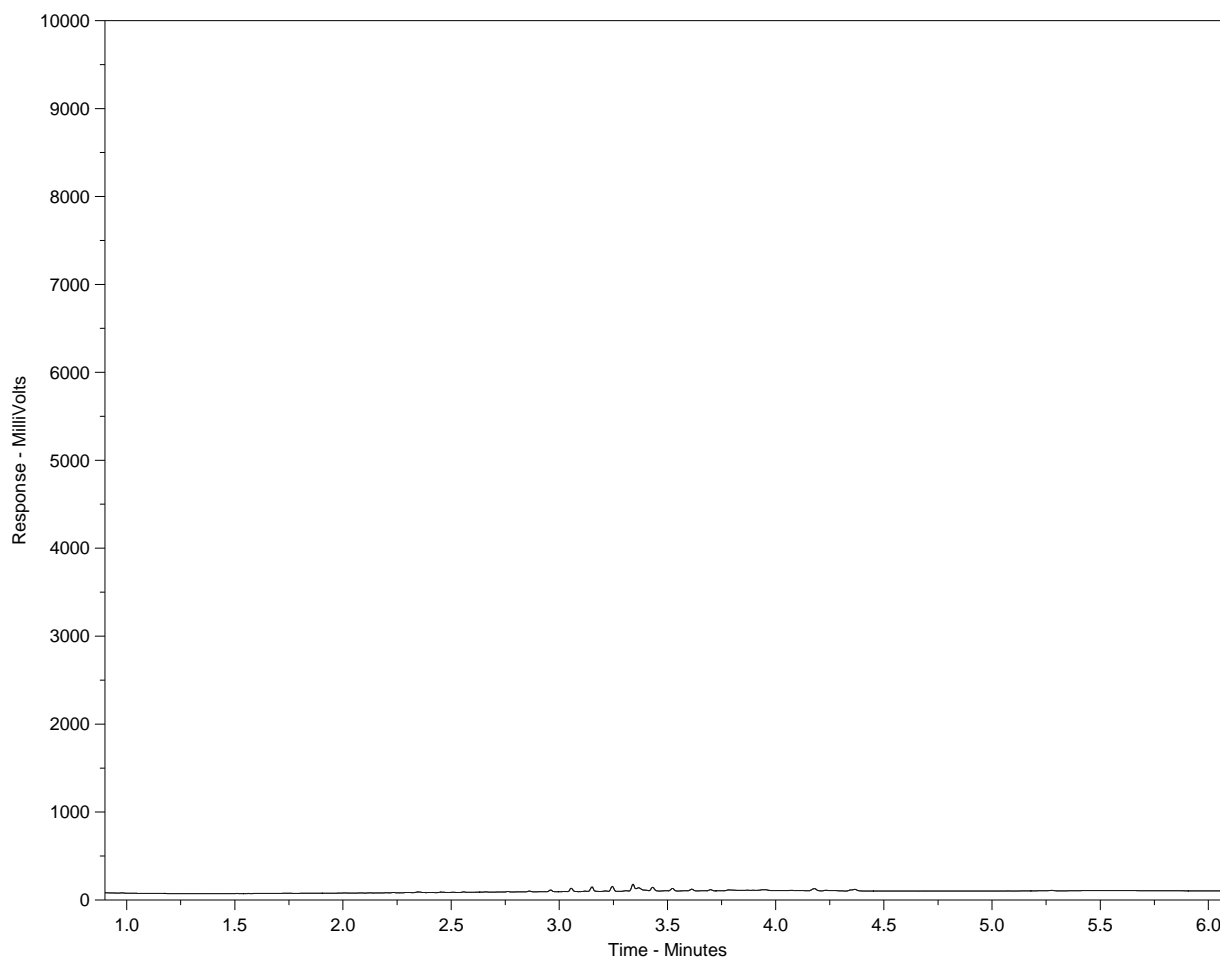
Note:

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: L2655550-16
Client ID: 21EX18-211022



| F2 | | F3 | | F4 | | F4 |
|-------------------|-------|-------------------------------|-------|----|--------|----|
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| Gasoline | | Motor Oils/ Lube Oils/ Grease | | | | |
| Diesel/ Jet Fuels | | | | | | |

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.

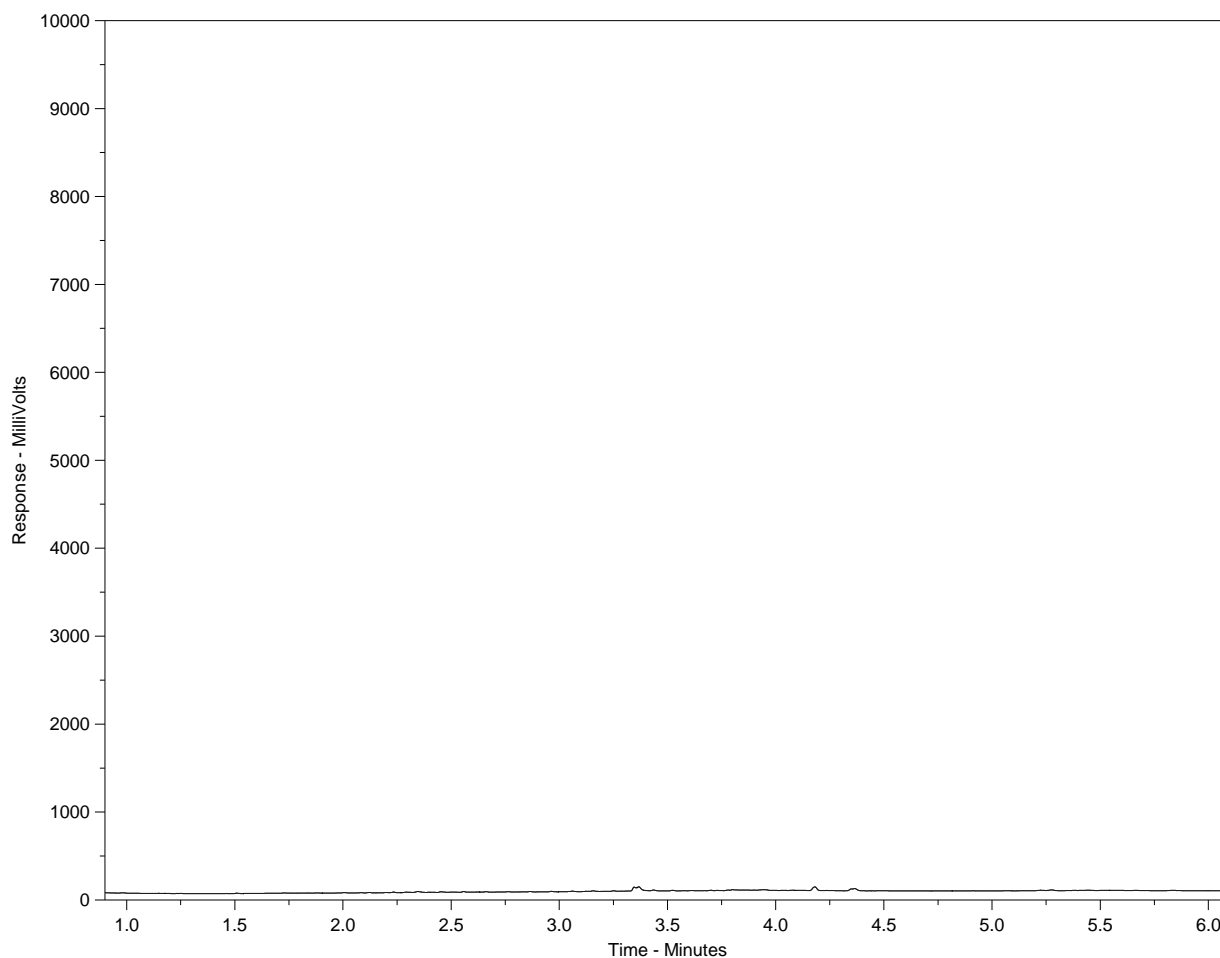
Note:

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: L2655550-17
 Client ID: 21EX19-211023 (DUP)



| | | | | | | |
|-----------------------|-------|-----------------------------------|-------|--------|--------|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | ← F4 → |
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| ← Gasoline → | | ← Motor Oils/ Lube Oils/ Grease → | | | | |
| ← Diesel/ Jet Fuels → | | | | | | |

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.

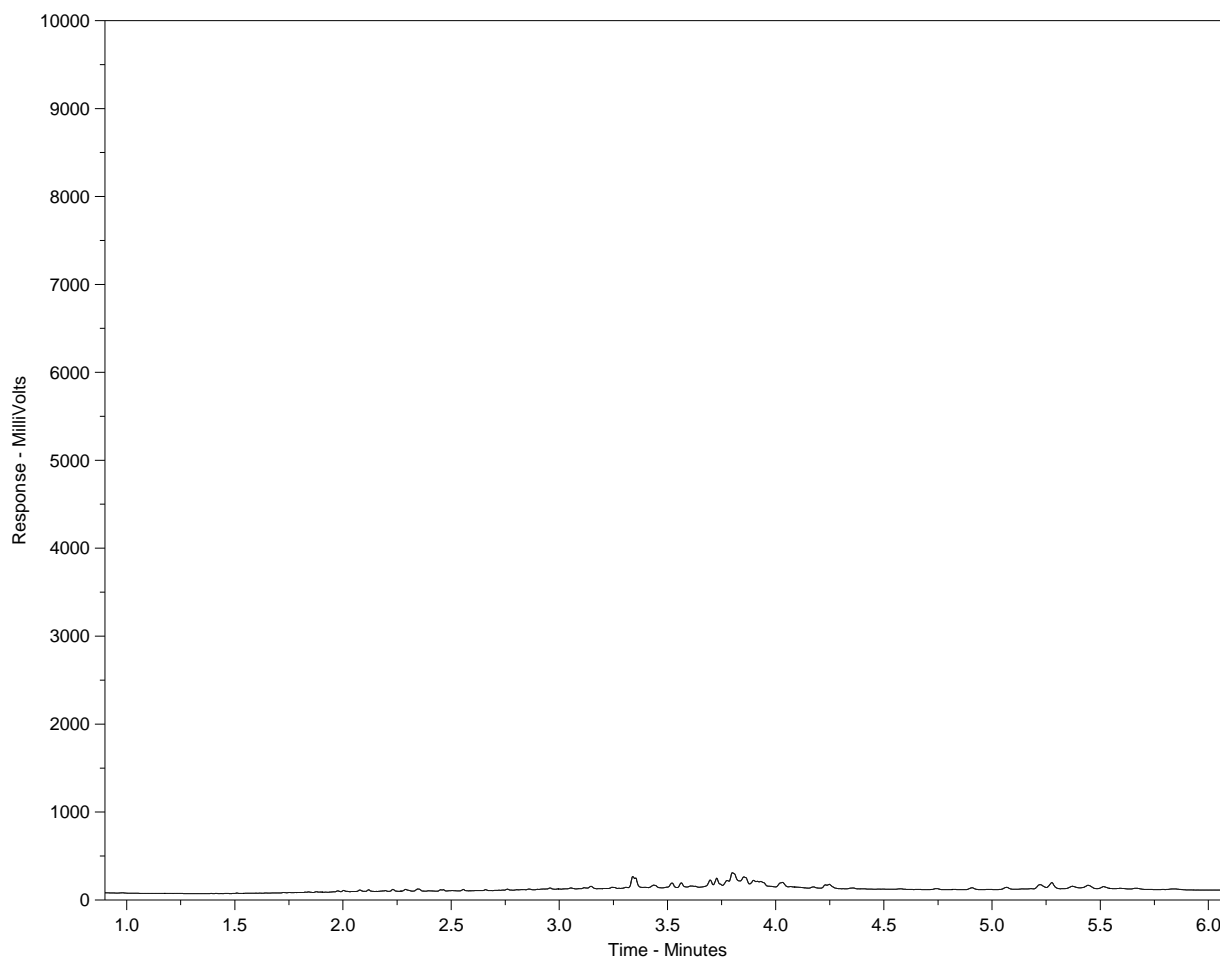
Note:

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: L2655550-18
Client ID: 21EX20-211022



| F2 | | F3 | | F4 | | F4 | |
|-------------------|-------|-------------------------------|-------|----|--------|----|--|
| nC10 | nC16 | | nC34 | | nC50 | | |
| 174°C | 287°C | | 481°C | | 575°C | | |
| 346°F | 549°F | | 898°F | | 1067°F | | |
| Gasoline | | Motor Oils/ Lube Oils/ Grease | | | | | |
| Diesel/ Jet Fuels | | | | | | | |

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.

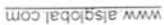
Note:

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.



| | | | | | |
|--|--|--|---|------------------|-------------|
| Contact and company name below will appear on the final report | | | | | |
| Report To | KBL | Select Report Format: | <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL) | | |
| Company: | David Vanderkley | Merge QC/QCI Reports with COA | <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A | | |
| Contact: | | <input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked | | | |
| Phone: | Company address below will appear on the final report | Select Distribution: | <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX | | |
| Street: | 3909 68 Ave | Email 1 or Fax | dvanterkley@kblenv.com | | |
| City/Province: | Leduc, AB | Email 2 | mmatkin@kblenv.com | | |
| Postal Code: | T9E0Z4 | Email 3 | | | |
| Invoice To | Same as Report To | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | | |
| Copy of Invoice with Report | <input type="checkbox"/> YES <input type="checkbox"/> NO | Invoice Recipients | | | |
| Company: | | Select Invoice Distribution: | <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX | | |
| Contact: | | Email 1 or Fax | accounting@kblenv.com | | |
| | | Email 2 | dvanterkley@kblenv.com | | |
| Project Information | | | Oil and Gas Required Fields (client use) | | |
| ALS Account # / Quote # | | A/E/Cost Center | PO# | | |
| Job # | 22-018NT | Major/Minor Code | Routing Code: | | |
| PO / AFE | MM024 | Requisitioner: | | | |
| LSD: | | Location: | | | |
| ALS Lab Work Order # (ALS use only): | C2655550 | ALS Contact: | Sampler: | | |
| ALS Sample # (ALS use only) | Sample Identification and/or Coordinates (This description will appear on the report) | Date (dd-mm-yy) | Time (hh:mm) | Sample Type | |
| 1 | 21EX01 - 211018 | 18-Oct-21 | | Soil | |
| 2 | 21EX02 - 211018 | 18-Oct-21 | | Soil | |
| 3 | 21EX04 - 211018 | 18-Oct-21 | | Soil | |
| 4 | 21EX05 - 211018 (Dup) | 18-Oct-21 | | Soil | |
| 5 | 21EX07 - 211018 | 18-Oct-21 | | Soil | |
| 6 | 21EX08 - 211018 | 18-Oct-21 | | Soil | |
| 7 | 21EX09 - 211018 | 18-Oct-21 | | Soil | |
| 8 | 21EX10 - 211019 | 19-Oct-21 | | Soil | |
| 9 | 21EX11 - 211019 | 19-Oct-21 | | Soil | |
| 10 | 21EX12 - 211021 | 21-Oct-21 | | Soil | |
| 11 | 21EX13 - 211021 | 21-Oct-21 | | Soil | |
| 12 | 21EX14 - 211022 | 22-Oct-21 | | Soil | |
| Drinking Water (DW) Samples (client use) | | Notes / Specify Limits for result evaluation by selecting from drop-down below | | | |
| Are samples taken from a Regulated DW System? | | (Excel COD only) | | | |
| <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | | |
| Are samples for human consumption/ use? | | | | | |
| <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | | |
| SHIPMENT RELEASE (client use) | | INITIAL SHIPMENT RECEPTION (ALS use only) | | | |
| Released by: Matt Matkin | Date: October 24, 2021 | Time: | Received by: | Date: Oct 26, 21 | Time: 10:15 |
| REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION | | WHITE - LABORATORY COPY YELLOW - CLIENT COPY | | | |
| | | TURNAROUND TIME (TAT) REQUESTED | | | |
| | | Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests. | | | |
| | | Date and Time Requested for all E&P TATS: | | | |
| | | For all tests with rush TATS requested, please contact your AM to confirm availability. | | | |
| | | ANALYSIS REQUEST | | | |
| | | Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below | | | |
| | | NUMBER OF CONTAINERS | | | |
| | | BTEX F1-F4 | | | |
| | | Particle size | | | |
| | | CCME Metals + Hg | | | |
| | | pH | | | |
| | | SAMPLES ON HOLD | | | |
| | | EXTENDED STORAGE REQUIRED | | | |
| | | SUSPECTED HAZARD (see notes) | | | |
| | | AFFIX ALS BARCODE LABEL HERE (ALS use only) | | | |
| | | L2655550-COFC | | | |
| | | COOLING METHOD: <input type="checkbox"/> NONE <input type="checkbox"/> ICE <input type="checkbox"/> ICE PACKS <input type="checkbox"/> FROZEN <input type="checkbox"/> COOLING INITIATED | | | |
| | | Submission Comments identified on Sample Receipt Notification: <input type="checkbox"/> YES <input type="checkbox"/> NO | | | |
| | | Cooler Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A Sample Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A | | | |
| | | INITIAL COOLER TEMPERATURES °C | | | |
| | | FINAL COOLER TEMPERATURES °C | | | |
| | | SHIPMENT RECEIPT DETAILS (ALS use only) | | | |
| | | COOLING METHOD: <input type="checkbox"/> NONE <input type="checkbox"/> ICE <input type="checkbox"/> ICE PACKS <input type="checkbox"/> FROZEN <input type="checkbox"/> COOLING INITIATED | | | |
| | | Submission Comments identified on Sample Receipt Notification: <input type="checkbox"/> YES <input type="checkbox"/> NO | | | |
| | | Cooler Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A Sample Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A | | | |
| | | INITIAL COOLER TEMPERATURES °C | | | |
| | | FINAL COOLER TEMPERATURES °C | | | |
| | | SHIPMENT RECEIPT (ALS use only) | | | |
| | | Released by: Matt Matkin | | | |
| | | Date: October 24, 2021 | | | |
| | | Time: | | | |
| | | REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION | | | |
| | | WHITE - LABORATORY COPY YELLOW - CLIENT COPY | | | |

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



COC Number: 20 -

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|-----------------|--|---------------------------|--|-------------------|--|--|--|---|--|---|--|---|--|--|--|-----------------------------|--|---|--|-------------------------|--|-----------------|--|-------------|--|
| Report To | | Contact and company name below will appear on the final report | | Company: KBL | | Contact: David Vanderkley | | Phone: | | Street: 3909 68Ave | | City/Province: Leduc, AB | | Postal Code: T9E0Z4 | | Invoice To: Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO | | Company: | | Contact: | | | | | | | |
| Project Information | | ALS Account # / Quote # | | AF/Coast Center | | PO# | | Routing Code: | | Major/Minor Code | | Requisitioner: | | Location: | | LSD: | | ALS Lab Work Order # (ALS use only): | | ALS Sample # (ALS use only) | | Sample Identification and/or Coordinates (This description will appear on the report) | | Date (dd-mm-yy) | | Time (hh mm) | | Sample Type | |
| | | Oil and Gas Required Fields (client use) | | ALS Contact: | | Sampler: | | | | | | | | | | | | | | | | | | | | | | | |
| NUMBER OF CONTAINERS | | Biox (F1-F4) | | Particle size | | GC/MS Metals + Hg | | pH | | Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below | | <input checked="" type="checkbox"/> Routine [R] if received by 3pm M-F - no surcharges apply <input type="checkbox"/> 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum <input type="checkbox"/> 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum <input type="checkbox"/> 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum <input type="checkbox"/> 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum <input type="checkbox"/> Same day [E2] if received by 10am M-S - 200% rush surcharge. | | Turnaround Time (TAT) Requested (ALS use only) | | AFFIX ALS BARCODE LABEL HERE | | Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests For all tests with rush TATs requested, please contact your Aft to confirm availability. | | Analysis Request | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | Project Information | | ALS Account # / Quote # | | AF/Coast Center | | PO# | |
| Project Information | | ALS Account # / Quote # | | AF/Coast Center | | PO# | | Routing Code: | | Major/Minor Code | | Requisitioner: | | Location: | | LSD: | | ALS Lab Work Order # (ALS use only): | | ALS Sample # (ALS use only) | | Sample Identification and/or Coordinates (This description will appear on the report) | | Date (dd-mm-yy) | | Time (hh mm) | | Sample Type | |
| Oil and Gas Required Fields (client use) | | ALS Contact: | | Sampler: | | Particle size | | GC/MS Metals + Hg | | pH | | Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below | | <input checked="" type="checkbox"/> Routine [R] if received by 3pm M-F - no surcharges apply <input type="checkbox"/> 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum <input type="checkbox"/> 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum <input type="checkbox"/> 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum <input type="checkbox"/> 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum <input type="checkbox"/> Same day [E2] if received by 10am M-S - 200% rush surcharge. | | Turnaround Time (TAT) Requested (ALS use only) | | Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests For all tests with rush TATs requested, please contact your Aft to confirm availability. | | Analysis Request | | | | | | | | | |
| Project Information | | ALS Account # / Quote # | | AF/Coast Center | | PO# | | Routing Code: | | Major/Minor Code | | Requisitioner: | | Location: | | LSD: | | ALS Lab Work Order # (ALS use only): | | ALS Sample # (ALS use only) | | Sample Identification and/or Coordinates (This description will appear on the report) | | Date (dd-mm-yy) | | Time (hh mm) | | Sample Type | |
| Oil and Gas Required Fields (client use) | | ALS Contact: | | Sampler: | | Particle size | | GC/MS Metals + Hg | | pH | | Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below | | <input checked="" type="checkbox"/> Routine [R] if received by 3pm M-F - no surcharges apply <input type="checkbox"/> 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum <input type="checkbox"/> 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum <input type="checkbox"/> 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum <input type="checkbox"/> 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum <input type="checkbox"/> Same day [E2] if received by 10am M-S - 200% rush surcharge. | | Turnaround Time (TAT) Requested (ALS use only) | | Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests For all tests with rush TATs requested, please contact your Aft to confirm availability. | | Analysis Request | | | | | | | | | |

CERTIFICATE OF ANALYSIS

| | | | |
|-------------------------|--|-------------------------|---|
| Work Order | : YL2201870 | Page | : 1 of 8 |
| Client | : KBL Environmental Ltd. | Laboratory | : Yellowknife - Environmental |
| Contact | : Katie Oliver | Account Manager | : Oliver Gregg |
| Address | : 17 Cameron Road PO Box 1895 Yellowknife NT Canada X1A 2P4 | Address | : 314 Old Airport Road, Unit 116 Yellowknife NT Canada X1A 3T3 |
| Telephone | : 780 893 3305 | Telephone | : 1 867 446 5593 |
| Project | : 22-102NT | Date Samples Received | : 19-Oct-2022 16:35 |
| PO | : KO059 | Date Analysis Commenced | : 21-Oct-2022 |
| C-O-C number | : ---- | Issue Date | : 26-Oct-2022 14:11 |
| Sampler | : ---- | | |
| Site | : ---- | | |
| Quote number | : YL22-KBLE100-001 | | |
| No. of samples received | : 10 | | |
| No. of samples analysed | : 10 | | |

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

| Signatories | Position | Laboratory Department |
|---------------|--------------------------------|-------------------------------|
| Dan Nguyen | Team Leader - Inorganics | Metals, Edmonton, Alberta |
| Kari Mulroy | Lab Supervisor - Environmental | Organics, Edmonton, Alberta |
| Leah Yee | Lab Assistant | Inorganics, Edmonton, Alberta |
| Ping Yeung | Team Leader - Inorganics | Inorganics, Edmonton, Alberta |
| Ping Yeung | Team Leader - Inorganics | Metals, Edmonton, Alberta |
| Remy Gatabazi | Lab Analyst | Organics, Edmonton, Alberta |
| Tiffany McKay | Lab Assistant | Organics, Edmonton, Alberta |
| Yan Zhang | Lab Analyst | Organics, Edmonton, Alberta |



General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances
LOR: Limit of Reporting (detection limit).

| Unit | Description |
|----------|-------------------------|
| - | No Unit |
| % | percent |
| mg/kg | milligrams per kilogram |
| pH units | pH units |

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Qualifiers

| Qualifier | Description |
|-----------|--|
| DLHM | Detection Limit Adjusted: Sample has high moisture content. |
| SUR-ND | Surrogate recovery marginally exceeded ALS DQO. Reported non-detect results for associated samples were deemed to be unaffected. |



Analytical Results

Sub-Matrix: Soil/Solid

Client sample ID

(Matrix: Soil/Solid)

| | | | | | 22102NT-STF Acceptance | 22102NT-01 | 22102NT-02 | 22102NT-03 | 22102NT-04 |
|-----------------------------|------------|--------|--------|----------|---------------------------|----------------------|----------------------|----------------------|----------------------|
| Client sampling date / time | | | | | 14-Oct-2022 12:17 | 14-Oct-2022 12:30 | 14-Oct-2022 12:20 | 14-Oct-2022 12:30 | 14-Oct-2022 12:37 |
| Analyte | CAS Number | Method | LOR | Unit | YL2201870-001 | YL2201870-002 | YL2201870-003 | YL2201870-004 | YL2201870-005 |
| | | | | | Result | Result | Result | Result | Result |
| Physical Tests | | | | | | | | | |
| moisture | ---- | E144 | 0.25 | % | ---- | 8.07 | 5.36 | 7.10 | 4.87 |
| pH (1:2 soil:CaCl2-aq) | ---- | E108B | 0.10 | pH units | 7.65 | ---- | ---- | ---- | ---- |
| Particle Size | | | | | | | | | |
| sand (>0.075mm) | ---- | E178 | 1.0 | % | 75.9 | ---- | ---- | ---- | ---- |
| finer (<0.075mm) | ---- | E178 | 1.0 | % | 24.1 | ---- | ---- | ---- | ---- |
| texture class | ---- | E178 | - | - | Coarse | ---- | ---- | ---- | ---- |
| Metals | | | | | | | | | |
| aluminum | 7429-90-5 | E440 | 50 | mg/kg | 4130 | ---- | ---- | ---- | ---- |
| antimony | 7440-36-0 | E440 | 0.10 | mg/kg | 0.38 | ---- | ---- | ---- | ---- |
| arsenic | 7440-38-2 | E440 | 0.10 | mg/kg | 7.44 | ---- | ---- | ---- | ---- |
| barium | 7440-39-3 | E440 | 0.50 | mg/kg | 276 | ---- | ---- | ---- | ---- |
| beryllium | 7440-41-7 | E440 | 0.10 | mg/kg | 0.22 | ---- | ---- | ---- | ---- |
| bismuth | 7440-69-9 | E440 | 0.20 | mg/kg | <0.20 | ---- | ---- | ---- | ---- |
| boron | 7440-42-8 | E440 | 5.0 | mg/kg | 5.8 | ---- | ---- | ---- | ---- |
| cadmium | 7440-43-9 | E440 | 0.020 | mg/kg | 0.163 | ---- | ---- | ---- | ---- |
| calcium | 7440-70-2 | E440 | 50 | mg/kg | 237000 | ---- | ---- | ---- | ---- |
| chromium | 7440-47-3 | E440 | 0.50 | mg/kg | 9.80 | ---- | ---- | ---- | ---- |
| cobalt | 7440-48-4 | E440 | 0.10 | mg/kg | 4.39 | ---- | ---- | ---- | ---- |
| copper | 7440-50-8 | E440 | 0.50 | mg/kg | 8.00 | ---- | ---- | ---- | ---- |
| iron | 7439-89-6 | E440 | 50 | mg/kg | 11700 | ---- | ---- | ---- | ---- |
| lead | 7439-92-1 | E440 | 0.50 | mg/kg | 6.33 | ---- | ---- | ---- | ---- |
| lithium | 7439-93-2 | E440 | 2.0 | mg/kg | 5.3 | ---- | ---- | ---- | ---- |
| magnesium | 7439-95-4 | E440 | 20 | mg/kg | 10300 | ---- | ---- | ---- | ---- |
| manganese | 7439-96-5 | E440 | 1.0 | mg/kg | 223 | ---- | ---- | ---- | ---- |
| mercury | 7439-97-6 | E510 | 0.0050 | mg/kg | 0.0216 | ---- | ---- | ---- | ---- |
| molybdenum | 7439-98-7 | E440 | 0.10 | mg/kg | 2.10 | ---- | ---- | ---- | ---- |
| nickel | 7440-02-0 | E440 | 0.50 | mg/kg | 16.8 | ---- | ---- | ---- | ---- |
| phosphorus | 7723-14-0 | E440 | 50 | mg/kg | 674 | ---- | ---- | ---- | ---- |
| potassium | 7440-09-7 | E440 | 100 | mg/kg | 710 | ---- | ---- | ---- | ---- |



Analytical Results

Sub-Matrix: Soil/Solid

Client sample ID

(Matrix: Soil/Solid)

| | | | | | 22102NT-STF Acceptance | 22102NT-01 | 22102NT-02 | 22102NT-03 | 22102NT-04 |
|---|-------------|------------|--------|-------|---------------------------|----------------------|----------------------|----------------------|----------------------|
| Client sampling date / time | | | | | 14-Oct-2022 12:17 | 14-Oct-2022 12:30 | 14-Oct-2022 12:20 | 14-Oct-2022 12:30 | 14-Oct-2022 12:37 |
| Analyte | CAS Number | Method | LOR | Unit | YL2201870-001 | YL2201870-002 | YL2201870-003 | YL2201870-004 | YL2201870-005 |
| | | | | | Result | Result | Result | Result | Result |
| Metals | | | | | | | | | |
| selenium | 7782-49-2 | E440 | 0.20 | mg/kg | 0.37 | ---- | ---- | ---- | ---- |
| silver | 7440-22-4 | E440 | 0.10 | mg/kg | <0.10 | ---- | ---- | ---- | ---- |
| sodium | 7440-23-5 | E440 | 50 | mg/kg | 100 | ---- | ---- | ---- | ---- |
| strontium | 7440-24-6 | E440 | 0.50 | mg/kg | 141 | ---- | ---- | ---- | ---- |
| sulfur | 7704-34-9 | E440 | 1000 | mg/kg | <1000 | ---- | ---- | ---- | ---- |
| thallium | 7440-28-0 | E440 | 0.050 | mg/kg | 0.122 | ---- | ---- | ---- | ---- |
| tin | 7440-31-5 | E440 | 2.0 | mg/kg | <2.0 | ---- | ---- | ---- | ---- |
| titanium | 7440-32-6 | E440 | 1.0 | mg/kg | 44.5 | ---- | ---- | ---- | ---- |
| tungsten | 7440-33-7 | E440 | 0.50 | mg/kg | <0.50 | ---- | ---- | ---- | ---- |
| uranium | 7440-61-1 | E440 | 0.050 | mg/kg | 2.64 | ---- | ---- | ---- | ---- |
| vanadium | 7440-62-2 | E440 | 0.20 | mg/kg | 18.9 | ---- | ---- | ---- | ---- |
| zinc | 7440-66-6 | E440 | 2.0 | mg/kg | 44.3 | ---- | ---- | ---- | ---- |
| zirconium | 7440-67-7 | E440 | 1.0 | mg/kg | 1.5 | ---- | ---- | ---- | ---- |
| Volatile Organic Compounds [Fuels] | | | | | | | | | |
| benzene | 71-43-2 | E611A | 0.0050 | mg/kg | ---- | 0.174 | 0.0384 | 0.123 | 0.0364 |
| ethylbenzene | 100-41-4 | E611A | 0.015 | mg/kg | ---- | 0.079 | 0.023 | 0.026 | 0.034 |
| toluene | 108-88-3 | E611A | 0.050 | mg/kg | ---- | 0.444 | 0.177 | 0.162 | 0.143 |
| xylene, m+p- | 179601-23-1 | E611A | 0.050 | mg/kg | ---- | 0.318 | 0.131 | 0.079 | 0.156 |
| xylene, o- | 95-47-6 | E611A | 0.050 | mg/kg | ---- | 0.062 | <0.050 | <0.050 | <0.050 |
| xylenes, total | 1330-20-7 | E611A | 0.075 | mg/kg | ---- | 0.380 | 0.131 | 0.079 | 0.156 |
| Hydrocarbons | | | | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 5.0 | mg/kg | ---- | <5.0 | <5.0 | <5.0 | <5.0 |
| F1-BTEX | ---- | EC580 | 5.0 | mg/kg | ---- | <5.0 | <5.0 | <5.0 | <5.0 |
| F2 (C10-C16) | ---- | E601.SG | 30 | mg/kg | ---- | <30 | <30 | <30 | <30 |
| F3 (C16-C34) | ---- | E601.SG | 50 | mg/kg | ---- | 227 | 242 | 218 | 306 |
| F4 (C34-C50) | ---- | E601.SG | 50 | mg/kg | ---- | <50 | <50 | <50 | <50 |
| chromatogram to baseline at nC50 | n/a | E601.SG | - | - | ---- | Yes | Yes | Yes | Yes |
| Hydrocarbons Surrogates | | | | | | | | | |
| bromobenzotrifluoride, 2- (F2-F4 surr) | 392-83-6 | E601.SG | 1.0 | % | ---- | 88.6 | 89.4 | 89.4 | 87.0 |
| dichlorotoluene, 3,4- | 97-75-0 | E581.VH+F1 | 1.0 | % | ---- | 94.6 | 92.0 | 94.1 | 84.5 |



Analytical Results

Sub-Matrix: Soil/Solid

Client sample ID

(Matrix: Soil/Solid)

| | | | | | 22102NT-STF Acceptance | 22102NT-01 | 22102NT-02 | 22102NT-03 | 22102NT-04 |
|--|------------|--------|-------|-------|---------------------------|----------------------|----------------------|----------------------|----------------------|
| Client sampling date / time | | | | | 14-Oct-2022 12:17 | 14-Oct-2022 12:30 | 14-Oct-2022 12:20 | 14-Oct-2022 12:30 | 14-Oct-2022 12:37 |
| Analyte | CAS Number | Method | LOR | Unit | YL2201870-001 | YL2201870-002 | YL2201870-003 | YL2201870-004 | YL2201870-005 |
| | | | | | Result | Result | Result | Result | Result |
| Volatile Organic Compounds Surrogates | | | | | | | | | |
| bromofluorobenzene, 4- | 460-00-4 | E611A | 0.10 | % | ---- | 84.9 | 76.9 | 74.6 | 70.1 |
| difluorobenzene, 1,4- | 540-36-3 | E611A | 0.10 | % | ---- | 96.0 | 89.1 | 74.9 | 73.3 |
| Polycyclic Aromatic Hydrocarbons | | | | | | | | | |
| acenaphthene | 83-32-9 | E641A | 0.050 | mg/kg | ---- | <0.050 | <0.050 | <0.050 | <0.050 |
| acenaphthylene | 208-96-8 | E641A | 0.050 | mg/kg | ---- | <0.050 | <0.050 | <0.050 | <0.050 |
| acridine | 260-94-6 | E641A | 0.050 | mg/kg | ---- | <0.050 | <0.050 | <0.050 | <0.050 |
| anthracene | 120-12-7 | E641A | 0.050 | mg/kg | ---- | <0.050 | <0.050 | <0.050 | <0.050 |
| benz(a)anthracene | 56-55-3 | E641A | 0.050 | mg/kg | ---- | <0.050 | <0.050 | <0.050 | <0.050 |
| benzo(a)pyrene | 50-32-8 | E641A | 0.050 | mg/kg | ---- | <0.050 | <0.050 | <0.050 | <0.050 |
| benzo(b+j)fluoranthene | n/a | E641A | 0.050 | mg/kg | ---- | <0.050 | <0.050 | <0.050 | <0.050 |
| benzo(b+j+k)fluoranthene | n/a | E641A | 0.075 | mg/kg | ---- | <0.075 | <0.075 | <0.075 | <0.075 |
| benzo(g,h,i)perylene | 191-24-2 | E641A | 0.050 | mg/kg | ---- | <0.050 | <0.050 | <0.050 | <0.050 |
| benzo(k)fluoranthene | 207-08-9 | E641A | 0.050 | mg/kg | ---- | <0.050 | <0.050 | <0.050 | <0.050 |
| chrysene | 218-01-9 | E641A | 0.050 | mg/kg | ---- | <0.050 | <0.050 | <0.050 | <0.050 |
| dibenz(a,h)anthracene | 53-70-3 | E641A | 0.050 | mg/kg | ---- | <0.050 | <0.050 | <0.050 | <0.050 |
| fluoranthene | 206-44-0 | E641A | 0.050 | mg/kg | ---- | <0.050 | <0.050 | <0.050 | <0.050 |
| fluorene | 86-73-7 | E641A | 0.050 | mg/kg | ---- | <0.050 | <0.050 | <0.050 | <0.050 |
| indeno(1,2,3-c,d)pyrene | 193-39-5 | E641A | 0.050 | mg/kg | ---- | <0.050 | <0.050 | <0.050 | <0.050 |
| methylnaphthalene, 1- | 90-12-0 | E641A | 0.030 | mg/kg | ---- | <0.030 | <0.030 | <0.030 | <0.030 |
| methylnaphthalene, 1+2- | ---- | E641A | 0.050 | mg/kg | ---- | <0.050 | <0.050 | <0.050 | <0.050 |
| methylnaphthalene, 2- | 91-57-6 | E641A | 0.030 | mg/kg | ---- | <0.030 | <0.030 | <0.030 | <0.030 |
| naphthalene | 91-20-3 | E641A | 0.010 | mg/kg | ---- | 0.012 | 0.012 | 0.010 | 0.012 |
| phenanthrene | 85-01-8 | E641A | 0.050 | mg/kg | ---- | <0.050 | <0.050 | <0.050 | <0.050 |
| pyrene | 129-00-0 | E641A | 0.050 | mg/kg | ---- | <0.050 | <0.050 | <0.050 | <0.050 |
| quinoline | 91-22-5 | E641A | 0.050 | mg/kg | ---- | <0.050 | <0.050 | <0.050 | <0.050 |
| B(a)P total potency equivalents [B(a)P TPE] | ---- | E641A | 0.065 | mg/kg | ---- | <0.065 | <0.065 | <0.065 | <0.065 |
| IACR (CCME) | ---- | E641A | 0.60 | - | ---- | <0.60 | <0.60 | <0.60 | <0.60 |
| IACR AB (coarse) | ---- | E641A | 0.10 | - | ---- | <0.10 | <0.10 | <0.10 | <0.10 |
| IACR AB (fine) | ---- | E641A | 0.10 | - | ---- | <0.10 | <0.10 | <0.10 | <0.10 |
| PAHs, total (BC Sched 3.4) | n/a | E641A | 0.20 | mg/kg | ---- | <0.20 | <0.20 | <0.20 | <0.20 |



Analytical Results

Sub-Matrix: Soil/Solid

Client sample ID

(Matrix: Soil/Solid)

| | | | | | 22102NT-STF Acceptance | 22102NT-01 | 22102NT-02 | 22102NT-03 | 22102NT-04 |
|--|------------|--------|------|-------|---------------------------|----------------------|----------------------|----------------------|----------------------|
| Client sampling date / time | | | | | 14-Oct-2022 12:17 | 14-Oct-2022 12:30 | 14-Oct-2022 12:20 | 14-Oct-2022 12:30 | 14-Oct-2022 12:37 |
| Analyte | CAS Number | Method | LOR | Unit | YL2201870-001 | YL2201870-002 | YL2201870-003 | YL2201870-004 | YL2201870-005 |
| | | | | | Result | Result | Result | Result | Result |
| Polycyclic Aromatic Hydrocarbons | | | | | | | | | |
| PAHs, total (EPA 16) | n/a | E641A | 0.20 | mg/kg | ---- | <0.20 | <0.20 | <0.20 | <0.20 |
| Polycyclic Aromatic Hydrocarbons Surrogates | | | | | | | | | |
| acridine-d9 | 34749-75-2 | E641A | 0.1 | % | ---- | 107 | 114 | 102 | 112 |
| chrysene-d12 | 1719-03-5 | E641A | 0.1 | % | ---- | 98.3 | 109 | 97.7 | 107 |
| naphthalene-d8 | 1146-65-2 | E641A | 0.1 | % | ---- | 88.5 | 95.6 | 89.1 | 95.7 |
| phenanthrene-d10 | 1517-22-2 | E641A | 0.1 | % | ---- | 102 | 109 | 100 | 109 |

Please refer to the General Comments section for an explanation of any qualifiers detected.



Analytical Results

| Sub-Matrix: Soil/Solid | | | | | Client sample ID | 22102NT-05 | 22102NT-06 | 22102NT-07 | 22102NT-08 | 22102NT-DUP |
|--|-------------|------------|--------|-------|----------------------|---------------|-------------------------|---------------|---------------|-------------|
| (Matrix: Soil/Solid) | | | | | | | | | | |
| Client sampling date / time | | | | | 14-Oct-2022 12:40 | 14-Oct-2022 | 14-Oct-2022 | 14-Oct-2022 | 14-Oct-2022 | 14-Oct-2022 |
| Analyte | CAS Number | Method | LOR | Unit | YL2201870-006 | YL2201870-007 | YL2201870-008 | YL2201870-009 | YL2201870-010 | |
| | | | | | Result | Result | Result | Result | Result | |
| Physical Tests | | | | | | | | | | |
| moisture | ---- | E144 | 0.25 | % | 9.46 | 28.5 | 50.7 | 49.7 | 6.32 | |
| Volatile Organic Compounds [Fuels] | | | | | | | | | | |
| benzene | 71-43-2 | E611A | 0.0050 | mg/kg | 0.180 | <0.0050 | <0.0087 ^{DLHM} | <0.0050 | 0.0692 | |
| ethylbenzene | 100-41-4 | E611A | 0.015 | mg/kg | 0.057 | <0.015 | <0.022 ^{DLHM} | <0.015 | 0.165 | |
| toluene | 108-88-3 | E611A | 0.050 | mg/kg | 0.380 | <0.050 | <0.050 | <0.050 | 0.909 | |
| xylene, m+p- | 179601-23-1 | E611A | 0.050 | mg/kg | 0.223 | <0.050 | <0.050 | <0.050 | 0.547 | |
| xylene, o- | 95-47-6 | E611A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | <0.050 | 0.115 | |
| xylenes, total | 1330-20-7 | E611A | 0.075 | mg/kg | 0.223 | <0.075 | <0.075 | <0.075 | 0.662 | |
| Hydrocarbons | | | | | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 5.0 | mg/kg | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | |
| F1-BTEX | ---- | EC580 | 5.0 | mg/kg | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | |
| F2 (C10-C16) | ---- | E601.SG | 30 | mg/kg | <30 | <30 | 30 | <30 | <30 | |
| F3 (C16-C34) | ---- | E601.SG | 50 | mg/kg | 351 | 187 | 307 | 583 | 356 | |
| F4 (C34-C50) | ---- | E601.SG | 50 | mg/kg | 63 | 100 | 141 | 373 | 317 | |
| F4G-sg | ---- | E601.F4G | 500 | mg/kg | ---- | <500 | 3360 | 1780 | 850 | |
| chromatogram to baseline at nC50 | n/a | E601.SG | - | - | Yes | No | No | No | No | |
| Hydrocarbons Surrogates | | | | | | | | | | |
| bromobenzotrifluoride, 2- (F2-F4 surr) | 392-83-6 | E601.SG | 1.0 | % | 90.2 | 88.7 | 90.0 | 90.9 | 88.2 | |
| dichlorotoluene, 3,4- | 97-75-0 | E581.VH+F1 | 1.0 | % | 91.4 | 98.1 | 70.3 | 99.4 | 96.0 | |
| Volatile Organic Compounds Surrogates | | | | | | | | | | |
| bromofluorobenzene, 4- | 460-00-4 | E611A | 0.10 | % | 75.3 | 75.8 | 70.5 | 74.8 | 74.2 | |
| difluorobenzene, 1,4- | 540-36-3 | E611A | 0.10 | % | 73.6 | 74.1 | 77.5 | 86.8 | 78.4 | |
| Polycyclic Aromatic Hydrocarbons | | | | | | | | | | |
| acenaphthene | 83-32-9 | E641A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | |
| acenaphthylene | 208-96-8 | E641A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | |
| acridine | 260-94-6 | E641A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | |
| anthracene | 120-12-7 | E641A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | |
| benz(a)anthracene | 56-55-3 | E641A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | |
| benzo(a)pyrene | 50-32-8 | E641A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | |
| benzo(b+j)fluoranthene | n/a | E641A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | |



Analytical Results

Sub-Matrix: Soil/Solid

Client sample ID

(Matrix: Soil/Solid)

| | | | | | 22102NT-05 | 22102NT-06 | 22102NT-07 | 22102NT-08 | 22102NT-DUP |
|--|------------|--------|-------|-------|----------------------|------------------------|---------------|------------------------|---------------|
| Client sampling date / time | | | | | 14-Oct-2022 12:40 | 14-Oct-2022 | 14-Oct-2022 | 14-Oct-2022 | 14-Oct-2022 |
| Analyte | CAS Number | Method | LOR | Unit | YL2201870-006 | YL2201870-007 | YL2201870-008 | YL2201870-009 | YL2201870-010 |
| | | | | | Result | Result | Result | Result | Result |
| Polycyclic Aromatic Hydrocarbons | | | | | | | | | |
| benzo(b+j+k)fluoranthene | n/a | E641A | 0.075 | mg/kg | <0.075 | <0.075 | <0.075 | <0.075 | <0.075 |
| benzo(g,h,i)perylene | 191-24-2 | E641A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| benzo(k)fluoranthene | 207-08-9 | E641A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| chrysene | 218-01-9 | E641A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| dibenz(a,h)anthracene | 53-70-3 | E641A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| fluoranthene | 206-44-0 | E641A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| fluorene | 86-73-7 | E641A | 0.050 | mg/kg | <0.050 | <0.050 | 0.052 | <0.050 | <0.050 |
| indeno(1,2,3-c,d)pyrene | 193-39-5 | E641A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| methylnaphthalene, 1- | 90-12-0 | E641A | 0.030 | mg/kg | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 |
| methylnaphthalene, 1+2- | ---- | E641A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| methylnaphthalene, 2- | 91-57-6 | E641A | 0.030 | mg/kg | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 |
| naphthalene | 91-20-3 | E641A | 0.010 | mg/kg | 0.012 | <0.010 | 0.011 | <0.010 | <0.010 |
| phenanthrene | 85-01-8 | E641A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| pyrene | 129-00-0 | E641A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| quinoline | 91-22-5 | E641A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| B(a)P total potency equivalents [B(a)P TPE] | ---- | E641A | 0.065 | mg/kg | <0.065 | <0.065 | <0.065 | <0.065 | <0.065 |
| IACR (CCME) | ---- | E641A | 0.60 | - | <0.60 | <0.60 | <0.60 | <0.60 | <0.60 |
| IACR AB (coarse) | ---- | E641A | 0.10 | - | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| IACR AB (fine) | ---- | E641A | 0.10 | - | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| PAHs, total (BC Sched 3.4) | n/a | E641A | 0.20 | mg/kg | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| PAHs, total (EPA 16) | n/a | E641A | 0.20 | mg/kg | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Polycyclic Aromatic Hydrocarbons Surrogates | | | | | | | | | |
| acridine-d9 | 34749-75-2 | E641A | 0.1 | % | 114 | 58.2 ^{SUR-ND} | 87.6 | 16.9 ^{SUR-ND} | 107 |
| chrysene-d12 | 1719-03-5 | E641A | 0.1 | % | 106 | 102 | 110 | 97.6 | 94.9 |
| naphthalene-d8 | 1146-65-2 | E641A | 0.1 | % | 102 | 92.7 | 104 | 92.8 | 85.6 |
| phenanthrene-d10 | 1517-22-2 | E641A | 0.1 | % | 109 | 105 | 114 | 101 | 100 |

Please refer to the General Comments section for an explanation of any qualifiers detected.

QUALITY CONTROL INTERPRETIVE REPORT

| | | | |
|-------------------------|--|-----------------------|---|
| Work Order | : YL2201870 | Page | : 1 of 13 |
| Client | : KBL Environmental Ltd. | Laboratory | : Yellowknife - Environmental |
| Contact | : Katie Oliver | Account Manager | : Oliver Gregg |
| Address | : 17 Cameron Road PO Box 1895 Yellowknife NT Canada X1A 2P4 | Address | : 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3 |
| Telephone | : 780 893 3305 | Telephone | : 1 867 446 5593 |
| Project | : 22-102NT | Date Samples Received | : 19-Oct-2022 16:35 |
| PO | : KO059 | Issue Date | : 26-Oct-2022 14:12 |
| C-O-C number | : ---- | | |
| Sampler | : ---- | | |
| Site | : ---- | | |
| Quote number | : YL22-KBLE100-001 | | |
| No. of samples received | : 10 | | |
| No. of samples analysed | : 10 | | |

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO: Data Quality Objective.

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- Test sample Surrogate recovery outliers exist for all regular sample matrices - please see following pages for full details.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers occur - please see following pages for full details.

Page : 3 of 13
Work Order : YL2201870
Client : KBL Environmental Ltd.
Project : 22-102NT



Regular Sample Surrogates

Sub-Matrix: **Soil/Solid**

| Analyte Group | Laboratory sample ID | Client/Ref Sample ID | Analyte | CAS Number | Result | Limits | Comment |
|---|----------------------|----------------------|-------------|------------|--------|------------|---|
| Samples Submitted | | | | | | | |
| Polycyclic Aromatic Hydrocarbons Surrogates | YL2201870-007 | 22102NT-06 | acridine-d9 | 34749-75-2 | 58.2 % | 60.0-130 % | Recovery less than lower data quality objective |
| Polycyclic Aromatic Hydrocarbons Surrogates | YL2201870-009 | 22102NT-08 | acridine-d9 | 34749-75-2 | 16.9 % | 60.0-130 % | Recovery less than lower data quality objective |



Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|---|---------|---------------|--------------------------|---------------|--------|------|---------------|---------------|--------|------|
| | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-01 | E601.SG | 14-Oct-2022 | 22-Oct-2022 | 14 days | 8 days | ✓ | 24-Oct-2022 | 40 days | 2 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-02 | E601.SG | 14-Oct-2022 | 22-Oct-2022 | 14 days | 8 days | ✓ | 24-Oct-2022 | 40 days | 2 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-03 | E601.SG | 14-Oct-2022 | 22-Oct-2022 | 14 days | 8 days | ✓ | 24-Oct-2022 | 40 days | 2 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-04 | E601.SG | 14-Oct-2022 | 22-Oct-2022 | 14 days | 8 days | ✓ | 24-Oct-2022 | 40 days | 2 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-05 | E601.SG | 14-Oct-2022 | 22-Oct-2022 | 14 days | 8 days | ✓ | 24-Oct-2022 | 40 days | 2 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-06 | E601.SG | 14-Oct-2022 | 22-Oct-2022 | 14 days | 8 days | ✓ | 24-Oct-2022 | 40 days | 2 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-07 | E601.SG | 14-Oct-2022 | 22-Oct-2022 | 14 days | 8 days | ✓ | 24-Oct-2022 | 40 days | 2 days | ✓ |



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group Container / Client Sample ID(s) | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|--|------------|---------------|--------------------------|---------------|---------|------|---------------|---------------|--------|------|
| | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-08 | E601.SG | 14-Oct-2022 | 22-Oct-2022 | 14 days | 8 days | ✓ | 24-Oct-2022 | 40 days | 2 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-DUP | E601.SG | 14-Oct-2022 | 22-Oct-2022 | 14 days | 8 days | ✓ | 24-Oct-2022 | 40 days | 2 days | ✓ |
| Hydrocarbons : CCME PHCs - F4G by Gravimetry | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-06 | E601.F4G | 14-Oct-2022 | 25-Oct-2022 | 14 days | 11 days | ✓ | 25-Oct-2022 | 40 days | 0 days | ✓ |
| Hydrocarbons : CCME PHCs - F4G by Gravimetry | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-07 | E601.F4G | 14-Oct-2022 | 25-Oct-2022 | 14 days | 11 days | ✓ | 25-Oct-2022 | 40 days | 0 days | ✓ |
| Hydrocarbons : CCME PHCs - F4G by Gravimetry | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-08 | E601.F4G | 14-Oct-2022 | 25-Oct-2022 | 14 days | 11 days | ✓ | 25-Oct-2022 | 40 days | 0 days | ✓ |
| Hydrocarbons : CCME PHCs - F4G by Gravimetry | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-DUP | E601.F4G | 14-Oct-2022 | 25-Oct-2022 | 14 days | 11 days | ✓ | 25-Oct-2022 | 40 days | 0 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass soil methanol vial 22102NT-01 | E581.VH+F1 | 14-Oct-2022 | 22-Oct-2022 | ---- | ---- | | 22-Oct-2022 | 40 days | 8 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass soil methanol vial 22102NT-02 | E581.VH+F1 | 14-Oct-2022 | 22-Oct-2022 | ---- | ---- | | 22-Oct-2022 | 40 days | 8 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass soil methanol vial 22102NT-03 | E581.VH+F1 | 14-Oct-2022 | 22-Oct-2022 | ---- | ---- | | 22-Oct-2022 | 40 days | 8 days | ✓ |



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group Container / Client Sample ID(s) | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|--|------------|---------------|--------------------------|---------------|--------|------|---------------|---------------|---------|------|
| | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass soil methanol vial 22102NT-04 | E581.VH+F1 | 14-Oct-2022 | 22-Oct-2022 | ---- | ---- | | 22-Oct-2022 | 40 days | 8 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass soil methanol vial 22102NT-05 | E581.VH+F1 | 14-Oct-2022 | 22-Oct-2022 | ---- | ---- | | 22-Oct-2022 | 40 days | 8 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass soil methanol vial 22102NT-06 | E581.VH+F1 | 14-Oct-2022 | 22-Oct-2022 | ---- | ---- | | 22-Oct-2022 | 40 days | 8 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass soil methanol vial 22102NT-07 | E581.VH+F1 | 14-Oct-2022 | 22-Oct-2022 | ---- | ---- | | 22-Oct-2022 | 40 days | 8 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass soil methanol vial 22102NT-08 | E581.VH+F1 | 14-Oct-2022 | 22-Oct-2022 | ---- | ---- | | 22-Oct-2022 | 40 days | 8 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass soil methanol vial 22102NT-DUP | E581.VH+F1 | 14-Oct-2022 | 22-Oct-2022 | ---- | ---- | | 22-Oct-2022 | 40 days | 8 days | ✓ |
| Metals : Mercury in Soil/Solid by CVAAS | | | | | | | | | | |
| LDPE bag 22102NT-STF Acceptance | E510 | 14-Oct-2022 | 25-Oct-2022 | ---- | ---- | | 25-Oct-2022 | 28 days | 11 days | ✓ |
| Metals : Metals in Soil/Solid by CRC ICPMS | | | | | | | | | | |
| LDPE bag 22102NT-STF Acceptance | E440 | 14-Oct-2022 | 25-Oct-2022 | ---- | ---- | | 25-Oct-2022 | 180 days | 11 days | ✓ |
| Particle Size : CCME fine/coarse Particle Size Analysis by wet sieve | | | | | | | | | | |
| LDPE bag 22102NT-STF Acceptance | E178 | 14-Oct-2022 | ---- | ---- | ---- | | 24-Oct-2022 | 180 days | 10 days | ✓ |



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group Container / Client Sample ID(s) | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|--|--------|---------------|--------------------------|---------------|--------|------|---------------|---------------|--------|------|
| | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Physical Tests : Moisture Content by Gravimetry | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-01 | E144 | 14-Oct-2022 | ---- | ---- | ---- | | 21-Oct-2022 | ---- | ---- | |
| Physical Tests : Moisture Content by Gravimetry | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-02 | E144 | 14-Oct-2022 | ---- | ---- | ---- | | 21-Oct-2022 | ---- | ---- | |
| Physical Tests : Moisture Content by Gravimetry | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-03 | E144 | 14-Oct-2022 | ---- | ---- | ---- | | 21-Oct-2022 | ---- | ---- | |
| Physical Tests : Moisture Content by Gravimetry | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-04 | E144 | 14-Oct-2022 | ---- | ---- | ---- | | 21-Oct-2022 | ---- | ---- | |
| Physical Tests : Moisture Content by Gravimetry | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-05 | E144 | 14-Oct-2022 | ---- | ---- | ---- | | 21-Oct-2022 | ---- | ---- | |
| Physical Tests : Moisture Content by Gravimetry | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-06 | E144 | 14-Oct-2022 | ---- | ---- | ---- | | 21-Oct-2022 | ---- | ---- | |
| Physical Tests : Moisture Content by Gravimetry | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-07 | E144 | 14-Oct-2022 | ---- | ---- | ---- | | 21-Oct-2022 | ---- | ---- | |
| Physical Tests : Moisture Content by Gravimetry | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-08 | E144 | 14-Oct-2022 | ---- | ---- | ---- | | 21-Oct-2022 | ---- | ---- | |
| Physical Tests : Moisture Content by Gravimetry | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-DUP | E144 | 14-Oct-2022 | ---- | ---- | ---- | | 21-Oct-2022 | ---- | ---- | |



Matrix: Soil/Solid

Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

| Analyte Group Container / Client Sample ID(s) | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|--|--------|---------------|--------------------------|---------------|--------|------|---------------|---------------|--------|------|
| | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Physical Tests : pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) | | | | | | | | | | |
| LDPE bag 22102NT-STF Acceptance | E108B | 14-Oct-2022 | 23-Oct-2022 | ---- | ---- | | 25-Oct-2022 | 30 days | 2 days | ✓ |
| Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-01 | E641A | 14-Oct-2022 | 22-Oct-2022 | 14 days | 8 days | ✓ | 24-Oct-2022 | 40 days | 2 days | ✓ |
| Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-02 | E641A | 14-Oct-2022 | 22-Oct-2022 | 14 days | 8 days | ✓ | 24-Oct-2022 | 40 days | 2 days | ✓ |
| Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-03 | E641A | 14-Oct-2022 | 22-Oct-2022 | 14 days | 8 days | ✓ | 24-Oct-2022 | 40 days | 2 days | ✓ |
| Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-04 | E641A | 14-Oct-2022 | 22-Oct-2022 | 14 days | 8 days | ✓ | 24-Oct-2022 | 40 days | 2 days | ✓ |
| Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-05 | E641A | 14-Oct-2022 | 22-Oct-2022 | 14 days | 8 days | ✓ | 24-Oct-2022 | 40 days | 2 days | ✓ |
| Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-06 | E641A | 14-Oct-2022 | 22-Oct-2022 | 14 days | 8 days | ✓ | 24-Oct-2022 | 40 days | 2 days | ✓ |
| Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-07 | E641A | 14-Oct-2022 | 22-Oct-2022 | 14 days | 8 days | ✓ | 24-Oct-2022 | 40 days | 2 days | ✓ |
| Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-08 | E641A | 14-Oct-2022 | 22-Oct-2022 | 14 days | 8 days | ✓ | 24-Oct-2022 | 40 days | 2 days | ✓ |



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group Container / Client Sample ID(s) | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|--|--------|---------------|--------------------------|---------------|--------|------|---------------|---------------|--------|------|
| | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap 22102NT-DUP | E641A | 14-Oct-2022 | 22-Oct-2022 | 14 days | 8 days | ✓ | 24-Oct-2022 | 40 days | 2 days | ✓ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass soil methanol vial 22102NT-01 | E611A | 14-Oct-2022 | 22-Oct-2022 | ---- | ---- | | 22-Oct-2022 | 40 days | 8 days | ✓ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass soil methanol vial 22102NT-02 | E611A | 14-Oct-2022 | 22-Oct-2022 | ---- | ---- | | 22-Oct-2022 | 40 days | 8 days | ✓ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass soil methanol vial 22102NT-03 | E611A | 14-Oct-2022 | 22-Oct-2022 | ---- | ---- | | 22-Oct-2022 | 40 days | 8 days | ✓ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass soil methanol vial 22102NT-04 | E611A | 14-Oct-2022 | 22-Oct-2022 | ---- | ---- | | 22-Oct-2022 | 40 days | 8 days | ✓ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass soil methanol vial 22102NT-05 | E611A | 14-Oct-2022 | 22-Oct-2022 | ---- | ---- | | 22-Oct-2022 | 40 days | 8 days | ✓ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass soil methanol vial 22102NT-06 | E611A | 14-Oct-2022 | 22-Oct-2022 | ---- | ---- | | 22-Oct-2022 | 40 days | 8 days | ✓ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass soil methanol vial 22102NT-07 | E611A | 14-Oct-2022 | 22-Oct-2022 | ---- | ---- | | 22-Oct-2022 | 40 days | 8 days | ✓ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass soil methanol vial 22102NT-08 | E611A | 14-Oct-2022 | 22-Oct-2022 | ---- | ---- | | 22-Oct-2022 | 40 days | 8 days | ✓ |

Page : 10 of 13
 Work Order : YL2201870
 Client : KBL Environmental Ltd.
 Project : 22-102NT



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|---|--------|---------------|--------------------------|--|--------|------|---------------|---------------|--------|------|
| Container / Client Sample ID(s) | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| | | | | Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | |
| Glass soil methanol vial 22102NT-DUP | E611A | 14-Oct-2022 | 22-Oct-2022 | ---- | ---- | | 22-Oct-2022 | 40 days | 8 days | ✓ |

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).



Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

| Quality Control Sample Type | | | Count | | Frequency (%) | | |
|--|------------|----------|-------|---------|---------------|----------|------------|
| Analytical Methods | Method | QC Lot # | QC | Regular | Actual | Expected | Evaluation |
| Laboratory Duplicates (DUP) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 709167 | 1 | 9 | 11.1 | 5.0 | ✓ |
| CCME fine/coarse Particle Size Analysis by wet sieve | E178 | 711109 | 1 | 7 | 14.2 | 5.0 | ✓ |
| CCME PHCs - F2-F4 by GC-FID | E601.SG | 709445 | 1 | 19 | 5.2 | 5.0 | ✓ |
| CCME PHCs - F4G by Gravimetry | E601.F4G | 714237 | 0 | 4 | 0.0 | 5.0 | ✗ |
| Mercury in Soil/Solid by CVAAS | E510 | 713795 | 1 | 1 | 100.0 | 5.0 | ✓ |
| Metals in Soil/Solid by CRC ICPMS | E440 | 713796 | 1 | 1 | 100.0 | 5.0 | ✓ |
| Moisture Content by Gravimetry | E144 | 708406 | 1 | 19 | 5.2 | 5.0 | ✓ |
| PAHs by Hex:Ace GC-MS | E641A | 709446 | 0 | 9 | 0.0 | 5.0 | ✗ |
| pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) | E108B | 710342 | 1 | 20 | 5.0 | 5.0 | ✓ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 709168 | 1 | 9 | 11.1 | 5.0 | ✓ |
| Laboratory Control Samples (LCS) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 709167 | 1 | 9 | 11.1 | 5.0 | ✓ |
| CCME fine/coarse Particle Size Analysis by wet sieve | E178 | 711109 | 1 | 7 | 14.2 | 5.0 | ✓ |
| CCME PHCs - F2-F4 by GC-FID | E601.SG | 709445 | 2 | 19 | 10.5 | 10.0 | ✓ |
| CCME PHCs - F4G by Gravimetry | E601.F4G | 714237 | 2 | 4 | 50.0 | 10.0 | ✓ |
| Mercury in Soil/Solid by CVAAS | E510 | 713795 | 2 | 1 | 200.0 | 10.0 | ✓ |
| Metals in Soil/Solid by CRC ICPMS | E440 | 713796 | 2 | 1 | 200.0 | 10.0 | ✓ |
| Moisture Content by Gravimetry | E144 | 708406 | 1 | 19 | 5.2 | 5.0 | ✓ |
| PAHs by Hex:Ace GC-MS | E641A | 709446 | 1 | 9 | 11.1 | 5.0 | ✓ |
| pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) | E108B | 710342 | 2 | 20 | 10.0 | 10.0 | ✓ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 709168 | 1 | 9 | 11.1 | 5.0 | ✓ |
| Method Blanks (MB) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 709167 | 1 | 9 | 11.1 | 5.0 | ✓ |
| CCME PHCs - F2-F4 by GC-FID | E601.SG | 709445 | 1 | 19 | 5.2 | 5.0 | ✓ |
| CCME PHCs - F4G by Gravimetry | E601.F4G | 714237 | 1 | 4 | 25.0 | 5.0 | ✓ |
| Mercury in Soil/Solid by CVAAS | E510 | 713795 | 1 | 1 | 100.0 | 5.0 | ✓ |
| Metals in Soil/Solid by CRC ICPMS | E440 | 713796 | 1 | 1 | 100.0 | 5.0 | ✓ |
| Moisture Content by Gravimetry | E144 | 708406 | 1 | 19 | 5.2 | 5.0 | ✓ |
| PAHs by Hex:Ace GC-MS | E641A | 709446 | 1 | 9 | 11.1 | 5.0 | ✓ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 709168 | 1 | 9 | 11.1 | 5.0 | ✓ |
| Matrix Spikes (MS) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 709167 | 1 | 9 | 11.1 | 5.0 | ✓ |
| PAHs by Hex:Ace GC-MS | E641A | 709446 | 1 | 9 | 11.1 | 5.0 | ✓ |



Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

| Analytical Methods | Method / Lab | Matrix | Method Reference | Method Descriptions |
|---|--|------------|---|--|
| pH by Meter (1:2 Soil:0.01M CaCl ₂ Extraction) | E108B Edmonton - Environmental | Soil/Solid | CSSS (2008) 16.3 | A 10g portion of dried (<60°C) and ground (10 mesh/2 mm) sample is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil by centrifuging, settling or decanting and then analyzed using a pH meter and electrode. |
| Moisture Content by Gravimetry | E144 Edmonton - Environmental | Soil/Solid | CCME PHC in Soil - Tier 1 | Moisture is measured gravimetrically by drying the sample at 105°C. Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage. |
| CCME fine/coarse Particle Size Analysis by wet sieve | E178 Edmonton - Environmental | Soil/Solid | CCME Vol 4 Analytical Methods | An air-dried sample is reduced to < 2 mm size and mixed with a dispersing agent (sodium hexametaphosphate). The sample is washed through a 200 mesh (0.075 mm) sieve. The retained mass of sample is used to determine % sand fraction. If the percentage of sand is >50%, the soil is considered to be coarse textured soil. If the percentage of sand is <50%, the soil is considered to be fine textured. |
| Metals in Soil/Solid by CRC ICPMS | E440 Edmonton - Environmental | Soil/Solid | EPA 6020B (mod) | This method is intended to liberate metals that may be environmentally available. Samples are dried, then sieved through a 2 mm sieve, and digested with HNO ₃ and HCl. Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, Tl, V, W, and Zr. Silicate minerals are not solubilized. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. This method does not adequately recover elemental sulfur, and is unsuitable for assessment of elemental sulfur standards or guidelines. Analysis is by Collision/Reaction Cell ICPMS. |
| Mercury in Soil/Solid by CVAAS | E510 Edmonton - Environmental | Soil/Solid | EPA 200.2/1631 Appendix (mod) | Samples are dried, then sieved through a 2 mm sieve, and digested with HNO ₃ and HCl, followed by CVAAS analysis. |
| VH and F1 by Headspace GC-FID | E581.VH+F1 Edmonton - Environmental | Soil/Solid | BC MOE Lab Manual / CCME PHC in Soil - Tier 1 (mod) | Volatile Hydrocarbons (VH and F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. |
| CCME PHCs - F4G by Gravimetry | E601.F4G Edmonton - Environmental | Soil/Solid | CCME PHC in Soil - Tier 1 | A portion of the silica gel treated sample extract is filtered and dried at 105°C and the mass of the residual gravimetric heavy hydrocarbons (F4G) is determined gravimetrically. |
| CCME PHCs - F2-F4 by GC-FID | E601.SG Edmonton - Environmental | Soil/Solid | CCME PHC in Soil - Tier 1 | Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4). |



| Analytical Methods | Method / Lab | Matrix | Method Reference | Method Descriptions |
|---|------------------------------------|------------|--|---|
| BTEX by Headspace GC-MS | E611A Edmonton - Environmental | Soil/Solid | EPA 8260D (mod) | Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. |
| PAHs by Hex:Ace GC-MS | E641A Edmonton - Environmental | Soil/Solid | EPA 8270E (mod) | Polycyclic Aromatic Hydrocarbons (PAHs) are extracted with hexane/acetone and analyzed by GC-MS. If reported, IACR (index of additive cancer risk, unitless) and B(a)P toxic potency equivalent (in soil concentration units) are calculated as per CCME PAH Soil Quality Guidelines fact sheet (2010) or ABT1. |
| F1-BTEX | EC580 Edmonton - Environmental | Soil/Solid | CCME PHC in Soil - Tier 1 | F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX). |
| Preparation Methods | Method / Lab | Matrix | Method Reference | Method Descriptions |
| Leach 1:2 Soil : 0.01CaCl ₂ | EP108B Edmonton - Environmental | Soil/Solid | CSSS (2008) 16.3 | A 10g portion of dried (<60°C) and ground (10 mesh/2 mm) sample is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil by centrifuging, settling or decanting and then analyzed using a pH meter and electrode. |
| Digestion for Metals and Mercury | EP440 Edmonton - Environmental | Soil/Solid | EPA 200.2 (mod) | Samples are dried, then sieved through a 2 mm sieve, and digested with HNO ₃ and HCl. This method is intended to liberate metals that may be environmentally available. |
| VOCs Methanol Extraction for Headspace Analysis | EP581 Edmonton - Environmental | Soil/Solid | EPA 5035A (mod) | VOCs in samples are extracted with methanol. Extracts are then prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. |
| PHCs and PAHs Hexane-Acetone Tumbler Extraction | EP601 Edmonton - Environmental | Soil/Solid | CCME PHC in Soil - Tier 1 (mod) | Samples are subsampled and Petroleum Hydrocarbons (PHC) and PAHs are extracted with 1:1 hexane:acetone using a rotary extractor. |
| Dry and Grind in Soil/Solid <60°C | EPP442 Edmonton - Environmental | Soil/Solid | Soil Sampling and Methods of Analysis, Carter 2008 | After removal of any coarse fragments and reservation of wet subsamples a portion of homogenized sample is set in a tray and dried at less than 60°C until dry. The sample is then particle size reduced with an automated crusher or mortar and pestle, typically to <2 mm. Further size reduction may be needed for particular tests. |

QUALITY CONTROL REPORT

| | | | |
|--------------------------------|--|--------------------------------|---|
| Work Order | : YL2201870 | Page | : 1 of 14 |
| Client | : KBL Environmental Ltd. | Laboratory | : Yellowknife - Environmental |
| Contact | : Katie Oliver | Account Manager | : Oliver Gregg |
| Address | : 17 Cameron Road PO Box 1895 Yellowknife NT Canada X1A 2P4 | Address | : 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3 |
| Telephone | : | Telephone | : 1 867 446 5593 |
| Project | : 22-102NT | Date Samples Received | : 19-Oct-2022 16:35 |
| PO | : KO059 | Date Analysis Commenced | : 21-Oct-2022 |
| C-O-C number | : ---- | Issue Date | : 26-Oct-2022 14:12 |
| Sampler | : ---- 780 893 3305 | | |
| Site | : ---- | | |
| Quote number | : YL22-KBLE100-001 | | |
| No. of samples received | : 10 | | |
| No. of samples analysed | : 10 | | |

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Reference Material (RM) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

| <i>Signatories</i> | <i>Position</i> | <i>Laboratory Department</i> |
|--------------------|--------------------------------|--|
| Dan Nguyen | Team Leader - Inorganics | Edmonton Metals, Edmonton, Alberta |
| Kari Mulroy | Lab Supervisor - Environmental | Edmonton Organics, Edmonton, Alberta |
| Leah Yee | Lab Assistant | Edmonton Inorganics, Edmonton, Alberta |
| Ping Yeung | Team Leader - Inorganics | Edmonton Inorganics, Edmonton, Alberta |
| Ping Yeung | Team Leader - Inorganics | Edmonton Metals, Edmonton, Alberta |
| Remy Gatabazi | Lab Analyst | Edmonton Organics, Edmonton, Alberta |
| Tiffany McKay | Lab Assistant | Edmonton Organics, Edmonton, Alberta |
| Yan Zhang | Lab Analyst | Edmonton Organics, Edmonton, Alberta |

Page : 2 of 14
Work Order : YL2201870
Client : KBL Environmental Ltd.
Project : 22-102NT



General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.



Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

| Sub-Matrix: Soil/Solid | | | | | Laboratory Duplicate (DUP) Report | | | | | | |
|---------------------------------|------------------------|------------------------|------------|--------|-----------------------------------|----------|-----------------|------------------|----------------------|------------------|-----------|
| Laboratory sample ID | Client sample ID | Analyte | CAS Number | Method | LOR | Unit | Original Result | Duplicate Result | RPD(%) or Difference | Duplicate Limits | Qualifier |
| Physical Tests (QC Lot: 708406) | | | | | | | | | | | |
| EO2209178-001 | Anonymous | moisture | ---- | E144 | 0.25 | % | 16.4 | 16.8 | 2.86% | 20% | ---- |
| Physical Tests (QC Lot: 710342) | | | | | | | | | | | |
| EO2208435-001 | Anonymous | pH (1:2 soil:CaCl2-aq) | ---- | E108B | 0.10 | pH units | 7.26 | 7.18 | 1.11% | 3% | ---- |
| Particle Size (QC Lot: 711109) | | | | | | | | | | | |
| EO2208956-007 | Anonymous | sand (>0.075mm) | ---- | E178 | 1.0 | % | 15.4 | 15.8 | 0.4 | Diff <2x LOR | ---- |
| Metals (QC Lot: 713795) | | | | | | | | | | | |
| YL2201870-001 | 22102NT-STF Acceptance | mercury | 7439-97-6 | E510 | 0.0050 | mg/kg | 0.0216 | 0.0301 | 33.0% | 40% | ---- |
| Metals (QC Lot: 713796) | | | | | | | | | | | |
| YL2201870-001 | 22102NT-STF Acceptance | aluminum | 7429-90-5 | E440 | 50 | mg/kg | 4130 | 3690 | 11.3% | 40% | ---- |
| | | antimony | 7440-36-0 | E440 | 0.10 | mg/kg | 0.38 | 0.33 | 0.05 | Diff <2x LOR | ---- |
| | | arsenic | 7440-38-2 | E440 | 0.10 | mg/kg | 7.44 | 6.43 | 14.5% | 30% | ---- |
| | | barium | 7440-39-3 | E440 | 0.50 | mg/kg | 276 | 238 | 14.7% | 40% | ---- |
| | | beryllium | 7440-41-7 | E440 | 0.10 | mg/kg | 0.22 | 0.20 | 0.02 | Diff <2x LOR | ---- |
| | | bismuth | 7440-69-9 | E440 | 0.20 | mg/kg | <0.20 | <0.20 | 0 | Diff <2x LOR | ---- |
| | | boron | 7440-42-8 | E440 | 5.0 | mg/kg | 5.8 | 5.1 | 0.7 | Diff <2x LOR | ---- |
| | | cadmium | 7440-43-9 | E440 | 0.020 | mg/kg | 0.163 | 0.136 | 18.3% | 30% | ---- |
| | | calcium | 7440-70-2 | E440 | 50 | mg/kg | 237000 | 206000 | 14.0% | 30% | ---- |
| | | chromium | 7440-47-3 | E440 | 0.50 | mg/kg | 9.80 | 8.82 | 10.5% | 30% | ---- |
| | | cobalt | 7440-48-4 | E440 | 0.10 | mg/kg | 4.39 | 3.96 | 10.2% | 30% | ---- |
| | | copper | 7440-50-8 | E440 | 0.50 | mg/kg | 8.00 | 7.15 | 11.2% | 30% | ---- |
| | | iron | 7439-89-6 | E440 | 50 | mg/kg | 11700 | 10500 | 11.0% | 30% | ---- |
| | | lead | 7439-92-1 | E440 | 0.50 | mg/kg | 6.33 | 6.03 | 4.76% | 40% | ---- |
| | | lithium | 7439-93-2 | E440 | 2.0 | mg/kg | 5.3 | 4.5 | 0.8 | Diff <2x LOR | ---- |
| | | magnesium | 7439-95-4 | E440 | 20 | mg/kg | 10300 | 9380 | 9.38% | 30% | ---- |
| | | manganese | 7439-96-5 | E440 | 1.0 | mg/kg | 223 | 197 | 12.4% | 30% | ---- |
| | | molybdenum | 7439-98-7 | E440 | 0.10 | mg/kg | 2.10 | 1.79 | 15.8% | 40% | ---- |
| | | nickel | 7440-02-0 | E440 | 0.50 | mg/kg | 16.8 | 15.1 | 11.1% | 30% | ---- |
| | | phosphorus | 7723-14-0 | E440 | 50 | mg/kg | 674 | 645 | 4.38% | 30% | ---- |
| | | potassium | 7440-09-7 | E440 | 100 | mg/kg | 710 | 600 | 15.5% | 40% | ---- |
| | | selenium | 7782-49-2 | E440 | 0.20 | mg/kg | 0.37 | 0.36 | 0.009 | Diff <2x LOR | ---- |



| Sub-Matrix: Soil/Solid | | | | | Laboratory Duplicate (DUP) Report | | | | | | |
|---|------------------------|--------------|-------------|------------|-----------------------------------|-------|-----------------|------------------|----------------------|------------------|-----------|
| Laboratory sample ID | Client sample ID | Analyte | CAS Number | Method | LOR | Unit | Original Result | Duplicate Result | RPD(%) or Difference | Duplicate Limits | Qualifier |
| Metals (QC Lot: 713796) - continued | | | | | | | | | | | |
| YL2201870-001 | 22102NT-STF Acceptance | silver | 7440-22-4 | E440 | 0.10 | mg/kg | <0.10 | <0.10 | 0 | Diff <2x LOR | ---- |
| | | sodium | 7440-23-5 | E440 | 50 | mg/kg | 100 | 88 | 12 | Diff <2x LOR | ---- |
| | | strontium | 7440-24-6 | E440 | 0.50 | mg/kg | 141 | 122 | 14.1% | 40% | ---- |
| | | sulfur | 7704-34-9 | E440 | 1000 | mg/kg | <1000 | <1000 | 0 | Diff <2x LOR | ---- |
| | | thallium | 7440-28-0 | E440 | 0.050 | mg/kg | 0.122 | 0.110 | 0.012 | Diff <2x LOR | ---- |
| | | tin | 7440-31-5 | E440 | 2.0 | mg/kg | <2.0 | <2.0 | 0 | Diff <2x LOR | ---- |
| | | titanium | 7440-32-6 | E440 | 1.0 | mg/kg | 44.5 | 39.8 | 11.2% | 40% | ---- |
| | | tungsten | 7440-33-7 | E440 | 0.50 | mg/kg | <0.50 | <0.50 | 0 | Diff <2x LOR | ---- |
| | | uranium | 7440-61-1 | E440 | 0.050 | mg/kg | 2.64 | 2.49 | 6.07% | 30% | ---- |
| | | vanadium | 7440-62-2 | E440 | 0.20 | mg/kg | 18.9 | 16.7 | 12.2% | 30% | ---- |
| | | zinc | 7440-66-6 | E440 | 2.0 | mg/kg | 44.3 | 39.7 | 10.9% | 30% | ---- |
| zirconium | 7440-67-7 | E440 | 1.0 | mg/kg | 1.5 | 1.3 | 0.1 | Diff <2x LOR | ---- | | |
| Volatile Organic Compounds (QC Lot: 709167) | | | | | | | | | | | |
| YL2201870-002 | 22102NT-01 | benzene | 71-43-2 | E611A | 0.0050 | mg/kg | 0.174 | 0.190 | 8.31% | 40% | ---- |
| | | ethylbenzene | 100-41-4 | E611A | 0.015 | mg/kg | 0.079 | 0.093 | 16.9% | 40% | ---- |
| | | toluene | 108-88-3 | E611A | 0.050 | mg/kg | 0.444 | 0.473 | 6.27% | 40% | ---- |
| | | xylene, m+p- | 179601-23-1 | E611A | 0.050 | mg/kg | 0.318 | 0.374 | 16.3% | 40% | ---- |
| | | xylene, o- | 95-47-6 | E611A | 0.050 | mg/kg | 0.062 | 0.067 | 0.005 | Diff <2x LOR | ---- |
| Hydrocarbons (QC Lot: 709168) | | | | | | | | | | | |
| YL2201870-002 | 22102NT-01 | F1 (C6-C10) | ---- | E581.VH+F1 | 5.0 | mg/kg | <5.0 | <5.0 | 0 | Diff <2x LOR | ---- |
| Hydrocarbons (QC Lot: 709445) | | | | | | | | | | | |
| YL2201847-023 | Anonymous | F2 (C10-C16) | ---- | E601.SG | 25 | mg/kg | 8520 | 6860 | 21.5% | 40% | ---- |
| | | F3 (C16-C34) | ---- | E601.SG | 50 | mg/kg | 940 | 762 | 20.9% | 40% | ---- |
| | | F4 (C34-C50) | ---- | E601.SG | 50 | mg/kg | <50 | <50 | 0 | Diff <2x LOR | ---- |



Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Soil/Solid

| Analyte | CAS Number | Method | LOR | Unit | Result | Qualifier |
|--------------------------------|------------|--------|-------|-------|---------|-----------|
| Physical Tests (QCLot: 708406) | | | | | | |
| moisture | --- | E144 | 0.25 | % | <0.25 | --- |
| Metals (QCLot: 713795) | | | | | | |
| mercury | 7439-97-6 | E510 | 0.005 | mg/kg | <0.0050 | --- |
| Metals (QCLot: 713796) | | | | | | |
| aluminum | 7429-90-5 | E440 | 50 | mg/kg | <50 | --- |
| antimony | 7440-36-0 | E440 | 0.1 | mg/kg | <0.10 | --- |
| arsenic | 7440-38-2 | E440 | 0.1 | mg/kg | <0.10 | --- |
| barium | 7440-39-3 | E440 | 0.5 | mg/kg | <0.50 | --- |
| beryllium | 7440-41-7 | E440 | 0.1 | mg/kg | <0.10 | --- |
| bismuth | 7440-69-9 | E440 | 0.2 | mg/kg | <0.20 | --- |
| boron | 7440-42-8 | E440 | 5 | mg/kg | <5.0 | --- |
| cadmium | 7440-43-9 | E440 | 0.02 | mg/kg | <0.020 | --- |
| calcium | 7440-70-2 | E440 | 50 | mg/kg | <50 | --- |
| chromium | 7440-47-3 | E440 | 0.5 | mg/kg | <0.50 | --- |
| cobalt | 7440-48-4 | E440 | 0.1 | mg/kg | <0.10 | --- |
| copper | 7440-50-8 | E440 | 0.5 | mg/kg | <0.50 | --- |
| iron | 7439-89-6 | E440 | 50 | mg/kg | <50 | --- |
| lead | 7439-92-1 | E440 | 0.5 | mg/kg | <0.50 | --- |
| lithium | 7439-93-2 | E440 | 2 | mg/kg | <2.0 | --- |
| magnesium | 7439-95-4 | E440 | 20 | mg/kg | <20 | --- |
| manganese | 7439-96-5 | E440 | 1 | mg/kg | <1.0 | --- |
| molybdenum | 7439-98-7 | E440 | 0.1 | mg/kg | <0.10 | --- |
| nickel | 7440-02-0 | E440 | 0.5 | mg/kg | <0.50 | --- |
| phosphorus | 7723-14-0 | E440 | 50 | mg/kg | <50 | --- |
| potassium | 7440-09-7 | E440 | 100 | mg/kg | <100 | --- |
| selenium | 7782-49-2 | E440 | 0.2 | mg/kg | <0.20 | --- |
| silver | 7440-22-4 | E440 | 0.1 | mg/kg | <0.10 | --- |
| sodium | 7440-23-5 | E440 | 50 | mg/kg | <50 | --- |
| strontium | 7440-24-6 | E440 | 0.5 | mg/kg | <0.50 | --- |
| sulfur | 7704-34-9 | E440 | 1000 | mg/kg | <1000 | --- |
| thallium | 7440-28-0 | E440 | 0.05 | mg/kg | <0.050 | --- |
| tin | 7440-31-5 | E440 | 2 | mg/kg | <2.0 | --- |



Sub-Matrix: Soil/Solid

| Analyte | CAS Number | Method | LOR | Unit | Result | Qualifier |
|---|-------------|------------|-------|-------|---------|-----------|
| Metals (QCLot: 713796) - continued | | | | | | |
| titanium | 7440-32-6 | E440 | 1 | mg/kg | <1.0 | ---- |
| tungsten | 7440-33-7 | E440 | 0.5 | mg/kg | <0.50 | ---- |
| uranium | 7440-61-1 | E440 | 0.05 | mg/kg | <0.050 | ---- |
| vanadium | 7440-62-2 | E440 | 0.2 | mg/kg | <0.20 | ---- |
| zinc | 7440-66-6 | E440 | 2 | mg/kg | <2.0 | ---- |
| zirconium | 7440-67-7 | E440 | 1 | mg/kg | <1.0 | ---- |
| Volatile Organic Compounds (QCLot: 709167) | | | | | | |
| benzene | 71-43-2 | E611A | 0.005 | mg/kg | <0.0050 | ---- |
| ethylbenzene | 100-41-4 | E611A | 0.015 | mg/kg | <0.015 | ---- |
| toluene | 108-88-3 | E611A | 0.05 | mg/kg | <0.050 | ---- |
| xylene, m+p- | 179601-23-1 | E611A | 0.03 | mg/kg | <0.030 | ---- |
| xylene, o- | 95-47-6 | E611A | 0.03 | mg/kg | <0.030 | ---- |
| Hydrocarbons (QCLot: 709168) | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 5 | mg/kg | <5.0 | ---- |
| Hydrocarbons (QCLot: 709445) | | | | | | |
| F2 (C10-C16) | ---- | E601.SG | 25 | mg/kg | <25 | ---- |
| F3 (C16-C34) | ---- | E601.SG | 50 | mg/kg | <50 | ---- |
| F4 (C34-C50) | ---- | E601.SG | 50 | mg/kg | <50 | ---- |
| Hydrocarbons (QCLot: 714237) | | | | | | |
| F4G-sg | ---- | E601.F4G | 500 | mg/kg | <500 | ---- |
| Polycyclic Aromatic Hydrocarbons (QCLot: 709446) | | | | | | |
| acenaphthene | 83-32-9 | E641A | 0.05 | mg/kg | <0.050 | ---- |
| acenaphthylene | 208-96-8 | E641A | 0.05 | mg/kg | <0.050 | ---- |
| acridine | 260-94-6 | E641A | 0.05 | mg/kg | <0.050 | ---- |
| anthracene | 120-12-7 | E641A | 0.05 | mg/kg | <0.050 | ---- |
| benz(a)anthracene | 56-55-3 | E641A | 0.05 | mg/kg | <0.050 | ---- |
| benzo(a)pyrene | 50-32-8 | E641A | 0.05 | mg/kg | <0.050 | ---- |
| benzo(b+j)fluoranthene | n/a | E641A | 0.05 | mg/kg | <0.050 | ---- |
| benzo(g,h,i)perylene | 191-24-2 | E641A | 0.05 | mg/kg | <0.050 | ---- |
| benzo(k)fluoranthene | 207-08-9 | E641A | 0.05 | mg/kg | <0.050 | ---- |
| chrysene | 218-01-9 | E641A | 0.05 | mg/kg | <0.050 | ---- |
| dibenz(a,h)anthracene | 53-70-3 | E641A | 0.05 | mg/kg | <0.050 | ---- |
| fluoranthene | 206-44-0 | E641A | 0.05 | mg/kg | <0.050 | ---- |
| fluorene | 86-73-7 | E641A | 0.05 | mg/kg | <0.050 | ---- |
| indeno(1,2,3-c,d)pyrene | 193-39-5 | E641A | 0.05 | mg/kg | <0.050 | ---- |



Sub-Matrix: Soil/Solid

| Analyte | CAS Number | Method | LOR | Unit | Result | Qualifier |
|--|------------|--------|------|-------|--------|-----------|
| Polycyclic Aromatic Hydrocarbons (QCLot: 709446) - continued | | | | | | |
| methylnaphthalene, 1- | 90-12-0 | E641A | 0.03 | mg/kg | <0.030 | ---- |
| methylnaphthalene, 2- | 91-57-6 | E641A | 0.03 | mg/kg | <0.030 | ---- |
| naphthalene | 91-20-3 | E641A | 0.01 | mg/kg | <0.010 | ---- |
| phenanthrene | 85-01-8 | E641A | 0.05 | mg/kg | <0.050 | ---- |
| pyrene | 129-00-0 | E641A | 0.05 | mg/kg | <0.050 | ---- |
| quinoline | 91-22-5 | E641A | 0.05 | mg/kg | <0.050 | ---- |



Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Soil/Solid

| | | | | | Laboratory Control Sample (LCS) Report | | | | |
|--------------------------------|------------|--------|-------|----------|--|--------------|---------------------|------|-----------|
| | | | | | Spike | Recovery (%) | Recovery Limits (%) | | |
| Analyte | CAS Number | Method | LOR | Unit | Concentration | LCS | Low | High | Qualifier |
| Physical Tests (QCLot: 708406) | | | | | | | | | |
| moisture | ---- | E144 | 0.25 | % | 50 % | 100 | 90.0 | 110 | ---- |
| Physical Tests (QCLot: 710342) | | | | | | | | | |
| pH (1:2 soil:CaCl2-aq) | ---- | E108B | ---- | pH units | 6 pH units | 98.0 | 97.0 | 103 | ---- |
| Metals (QCLot: 713795) | | | | | | | | | |
| mercury | 7439-97-6 | E510 | 0.005 | mg/kg | 0.1 mg/kg | 105 | 70.0 | 130 | ---- |
| Metals (QCLot: 713796) | | | | | | | | | |
| aluminum | 7429-90-5 | E440 | 50 | mg/kg | 200 mg/kg | 110 | 80.0 | 120 | ---- |
| antimony | 7440-36-0 | E440 | 0.1 | mg/kg | 100 mg/kg | 112 | 80.0 | 120 | ---- |
| arsenic | 7440-38-2 | E440 | 0.1 | mg/kg | 100 mg/kg | 110 | 80.0 | 120 | ---- |
| barium | 7440-39-3 | E440 | 0.5 | mg/kg | 25 mg/kg | 113 | 80.0 | 120 | ---- |
| beryllium | 7440-41-7 | E440 | 0.1 | mg/kg | 10 mg/kg | 98.7 | 80.0 | 120 | ---- |
| bismuth | 7440-69-9 | E440 | 0.2 | mg/kg | 100 mg/kg | 110 | 80.0 | 120 | ---- |
| boron | 7440-42-8 | E440 | 5 | mg/kg | 100 mg/kg | 104 | 80.0 | 120 | ---- |
| cadmium | 7440-43-9 | E440 | 0.02 | mg/kg | 10 mg/kg | 101 | 80.0 | 120 | ---- |
| calcium | 7440-70-2 | E440 | 50 | mg/kg | 5000 mg/kg | 105 | 80.0 | 120 | ---- |
| chromium | 7440-47-3 | E440 | 0.5 | mg/kg | 25 mg/kg | 107 | 80.0 | 120 | ---- |
| cobalt | 7440-48-4 | E440 | 0.1 | mg/kg | 25 mg/kg | 105 | 80.0 | 120 | ---- |
| copper | 7440-50-8 | E440 | 0.5 | mg/kg | 25 mg/kg | 102 | 80.0 | 120 | ---- |
| iron | 7439-89-6 | E440 | 50 | mg/kg | 100 mg/kg | 110 | 80.0 | 120 | ---- |
| lead | 7439-92-1 | E440 | 0.5 | mg/kg | 50 mg/kg | 112 | 80.0 | 120 | ---- |
| lithium | 7439-93-2 | E440 | 2 | mg/kg | 25 mg/kg | 99.8 | 80.0 | 120 | ---- |
| magnesium | 7439-95-4 | E440 | 20 | mg/kg | 5000 mg/kg | 108 | 80.0 | 120 | ---- |
| manganese | 7439-96-5 | E440 | 1 | mg/kg | 25 mg/kg | 105 | 80.0 | 120 | ---- |
| molybdenum | 7439-98-7 | E440 | 0.1 | mg/kg | 25 mg/kg | 110 | 80.0 | 120 | ---- |
| nickel | 7440-02-0 | E440 | 0.5 | mg/kg | 50 mg/kg | 106 | 80.0 | 120 | ---- |
| phosphorus | 7723-14-0 | E440 | 50 | mg/kg | 1000 mg/kg | 119 | 80.0 | 120 | ---- |
| potassium | 7440-09-7 | E440 | 100 | mg/kg | 5000 mg/kg | 107 | 80.0 | 120 | ---- |
| selenium | 7782-49-2 | E440 | 0.2 | mg/kg | 100 mg/kg | 103 | 80.0 | 120 | ---- |
| silver | 7440-22-4 | E440 | 0.1 | mg/kg | 10 mg/kg | 101 | 80.0 | 120 | ---- |
| sodium | 7440-23-5 | E440 | 50 | mg/kg | 5000 mg/kg | 101 | 80.0 | 120 | ---- |
| strontium | 7440-24-6 | E440 | 0.5 | mg/kg | 25 mg/kg | 104 | 80.0 | 120 | ---- |
| sulfur | 7704-34-9 | E440 | 1000 | mg/kg | 5000 mg/kg | 105 | 80.0 | 120 | ---- |



| Sub-Matrix: Soil/Solid | | | | | Laboratory Control Sample (LCS) Report | | | | |
|--|-------------|------------|-------|-------|--|--------------|---------------------|------|-----------|
| | | | | | Spike | Recovery (%) | Recovery Limits (%) | | Qualifier |
| | | | | | Concentration | LCS | Low | High | |
| Analyte | CAS Number | Method | LOR | Unit | | | | | |
| Metals (QCLot: 713796) - continued | | | | | | | | | |
| thallium | 7440-28-0 | E440 | 0.05 | mg/kg | 100 mg/kg | 104 | 80.0 | 120 | ---- |
| tin | 7440-31-5 | E440 | 2 | mg/kg | 50 mg/kg | 108 | 80.0 | 120 | ---- |
| titanium | 7440-32-6 | E440 | 1 | mg/kg | 25 mg/kg | 110 | 80.0 | 120 | ---- |
| tungsten | 7440-33-7 | E440 | 0.5 | mg/kg | 10 mg/kg | 115 | 80.0 | 120 | ---- |
| uranium | 7440-61-1 | E440 | 0.05 | mg/kg | 0.5 mg/kg | 113 | 80.0 | 120 | ---- |
| vanadium | 7440-62-2 | E440 | 0.2 | mg/kg | 50 mg/kg | 108 | 80.0 | 120 | ---- |
| zinc | 7440-66-6 | E440 | 2 | mg/kg | 50 mg/kg | 104 | 80.0 | 120 | ---- |
| zirconium | 7440-67-7 | E440 | 1 | mg/kg | 10 mg/kg | 117 | 80.0 | 120 | ---- |
| Volatile Organic Compounds (QCLot: 709167) | | | | | | | | | |
| benzene | 71-43-2 | E611A | 0.005 | mg/kg | 2.5 mg/kg | 86.8 | 70.0 | 130 | ---- |
| ethylbenzene | 100-41-4 | E611A | 0.015 | mg/kg | 2.5 mg/kg | 93.5 | 70.0 | 130 | ---- |
| toluene | 108-88-3 | E611A | 0.05 | mg/kg | 2.5 mg/kg | 97.3 | 70.0 | 130 | ---- |
| xylene, m+p- | 179601-23-1 | E611A | 0.03 | mg/kg | 5 mg/kg | 115 | 70.0 | 130 | ---- |
| xylene, o- | 95-47-6 | E611A | 0.03 | mg/kg | 2.5 mg/kg | 104 | 70.0 | 130 | ---- |
| Hydrocarbons (QCLot: 709168) | | | | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 5 | mg/kg | 86 mg/kg | 113 | 70.0 | 130 | ---- |
| Hydrocarbons (QCLot: 709445) | | | | | | | | | |
| F2 (C10-C16) | ---- | E601.SG | 25 | mg/kg | 652 mg/kg | 103 | 70.0 | 130 | ---- |
| F3 (C16-C34) | ---- | E601.SG | 50 | mg/kg | 1209 mg/kg | 94.6 | 70.0 | 130 | ---- |
| F4 (C34-C50) | ---- | E601.SG | 50 | mg/kg | 905 mg/kg | 91.1 | 70.0 | 130 | ---- |
| Hydrocarbons (QCLot: 714237) | | | | | | | | | |
| F4G-sg | ---- | E601.F4G | 500 | mg/kg | 1540 mg/kg | 92.5 | 70.0 | 130 | ---- |
| Polycyclic Aromatic Hydrocarbons (QCLot: 709446) | | | | | | | | | |
| acenaphthene | 83-32-9 | E641A | 0.05 | mg/kg | 0.5 mg/kg | 91.0 | 60.0 | 130 | ---- |
| acenaphthylene | 208-96-8 | E641A | 0.05 | mg/kg | 0.5 mg/kg | 98.5 | 60.0 | 130 | ---- |
| acridine | 260-94-6 | E641A | 0.05 | mg/kg | 0.5 mg/kg | 80.5 | 60.0 | 130 | ---- |
| anthracene | 120-12-7 | E641A | 0.05 | mg/kg | 0.5 mg/kg | 86.8 | 60.0 | 130 | ---- |
| benz(a)anthracene | 56-55-3 | E641A | 0.05 | mg/kg | 0.5 mg/kg | 86.4 | 60.0 | 130 | ---- |
| benzo(a)pyrene | 50-32-8 | E641A | 0.05 | mg/kg | 0.5 mg/kg | 81.4 | 60.0 | 130 | ---- |
| benzo(b+j)fluoranthene | n/a | E641A | 0.05 | mg/kg | 0.5 mg/kg | 84.0 | 60.0 | 130 | ---- |
| benzo(g,h,i)perylene | 191-24-2 | E641A | 0.05 | mg/kg | 0.5 mg/kg | 98.6 | 60.0 | 130 | ---- |
| benzo(k)fluoranthene | 207-08-9 | E641A | 0.05 | mg/kg | 0.5 mg/kg | 85.5 | 60.0 | 130 | ---- |
| chrysene | 218-01-9 | E641A | 0.05 | mg/kg | 0.5 mg/kg | 80.7 | 60.0 | 130 | ---- |



| Sub-Matrix: Soil/Solid | | | | | Laboratory Control Sample (LCS) Report | | | | |
|--|------------|--------|------|-------|--|--------------|---------------------|------|-----------|
| | | | | | Spike | Recovery (%) | Recovery Limits (%) | | |
| | | | | | Concentration | LCS | Low | High | Qualifier |
| Analyte | CAS Number | Method | LOR | Unit | | | | | |
| Polycyclic Aromatic Hydrocarbons (QCLot: 709446) - continued | | | | | | | | | |
| dibenz(a,h)anthracene | 53-70-3 | E641A | 0.05 | mg/kg | 0.5 mg/kg | 108 | 60.0 | 130 | ---- |
| fluoranthene | 206-44-0 | E641A | 0.05 | mg/kg | 0.5 mg/kg | 105 | 60.0 | 130 | ---- |
| fluorene | 86-73-7 | E641A | 0.05 | mg/kg | 0.5 mg/kg | 103 | 60.0 | 130 | ---- |
| indeno(1,2,3-c,d)pyrene | 193-39-5 | E641A | 0.05 | mg/kg | 0.5 mg/kg | 106 | 60.0 | 130 | ---- |
| methylnaphthalene, 1- | 90-12-0 | E641A | 0.03 | mg/kg | 0.5 mg/kg | 92.6 | 60.0 | 130 | ---- |
| methylnaphthalene, 2- | 91-57-6 | E641A | 0.03 | mg/kg | 0.5 mg/kg | 91.2 | 60.0 | 130 | ---- |
| naphthalene | 91-20-3 | E641A | 0.01 | mg/kg | 0.5 mg/kg | 89.3 | 50.0 | 130 | ---- |
| phenanthrene | 85-01-8 | E641A | 0.05 | mg/kg | 0.5 mg/kg | 104 | 60.0 | 130 | ---- |
| pyrene | 129-00-0 | E641A | 0.05 | mg/kg | 0.5 mg/kg | 106 | 60.0 | 130 | ---- |
| quinoline | 91-22-5 | E641A | 0.05 | mg/kg | 0.5 mg/kg | 94.3 | 60.0 | 130 | ---- |



Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Soil/Solid

| Sub-Matrix: Soil/Solid | | | | | Matrix Spike (MS) Report | | | | | |
|--|------------------|-------------------------|-------------|--------|--------------------------|-----------|--------------|---------------------|------|-----------|
| | | | | | Spike | | Recovery (%) | Recovery Limits (%) | | |
| Laboratory sample ID | Client sample ID | Analyte | CAS Number | Method | Concentration | Target | MS | Low | High | Qualifier |
| Volatile Organic Compounds (QCLot: 709167) | | | | | | | | | | |
| YL2201870-003 | 22102NT-02 | benzene | 71-43-2 | E611A | 1.64 mg/kg | 2.5 mg/kg | 91.4 | 60.0 | 140 | ---- |
| | | ethylbenzene | 100-41-4 | E611A | 2.29 mg/kg | 2.5 mg/kg | 128 | 60.0 | 140 | ---- |
| | | toluene | 108-88-3 | E611A | 1.56 mg/kg | 2.5 mg/kg | 87.3 | 60.0 | 140 | ---- |
| | | xylene, m+p- | 179601-23-1 | E611A | 4.28 mg/kg | 5 mg/kg | 119 | 60.0 | 140 | ---- |
| | | xylene, o- | 95-47-6 | E611A | 2.46 mg/kg | 2.5 mg/kg | 137 | 60.0 | 140 | ---- |
| Polycyclic Aromatic Hydrocarbons (QCLot: 709446) | | | | | | | | | | |
| YL2201870-002 | 22102NT-01 | acenaphthene | 83-32-9 | E641A | 0.364 mg/kg | 0.5 mg/kg | 92.2 | 50.0 | 140 | ---- |
| | | acenaphthylene | 208-96-8 | E641A | 0.398 mg/kg | 0.5 mg/kg | 101 | 50.0 | 140 | ---- |
| | | acridine | 260-94-6 | E641A | 0.438 mg/kg | 0.5 mg/kg | 111 | 50.0 | 140 | ---- |
| | | anthracene | 120-12-7 | E641A | 0.430 mg/kg | 0.5 mg/kg | 109 | 50.0 | 140 | ---- |
| | | benz(a)anthracene | 56-55-3 | E641A | 0.342 mg/kg | 0.5 mg/kg | 86.6 | 50.0 | 140 | ---- |
| | | benzo(a)pyrene | 50-32-8 | E641A | 0.379 mg/kg | 0.5 mg/kg | 96.1 | 50.0 | 140 | ---- |
| | | benzo(b+j)fluoranthene | n/a | E641A | 0.346 mg/kg | 0.5 mg/kg | 87.6 | 50.0 | 140 | ---- |
| | | benzo(g,h,i)perylene | 191-24-2 | E641A | 0.355 mg/kg | 0.5 mg/kg | 90.1 | 50.0 | 140 | ---- |
| | | benzo(k)fluoranthene | 207-08-9 | E641A | 0.350 mg/kg | 0.5 mg/kg | 88.7 | 50.0 | 140 | ---- |
| | | chrysene | 218-01-9 | E641A | 0.282 mg/kg | 0.5 mg/kg | 71.5 | 50.0 | 140 | ---- |
| | | dibenz(a,h)anthracene | 53-70-3 | E641A | 0.422 mg/kg | 0.5 mg/kg | 107 | 50.0 | 140 | ---- |
| | | fluoranthene | 206-44-0 | E641A | 0.417 mg/kg | 0.5 mg/kg | 106 | 50.0 | 140 | ---- |
| | | fluorene | 86-73-7 | E641A | 0.418 mg/kg | 0.5 mg/kg | 106 | 50.0 | 140 | ---- |
| | | indeno(1,2,3-c,d)pyrene | 193-39-5 | E641A | 0.404 mg/kg | 0.5 mg/kg | 102 | 50.0 | 140 | ---- |
| | | methylnaphthalene, 1- | 90-12-0 | E641A | 0.367 mg/kg | 0.5 mg/kg | 93.1 | 50.0 | 140 | ---- |
| | | methylnaphthalene, 2- | 91-57-6 | E641A | 0.355 mg/kg | 0.5 mg/kg | 90.0 | 50.0 | 140 | ---- |
| | | naphthalene | 91-20-3 | E641A | 0.342 mg/kg | 0.5 mg/kg | 86.7 | 50.0 | 140 | ---- |
| | | phenanthrene | 85-01-8 | E641A | 0.422 mg/kg | 0.5 mg/kg | 107 | 50.0 | 140 | ---- |
| | | pyrene | 129-00-0 | E641A | 0.419 mg/kg | 0.5 mg/kg | 106 | 50.0 | 140 | ---- |
| | | quinoline | 91-22-5 | E641A | 0.366 mg/kg | 0.5 mg/kg | 92.7 | 50.0 | 140 | ---- |





Reference Material (RM) Report

A Reference Material (RM) is a homogenous material with known and well-established analyte concentrations. RMs are processed in an identical manner to test samples, and are used to monitor and control the accuracy and precision of a test method for a typical sample matrix. RM results are expressed as percent recovery of the target analyte concentration. RM targets may be certified target concentrations provided by the RM supplier, or may be ALS long-term mean values (for empirical test methods).

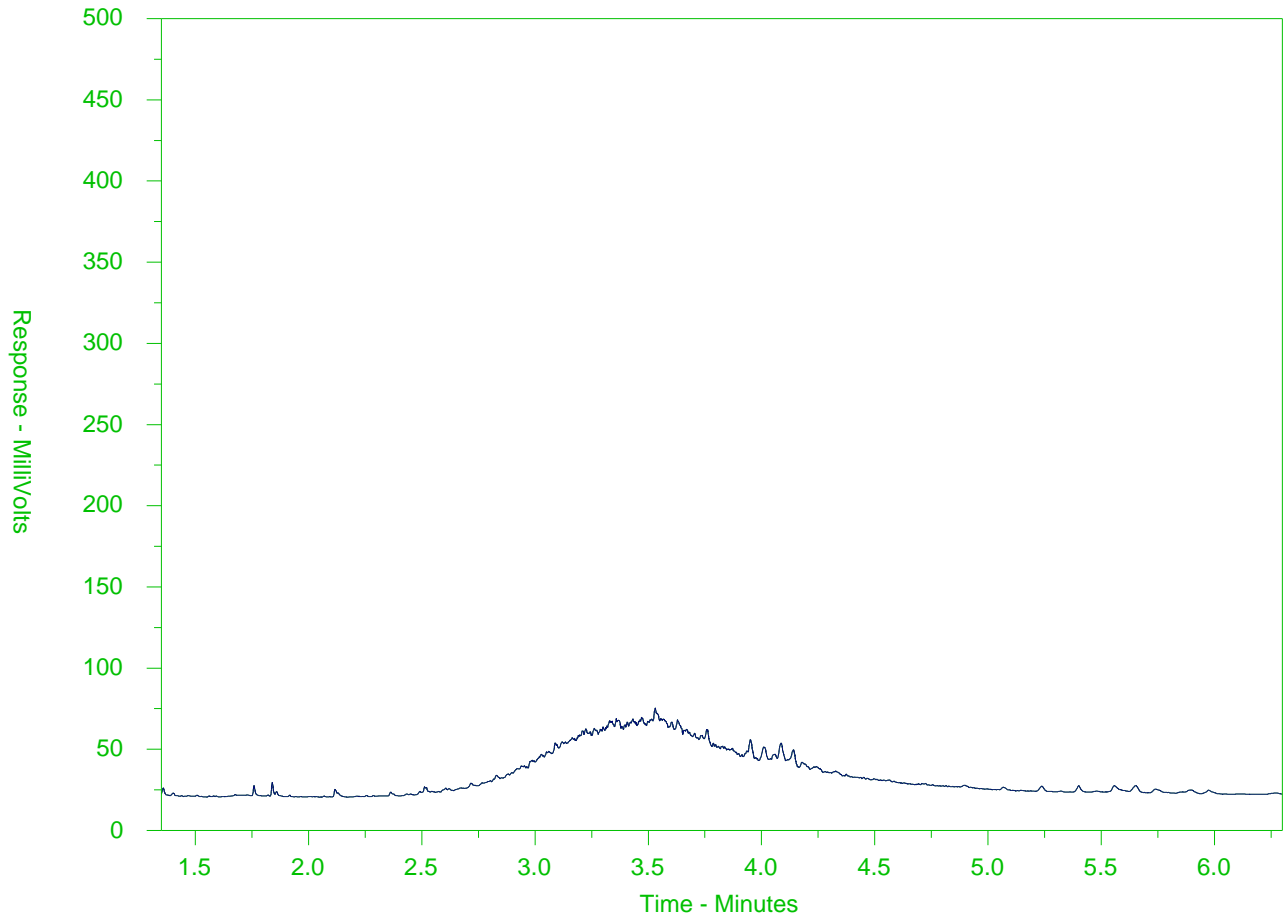
Sub-Matrix:

| Sub-Matrix: | | | | | Reference Material (RM) Report | | | | |
|--------------------------------|-----------------------|------------------------|------------|--------|--------------------------------|--------------------|---------------------|------|-----------|
| | | | | | RM Target Concentration | Recovery (%) RM | Recovery Limits (%) | | Qualifier |
| Laboratory sample ID | Reference Material ID | Analyte | CAS Number | Method | | | Low | High | |
| Physical Tests (QCLot: 710342) | | | | | | | | | |
| | RM | pH (1:2 soil:CaCl2-aq) | ---- | E108B | 7.82 pH units | 97.8 | 96.0 | 104 | ---- |
| Particle Size (QCLot: 711109) | | | | | | | | | |
| | RM | sand (>0.075mm) | ---- | E178 | 36.4 % | 106 | 91.0 | 109 | ---- |
| Metals (QCLot: 713795) | | | | | | | | | |
| | RM | mercury | 7439-97-6 | E510 | 0.059 mg/kg | 92.7 | 70.0 | 130 | ---- |
| Metals (QCLot: 713796) | | | | | | | | | |
| | RM | aluminum | 7429-90-5 | E440 | 9817 mg/kg | 122 | 70.0 | 130 | ---- |
| | RM | antimony | 7440-36-0 | E440 | 3.99 mg/kg | 102 | 70.0 | 130 | ---- |
| | RM | arsenic | 7440-38-2 | E440 | 3.73 mg/kg | 118 | 70.0 | 130 | ---- |
| | RM | barium | 7440-39-3 | E440 | 105 mg/kg | 120 | 70.0 | 130 | ---- |
| | RM | beryllium | 7440-41-7 | E440 | 0.349 mg/kg | 110 | 70.0 | 130 | ---- |
| | RM | boron | 7440-42-8 | E440 | 8.5 mg/kg | 117 | 40.0 | 160 | ---- |
| | RM | cadmium | 7440-43-9 | E440 | 0.91 mg/kg | 117 | 70.0 | 130 | ---- |
| | RM | calcium | 7440-70-2 | E440 | 31082 mg/kg | 111 | 70.0 | 130 | ---- |
| | RM | chromium | 7440-47-3 | E440 | 101 mg/kg | 113 | 70.0 | 130 | ---- |
| | RM | cobalt | 7440-48-4 | E440 | 6.9 mg/kg | 115 | 70.0 | 130 | ---- |
| | RM | copper | 7440-50-8 | E440 | 123 mg/kg | 111 | 70.0 | 130 | ---- |
| | RM | iron | 7439-89-6 | E440 | 23558 mg/kg | 112 | 70.0 | 130 | ---- |
| | RM | lead | 7439-92-1 | E440 | 267 mg/kg | 112 | 70.0 | 130 | ---- |
| | RM | lithium | 7439-93-2 | E440 | 9.5 mg/kg | 112 | 70.0 | 130 | ---- |
| | RM | magnesium | 7439-95-4 | E440 | 5509 mg/kg | 117 | 70.0 | 130 | ---- |
| | RM | manganese | 7439-96-5 | E440 | 269 mg/kg | 112 | 70.0 | 130 | ---- |
| | RM | molybdenum | 7439-98-7 | E440 | 1.03 mg/kg | 116 | 70.0 | 130 | ---- |
| | RM | nickel | 7440-02-0 | E440 | 26.7 mg/kg | 116 | 70.0 | 130 | ---- |
| | RM | phosphorus | 7723-14-0 | E440 | 752 mg/kg | 125 | 70.0 | 130 | ---- |
| | RM | potassium | 7440-09-7 | E440 | 1587 mg/kg | 116 | 70.0 | 130 | ---- |
| | RM | silver | 7440-22-4 | E440 | 4.06 mg/kg | 95.1 | 50.0 | 150 | ---- |
| | RM | sodium | 7440-23-5 | E440 | 797 mg/kg | 117 | 70.0 | 130 | ---- |



| Sub-Matrix: | | | | | Reference Material (RM) Report | | | | |
|------------------------------------|-----------------------|--------------|------------|----------|--------------------------------|--------------------|---------------------|------|-----------|
| | | | | | RM Target Concentration | Recovery (%) RM | Recovery Limits (%) | | Qualifier |
| | | | | | | | Low | High | |
| Laboratory sample ID | Reference Material ID | Analyte | CAS Number | Method | | | | | |
| Metals (QCLot: 713796) - continued | | | | | | | | | |
| | RM | strontium | 7440-24-6 | E440 | 86.1 mg/kg | 106 | 70.0 | 130 | ---- |
| | RM | thallium | 7440-28-0 | E440 | 0.0786 mg/kg | 103 | 40.0 | 160 | ---- |
| | RM | tin | 7440-31-5 | E440 | 10.6 mg/kg | 104 | 70.0 | 130 | ---- |
| | RM | titanium | 7440-32-6 | E440 | 839 mg/kg | 107 | 70.0 | 130 | ---- |
| | RM | uranium | 7440-61-1 | E440 | 0.52 mg/kg | 109 | 70.0 | 130 | ---- |
| | RM | vanadium | 7440-62-2 | E440 | 32.7 mg/kg | 113 | 70.0 | 130 | ---- |
| | RM | zinc | 7440-66-6 | E440 | 297 mg/kg | 110 | 70.0 | 130 | ---- |
| | RM | zirconium | 7440-67-7 | E440 | 5.73 mg/kg | 110 | 70.0 | 130 | ---- |
| Hydrocarbons (QCLot: 709445) | | | | | | | | | |
| | RM | F2 (C10-C16) | ---- | E601.SG | 4316 mg/kg | 76.8 | 70.0 | 130 | ---- |
| | RM | F3 (C16-C34) | ---- | E601.SG | 12844 mg/kg | 78.8 | 70.0 | 130 | ---- |
| | RM | F4 (C34-C50) | ---- | E601.SG | 1156 mg/kg | 82.3 | 70.0 | 130 | ---- |
| Hydrocarbons (QCLot: 714237) | | | | | | | | | |
| | RM | F4G-sg | ---- | E601.F4G | 8598 mg/kg | 87.3 | 70.0 | 130 | ---- |

ALS Sample ID: YL2201870-002-E601.SG
Client ID: 22102NT-01



| | | | | | | |
|--------------|-------|-----------------------|-------|-----------------------------------|--------|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | ← F4 → |
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| ← Gasoline → | | ← Diesel/ Jet Fuels → | | ← Motor Oils/ Lube Oils/ Grease → | | |

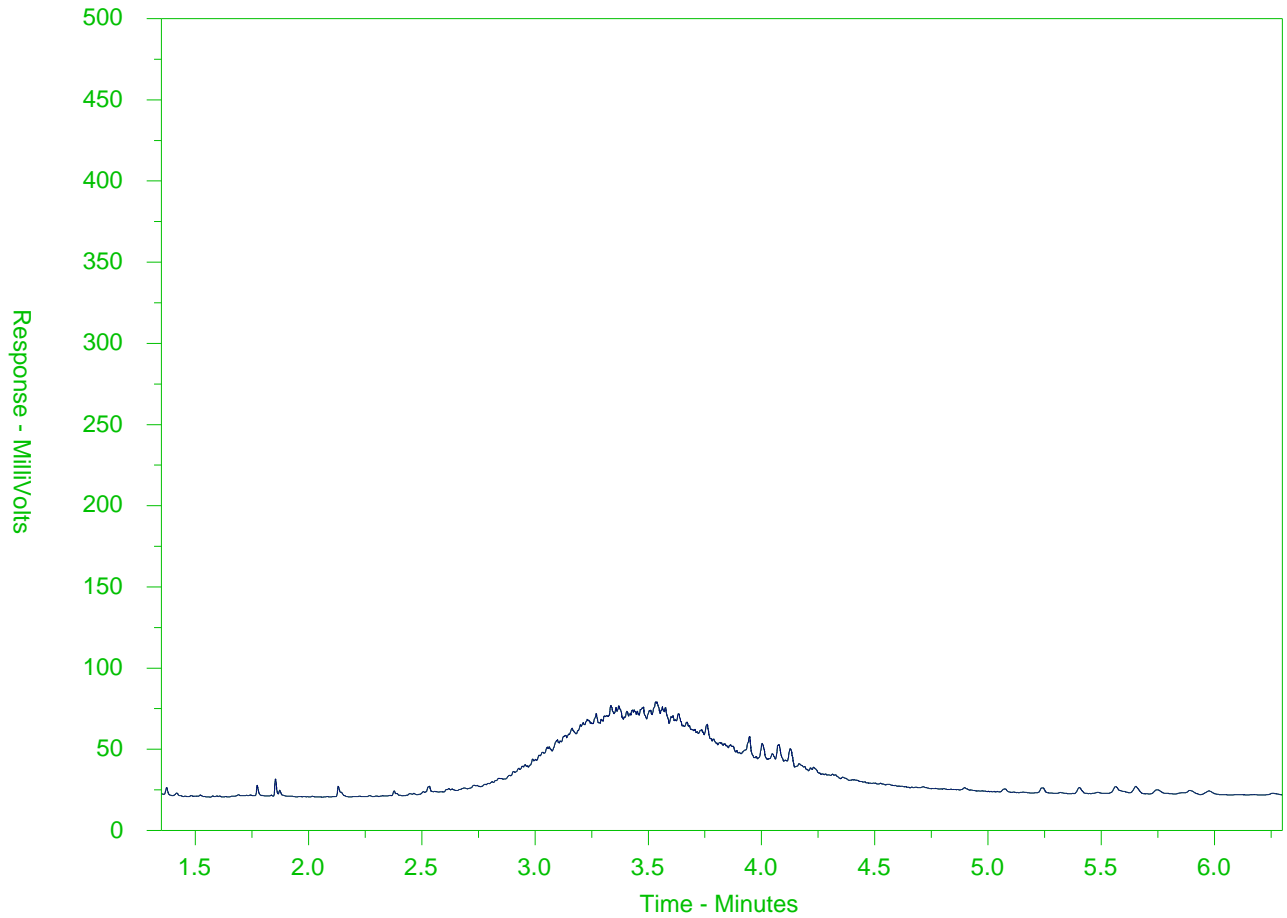
The Canada Wide Standard Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products as well as a number of specified 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 Sample ID: YL2201870-003-E601.SG
Client ID: 22102NT-02



| | | | | | | |
|--------------|-------|-----------------------|-------|-----------------------------------|--------|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | ← F4 → |
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| ← Gasoline → | | ← Diesel/ Jet Fuels → | | ← Motor Oils/ Lube Oils/ Grease → | | |

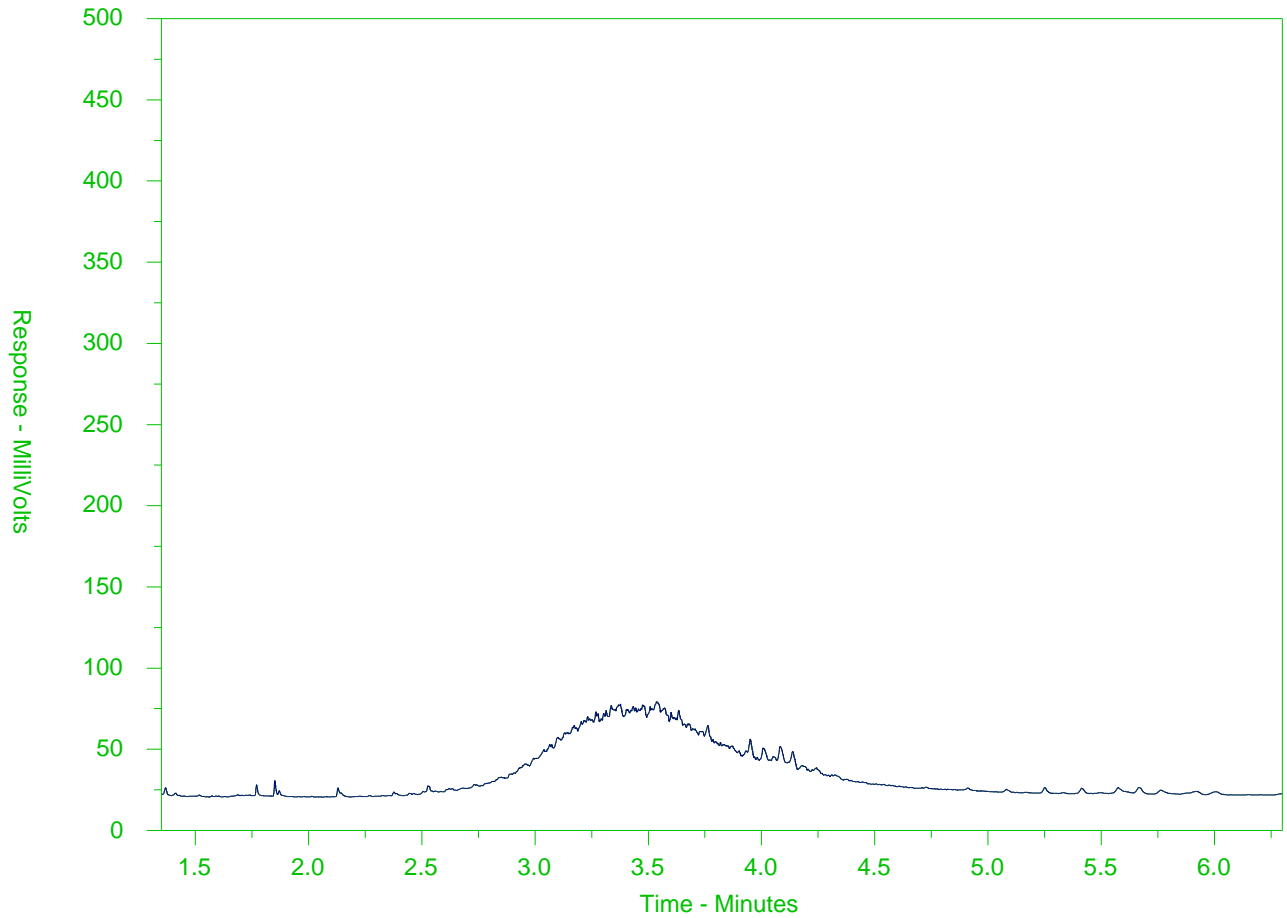
The Canada Wide Standard Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products as well as a number of specified 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 Sample ID: YL2201870-004-E601.SG
Client ID: 22102NT-03



| | | | | | | |
|--------------|-------|-----------------------|-------|-----------------------------------|--------|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | ← F4 → |
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| ← Gasoline → | | ← Diesel/ Jet Fuels → | | ← Motor Oils/ Lube Oils/ Grease → | | |

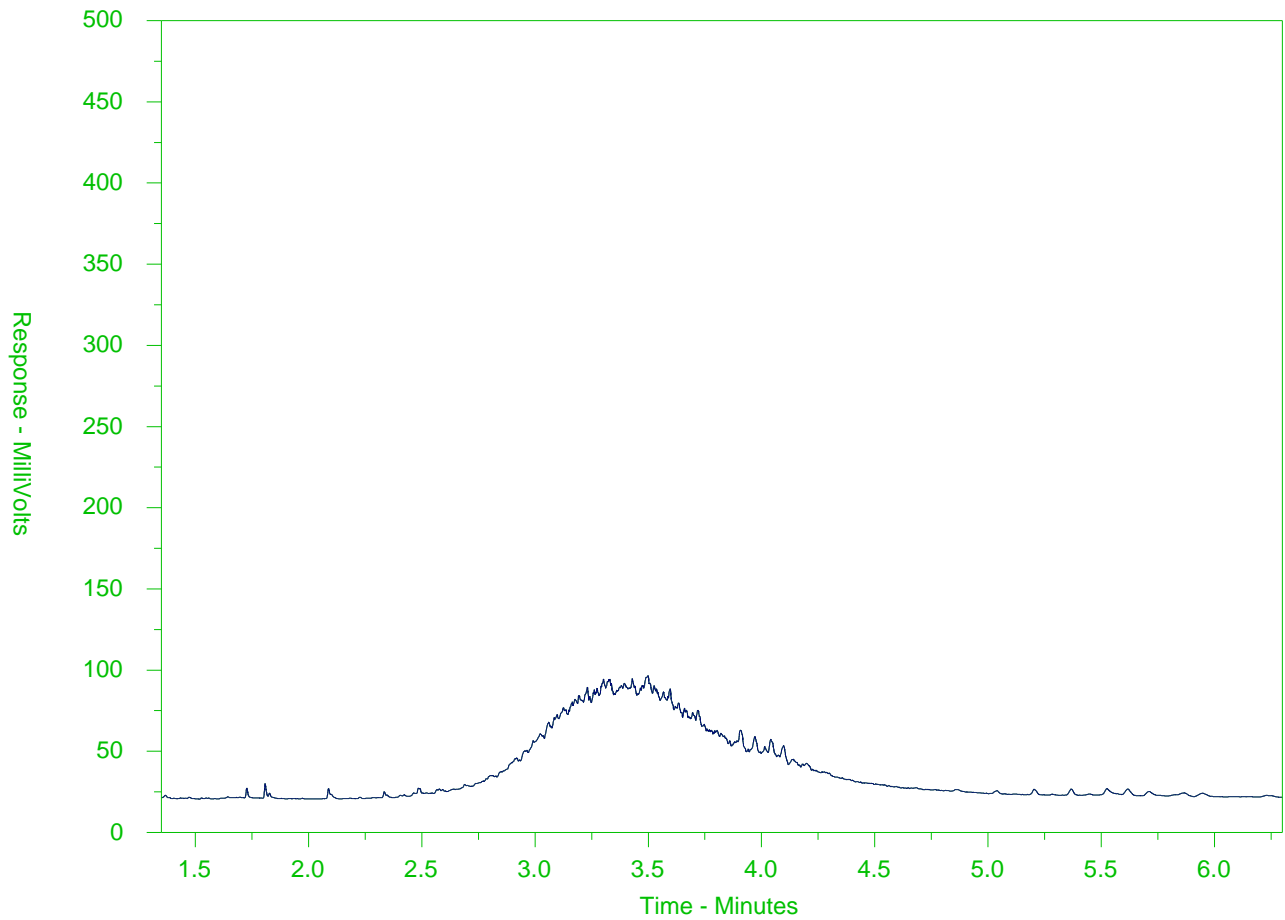
The Canada Wide Standard Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products as well as a number of specified 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 Sample ID: YL2201870-005-E601.SG
Client ID: 22102NT-04



| | | | | | | |
|--------------|-------|-----------------------|-------|-----------------------------------|--------|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | ← F4 → |
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| ← Gasoline → | | ← Diesel/ Jet Fuels → | | ← Motor Oils/ Lube Oils/ Grease → | | |

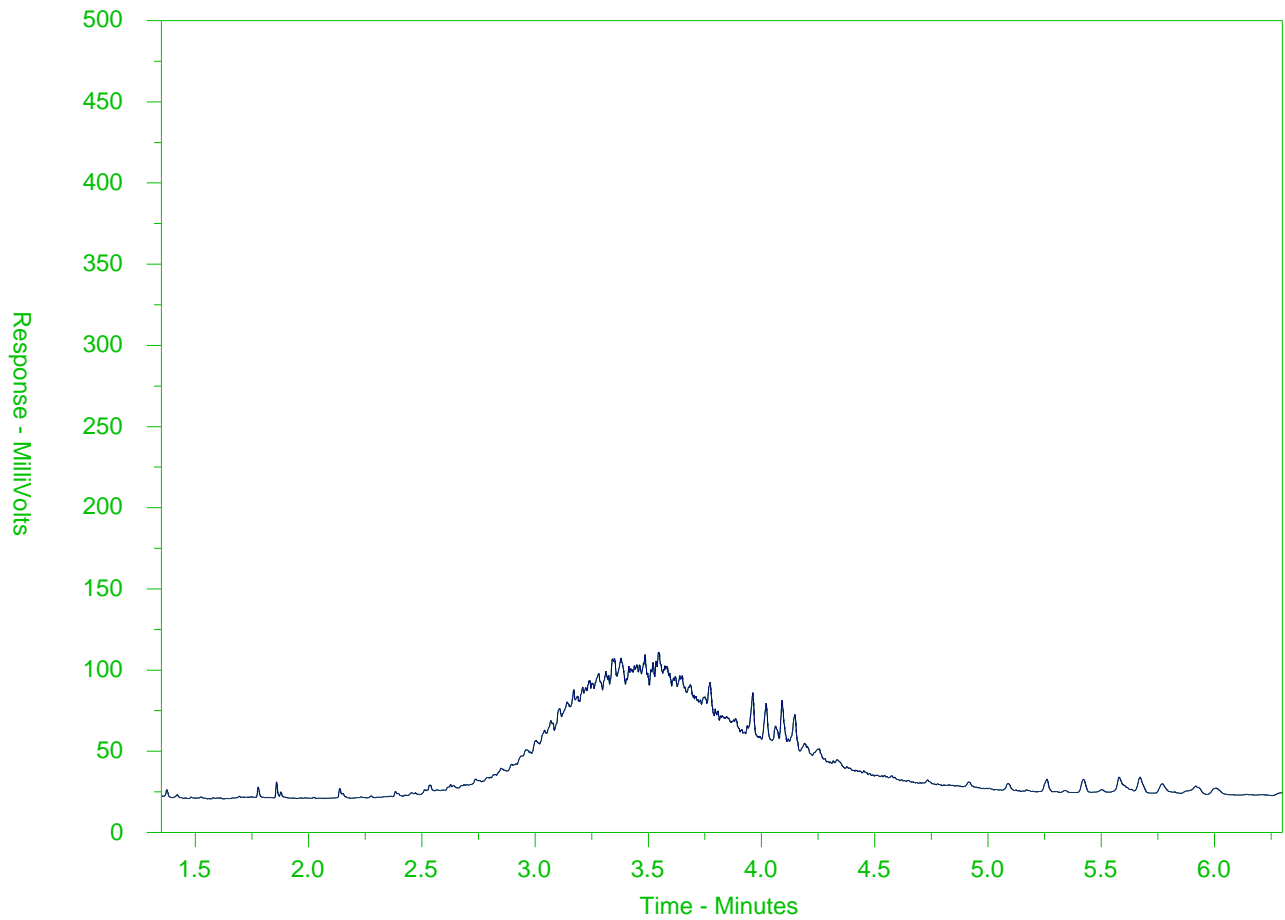
The Canada Wide Standard Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products as well as a number of specified 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 Sample ID: YL2201870-006-E601.SG
Client ID: 22102NT-05



| | | | | | | |
|--------------|-------|-----------------------|-------|-----------------------------------|--------|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | ← F4 → |
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| ← Gasoline → | | ← Diesel/ Jet Fuels → | | ← Motor Oils/ Lube Oils/ Grease → | | |

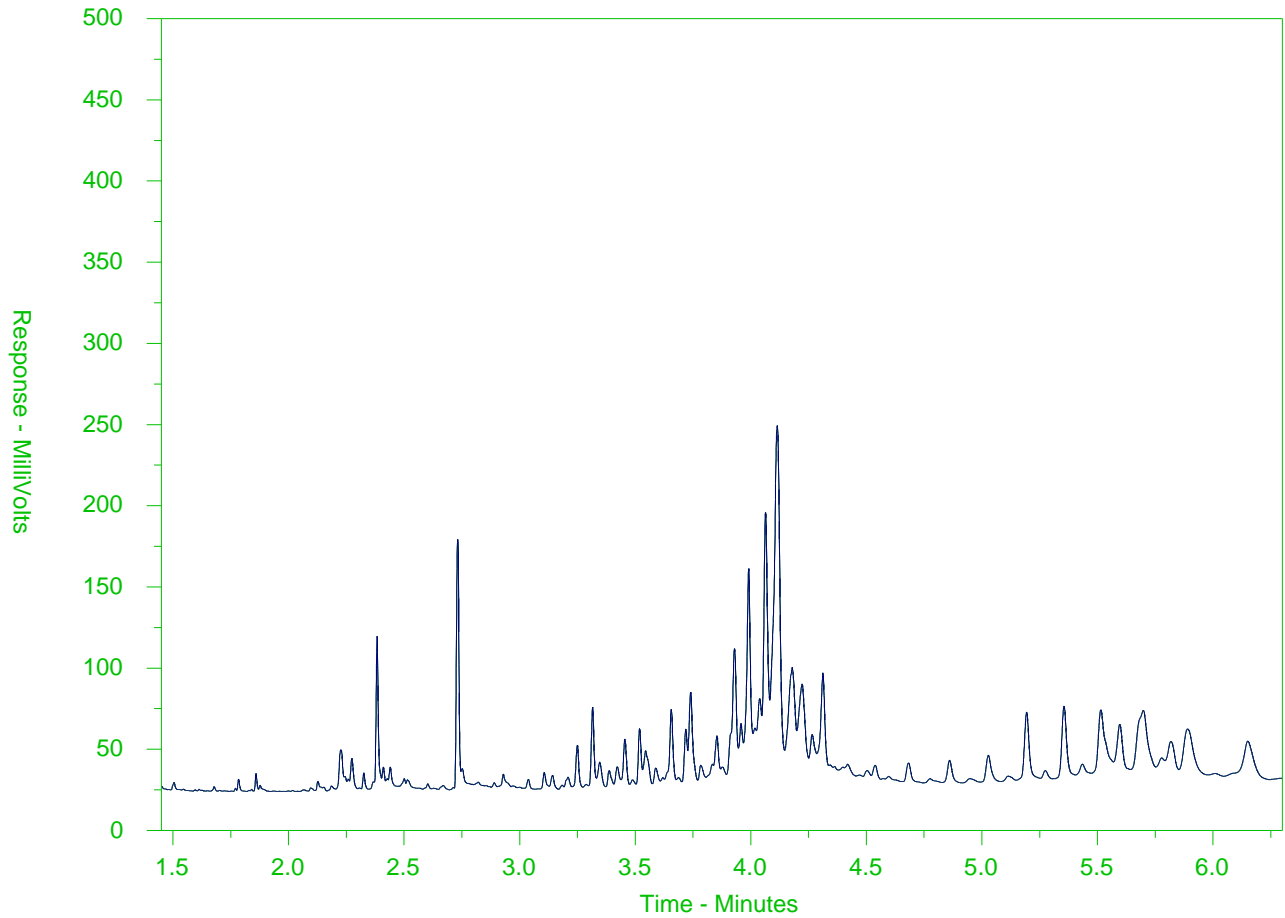
The Canada Wide Standard Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products as well as a number of specified 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 Sample ID: YL2201870-007-E601.SG
Client ID: 22102NT-06



| | | | | | | |
|--------------|-------|-----------------------|-------|-----------------------------------|--------|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | → F4 → |
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| ← Gasoline → | | ← Diesel/ Jet Fuels → | | ← Motor Oils/ Lube Oils/ Grease → | | |

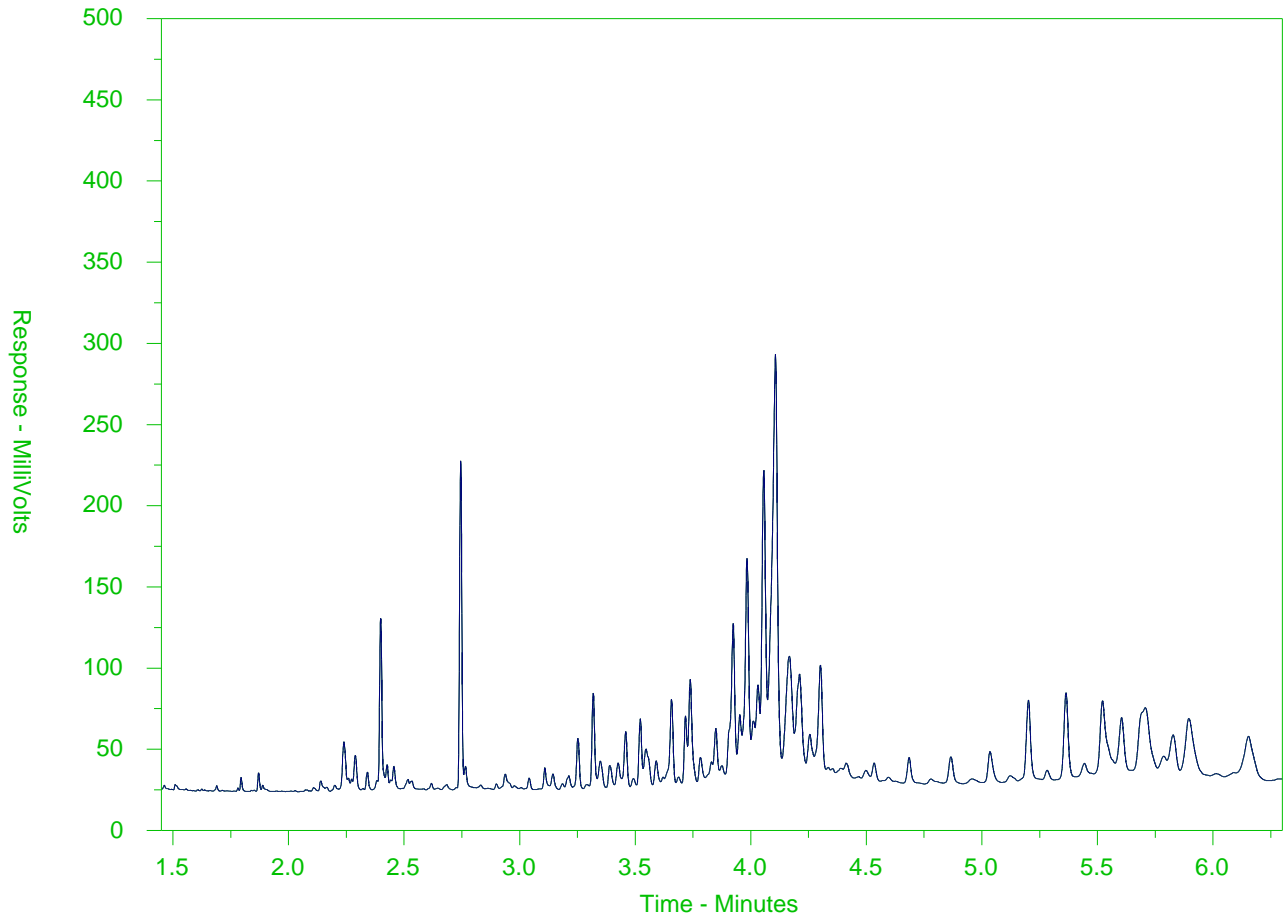
The Canada Wide Standard Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products as well as a number of specified 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 Sample ID: YL2201870-008-E601.SG
Client ID: 22102NT-07



| | | | | | | |
|--------------|-------|-----------------------|-------|-----------------------------------|--------|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | → F4 → |
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| ← Gasoline → | | ← Diesel/ Jet Fuels → | | ← Motor Oils/ Lube Oils/ Grease → | | |

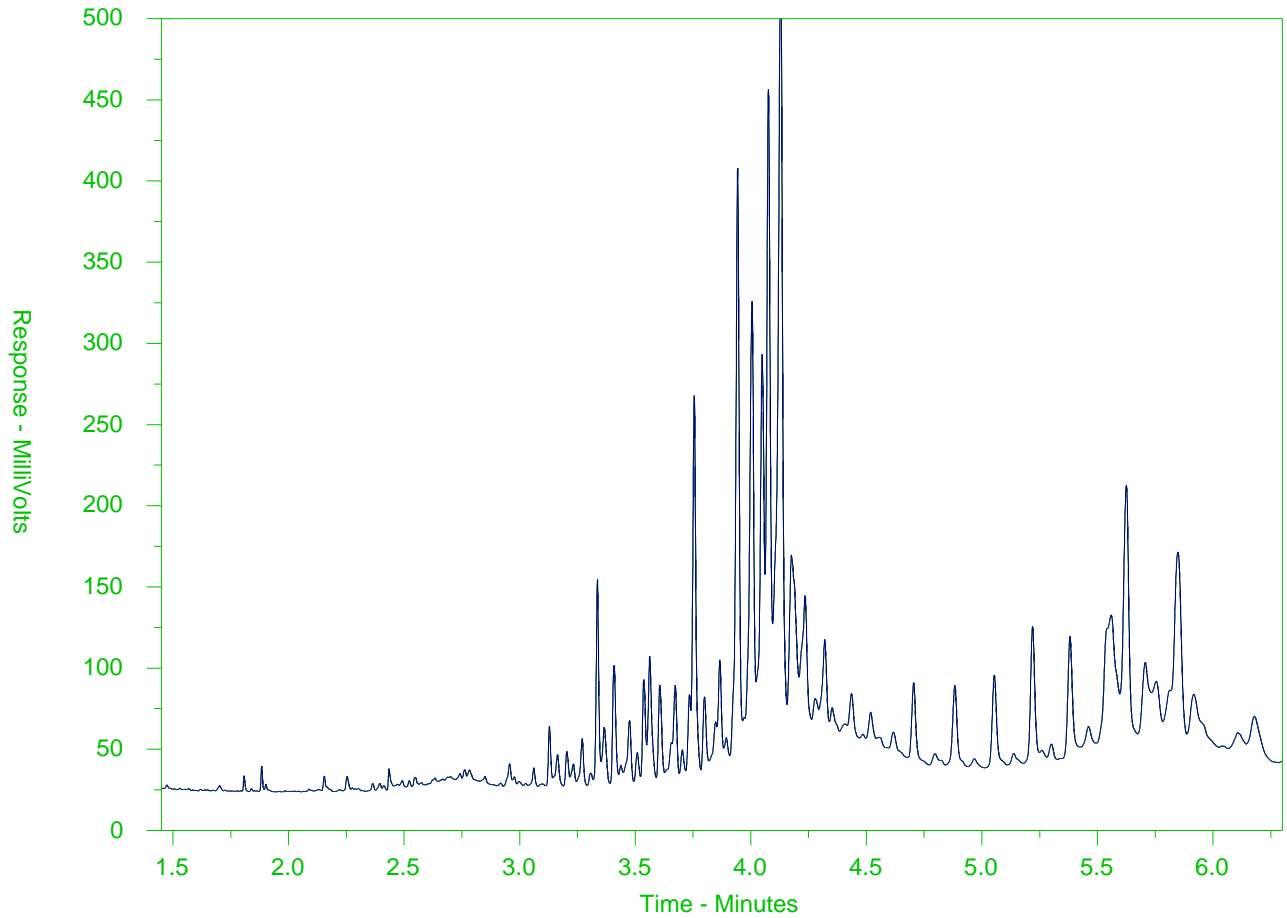
The Canada Wide Standard Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products as well as a number of specified 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 Sample ID: YL2201870-009-E601.SG
Client ID: 22102NT-08



| | | | | | | |
|--------------|-------|-----------------------|-------|-----------------------------------|--------|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | → F4 → |
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| ← Gasoline → | | ← Diesel/ Jet Fuels → | | ← Motor Oils/ Lube Oils/ Grease → | | |

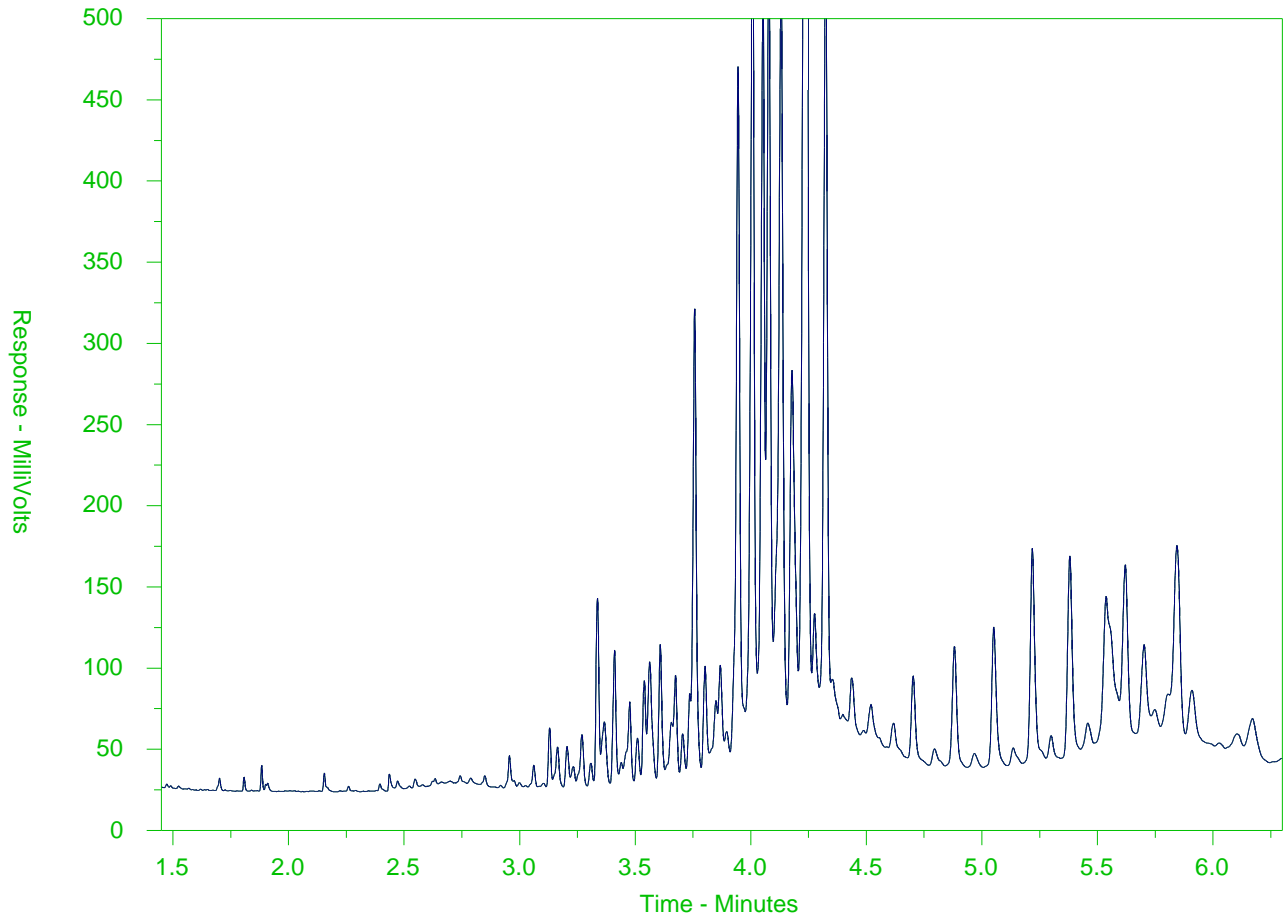
The Canada Wide Standard Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products as well as a number of specified 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 Sample ID: YL2201870-010-E601.SG
Client ID: 22102NT-DUP



| | | | | | | |
|--------------|-------|-----------------------|-------|-----------------------------------|--------|--------|
| ← F2 → | | ← F3 → | | ← F4 → | | → F4 → |
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| ← Gasoline → | | ← Diesel/ Jet Fuels → | | ← Motor Oils/ Lube Oils/ Grease → | | |

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.



COC Number: **21 -**

Page of

Canada Toll Free: 1 800 668 9878

| | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|-----------------|--|---------------|--|--|--|--|---|-----------------|--|---------------------------|--|------------------------------|--|
| Report To | | | | | | Contact and company name below will appear on the final report | | | | | | | | | | | | | | | |
| Company: | | | | | | KBL Environmental | | | | | | | | | | | | | | | |
| Contact: | | | | | | Katie Oliver | | | | | | | | | | | | | | | |
| Phone: | | | | | | 780.452.7779 | | | | | | | | | | | | | | | |
| | | | | | | Company address below will appear on the final report | | | | | | | | | | | | | | | |
| Street: | | | | | | 3909, 68 Avenue | | | | | | | | | | | | | | | |
| City/Province: | | | | | | Leduc, AB | | | | | | | | | | | | | | | |
| Postal Code: | | | | | | T9E 0Z4 | | | | | | | | | | | | | | | |
| Invoice To | | | | | | Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | | | | | | | | | | | | | | |
| | | | | | | Copy of Invoice with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | | | | | | | | | | | | | | |
| Company: | | | | | | | | | | | | | | | | | | | | | |
| Contact: | | | | | | | | | | | | | | | | | | | | | |
| Project Information | | | | | | Oil and Gas Required Fields (client use) | | | | | | | | | | | | | | | |
| ALS Account # / Quote #: | | | | | | AFE/Cost Center: | | | | PO# | | | | | | | | | | | |
| Job #: | | | | | | Major/Minor Code: | | | | Routing Code: | | | | | | | | | | | |
| PO / AFE: | | | | | | Requisitioner: | | | | | | | | | | | | | | | |
| LSD: | | | | | | Location: | | | | | | | | | | | | | | | |
| ALS Lab Work Order # (ALS use only): | | | | | | ALS Contact: | | | | Sampler: | | | | | | | | | | | |
| ALS Sample # (ALS use only) | | Sample Identification and/or Coordinates (This description will appear on the report) | | | | Date (dd-mm-yy) | | Time (hh:mm) | | Sample Type | | NUMBER OF CONTAINERS | | Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below | | SAMPLES ON HOLD | | EXTENDED STORAGE REQUIRED | | SUSPECTED HAZARD (see notes) | |
| | | 22102NT-STF Acceptance | | | | 14-10-22 | | 12:17 | | soil | | 1 | | | | | | | | | |
| | | 22102NT-01 | | | | 14-10-22 | | 12:30 | | soil | | 4 | | R | R | | | | | | |
| | | 22102NT-02 | | | | 14-10-22 | | 12:20 | | soil | | 4 | | R | R | | | | | | |
| | | 22102NT-03 | | | | 14-10-22 | | 12:30 | | soil | | 4 | | R | R | | | | | | |
| | | 22102NT-04 | | | | 14-10-22 | | 12:37 | | soil | | 4 | | R | R | | | | | | |
| | | 22102NT-05 | | | | 14-10-22 | | 12:40 | | soil | | 4 | | R | R | | | | | | |
| | | 22102NT-06 | | | | 14-10-22 | | | | soil | | 4 | | R | R | | | | | | |
| | | 22102NT-07 | | | | 14-10-22 | | | | soil | | 4 | | R | R | | | | | | |
| | | 22102NT-08 | | | | 14-10-22 | | | | soil | | 4 | | R | R | | | | | | |
| | | 22102NT-DUP | | | | 14-10-22 | | | | soil | | 4 | | R | R | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| Drinking Water (DW) Samples¹ (client use) | | | | | | Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only) | | | | | | SAMPLE RECEIPT DETAILS (ALS use only) | | | | | | | | | |
| Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | | | | | | | | | | | Cooling Method: <input type="checkbox"/> NONE <input type="checkbox"/> ICE <input type="checkbox"/> ICE PACKS <input type="checkbox"/> FROZEN <input type="checkbox"/> COOLING INITIATED | | | | | | | | | |
| Are samples for human consumption/use? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | | | | | | | | | | | Submission Comments identified on Sample Receipt Notification: <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | | | | | | |
| | | | | | | | | | | | | Cooler Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A Sample Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A | | | | | | | | | |
| | | | | | | | | | | | | INITIAL COOLER TEMPERATURES °C: 13.7 FINAL COOLER TEMPERATURES °C: | | | | | | | | | |
| SHIPMENT RELEASE (client use) Released by: [Signature] Date: Time: | | | | | | INITIAL SHIPMENT RECEPTION (ALS use only) Received by: [Signature] Date: Oct 19/22 Time: 16:35 | | | | | | FINAL SHIPMENT RECEPTION (ALS use only) Received by: Date: Time: | | | | | | | | | |

REFER TO BACK PAGE FOR ALC LOCATIONS AND SAMPLING INFORMATION

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

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

AUG 2020 EDITION



Taiga Environmental Laboratory
4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
221247

- AMENDED REPORT -

Prepared For: Parks Canada

Address: P.O. Box 1840
Inuvik, NT
X0E 0T0

Attn: Stephanie Yuill

Facsimile: 867-777-8820

Final report has been reviewed and approved by:

Judy Mah
Client Service Officer

NOTES:

- Test methods and data are validated by the laboratory's Quality Assurance Program. Taiga Environmental Laboratory is accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) to ISO/IEC 17025 as a testing laboratory for specific tests registered with CALA.
- Routine methods are based on recognized procedures from sources such as
 - Standard Methods for the Examination of Water and Wastewater APHA AWWA WEF;
 - Environment Canada
 - USEPA
- Samples shall be kept for thirty (30) days after the final report is issued. All microbiological samples shall be disposed of immediately upon completion of analysis to minimize biohazardous risks to laboratory personnel. Please contact the laboratory if you have any special requirements.
- Final results are based on the specific tests at the time of analysis and do not represent the conditions during sampling.

ReportDate: Tuesday, July 5, 2022
Print Date: *Thursday, August 4, 2022*

Page 1 of 13



Taiga Environmental Laboratory

4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9

Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
221247

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **1**

Taiga Sample ID: **001**

Client Project:

Sample Type: Sediment

Received Date: 28-Jun-22

Sampling Date: 24-Jun-22

Sampling Time: 15:30

Location: Pingo Landmark

Report Status: Amended

| Test Parameter | Result | Detection Limit | Units | Analysis Date | Analytical Method * | Qualifier |
|--------------------------------------|--------|-----------------|-------|---------------|---------------------|-----------|
| <u>Subcontracted Organics</u> | | | | | | |
| Benzene | 0.0350 | 0.005 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Ethylbenzene | 0.050 | 0.015 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F1: C6-C10 | < 5 | 5 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F2: C10-C16 | < 25 | 25 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F3: C16-C34 | 8320 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F4: C34-C50 | 300 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Toluene | 0.205 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Xylenes | 0.145 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |

ReportDate: Tuesday, July 5, 2022

Print Date: *Thursday, August 4, 2022*

Page 2 of 13



Taiga Environmental Laboratory
4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
221247

- CERTIFICATE OF ANALYSIS -

Client Sample ID: 2

Taiga Sample ID: 002

Client Project:

Sample Type: Sediment

Received Date: 28-Jun-22

Sampling Date: 24-Jun-22

Sampling Time: 15:30

Location: Pingo Landmark

Report Status: Amended

| Test Parameter | Result | Detection Limit | Units | Analysis Date | Analytical Method * | Qualifer |
|--------------------------------------|--------|-----------------|-------|---------------|---------------------|----------|
| <u>Subcontracted Organics</u> | | | | | | |
| Benzene | 0.0429 | 0.005 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Ethylbenzene | 0.050 | 0.015 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F1: C6-C10 | < 5 | 5 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F2: C10-C16 | 34 | 25 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F3: C16-C34 | 10800 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F4: C34-C50 | 952 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Toluene | 0.284 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Xylenes | 0.148 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |

ReportDate: Tuesday, July 5, 2022

Print Date: Thursday, August 4, 2022

Page 3 of 13



Taiga Environmental Laboratory

4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9

Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:

221247

- CERTIFICATE OF ANALYSIS -

Client Sample ID: 3

Taiga Sample ID: 003

Client Project:

Sample Type: Sediment

Received Date: 28-Jun-22

Sampling Date: 24-Jun-22

Sampling Time: 15:30

Location: Pingo Landmark

Report Status: Amended

| Test Parameter | Result | Detection Limit | Units | Analysis Date | Analytical Method * | Qualifer |
|-------------------------------|--------|-----------------|-------|---------------|---------------------|----------|
| <u>Subcontracted Organics</u> | | | | | | |
| Benzene | 0.0260 | 0.005 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Ethylbenzene | 0.063 | 0.015 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F1: C6-C10 | < 5 | 5 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F2: C10-C16 | < 25 | 25 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F3: C16-C34 | 1740 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F4: C34-C50 | 190 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Toluene | 0.220 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Xylenes | 0.250 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |

ReportDate: Tuesday, July 5, 2022

Print Date: Thursday, August 4, 2022

Page 4 of 13



Taiga Environmental Laboratory

4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9

Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:

221247

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **4**

Taiga Sample ID: **004**

Client Project:

Sample Type: Sediment

Received Date: 28-Jun-22

Sampling Date: 24-Jun-22

Sampling Time: 15:30

Location: Pingo Landmark

Report Status: Amended

| Test Parameter | Result | Detection Limit | Units | Analysis Date | Analytical Method * | Qualifer |
|--------------------------------------|--------|-----------------|-------|---------------|---------------------|----------|
| <u>Subcontracted Organics</u> | | | | | | |
| Benzene | 0.0256 | 0.005 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Ethylbenzene | 0.079 | 0.015 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F1: C6-C10 | < 5 | 5 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F2: C10-C16 | < 25 | 25 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F3: C16-C34 | 2790 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F4: C34-C50 | 264 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Toluene | 0.255 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Xylenes | 0.295 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |

ReportDate: Tuesday, July 5, 2022

Print Date: *Thursday, August 4, 2022*

Page 5 of 13



Taiga Environmental Laboratory

4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9

Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:

221247

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **5**

Taiga Sample ID: **005**

Client Project:

Sample Type: Sediment

Received Date: 28-Jun-22

Sampling Date: 24-Jun-22

Sampling Time: 15:30

Location: Pingo Landmark

Report Status: Amended

| Test Parameter | Result | Detection Limit | Units | Analysis Date | Analytical Method * | Qualifer |
|--------------------------------------|--------|-----------------|-------|---------------|---------------------|----------|
| <u>Subcontracted Organics</u> | | | | | | |
| Benzene | 0.107 | 0.005 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Ethylbenzene | 0.115 | 0.015 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F1: C6-C10 | < 5 | 5 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F2: C10-C16 | < 25 | 25 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F3: C16-C34 | 600 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F4: C34-C50 | < 50 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Toluene | 0.407 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Xylenes | 0.450 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |

ReportDate: Tuesday, July 5, 2022

Print Date: *Thursday, August 4, 2022*

Page 6 of 13



Taiga Environmental Laboratory

4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9

Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:

221247

- CERTIFICATE OF ANALYSIS -

Client Sample ID: 6

Taiga Sample ID: 006

Client Project:

Sample Type: Sediment

Received Date: 28-Jun-22

Sampling Date: 24-Jun-22

Sampling Time: 15:30

Location: Pingo Landmark

Report Status: Amended

| Test Parameter | Result | Detection Limit | Units | Analysis Date | Analytical Method * | Qualifer |
|-------------------------------|--------|-----------------|-------|---------------|---------------------|----------|
| Subcontracted Organics | | | | | | |
| Benzene | 0.0398 | 0.005 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Ethylbenzene | 0.034 | 0.015 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F1: C6-C10 | < 5 | 5 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F2: C10-C16 | < 25 | 25 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F3: C16-C34 | < 50 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F4: C34-C50 | < 50 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Toluene | 0.138 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Xylenes | 0.118 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |

ReportDate: Tuesday, July 5, 2022

Print Date: Thursday, August 4, 2022

Page 7 of 13



Taiga Environmental Laboratory

4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9

Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:

221247

- CERTIFICATE OF ANALYSIS -

Client Sample ID: 7

Taiga Sample ID: 007

Client Project:

Sample Type: Sediment

Received Date: 28-Jun-22

Sampling Date: 24-Jun-22

Sampling Time: 15:30

Location: Pingo Landmark

Report Status: Amended

| Test Parameter | Result | Detection Limit | Units | Analysis Date | Analytical Method * | Qualifer |
|-------------------------------|--------|-----------------|-------|---------------|---------------------|----------|
| <u>Subcontracted Organics</u> | | | | | | |
| Benzene | 0.0397 | 0.005 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Ethylbenzene | 0.041 | 0.015 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F1: C6-C10 | < 5 | 5 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F2: C10-C16 | < 25 | 25 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F3: C16-C34 | 7220 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F4: C34-C50 | 646 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Toluene | 0.241 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Xylenes | 0.136 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |

ReportDate: Tuesday, July 5, 2022

Print Date: Thursday, August 4, 2022

Page 8 of 13



Taiga Environmental Laboratory

4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9

Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:

221247

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **8**

Taiga Sample ID: **008**

Client Project:

Sample Type: Sediment

Received Date: 28-Jun-22

Sampling Date: 24-Jun-22

Sampling Time: 15:30

Location: Pingo Landmark

Report Status: Amended

| Test Parameter | Result | Detection Limit | Units | Analysis Date | Analytical Method * | Qualifer |
|--------------------------------------|--------|-----------------|-------|---------------|---------------------|----------|
| <u>Subcontracted Organics</u> | | | | | | |
| Benzene | 0.0102 | 0.005 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Ethylbenzene | 0.032 | 0.015 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F1: C6-C10 | < 5 | 5 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F2: C10-C16 | < 25 | 25 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F3: C16-C34 | 7030 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F4: C34-C50 | 315 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Toluene | 0.080 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Xylenes | 0.108 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |

ReportDate: Tuesday, July 5, 2022

Print Date: *Thursday, August 4, 2022*

Page 9 of 13



Taiga Environmental Laboratory

4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9

Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:

221247

- CERTIFICATE OF ANALYSIS -

Client Sample ID: 9

Taiga Sample ID: 009

Client Project:

Sample Type: Sediment

Received Date: 28-Jun-22

Sampling Date: 24-Jun-22

Sampling Time: 15:30

Location: Pingo Landmark

Report Status: Amended

| Test Parameter | Result | Detection Limit | Units | Analysis Date | Analytical Method * | Qualifer |
|-------------------------------|--------|-----------------|-------|---------------|---------------------|----------|
| Subcontracted Organics | | | | | | |
| Benzene | 0.0504 | 0.005 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Ethylbenzene | 0.083 | 0.015 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F1: C6-C10 | < 5 | 5 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F2: C10-C16 | < 25 | 25 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F3: C16-C34 | 4140 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F4: C34-C50 | 348 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Toluene | 0.299 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Xylenes | 0.337 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |

ReportDate: Tuesday, July 5, 2022

Print Date: Thursday, August 4, 2022

Page 10 of 13



Taiga Environmental Laboratory

4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9

Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:

221247

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **10**

Taiga Sample ID: **010**

Client Project:

Sample Type: Sediment

Received Date: 28-Jun-22

Sampling Date: 24-Jun-22

Sampling Time: 15:30

Location: Pingo Landmark

Report Status: Amended

| Test Parameter | Result | Detection Limit | Units | Analysis Date | Analytical Method * | Qualifer |
|--------------------------------------|--------|-----------------|-------|---------------|---------------------|----------|
| <u>Subcontracted Organics</u> | | | | | | |
| Benzene | 0.0200 | 0.005 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Ethylbenzene | 0.020 | 0.015 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F1: C6-C10 | < 5 | 5 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F2: C10-C16 | < 25 | 25 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F3: C16-C34 | 1890 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| F4: C34-C50 | 178 | 50 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Toluene | 0.101 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |
| Xylenes | 0.065 | 0.05 | mg/kg | 02-Jul-22 | CCME CWS PHC | |

ReportDate: Tuesday, July 5, 2022

Print Date: *Thursday, August 4, 2022*

Page 11 of 13



Taiga Environmental Laboratory
4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
221247

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **Composite of Samples 1-10**

Taiga Sample ID: **011**

Client Project:

Sample Type: Sediment

Received Date: 28-Jun-22

Sampling Date: 24-Jun-22

Sampling Time: 15:30

Location: Pingo Landmark

Report Status: Amended

| Test Parameter | Result | Detection Limit | Units | Analysis Date | Analytical Method * | Qualifer |
|--------------------------------------|------------|-----------------|-------|---------------|---------------------|----------|
| <u>Subcontracted Physical</u> | | | | | | |
| % Clay | 7.0 | 1 | % | 02-Aug-22 | SSIR-51, 3.2.1 | |
| % Sand | 85.0 | 1 | % | 02-Aug-22 | SSIR-51, 3.2.1 | |
| % Silt | 8.0 | 1 | % | 02-Aug-22 | SSIR-51, 3.2.1 | |
| Texture | Loamy Sand | | | 02-Aug-22 | SSIR-51, 3.2.1 | |

ReportDate:

Page 12 of 13

Print Date: *Thursday, August 4, 2022*



Taiga Environmental Laboratory
4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
221247

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **Composite of Samples 1-10**

Taiga Sample ID: **011**

*** Taiga analytical methods are based on the following standard analytical methods**

SM - Standard Methods for the Examination of Water and Wastewater

EPA - United States Environmental Protection Agency

Comments *Sample -011 added, PSA analysis of composite samples 1-10*

ReportDate:

Page 13 of 13

Print Date: *Thursday, August 4, 2022*




KBL Environmental Ltd.
ATTN: David Vanderkley
3601, 75 Avenue
Leduc ab T9E 0Z5

Date Received: 05-JUL-21
Report Date: 19-JUL-21 15:16 (MT)
Version: FINAL

Client Phone: 780-893-3305

Certificate of Analysis

Lab Work Order #: L2609511
Project P.O. #: JG004
Job Reference: 21-057NT
C of C Numbers: 17-818607
Legal Site Desc:



Oliver Gregg
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 314 Old Airport Road, Unit 116, Yellowknife, NT X1A 3T3 Canada | Phone: +1 867 873 5593 |
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

| Sample Details/Parameters | Result | Qualifier* | D.L. | Units | Extracted | Analyzed | Batch |
|---|-----------|------------|-----------|-------|-----------|-----------|----------|
| L2609511-1 21EXO1SW-210705 | | | | | | | |
| Sampled By: CLIENT on 05-JUL-21 @ 08:35 | | | | | | | |
| Matrix: WATER | | | | | | | |
| BTEX & F1-F4 | | | | | | | |
| BTEX, Styrene and F1 (C6-C10) | | | | | | | |
| Benzene | <0.00050 | | 0.00050 | mg/L | 14-JUL-21 | 15-JUL-21 | R5508763 |
| Toluene | <0.00050 | | 0.00050 | mg/L | 14-JUL-21 | 15-JUL-21 | R5508763 |
| EthylBenzene | <0.00050 | | 0.00050 | mg/L | 14-JUL-21 | 15-JUL-21 | R5508763 |
| m+p-Xylene | <0.00050 | | 0.00050 | mg/L | 14-JUL-21 | 15-JUL-21 | R5508763 |
| o-Xylene | <0.00050 | | 0.00050 | mg/L | 14-JUL-21 | 15-JUL-21 | R5508763 |
| F1(C6-C10) | <0.10 | | 0.10 | mg/L | 14-JUL-21 | 15-JUL-21 | R5508763 |
| F1-BTEX | <0.10 | | 0.10 | mg/L | 14-JUL-21 | 15-JUL-21 | R5508763 |
| Xylenes | <0.00071 | | 0.00071 | mg/L | 14-JUL-21 | 15-JUL-21 | R5508763 |
| Surrogate: 1,4-Difluorobenzene (SS) | 80.8 | | 70-130 | % | 14-JUL-21 | 15-JUL-21 | R5508763 |
| Surrogate: 4-Bromofluorobenzene (SS) | 83.6 | | 70-130 | % | 14-JUL-21 | 15-JUL-21 | R5508763 |
| Surrogate: 3,4-Dichlorotoluene (SS) | 111.5 | | 70-130 | % | 14-JUL-21 | 15-JUL-21 | R5508763 |
| F2, F3, F4 | | | | | | | |
| F2 (C10-C16) | <0.10 | | 0.10 | mg/L | 07-JUL-21 | 07-JUL-21 | R5516062 |
| F3 (C16-C34) | <0.25 | | 0.25 | mg/L | 07-JUL-21 | 07-JUL-21 | R5516062 |
| F4 (C34-C50) | <0.25 | | 0.25 | mg/L | 07-JUL-21 | 07-JUL-21 | R5516062 |
| Surrogate: 2-Bromobenzotrifluoride | 95.4 | | 60-140 | % | 07-JUL-21 | 07-JUL-21 | R5516062 |
| Dissolved Metals - CCME | | | | | | | |
| Dissolved Mercury in Water by CVAAS | | | | | | | |
| Dissolved Mercury Filtration Location | LAB | | | | | 07-JUL-21 | R5513706 |
| Mercury (Hg)-Dissolved | 0.0000095 | | 0.0000050 | mg/L | | 07-JUL-21 | R5514055 |
| Dissolved Metals in Water by CRC ICPMS | | | | | | | |
| Dissolved Metals Filtration Location | FIELD | | | | | 07-JUL-21 | R5514230 |
| Aluminum (Al)-Dissolved | 0.0137 | | 0.0010 | mg/L | | 08-JUL-21 | R5515893 |
| Antimony (Sb)-Dissolved | 0.00591 | | 0.00010 | mg/L | | 08-JUL-21 | R5515893 |
| Arsenic (As)-Dissolved | 0.0691 | | 0.00010 | mg/L | | 08-JUL-21 | R5515893 |
| Barium (Ba)-Dissolved | 0.0242 | | 0.00010 | mg/L | | 08-JUL-21 | R5515893 |
| Beryllium (Be)-Dissolved | <0.00010 | | 0.00010 | mg/L | | 08-JUL-21 | R5515893 |
| Boron (B)-Dissolved | 0.077 | | 0.010 | mg/L | | 08-JUL-21 | R5515893 |
| Cadmium (Cd)-Dissolved | 0.000116 | | 0.0000050 | mg/L | | 08-JUL-21 | R5515893 |
| Calcium (Ca)-Dissolved | 99.1 | | 0.050 | mg/L | | 08-JUL-21 | R5515893 |
| Chromium (Cr)-Dissolved | 0.00274 | | 0.00010 | mg/L | | 08-JUL-21 | R5515893 |
| Cobalt (Co)-Dissolved | 0.00474 | | 0.00010 | mg/L | | 08-JUL-21 | R5515893 |
| Copper (Cu)-Dissolved | 0.0732 | | 0.00020 | mg/L | | 08-JUL-21 | R5515893 |
| Iron (Fe)-Dissolved | 0.047 | | 0.010 | mg/L | | 08-JUL-21 | R5515893 |
| Lead (Pb)-Dissolved | 0.000124 | | 0.000050 | mg/L | | 08-JUL-21 | R5515893 |
| Lithium (Li)-Dissolved | 0.0032 | | 0.0010 | mg/L | | 08-JUL-21 | R5515893 |
| Magnesium (Mg)-Dissolved | 8.17 | | 0.0050 | mg/L | | 08-JUL-21 | R5515893 |
| Manganese (Mn)-Dissolved | 0.0745 | | 0.00010 | mg/L | | 08-JUL-21 | R5515893 |
| Molybdenum (Mo)-Dissolved | 0.00266 | | 0.000050 | mg/L | | 08-JUL-21 | R5515893 |
| Nickel (Ni)-Dissolved | 0.0160 | | 0.00050 | mg/L | | 08-JUL-21 | R5515893 |
| Potassium (K)-Dissolved | 13.9 | | 0.050 | mg/L | | 08-JUL-21 | R5515893 |
| Selenium (Se)-Dissolved | 0.000424 | | 0.000050 | mg/L | | 08-JUL-21 | R5515893 |
| Silver (Ag)-Dissolved | <0.000010 | | 0.000010 | mg/L | | 08-JUL-21 | R5515893 |
| Sodium (Na)-Dissolved | 12.2 | | 0.050 | mg/L | | 08-JUL-21 | R5515893 |
| Thallium (Tl)-Dissolved | 0.000027 | | 0.000010 | mg/L | | 08-JUL-21 | R5515893 |
| Tin (Sn)-Dissolved | <0.00010 | | 0.00010 | mg/L | | 08-JUL-21 | R5515893 |
| Titanium (Ti)-Dissolved | 0.00032 | | 0.00030 | mg/L | | 08-JUL-21 | R5515893 |
| Uranium (U)-Dissolved | 0.00372 | | 0.000010 | mg/L | | 08-JUL-21 | R5515893 |
| Vanadium (V)-Dissolved | 0.00086 | | 0.00050 | mg/L | | 08-JUL-21 | R5515893 |
| Zinc (Zn)-Dissolved | 0.0148 | | 0.0010 | mg/L | | 08-JUL-21 | R5515893 |
| Hardness (from Dissolved Ca and Mg) | | | | | | | |

* 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 |
|--|------------|------------|-----------|-------|-----------|-----------|----------|
| L2609511-1 21EXO1SW-210705 Sampled By: CLIENT on 05-JUL-21 @ 08:35 Matrix: WATER | | | | | | | |
| Hardness (from Dissolved Ca and Mg) Hardness (as CaCO3) | 281 | | 0.13 | mg/L | | 09-JUL-21 | |
| Total Metals - CCME Hardness (from Total Ca and Mg) Hardness (as CaCO3) | 282 | HTC | 0.13 | mg/L | | 12-JUL-21 | |
| Total Mercury in Water by CVAAS Mercury (Hg)-Total | 0.0000141 | | 0.0000050 | mg/L | | 07-JUL-21 | R5514055 |
| Total Metals in Water by CRC ICPMS Aluminum (Al)-Total | 0.327 | | 0.0030 | mg/L | | 11-JUL-21 | R5517198 |
| Antimony (Sb)-Total | 0.00584 | | 0.00010 | mg/L | | 11-JUL-21 | R5517198 |
| Arsenic (As)-Total | 0.0764 | | 0.00010 | mg/L | | 11-JUL-21 | R5517198 |
| Barium (Ba)-Total | 0.0294 | | 0.00010 | mg/L | | 11-JUL-21 | R5517198 |
| Beryllium (Be)-Total | <0.00010 | | 0.00010 | mg/L | | 11-JUL-21 | R5517198 |
| Boron (B)-Total | 0.091 | | 0.010 | mg/L | | 11-JUL-21 | R5517198 |
| Cadmium (Cd)-Total | 0.000144 | | 0.0000050 | mg/L | | 11-JUL-21 | R5517198 |
| Calcium (Ca)-Total | 98.3 | | 0.050 | mg/L | | 11-JUL-21 | R5517198 |
| Chromium (Cr)-Total | 0.0172 | | 0.00010 | mg/L | | 11-JUL-21 | R5517198 |
| Cobalt (Co)-Total | 0.00662 | | 0.00010 | mg/L | | 11-JUL-21 | R5517198 |
| Copper (Cu)-Total | 0.0850 | | 0.00050 | mg/L | | 11-JUL-21 | R5517198 |
| Iron (Fe)-Total | 0.678 | | 0.010 | mg/L | | 11-JUL-21 | R5517198 |
| Lead (Pb)-Total | 0.000656 | | 0.000050 | mg/L | | 11-JUL-21 | R5517198 |
| Lithium (Li)-Total | 0.0035 | | 0.0010 | mg/L | | 11-JUL-21 | R5517198 |
| Magnesium (Mg)-Total | 8.89 | | 0.0050 | mg/L | | 11-JUL-21 | R5517198 |
| Manganese (Mn)-Total | 0.102 | | 0.00010 | mg/L | | 11-JUL-21 | R5517198 |
| Molybdenum (Mo)-Total | 0.00277 | | 0.000050 | mg/L | | 11-JUL-21 | R5517198 |
| Nickel (Ni)-Total | 0.0313 | | 0.00050 | mg/L | | 11-JUL-21 | R5517198 |
| Potassium (K)-Total | 15.1 | | 0.050 | mg/L | | 11-JUL-21 | R5517198 |
| Selenium (Se)-Total | 0.000429 | | 0.000050 | mg/L | | 11-JUL-21 | R5517198 |
| Silver (Ag)-Total | 0.000016 | | 0.000010 | mg/L | | 11-JUL-21 | R5517198 |
| Sodium (Na)-Total | 12.9 | | 0.050 | mg/L | | 11-JUL-21 | R5517198 |
| Thallium (Tl)-Total | 0.000030 | | 0.000010 | mg/L | | 11-JUL-21 | R5517198 |
| Tin (Sn)-Total | <0.00010 | | 0.00010 | mg/L | | 11-JUL-21 | R5517198 |
| Titanium (Ti)-Total | 0.00779 | | 0.00030 | mg/L | | 11-JUL-21 | R5517198 |
| Uranium (U)-Total | 0.00358 | | 0.000010 | mg/L | | 11-JUL-21 | R5517198 |
| Vanadium (V)-Total | 0.00186 | | 0.00050 | mg/L | | 11-JUL-21 | R5517198 |
| Zinc (Zn)-Total | 0.0251 | | 0.0030 | mg/L | | 11-JUL-21 | R5517198 |
| Miscellaneous Parameters pH | 7.70 | | 0.10 | pH | | 07-JUL-21 | R5514188 |
| PAHs in water by liquid extraction, GCMS Acenaphthene | <0.000010 | | 0.000010 | mg/L | 07-JUL-21 | 08-JUL-21 | R5517347 |
| Acenaphthylene | <0.000010 | | 0.000010 | mg/L | 07-JUL-21 | 08-JUL-21 | R5517347 |
| Acridine | 0.000015 | | 0.000010 | mg/L | 07-JUL-21 | 08-JUL-21 | R5517347 |
| Anthracene | <0.000010 | | 0.000010 | mg/L | 07-JUL-21 | 08-JUL-21 | R5517347 |
| Benzo(a)anthracene | <0.000010 | | 0.000010 | mg/L | 07-JUL-21 | 08-JUL-21 | R5517347 |
| Benzo(a)pyrene | <0.0000050 | | 0.0000050 | mg/L | 07-JUL-21 | 08-JUL-21 | R5517347 |
| Benzo(b&j)fluoranthene | <0.000010 | | 0.000010 | mg/L | 07-JUL-21 | 08-JUL-21 | R5517347 |
| Benzo(e)pyrene | <0.000010 | | 0.000010 | mg/L | 07-JUL-21 | 08-JUL-21 | R5517347 |
| Benzo(g,h,i)perylene | <0.000010 | | 0.000010 | mg/L | 07-JUL-21 | 08-JUL-21 | R5517347 |
| Benzo(k)fluoranthene | <0.000010 | | 0.000010 | mg/L | 07-JUL-21 | 08-JUL-21 | R5517347 |
| Chrysene | <0.000010 | | 0.000010 | mg/L | 07-JUL-21 | 08-JUL-21 | R5517347 |
| Dibenzo(a,h)anthracene | <0.0000050 | | 0.0000050 | mg/L | 07-JUL-21 | 08-JUL-21 | R5517347 |
| Fluoranthene | <0.000010 | | 0.000010 | mg/L | 07-JUL-21 | 08-JUL-21 | R5517347 |
| Fluorene | <0.000010 | | 0.000010 | mg/L | 07-JUL-21 | 08-JUL-21 | R5517347 |

* 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 |
|--|--|---|--|--|---|---|--|
| L2609511-1 21EXO1SW-210705 Sampled By: CLIENT on 05-JUL-21 @ 08:35 Matrix: WATER PAHs in water by liquid extraction, GCMS Indeno(1,2,3-cd)pyrene 1-Methyl Naphthalene 2-Methyl Naphthalene Naphthalene Perylene Phenanthrene Pyrene Quinoline Surrogate: Acridine d9 Surrogate: d12-Chrysene Surrogate: d8-Naphthalene Surrogate: d10-Phenanthrene B(a)P Total Potency Equivalent | <0.000010 <0.000020 <0.000020 <0.000050 <0.000010 <0.000020 0.000039 <0.000087 86.7 93.3 90.9 91.8 <0.000010 | DLQ | 0.000010 0.000020 0.000020 0.000050 0.000010 0.000020 0.000010 0.000087 60-130 60-130 50-130 60-130 0.000010 | mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L % % % % mg/L | 07-JUL-21 07-JUL-21 07-JUL-21 07-JUL-21 07-JUL-21 07-JUL-21 07-JUL-21 07-JUL-21 07-JUL-21 07-JUL-21 07-JUL-21 07-JUL-21 07-JUL-21 | 08-JUL-21 08-JUL-21 08-JUL-21 08-JUL-21 08-JUL-21 08-JUL-21 08-JUL-21 08-JUL-21 08-JUL-21 08-JUL-21 08-JUL-21 08-JUL-21 08-JUL-21 | R5517347 R5517347 R5517347 R5517347 R5517347 R5517347 R5517347 R5517347 R5517347 R5517347 R5517347 R5517347 R5517347 |
| | | | | | | | |

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

Reference Information

Sample Parameter Qualifier Key:

| Qualifier | Description |
|-----------|---|
| DLQ | Detection Limit raised due to co-eluting interference. GCMS qualifier ion ratio did not meet acceptance criteria. |
| HTC | Hardness was calculated from Total Ca and/or Mg concentrations and may be biased high (dissolved Ca/Mg results unavailable). |
| 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). |
| MS-B | Matrix Spike recovery could not be accurately calculated due to high analyte background in sample. |

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. | | | |
| ETL-HARDNESS-DIS-ED | Water | Hardness (from Dissolved Ca and Mg) | APHA 2340 B-Calculation |
| ETL-HARDNESS-TOT-ED | Water | Hardness (from Total Ca and Mg) | APHA 2340 B-Calculation |
| F2,F3,F4-ED | Water | F2, F3, F4 | EPA 3510/CCME PHC CWS-GC-FID |
| Water samples are spiked with 2-BBTF surrogate, and extracted by reciprocal action shaker for 30 minutes using a single micro-extraction with 2 mL hexane. After extraction, hexane extracts are dispensed into GC vials for GC-FID analysis. | | | |
| HG-D-CVAA-ED | Water | Dissolved Mercury in Water by CVAAS | APHA 3030B/EPA 1631E (mod) |
| Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS. | | | |
| HG-T-CVAA-ED | Water | Total Mercury in Water by CVAAS | EPA 1631E (mod) |
| Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS. | | | |
| MET-D-CCMS-ED | Water | Dissolved Metals in Water by CRC ICPMS | APHA 3030B/6020A (mod) |
| Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS. | | | |
| Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this 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. | | | |
| PAH-ME-GCMS-ED | Water | PAHs in water by liquid extraction, GCMS | EPA 3511 / EPA 8270D GCMS |
| PAHs are extracted from water using a hexane micro-extraction technique. The final extract is analyzed by capillary column gas chromatography with mass spectrometric detection (GC/MS). Surrogate recoveries may not be reported in cases where interferences from the sample matrix prevent accurate quantitation. | | | |
| 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) | | | |
| ** 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:

17-818607

Reference Information

Test Method References:

| ALS Test Code | Matrix | Test Description | Method Reference** |
|---------------|--------|------------------|--------------------|
|---------------|--------|------------------|--------------------|

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 ww - 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: L2609511

Report Date: 19-JUL-21

Page 1 of 9

Client: KBL Environmental Ltd.

3601, 75 Avenue

Leduc ab T9E 0Z5

Contact: David Vanderkley

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|--------------------------------------|-----------------|-------------------------|----------|-----------|-------|-----|--------|-----------|
| BTXS,F1-ED | | Water | | | | | | |
| Batch | R5508763 | | | | | | | |
| WG3573089-4 | DUP | L2609511-1 | | | | | | |
| Benzene | | <0.00050 | <0.00050 | RPD-NA | mg/L | N/A | 30 | 15-JUL-21 |
| Toluene | | <0.00050 | <0.00050 | RPD-NA | mg/L | N/A | 30 | 15-JUL-21 |
| EthylBenzene | | <0.00050 | <0.00050 | RPD-NA | mg/L | N/A | 30 | 15-JUL-21 |
| m+p-Xylene | | <0.00050 | <0.00050 | RPD-NA | mg/L | N/A | 30 | 15-JUL-21 |
| o-Xylene | | <0.00050 | <0.00050 | RPD-NA | mg/L | N/A | 30 | 15-JUL-21 |
| F1(C6-C10) | | <0.10 | <0.10 | RPD-NA | mg/L | N/A | 30 | 15-JUL-21 |
| WG3573089-2 | LCS | | | | | | | |
| Benzene | | | 110.8 | | % | | 70-130 | 15-JUL-21 |
| Toluene | | | 100.0 | | % | | 70-130 | 15-JUL-21 |
| EthylBenzene | | | 86.3 | | % | | 70-130 | 15-JUL-21 |
| m+p-Xylene | | | 103.5 | | % | | 70-130 | 15-JUL-21 |
| o-Xylene | | | 99.7 | | % | | 70-130 | 15-JUL-21 |
| WG3573089-3 | LCS | | | | | | | |
| F1(C6-C10) | | | 81.8 | | % | | 70-130 | 15-JUL-21 |
| WG3573089-1 | MB | | | | | | | |
| Benzene | | | <0.00050 | | mg/L | | 0.0005 | 15-JUL-21 |
| Toluene | | | <0.00050 | | mg/L | | 0.0005 | 15-JUL-21 |
| EthylBenzene | | | <0.00050 | | mg/L | | 0.0005 | 15-JUL-21 |
| m+p-Xylene | | | <0.00050 | | mg/L | | 0.0005 | 15-JUL-21 |
| o-Xylene | | | <0.00050 | | mg/L | | 0.0005 | 15-JUL-21 |
| F1(C6-C10) | | | <0.10 | | mg/L | | 0.1 | 15-JUL-21 |
| Surrogate: 1,4-Difluorobenzene (SS) | | | 80.1 | | % | | 70-130 | 15-JUL-21 |
| Surrogate: 4-Bromofluorobenzene (SS) | | | 80.0 | | % | | 70-130 | 15-JUL-21 |
| Surrogate: 3,4-Dichlorotoluene (SS) | | | 113.8 | | % | | 70-130 | 15-JUL-21 |
| F2,F3,F4-ED | | Water | | | | | | |
| Batch | R5516062 | | | | | | | |
| WG3570873-2 | LCS | DIESEL/MOTOR OIL | | | | | | |
| F2 (C10-C16) | | | 95.5 | | % | | 70-130 | 07-JUL-21 |
| F3 (C16-C34) | | | 104.1 | | % | | 70-130 | 07-JUL-21 |
| F4 (C34-C50) | | | 101.1 | | % | | 70-130 | 07-JUL-21 |
| WG3570873-1 | MB | | | | | | | |
| F2 (C10-C16) | | | <0.10 | | mg/L | | 0.1 | 07-JUL-21 |
| F3 (C16-C34) | | | <0.25 | | mg/L | | 0.25 | 07-JUL-21 |
| F4 (C34-C50) | | | <0.25 | | mg/L | | 0.25 | 07-JUL-21 |
| Surrogate: 2-Bromobenzotrifluoride | | | 89.3 | | % | | 60-140 | 07-JUL-21 |

Quality Control Report

Workorder: L2609511

Report Date: 19-JUL-21

Page 2 of 9

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|---------------------------|--------|-------------------------|------------|-----------|-------|-----|----------|-----------|
| HG-D-CVAA-ED | | | | | | | | |
| Water | | | | | | | | |
| Batch R5514055 | | | | | | | | |
| WG3570665-2 LCS | | | | | | | | |
| Mercury (Hg)-Dissolved | | | 95.2 | | % | | 80-120 | 07-JUL-21 |
| WG3570665-1 MB | | | | | | | | |
| Mercury (Hg)-Dissolved | | | <0.000005C | | mg/L | | 0.000005 | 07-JUL-21 |
| HG-T-CVAA-ED | | | | | | | | |
| Water | | | | | | | | |
| Batch R5514055 | | | | | | | | |
| WG3570668-3 DUP | | | | | | | | |
| Mercury (Hg)-Total | | L2609511-1 0.0000141 | 0.0000133 | | mg/L | 5.8 | 20 | 07-JUL-21 |
| WG3570668-2 LCS | | | | | | | | |
| Mercury (Hg)-Total | | | 93.7 | | % | | 80-120 | 07-JUL-21 |
| WG3570668-1 MB | | | | | | | | |
| Mercury (Hg)-Total | | | <0.000005C | | mg/L | | 0.000005 | 07-JUL-21 |
| MET-D-CCMS-ED | | | | | | | | |
| Water | | | | | | | | |
| Batch R5515893 | | | | | | | | |
| WG3571268-2 LCS | | | | | | | | |
| Aluminum (Al)-Dissolved | | | 104.4 | | % | | 80-120 | 08-JUL-21 |
| Antimony (Sb)-Dissolved | | | 101.2 | | % | | 80-120 | 08-JUL-21 |
| Arsenic (As)-Dissolved | | | 93.3 | | % | | 80-120 | 08-JUL-21 |
| Barium (Ba)-Dissolved | | | 92.1 | | % | | 80-120 | 08-JUL-21 |
| Beryllium (Be)-Dissolved | | | 98.7 | | % | | 80-120 | 08-JUL-21 |
| Boron (B)-Dissolved | | | 83.0 | | % | | 80-120 | 08-JUL-21 |
| Cadmium (Cd)-Dissolved | | | 96.8 | | % | | 80-120 | 08-JUL-21 |
| Calcium (Ca)-Dissolved | | | 96.9 | | % | | 80-120 | 08-JUL-21 |
| Chromium (Cr)-Dissolved | | | 100.1 | | % | | 80-120 | 08-JUL-21 |
| Cobalt (Co)-Dissolved | | | 96.5 | | % | | 80-120 | 08-JUL-21 |
| Copper (Cu)-Dissolved | | | 94.4 | | % | | 80-120 | 08-JUL-21 |
| Iron (Fe)-Dissolved | | | 99.0 | | % | | 80-120 | 08-JUL-21 |
| Lead (Pb)-Dissolved | | | 93.8 | | % | | 80-120 | 08-JUL-21 |
| Lithium (Li)-Dissolved | | | 94.7 | | % | | 80-120 | 08-JUL-21 |
| Magnesium (Mg)-Dissolved | | | 92.5 | | % | | 80-120 | 08-JUL-21 |
| Manganese (Mn)-Dissolved | | | 95.6 | | % | | 80-120 | 08-JUL-21 |
| Molybdenum (Mo)-Dissolved | | | 96.0 | | % | | 80-120 | 08-JUL-21 |
| Nickel (Ni)-Dissolved | | | 95.2 | | % | | 80-120 | 08-JUL-21 |
| Potassium (K)-Dissolved | | | 92.2 | | % | | 80-120 | 08-JUL-21 |
| Selenium (Se)-Dissolved | | | 102.0 | | % | | 80-120 | 08-JUL-21 |
| Silver (Ag)-Dissolved | | | 99.2 | | % | | 80-120 | 08-JUL-21 |

Quality Control Report

Workorder: L2609511

Report Date: 19-JUL-21

Page 3 of 9

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|---------------------------|-----------------|--------------|------------|-----------|-------|-----|----------|-----------|
| MET-D-CCMS-ED | | Water | | | | | | |
| Batch | R5515893 | | | | | | | |
| WG3571268-2 | LCS | | | | | | | |
| Sodium (Na)-Dissolved | | | 94.3 | | % | | 80-120 | 08-JUL-21 |
| Thallium (Tl)-Dissolved | | | 86.9 | | % | | 80-120 | 08-JUL-21 |
| Tin (Sn)-Dissolved | | | 95.3 | | % | | 80-120 | 08-JUL-21 |
| Titanium (Ti)-Dissolved | | | 94.3 | | % | | 80-120 | 08-JUL-21 |
| Uranium (U)-Dissolved | | | 90.3 | | % | | 80-120 | 08-JUL-21 |
| Vanadium (V)-Dissolved | | | 94.5 | | % | | 80-120 | 08-JUL-21 |
| Zinc (Zn)-Dissolved | | | 91.2 | | % | | 80-120 | 08-JUL-21 |
| WG3571268-1 | MB | | | | | | | |
| Aluminum (Al)-Dissolved | | | <0.0010 | | mg/L | | 0.001 | 08-JUL-21 |
| Antimony (Sb)-Dissolved | | | <0.00010 | | mg/L | | 0.0001 | 08-JUL-21 |
| Arsenic (As)-Dissolved | | | <0.00010 | | mg/L | | 0.0001 | 08-JUL-21 |
| Barium (Ba)-Dissolved | | | <0.00010 | | mg/L | | 0.0001 | 08-JUL-21 |
| Beryllium (Be)-Dissolved | | | <0.00010 | | mg/L | | 0.0001 | 08-JUL-21 |
| Boron (B)-Dissolved | | | <0.010 | | mg/L | | 0.01 | 08-JUL-21 |
| Cadmium (Cd)-Dissolved | | | <0.0000050 | | mg/L | | 0.000005 | 08-JUL-21 |
| Calcium (Ca)-Dissolved | | | <0.050 | | mg/L | | 0.05 | 08-JUL-21 |
| Chromium (Cr)-Dissolved | | | <0.00010 | | mg/L | | 0.0001 | 08-JUL-21 |
| Cobalt (Co)-Dissolved | | | <0.00010 | | mg/L | | 0.0001 | 08-JUL-21 |
| Copper (Cu)-Dissolved | | | <0.00020 | | mg/L | | 0.0002 | 08-JUL-21 |
| Iron (Fe)-Dissolved | | | <0.010 | | mg/L | | 0.01 | 08-JUL-21 |
| Lead (Pb)-Dissolved | | | <0.000050 | | mg/L | | 0.00005 | 08-JUL-21 |
| Lithium (Li)-Dissolved | | | <0.0010 | | mg/L | | 0.001 | 08-JUL-21 |
| Magnesium (Mg)-Dissolved | | | <0.0050 | | mg/L | | 0.005 | 08-JUL-21 |
| Manganese (Mn)-Dissolved | | | <0.00010 | | mg/L | | 0.0001 | 08-JUL-21 |
| Molybdenum (Mo)-Dissolved | | | <0.000050 | | mg/L | | 0.00005 | 08-JUL-21 |
| Nickel (Ni)-Dissolved | | | <0.00050 | | mg/L | | 0.0005 | 08-JUL-21 |
| Potassium (K)-Dissolved | | | <0.050 | | mg/L | | 0.05 | 08-JUL-21 |
| Selenium (Se)-Dissolved | | | <0.000050 | | mg/L | | 0.00005 | 08-JUL-21 |
| Silver (Ag)-Dissolved | | | <0.000010 | | mg/L | | 0.00001 | 08-JUL-21 |
| Sodium (Na)-Dissolved | | | <0.050 | | mg/L | | 0.05 | 08-JUL-21 |
| Thallium (Tl)-Dissolved | | | <0.000010 | | mg/L | | 0.00001 | 08-JUL-21 |
| Tin (Sn)-Dissolved | | | <0.00010 | | mg/L | | 0.0001 | 08-JUL-21 |
| Titanium (Ti)-Dissolved | | | <0.00030 | | mg/L | | 0.0003 | 08-JUL-21 |
| Uranium (U)-Dissolved | | | <0.000010 | | mg/L | | 0.00001 | 08-JUL-21 |

Quality Control Report

Workorder: L2609511

Report Date: 19-JUL-21

Page 4 of 9

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|------------------------|----------|-----------------|----------|-----------|-------|-----|--------|-----------|
| MET-D-CCMS-ED | | | | | | | | |
| Water | | | | | | | | |
| Batch | R5515893 | | | | | | | |
| WG3571268-1 MB | | | | | | | | |
| Vanadium (V)-Dissolved | | | <0.00050 | | mg/L | | 0.0005 | 08-JUL-21 |
| Zinc (Zn)-Dissolved | | | <0.0010 | | mg/L | | 0.001 | 08-JUL-21 |
| MET-T-CCMS-ED | | | | | | | | |
| Water | | | | | | | | |
| Batch | R5516718 | | | | | | | |
| WG3572062-2 LCS | | HB_WATER | | | | | | |
| Aluminum (Al)-Total | | | 105.0 | | % | | 80-120 | 09-JUL-21 |
| Antimony (Sb)-Total | | | 98.9 | | % | | 80-120 | 09-JUL-21 |
| Arsenic (As)-Total | | | 100.1 | | % | | 80-120 | 09-JUL-21 |
| Barium (Ba)-Total | | | 99.2 | | % | | 80-120 | 09-JUL-21 |
| Beryllium (Be)-Total | | | 86.0 | | % | | 80-120 | 09-JUL-21 |
| Boron (B)-Total | | | 86.9 | | % | | 80-120 | 09-JUL-21 |
| Cadmium (Cd)-Total | | | 98.6 | | % | | 80-120 | 09-JUL-21 |
| Calcium (Ca)-Total | | | 89.0 | | % | | 80-120 | 09-JUL-21 |
| Chromium (Cr)-Total | | | 107.8 | | % | | 80-120 | 09-JUL-21 |
| Cobalt (Co)-Total | | | 98.8 | | % | | 80-120 | 09-JUL-21 |
| Copper (Cu)-Total | | | 97.8 | | % | | 80-120 | 09-JUL-21 |
| Iron (Fe)-Total | | | 101.5 | | % | | 80-120 | 09-JUL-21 |
| Lead (Pb)-Total | | | 91.2 | | % | | 80-120 | 09-JUL-21 |
| Lithium (Li)-Total | | | 73.4 | MES | % | | 80-120 | 09-JUL-21 |
| Magnesium (Mg)-Total | | | 100.1 | | % | | 80-120 | 09-JUL-21 |
| Manganese (Mn)-Total | | | 101.6 | | % | | 80-120 | 09-JUL-21 |
| Molybdenum (Mo)-Total | | | 99.1 | | % | | 80-120 | 09-JUL-21 |
| Nickel (Ni)-Total | | | 99.6 | | % | | 80-120 | 09-JUL-21 |
| Potassium (K)-Total | | | 99.95 | | % | | 80-120 | 09-JUL-21 |
| Selenium (Se)-Total | | | 97.7 | | % | | 80-120 | 09-JUL-21 |
| Silver (Ag)-Total | | | 96.7 | | % | | 80-120 | 09-JUL-21 |
| Sodium (Na)-Total | | | 99.0 | | % | | 80-120 | 09-JUL-21 |
| Thallium (Tl)-Total | | | 90.5 | | % | | 80-120 | 09-JUL-21 |
| Tin (Sn)-Total | | | 96.6 | | % | | 80-120 | 09-JUL-21 |
| Titanium (Ti)-Total | | | 98.6 | | % | | 80-120 | 09-JUL-21 |
| Uranium (U)-Total | | | 99.9 | | % | | 80-120 | 09-JUL-21 |
| Vanadium (V)-Total | | | 100.0 | | % | | 80-120 | 09-JUL-21 |
| Zinc (Zn)-Total | | | 94.9 | | % | | 80-120 | 09-JUL-21 |
| WG3572062-1 MB | | | | | | | | |

Quality Control Report

Workorder: L2609511

Report Date: 19-JUL-21

Page 5 of 9

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|------------------------|--------|--------------|------------|-----------|-------|-----|----------|-----------|
| MET-T-CCMS-ED | | Water | | | | | | |
| Batch R5516718 | | | | | | | | |
| WG3572062-1 MB | | | | | | | | |
| Aluminum (Al)-Total | | | <0.0030 | | mg/L | | 0.003 | 09-JUL-21 |
| Antimony (Sb)-Total | | | <0.00010 | | mg/L | | 0.0001 | 09-JUL-21 |
| Arsenic (As)-Total | | | <0.00010 | | mg/L | | 0.0001 | 09-JUL-21 |
| Barium (Ba)-Total | | | <0.00010 | | mg/L | | 0.0001 | 09-JUL-21 |
| Beryllium (Be)-Total | | | <0.00010 | | mg/L | | 0.0001 | 09-JUL-21 |
| Boron (B)-Total | | | <0.010 | | mg/L | | 0.01 | 09-JUL-21 |
| Cadmium (Cd)-Total | | | <0.0000050 | | mg/L | | 0.000005 | 09-JUL-21 |
| Calcium (Ca)-Total | | | <0.050 | | mg/L | | 0.05 | 09-JUL-21 |
| Chromium (Cr)-Total | | | <0.00010 | | mg/L | | 0.0001 | 09-JUL-21 |
| Cobalt (Co)-Total | | | <0.00010 | | mg/L | | 0.0001 | 09-JUL-21 |
| Copper (Cu)-Total | | | <0.00050 | | mg/L | | 0.0005 | 09-JUL-21 |
| Iron (Fe)-Total | | | <0.010 | | mg/L | | 0.01 | 09-JUL-21 |
| Lead (Pb)-Total | | | <0.000050 | | mg/L | | 0.00005 | 09-JUL-21 |
| Lithium (Li)-Total | | | <0.0010 | | mg/L | | 0.001 | 09-JUL-21 |
| Magnesium (Mg)-Total | | | <0.0050 | | mg/L | | 0.005 | 09-JUL-21 |
| Manganese (Mn)-Total | | | <0.00010 | | mg/L | | 0.0001 | 09-JUL-21 |
| Molybdenum (Mo)-Total | | | <0.000050 | | mg/L | | 0.00005 | 09-JUL-21 |
| Nickel (Ni)-Total | | | <0.00050 | | mg/L | | 0.0005 | 09-JUL-21 |
| Potassium (K)-Total | | | <0.050 | | mg/L | | 0.05 | 09-JUL-21 |
| Selenium (Se)-Total | | | <0.000050 | | mg/L | | 0.00005 | 09-JUL-21 |
| Silver (Ag)-Total | | | <0.000010 | | mg/L | | 0.00001 | 09-JUL-21 |
| Sodium (Na)-Total | | | <0.050 | | mg/L | | 0.05 | 09-JUL-21 |
| Thallium (Tl)-Total | | | <0.000010 | | mg/L | | 0.00001 | 09-JUL-21 |
| Tin (Sn)-Total | | | <0.00010 | | mg/L | | 0.0001 | 09-JUL-21 |
| Titanium (Ti)-Total | | | <0.00030 | | mg/L | | 0.0003 | 09-JUL-21 |
| Uranium (U)-Total | | | <0.000010 | | mg/L | | 0.00001 | 09-JUL-21 |
| Vanadium (V)-Total | | | <0.00050 | | mg/L | | 0.0005 | 09-JUL-21 |
| Zinc (Zn)-Total | | | <0.0030 | | mg/L | | 0.003 | 09-JUL-21 |
| PAH-ME-GCMS-ED | | Water | | | | | | |
| Batch R5517347 | | | | | | | | |
| WG3570577-2 LCS | | | | | | | | |
| Acenaphthene | | | 103.2 | | % | | 60-130 | 12-JUL-21 |
| Acenaphthylene | | | 92.3 | | % | | 60-130 | 12-JUL-21 |
| Acridine | | | 92.3 | | % | | 60-130 | 12-JUL-21 |

Quality Control Report

Workorder: L2609511

Report Date: 19-JUL-21

Page 6 of 9

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|------------------------|-----------------|--------------|------------|-----------|-------|-----|----------|-----------|
| PAH-ME-GCMS-ED | | Water | | | | | | |
| Batch | R5517347 | | | | | | | |
| WG3570577-2 | LCS | | | | | | | |
| Anthracene | | | 95.3 | | % | | 60-130 | 12-JUL-21 |
| Benzo(a)anthracene | | | 90.0 | | % | | 60-130 | 12-JUL-21 |
| Benzo(a)pyrene | | | 98.6 | | % | | 60-130 | 12-JUL-21 |
| Benzo(b&j)fluoranthene | | | 103.5 | | % | | 60-130 | 12-JUL-21 |
| Benzo(e)pyrene | | | 107.9 | | % | | 60-130 | 12-JUL-21 |
| Benzo(g,h,i)perylene | | | 105.2 | | % | | 60-130 | 12-JUL-21 |
| Benzo(k)fluoranthene | | | 109.8 | | % | | 60-130 | 12-JUL-21 |
| Chrysene | | | 100.5 | | % | | 60-130 | 12-JUL-21 |
| Dibenzo(a,h)anthracene | | | 106.8 | | % | | 60-130 | 12-JUL-21 |
| Fluoranthene | | | 110.1 | | % | | 60-130 | 12-JUL-21 |
| Fluorene | | | 102.4 | | % | | 60-130 | 12-JUL-21 |
| Indeno(1,2,3-cd)pyrene | | | 106.2 | | % | | 60-130 | 12-JUL-21 |
| 1-Methyl Naphthalene | | | 110.6 | | % | | 60-130 | 12-JUL-21 |
| 2-Methyl Naphthalene | | | 110.3 | | % | | 60-130 | 12-JUL-21 |
| Naphthalene | | | 112.1 | | % | | 50-130 | 12-JUL-21 |
| Perylene | | | 105.6 | | % | | 60-130 | 12-JUL-21 |
| Phenanthrene | | | 108.8 | | % | | 60-130 | 12-JUL-21 |
| Pyrene | | | 107.8 | | % | | 60-130 | 12-JUL-21 |
| Quinoline | | | 114.6 | | % | | 60-130 | 12-JUL-21 |
| WG3570577-1 | MB | | | | | | | |
| Acenaphthene | | | <0.000010 | | mg/L | | 0.00001 | 12-JUL-21 |
| Acenaphthylene | | | <0.000010 | | mg/L | | 0.00001 | 12-JUL-21 |
| Acridine | | | <0.000010 | | mg/L | | 0.00001 | 12-JUL-21 |
| Anthracene | | | <0.000010 | | mg/L | | 0.00001 | 12-JUL-21 |
| Benzo(a)anthracene | | | <0.000010 | | mg/L | | 0.00001 | 12-JUL-21 |
| Benzo(a)pyrene | | | <0.0000050 | | mg/L | | 0.000005 | 12-JUL-21 |
| Benzo(b&j)fluoranthene | | | <0.000010 | | mg/L | | 0.00001 | 12-JUL-21 |
| Benzo(e)pyrene | | | <0.000010 | | mg/L | | 0.00001 | 12-JUL-21 |
| Benzo(g,h,i)perylene | | | <0.000010 | | mg/L | | 0.00001 | 12-JUL-21 |
| Benzo(k)fluoranthene | | | <0.000010 | | mg/L | | 0.00001 | 12-JUL-21 |
| Chrysene | | | <0.000010 | | mg/L | | 0.00001 | 12-JUL-21 |
| Dibenzo(a,h)anthracene | | | <0.0000050 | | mg/L | | 0.000005 | 12-JUL-21 |
| Fluoranthene | | | <0.000010 | | mg/L | | 0.00001 | 12-JUL-21 |
| Fluorene | | | <0.000010 | | mg/L | | 0.00001 | 12-JUL-21 |

Quality Control Report

Workorder: L2609511

Report Date: 19-JUL-21

Page 7 of 9

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|-----------------------------|--------|---------------|-----------|-----------|-------|-----|---------|-----------|
| PAH-ME-GCMS-ED | | Water | | | | | | |
| Batch R5517347 | | | | | | | | |
| WG3570577-1 MB | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | | | <0.000010 | | mg/L | | 0.00001 | 12-JUL-21 |
| 1-Methyl Naphthalene | | | <0.000020 | | mg/L | | 0.00002 | 12-JUL-21 |
| 2-Methyl Naphthalene | | | <0.000020 | | mg/L | | 0.00002 | 12-JUL-21 |
| Naphthalene | | | <0.000050 | | mg/L | | 0.00005 | 12-JUL-21 |
| Perylene | | | <0.000010 | | mg/L | | 0.00001 | 12-JUL-21 |
| Phenanthrene | | | <0.000020 | | mg/L | | 0.00002 | 12-JUL-21 |
| Pyrene | | | <0.000010 | | mg/L | | 0.00001 | 12-JUL-21 |
| Quinoline | | | <0.000050 | | mg/L | | 0.00005 | 12-JUL-21 |
| Surrogate: Acridine d9 | | | 83.9 | | % | | 60-130 | 12-JUL-21 |
| Surrogate: d12-Chrysene | | | 77.2 | | % | | 60-130 | 12-JUL-21 |
| Surrogate: d8-Naphthalene | | | 105.3 | | % | | 50-130 | 12-JUL-21 |
| Surrogate: d10-Phenanthrene | | | 95.1 | | % | | 60-130 | 12-JUL-21 |
| PH-ED | | Water | | | | | | |
| Batch R5514188 | | | | | | | | |
| WG3570824-12 LCS | | ED-PH6 | | | | | | |
| pH | | | 6.05 | | pH | | 5.8-6.2 | 07-JUL-21 |
| WG3570824-2 LCS | | ED-PH6 | | | | | | |
| pH | | | 6.05 | | pH | | 5.8-6.2 | 07-JUL-21 |
| WG3570824-7 LCS | | ED-PH6 | | | | | | |
| pH | | | 6.04 | | pH | | 5.8-6.2 | 07-JUL-21 |

Quality Control Report

Workorder: L2609511

Report Date: 19-JUL-21

Page 8 of 9

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. |

Quality Control Report

Workorder: L2609511

Report Date: 19-JUL-21

Page 9 of 9

Hold Time Exceedances:

| ALS Product Description | Sample ID | Sampling Date | Date Processed | Rec. HT | Actual HT | Units | Qualifier |
|-------------------------|-----------|-----------------|-----------------|---------|-----------|-------|-----------|
| Physical Tests | | | | | | | |
| pH | 1 | 05-JUL-21 08:35 | 07-JUL-21 10:00 | 0.25 | 49 | 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 L2609511 were received on 05-JUL-21 09:20.

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.

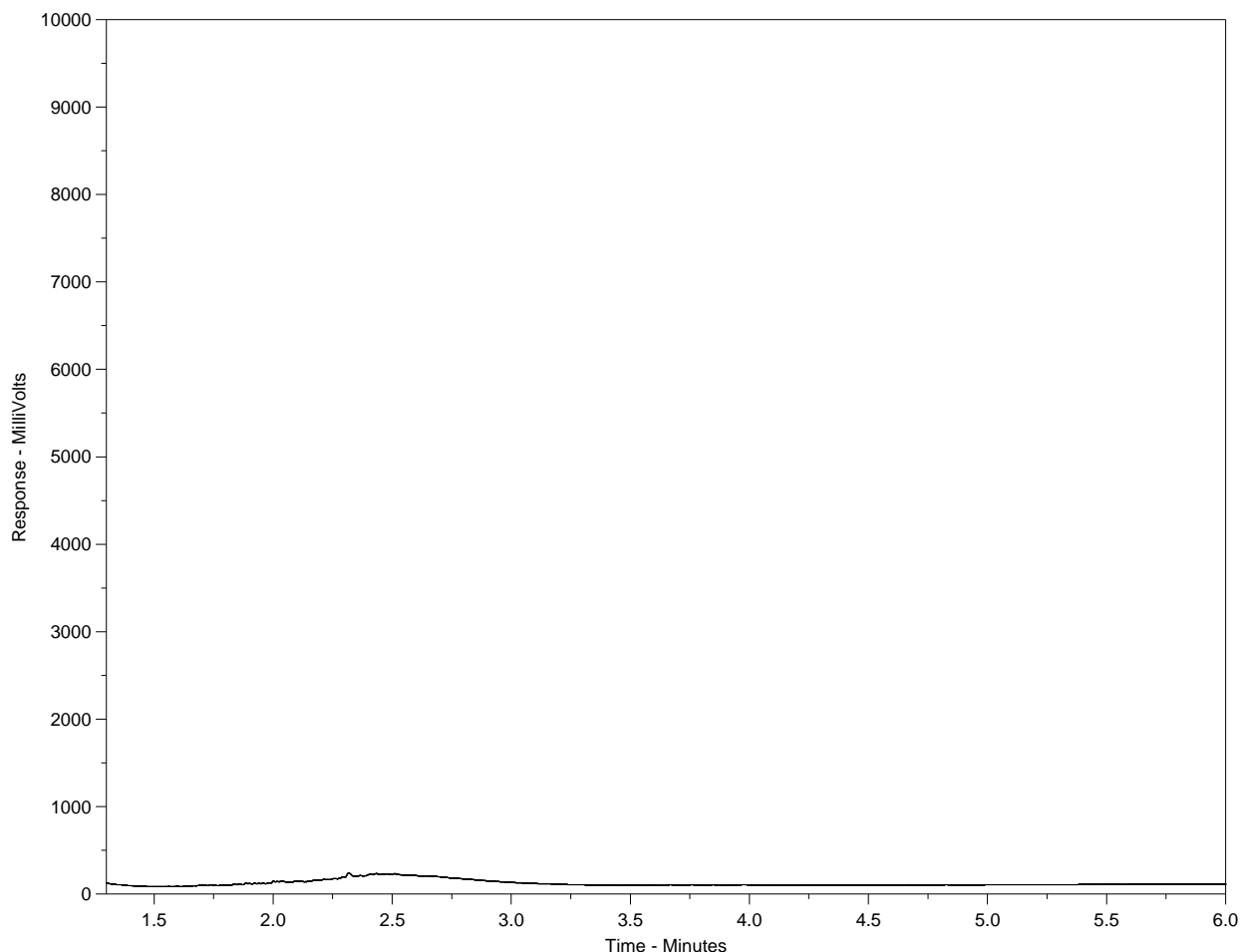
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide 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: L2609511-1
Client ID: 21EXO1SW-210705



| F2 | | F3 | | F4 | | F4 |
|-------------------|-------|-------------------------------|-------|----|--------|----|
| nC10 | nC16 | | nC34 | | nC50 | |
| 174°C | 287°C | | 481°C | | 575°C | |
| 346°F | 549°F | | 898°F | | 1067°F | |
| Gasoline | | Motor Oils/ Lube Oils/ Grease | | | | |
| Diesel/ Jet Fuels | | | | | | |

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.



Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

COC Number: 17 - 818607

Page of

Affix ALS barcode label here
(lab use only)

| | | | | | |
|--|--|--|--|---|--|
| Report To Contact and company name below will appear on the final report | | Report Format / Distribution Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDO (DIGITAL) Quality Control (QC) Report with Report <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked Select Distribution: <input type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax: <u>dvanderkley@kblenv.com</u> Email 2: <u>jgrayse@kblenv.com</u> Email 3: <u>mmatt@kblenv.com</u> | | Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply) Regular [R] <input type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply 4 day [P4-20%] <input type="checkbox"/> 1 Business day [E - 100%] 3 day [P3-25%] <input type="checkbox"/> Same Day, Weekend or Statutory holiday [E - 200%] 2 day [P2-50%] <input type="checkbox"/> (Laboratory opening fees may apply) Date and Time Required for all E&P TATs: <u>dd-mm-yy hh:mm</u> For tests that can not be performed according to the service level selected, you will be contacted. | |
| Company: <u>KBL Environmental</u> Contact: <u>Dave Vanderkley</u> Phone: <u>780 494 7414</u> Company address below will appear on the final report Street: <u>3903 63 Ave</u> City/Province: <u>Leduc AB</u> Postal Code: <u>T4E 0Z4</u> | | Invoice To Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO | | Analysis Request Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below SUSPECTED HAZARD (see Special Instructions) | |
| Project Information ALS Account # / Quote #: <u>21-057NT</u> Job #: <u>21-057NT</u> PO / AFE: <u>56004</u> LSD: | | Oil and Gas Required Fields (client use) AFE/Coast Center: <u>PO#</u> Major/Minor Code: <u>Routing Code:</u> Requisitioner: <u>accounting@kblenv.com</u> Location: | | NUMBER OF CONTAINERS 7 | |
| ALS Lab Work Order # (lab use only): | | ALS Contact: | | SAMPLES ON HOLD | |
| Sample Identification and/or Coordinates (This description will appear on the report) <u>21EX01SW-210705</u> | | Date (dd-mm-yy) <u>05-Jul-21</u> | | Time (hh:mm) <u>0835</u> | |
| Drinking Water (DW) Samples¹ (client use) Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> 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 <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Packs <input type="checkbox"/> Ice Cubes <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/> Cooling Initiated <input type="checkbox"/> | |
| SHIPMENT RELEASE (client use) Released by: <u>James Grayse</u> Date: <u>2021-Jul-05</u> | | INITIAL SHIPMENT RECEPTION (lab use only) Received by: <u>M/C</u> Date: <u>05/05/21</u> Time: <u>09:20</u> | | FINAL SHIPMENT RECEPTION (lab use only) Received by: <u>9.1</u> Date: <u>05/05/21</u> Time: <u>09:20</u> | |
| SHIPMENT RELEASE (client use) Date: <u>2021-Jul-05</u> | | INITIAL SHIPMENT RECEPTION (lab use only) Date: <u>05/05/21</u> | | FINAL SHIPMENT RECEPTION (lab use only) Date: <u>05/05/21</u> | |

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 24, 25, 26, 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.

CERTIFICATE OF ANALYSIS

Work Order : **YL2200422**
Client : **KBL Environmental Ltd.**
Contact : Nicole Prince
Address : 17 Cameron Road PO Box 1895
Yellowknife NT Canada X1A 2P4
Telephone : 780-554-7259
Project : 22-071NT
PO : PRINN0002
C-O-C number : ----
Sampler : ----
Site : ----
Quote number : YL22-KBLE100-003
No. of samples received : 4
No. of samples analysed : 4

Page : 1 of 5
Laboratory : Yellowknife - Environmental
Account Manager : Oliver Gregg
Address : 314 Old Airport Road, Unit 116
Yellowknife NT Canada X1A 3T3
Telephone : 1 867 446 5593
Date Samples Received : 09-May-2022 11:00
Date Analysis Commenced : 10-May-2022
Issue Date : 11-May-2022 17:24

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

| <i>Signatories</i> | <i>Position</i> | <i>Laboratory Department</i> |
|--------------------|---------------------------------|---------------------------------------|
| Jing Liu | Lab Assistant | Inorganics, Edmonton, Alberta |
| Miles Gropen | Department Manager - Inorganics | Inorganics, Burnaby, British Columbia |
| Paul Cushing | Team Leader - Organics | Organics, Burnaby, British Columbia |
| Robin Weeks | Team Leader - Metals | Metals, Burnaby, British Columbia |



General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances
LOR: Limit of Reporting (detection limit).

| <i>Unit</i> | <i>Description</i> |
|-------------|----------------------|
| µg/L | micrograms per litre |
| mg/L | milligrams per litre |
| pH units | pH units |

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Qualifiers

| <i>Qualifier</i> | <i>Description</i> |
|------------------|---|
| DLA | Detection Limit adjusted for required dilution. |
| DLCI | Detection Limit Raised: Chromatographic interference due to co-elution. |
| DLQ | Detection Limit raised due to co-eluting interference. GCMS qualifier ion ratio did not meet acceptance criteria. |
| SMI | Surrogate recovery could not be measured due to sample matrix interference. |



Analytical Results

| Sub-Matrix: Water (Matrix: Water) | | | | | Client sample ID | EMD Berm 1 | EMD Berm 2 | KBL Pond 1 | KBL Pond 2 | ---- |
|---------------------------------------|-------------|------------|----------|----------|--------------------------|--------------------------|---------------|---------------|------------|------|
| Client sampling date / time | | | | | 07-May-2022 | 07-May-2022 | 07-May-2022 | 07-May-2022 | ---- | |
| Analyte | CAS Number | Method | LOR | Unit | YL2200422-001 | YL2200422-002 | YL2200422-003 | YL2200422-004 | ----- | |
| | | | | | Result | Result | Result | Result | ---- | |
| Physical Tests | | | | | | | | | | |
| pH | ---- | E108 | 0.10 | pH units | 7.20 | 7.24 | 7.19 | 7.19 | ---- | |
| Total Metals | | | | | | | | | | |
| antimony, total | 7440-36-0 | E420 | 0.00010 | mg/L | 0.00343 | 0.00341 | 0.00170 | 0.00175 | ---- | |
| arsenic, total | 7440-38-2 | E420 | 0.00010 | mg/L | 0.00080 | 0.00078 | 0.00166 | 0.00212 | ---- | |
| barium, total | 7440-39-3 | E420 | 0.00010 | mg/L | 0.0241 | 0.0241 | 0.0365 | 0.0399 | ---- | |
| beryllium, total | 7440-41-7 | E420 | 0.000020 | mg/L | <0.000040 ^{DLA} | <0.000040 ^{DLA} | 0.000024 | 0.000026 | ---- | |
| boron, total | 7440-42-8 | E420 | 0.010 | mg/L | 3.97 | 4.18 | 1.99 | 1.98 | ---- | |
| iron, total | 7439-89-6 | E420 | 0.010 | mg/L | 0.138 | 0.127 | 0.976 | 1.51 | ---- | |
| manganese, total | 7439-96-5 | E420 | 0.00010 | mg/L | 0.160 | 0.159 | 0.113 | 0.138 | ---- | |
| selenium, total | 7782-49-2 | E420 | 0.000050 | mg/L | 0.000976 | 0.00101 | 0.00217 | 0.00215 | ---- | |
| uranium, total | 7440-61-1 | E420 | 0.000010 | mg/L | 0.00507 | 0.00514 | 0.00245 | 0.00263 | ---- | |
| zinc, total | 7440-66-6 | E420 | 0.0030 | mg/L | 0.522 | 0.534 | 0.0628 | 0.0608 | ---- | |
| Aggregate Organics | | | | | | | | | | |
| phenols, total (4AAP) | ---- | E562 | 0.0010 | mg/L | 0.0685 | 0.0689 | 0.120 | 0.115 | ---- | |
| Volatile Organic Compounds [Fuels] | | | | | | | | | | |
| benzene | 71-43-2 | E611A | 0.50 | µg/L | <0.50 | <0.50 | <0.50 | <0.50 | ---- | |
| ethylbenzene | 100-41-4 | E611A | 0.50 | µg/L | 1.70 | 1.70 | <0.50 | <0.50 | ---- | |
| methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 0.50 | µg/L | <0.50 | <0.50 | <0.50 | <0.50 | ---- | |
| styrene | 100-42-5 | E611A | 0.50 | µg/L | <0.50 | <0.50 | <0.50 | <0.50 | ---- | |
| toluene | 108-88-3 | E611A | 0.50 | µg/L | 2.39 | 2.30 | 0.62 | 0.68 | ---- | |
| xylene, m+p- | 179601-23-1 | E611A | 0.40 | µg/L | 7.69 | 7.52 | 2.05 | 1.95 | ---- | |
| xylene, o- | 95-47-6 | E611A | 0.30 | µg/L | 5.67 | 5.56 | 1.32 | 1.34 | ---- | |
| xylenes, total | 1330-20-7 | E611A | 0.50 | µg/L | 13.4 | 13.1 | 3.37 | 3.29 | ---- | |
| Volatile Organic Compounds Surrogates | | | | | | | | | | |
| bromofluorobenzene, 4- | 460-00-4 | E611A | 1.0 | % | 94.7 | 97.9 | 97.2 | 92.3 | ---- | |
| difluorobenzene, 1,4- | 540-36-3 | E611A | 1.0 | % | 98.7 | 99.2 | 97.3 | 98.6 | ---- | |
| Hydrocarbons | | | | | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | 110 | <100 | <100 | ---- | |
| F2 (C10-C16) | ---- | E601 | 300 | µg/L | 7760 | 13100 | 670 | 640 | ---- | |
| VHw (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | <100 | <100 | <100 | ---- | |
| F1-BTEX | ---- | EC580 | 100 | µg/L | <100 | <100 | <100 | <100 | ---- | |

| Sub-Matrix: Water (Matrix: Water) | | | | | Client sample ID | EMD Berm 1 | EMD Berm 2 | KBL Pond 1 | KBL Pond 2 | ---- |
|---|------------|------------|--------|------|----------------------------------|----------------------------------|------------------------|------------------------|------------|------|
| Client sampling date / time | | | | | 07-May-2022 | 07-May-2022 | 07-May-2022 | 07-May-2022 | ---- | |
| Analyte | CAS Number | Method | LOR | Unit | YL2200422-001 | YL2200422-002 | YL2200422-003 | YL2200422-004 | ----- | |
| | | | | | Result | Result | Result | Result | ---- | |
| Hydrocarbons | | | | | | | | | | |
| VPHw | ---- | EC580A | 100 | µg/L | <100 | <100 | <100 | <100 | ---- | |
| Hydrocarbons Surrogates | | | | | | | | | | |
| bromobenzotrifluoride, 2- (F2-F4 surr) | 392-83-6 | E601 | 1.0 | % | 94.6 | 94.9 | 91.7 | 91.3 | ---- | |
| dichlorotoluene, 3,4- | 97-75-0 | E581.VH+F1 | 1.0 | % | 98.6 | 111 | 71.8 | 104 | ---- | |
| Polycyclic Aromatic Hydrocarbons | | | | | | | | | | |
| acenaphthene | 83-32-9 | E641A | 0.010 | µg/L | <2.00 ^{DLCl} | <2.20 ^{DLCl} | 0.465 | 0.430 | ---- | |
| acenaphthylene | 208-96-8 | E641A | 0.010 | µg/L | <0.590 ^{DLCl} | <0.630 ^{DLCl} | 0.123 | 0.113 | ---- | |
| anthracene | 120-12-7 | E641A | 0.010 | µg/L | <0.480 ^{DLCl} | <0.600 ^{DLCl} | <0.060 ^{DLCl} | <0.050 ^{DLCl} | ---- | |
| benz(a)anthracene | 56-55-3 | E641A | 0.010 | µg/L | 0.412 | 0.627 | 0.017 | 0.017 | ---- | |
| benzo(a)pyrene | 50-32-8 | E641A | 0.0050 | µg/L | 0.0536 | 0.0858 | <0.0050 | <0.0050 | ---- | |
| benzo(b+j)fluoranthene | n/a | E641A | 0.010 | µg/L | 0.256 | 0.429 | <0.010 | <0.010 | ---- | |
| benzo(b+j+k)fluoranthene | n/a | E641A | 0.015 | µg/L | 0.355 | 0.595 | <0.015 | <0.015 | ---- | |
| benzo(g,h,i)perylene | 191-24-2 | E641A | 0.010 | µg/L | 0.036 | 0.054 | <0.010 | <0.010 | ---- | |
| benzo(k)fluoranthene | 207-08-9 | E641A | 0.010 | µg/L | 0.099 | 0.166 | <0.010 | <0.010 | ---- | |
| chrysene | 218-01-9 | E641A | 0.010 | µg/L | 0.408 | 0.635 | <0.030 ^{DLCl} | <0.030 ^{DLCl} | ---- | |
| dibenz(a,h)anthracene | 53-70-3 | E641A | 0.0050 | µg/L | 0.0121 | 0.0183 | <0.0050 | <0.0050 | ---- | |
| fluoranthene | 206-44-0 | E641A | 0.010 | µg/L | 3.90 | 6.05 | 0.243 | 0.241 | ---- | |
| fluorene | 86-73-7 | E641A | 0.010 | µg/L | 2.62 | 3.12 | 0.439 | 0.410 | ---- | |
| indeno(1,2,3-c,d)pyrene | 193-39-5 | E641A | 0.010 | µg/L | 0.053 | 0.087 | <0.010 | <0.010 | ---- | |
| naphthalene | 91-20-3 | E641A | 0.050 | µg/L | <8.50 ^{DLQ} | <9.40 ^{DLQ} | 3.25 | 2.97 | ---- | |
| phenanthrene | 85-01-8 | E641A | 0.020 | µg/L | 4.92 | 6.18 | 0.704 | 0.667 | ---- | |
| pyrene | 129-00-0 | E641A | 0.010 | µg/L | 2.31 | 3.56 | 0.126 | 0.128 | ---- | |
| B(a)P total potency equivalents [B(a)P TPE] | ---- | E641A | 0.010 | µg/L | 0.152 | 0.242 | <0.010 | <0.010 | ---- | |
| PAHs, total (EPA 16) | n/a | E641A | 0.065 | µg/L | 15.1 | 21.0 | 5.37 | 4.98 | ---- | |
| Polycyclic Aromatic Hydrocarbons Surrogates | | | | | | | | | | |
| chrysene-d12 | 1719-03-5 | E641A | 0.1 | % | 98.5 | 105 | 116 | 109 | ---- | |
| naphthalene-d8 | 1146-65-2 | E641A | 0.1 | % | Not ^{SMI} Determined | Not ^{SMI} Determined | 126 | 123 | ---- | |
| phenanthrene-d10 | 1517-22-2 | E641A | 0.1 | % | 91.4 | 91.0 | 86.8 | 80.7 | ---- | |
| Polychlorinated Biphenyls | | | | | | | | | | |
| polychlorinated biphenyls [PCBs], total | ---- | E685 | 1.0 | µg/L | <1.0 | <1.0 | <1.0 | <1.0 | ---- | |
| Polychlorinated Biphenyls Surrogates | | | | | | | | | | |



Analytical Results

| | | | | | | | | | | |
|--------------------------------------|------------|--------|-----|------|-----------------------------|---------------|---------------|---------------|-------------|------|
| Sub-Matrix: Water | | | | | Client sample ID | EMD Berm 1 | EMD Berm 2 | KBL Pond 1 | KBL Pond 2 | ---- |
| (Matrix: Water) | | | | | | | | | | |
| | | | | | Client sampling date / time | 07-May-2022 | 07-May-2022 | 07-May-2022 | 07-May-2022 | ---- |
| Analyte | CAS Number | Method | LOR | Unit | YL2200422-001 | YL2200422-002 | YL2200422-003 | YL2200422-004 | ----- | |
| | | | | | Result | Result | Result | Result | ---- | |
| Polychlorinated Biphenyls Surrogates | | | | | | | | | | |
| decachlorobiphenyl | 2051-24-3 | E685 | 1.0 | % | 83.8 | 88.9 | 84.5 | 91.3 | ---- | |

Please refer to the General Comments section for an explanation of any qualifiers detected.

QUALITY CONTROL INTERPRETIVE REPORT

| | | | |
|-------------------------|--|-----------------------|---|
| Work Order | : YL2200422 | Page | : 1 of 9 |
| Client | : KBL Environmental Ltd. | Laboratory | : Yellowknife - Environmental |
| Contact | : Nicole Prince | Account Manager | : Oliver Gregg |
| Address | : 17 Cameron Road PO Box 1895 Yellowknife NT Canada X1A 2P4 | Address | : 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3 |
| Telephone | : 780-554-7259 | Telephone | : 1 867 446 5593 |
| Project | : 22-071NT | Date Samples Received | : 09-May-2022 11:00 |
| PO | : PRINN0002 | Issue Date | : 11-May-2022 17:24 |
| C-O-C number | : ---- | | |
| Sampler | : ---- | | |
| Site | : ---- | | |
| Quote number | : YL22-KBLE100-003 | | |
| No. of samples received | : 4 | | |
| No. of samples analysed | : 4 | | |

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.

DQO: Data Quality Objective.

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|---|--------|---------------|--------------------------|---------------|--------|------|---------------|---------------|--------|------|
| | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Aggregate Organics : Phenols (4AAP) in Water by Colorimetry | | | | | | | | | | |
| Amber glass total (sulfuric acid) EMD Berm 1 | E562 | 07-May-2022 | ---- | ---- | ---- | | 11-May-2022 | 28 days | 5 days | ✓ |
| Aggregate Organics : Phenols (4AAP) in Water by Colorimetry | | | | | | | | | | |
| Amber glass total (sulfuric acid) EMD Berm 2 | E562 | 07-May-2022 | ---- | ---- | ---- | | 11-May-2022 | 28 days | 5 days | ✓ |
| Aggregate Organics : Phenols (4AAP) in Water by Colorimetry | | | | | | | | | | |
| Amber glass total (sulfuric acid) KBL Pond 1 | E562 | 07-May-2022 | ---- | ---- | ---- | | 11-May-2022 | 28 days | 5 days | ✓ |
| Aggregate Organics : Phenols (4AAP) in Water by Colorimetry | | | | | | | | | | |
| Amber glass total (sulfuric acid) KBL Pond 2 | E562 | 07-May-2022 | ---- | ---- | ---- | | 11-May-2022 | 28 days | 5 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) EMD Berm 1 | E601 | 07-May-2022 | 10-May-2022 | 14 days | 4 days | ✓ | 11-May-2022 | 40 days | 1 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) EMD Berm 2 | E601 | 07-May-2022 | 10-May-2022 | 14 days | 4 days | ✓ | 11-May-2022 | 40 days | 1 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) KBL Pond 1 | E601 | 07-May-2022 | 10-May-2022 | 14 days | 4 days | ✓ | 11-May-2022 | 40 days | 1 days | ✓ |



Matrix: **Water** Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

| Analyte Group | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|---|------------|---------------|--------------------------|---------------|--------|------|---------------|---------------|---------|--------------|
| Container / Client Sample ID(s) | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) KBL Pond 2 | E601 | 07-May-2022 | 10-May-2022 | 14 days | 4 days | ✓ | 11-May-2022 | 40 days | 1 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass vial (sodium bisulfate) EMD Berm 1 | E581.VH+F1 | 07-May-2022 | 11-May-2022 | ---- | ---- | | 11-May-2022 | 14 days | 4 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass vial (sodium bisulfate) EMD Berm 2 | E581.VH+F1 | 07-May-2022 | 11-May-2022 | ---- | ---- | | 11-May-2022 | 14 days | 4 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass vial (sodium bisulfate) KBL Pond 1 | E581.VH+F1 | 07-May-2022 | 11-May-2022 | ---- | ---- | | 11-May-2022 | 14 days | 4 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass vial (sodium bisulfate) KBL Pond 2 | E581.VH+F1 | 07-May-2022 | 11-May-2022 | ---- | ---- | | 11-May-2022 | 14 days | 4 days | ✓ |
| Physical Tests : pH by Meter | | | | | | | | | | |
| HDPE EMD Berm 1 | E108 | 07-May-2022 | ---- | ---- | ---- | | 11-May-2022 | 0.25 hrs | 102 hrs | ✖ EHTR-FM |
| Physical Tests : pH by Meter | | | | | | | | | | |
| HDPE EMD Berm 2 | E108 | 07-May-2022 | ---- | ---- | ---- | | 11-May-2022 | 0.25 hrs | 102 hrs | ✖ EHTR-FM |
| Physical Tests : pH by Meter | | | | | | | | | | |
| HDPE KBL Pond 1 | E108 | 07-May-2022 | ---- | ---- | ---- | | 11-May-2022 | 0.25 hrs | 102 hrs | ✖ EHTR-FM |
| Physical Tests : pH by Meter | | | | | | | | | | |
| HDPE KBL Pond 2 | E108 | 07-May-2022 | ---- | ---- | ---- | | 11-May-2022 | 0.25 hrs | 102 hrs | ✖ EHTR-FM |



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|---|--------|---------------|--------------------------|---------------|--------|------|---------------|---------------|--------|------|
| Container / Client Sample ID(s) | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Polychlorinated Biphenyls : PCB Aroclors by GC-ECD | | | | | | | | | | |
| Amber glass/Teflon lined cap EMD Berm 1 | E685 | 07-May-2022 | 10-May-2022 | ---- | ---- | | 11-May-2022 | 40 days | 1 days | ✓ |
| Polychlorinated Biphenyls : PCB Aroclors by GC-ECD | | | | | | | | | | |
| Amber glass/Teflon lined cap EMD Berm 2 | E685 | 07-May-2022 | 10-May-2022 | ---- | ---- | | 11-May-2022 | 40 days | 1 days | ✓ |
| Polychlorinated Biphenyls : PCB Aroclors by GC-ECD | | | | | | | | | | |
| Amber glass/Teflon lined cap KBL Pond 1 | E685 | 07-May-2022 | 10-May-2022 | ---- | ---- | | 11-May-2022 | 40 days | 1 days | ✓ |
| Polychlorinated Biphenyls : PCB Aroclors by GC-ECD | | | | | | | | | | |
| Amber glass/Teflon lined cap KBL Pond 2 | E685 | 07-May-2022 | 10-May-2022 | ---- | ---- | | 11-May-2022 | 40 days | 1 days | ✓ |
| Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) EMD Berm 1 | E641A | 07-May-2022 | 10-May-2022 | 14 days | 4 days | ✓ | 11-May-2022 | 40 days | 1 days | ✓ |
| Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) EMD Berm 2 | E641A | 07-May-2022 | 10-May-2022 | 14 days | 4 days | ✓ | 11-May-2022 | 40 days | 1 days | ✓ |
| Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) KBL Pond 1 | E641A | 07-May-2022 | 10-May-2022 | 14 days | 4 days | ✓ | 11-May-2022 | 40 days | 1 days | ✓ |
| Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) KBL Pond 2 | E641A | 07-May-2022 | 10-May-2022 | 14 days | 4 days | ✓ | 11-May-2022 | 40 days | 1 days | ✓ |
| Total Metals : Total Metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE - total (lab preserved) EMD Berm 1 | E420 | 07-May-2022 | ---- | ---- | ---- | | 11-May-2022 | 180 days | 5 days | ✓ |



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|--|--------|---------------|--------------------------|---------------|--------|------|---------------|---------------|--------|------|
| Container / Client Sample ID(s) | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Total Metals : Total Metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE - total (lab preserved) EMD Berm 2 | E420 | 07-May-2022 | ---- | ---- | ---- | | 11-May-2022 | 180 days | 5 days | ✔ |
| Total Metals : Total Metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE - total (lab preserved) KBL Pond 1 | E420 | 07-May-2022 | ---- | ---- | ---- | | 11-May-2022 | 180 days | 5 days | ✔ |
| Total Metals : Total Metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE - total (lab preserved) KBL Pond 2 | E420 | 07-May-2022 | ---- | ---- | ---- | | 11-May-2022 | 180 days | 5 days | ✔ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass vial (sodium bisulfate) EMD Berm 1 | E611A | 07-May-2022 | 11-May-2022 | ---- | ---- | | 11-May-2022 | 14 days | 4 days | ✔ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass vial (sodium bisulfate) EMD Berm 2 | E611A | 07-May-2022 | 11-May-2022 | ---- | ---- | | 11-May-2022 | 14 days | 4 days | ✔ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass vial (sodium bisulfate) KBL Pond 1 | E611A | 07-May-2022 | 11-May-2022 | ---- | ---- | | 11-May-2022 | 14 days | 4 days | ✔ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass vial (sodium bisulfate) KBL Pond 2 | E611A | 07-May-2022 | 11-May-2022 | ---- | ---- | | 11-May-2022 | 14 days | 4 days | ✔ |

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).



Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water** Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

| Quality Control Sample Type | | | Count | | Frequency (%) | | |
|--|------------|----------|-------|---------|---------------|----------|------------|
| Analytical Methods | Method | QC Lot # | QC | Regular | Actual | Expected | Evaluation |
| Laboratory Duplicates (DUP) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 483551 | 1 | 4 | 25.0 | 5.0 | ✓ |
| pH by Meter | E108 | 483389 | 1 | 10 | 10.0 | 5.0 | ✓ |
| Phenols (4AAP) in Water by Colorimetry | E562 | 484591 | 1 | 20 | 5.0 | 5.0 | ✓ |
| Total Metals in Water by CRC ICPMS | E420 | 483152 | 1 | 5 | 20.0 | 5.0 | ✓ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 483550 | 1 | 4 | 25.0 | 5.0 | ✓ |
| Laboratory Control Samples (LCS) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 483551 | 1 | 4 | 25.0 | 5.0 | ✓ |
| CCME PHCs - F2-F4 by GC-FID | E601 | 483524 | 1 | 4 | 25.0 | 5.0 | ✓ |
| PAHs by Hexane LVI GC-MS | E641A | 483523 | 1 | 13 | 7.6 | 5.0 | ✓ |
| PCB Aroclors by GC-ECD | E685 | 483149 | 1 | 5 | 20.0 | 5.0 | ✓ |
| pH by Meter | E108 | 483389 | 1 | 10 | 10.0 | 5.0 | ✓ |
| Phenols (4AAP) in Water by Colorimetry | E562 | 484591 | 1 | 20 | 5.0 | 5.0 | ✓ |
| Total Metals in Water by CRC ICPMS | E420 | 483152 | 1 | 5 | 20.0 | 5.0 | ✓ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 483550 | 1 | 4 | 25.0 | 5.0 | ✓ |
| Method Blanks (MB) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 483551 | 1 | 4 | 25.0 | 5.0 | ✓ |
| CCME PHCs - F2-F4 by GC-FID | E601 | 483524 | 1 | 4 | 25.0 | 5.0 | ✓ |
| PAHs by Hexane LVI GC-MS | E641A | 483523 | 1 | 13 | 7.6 | 5.0 | ✓ |
| PCB Aroclors by GC-ECD | E685 | 483149 | 1 | 5 | 20.0 | 5.0 | ✓ |
| Phenols (4AAP) in Water by Colorimetry | E562 | 484591 | 1 | 20 | 5.0 | 5.0 | ✓ |
| Total Metals in Water by CRC ICPMS | E420 | 483152 | 1 | 5 | 20.0 | 5.0 | ✓ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 483550 | 1 | 4 | 25.0 | 5.0 | ✓ |
| Matrix Spikes (MS) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 483551 | 1 | 4 | 25.0 | 5.0 | ✓ |
| Phenols (4AAP) in Water by Colorimetry | E562 | 484591 | 1 | 20 | 5.0 | 5.0 | ✓ |
| Total Metals in Water by CRC ICPMS | E420 | 483152 | 1 | 5 | 20.0 | 5.0 | ✓ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 483550 | 1 | 4 | 25.0 | 5.0 | ✓ |



Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

| Analytical Methods | Method / Lab | Matrix | Method Reference | Method Descriptions |
|--|---|--------|---|---|
| pH by Meter | E108 Vancouver - Environmental | Water | APHA 4500-H (mod) | pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally $20 \pm 5^{\circ}\text{C}$). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time. |
| Total Metals in Water by CRC ICPMS | E420 Vancouver - Environmental | Water | EPA 200.2/6020B (mod) | Water samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method. |
| Phenols (4AAP) in Water by Colorimetry | E562 Edmonton - Environmental | Water | EPA 9066 | This automated method is based on the distillation of phenol and subsequent reaction of the distillate with alkaline ferricyanide ($\text{K}_3\text{Fe}(\text{CN})_6$) and 4-amino-antipyrine (4-AAP) to form a red complex which is measured colorimetrically. |
| VH and F1 by Headspace GC-FID | E581.VH+F1 Vancouver - Environmental | Water | BC MOE Lab Manual / CCME PHC in Soil - Tier 1 (mod) | Volatile Hydrocarbons (VH and F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. |
| CCME PHCs - F2-F4 by GC-FID | E601 Vancouver - Environmental | Water | CCME PHC in Soil - Tier 1 | Sample extracts are analyzed by GC-FID for CCME hydrocarbon fractions (F2-F4). |
| BTEX by Headspace GC-MS | E611A Vancouver - Environmental | Water | EPA 8260D (mod) | Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. |
| PAHs by Hexane LVI GC-MS | E641A Vancouver - Environmental | Water | EPA 8270E (mod) | Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS. |
| PCB Aroclors by GC-ECD | E685 Vancouver - Environmental | Water | EPA 8082A (mod) | PCB Aroclors are analyzed by GC-ECD |
| F1-BTEX | EC580 Vancouver - Environmental | Water | CCME PHC in Soil - Tier 1 | F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX). |
| VPH: VH-BTEX-Styrene | EC580A Vancouver - Environmental | Water | BC MOE Lab Manual (VPH in Water and Solids) (mod) | Volatile Petroleum Hydrocarbons (VPH) is calculated as follows: VPHw = Volatile Hydrocarbons (VH6-10) minus benzene, toluene, ethylbenzene, xylenes (BTEX) and styrene. |



| <i>Preparation Methods</i> | <i>Method / Lab</i> | <i>Matrix</i> | <i>Method Reference</i> | <i>Method Descriptions</i> |
|---|--|---------------|-------------------------|---|
| VOCs Preparation for Headspace Analysis | EP581 Vancouver - Environmental | Water | EPA 5021A (mod) | Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into the GC/MS-FID system. |
| PHCs and PAHs Hexane Extraction | EP601 Vancouver - Environmental | Water | EPA 3511 (mod) | Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction. |
| PCB Aroclors Extraction | EP685 Vancouver - Environmental | Water | EPA 3510C (mod) | PCBs are extracted using an organic solvent liquid-liquid extraction. The hexane extract undergoes one or more of the following clean-up procedures (if required): florisil clean-up, silica gel clean-up, sulphur clean-up and/or sulphuric acid clean-up. |



QUALITY CONTROL REPORT

Work Order : **YL2200422**

Page : 1 of 8

Client : KBL Environmental Ltd.
Contact : Nicole Prince
Address : 17 Cameron Road PO Box 1895
Yellowknife NT Canada X1A 2P4
Telephone : 780-554-7259
Project : 22-071NT
PO : PRINN0002
C-O-C number : ----
Sampler : ----
Site : ----
Quote number : YL22-KBLE100-003
No. of samples received : 4
No. of samples analysed : 4

Laboratory : Yellowknife - Environmental
Account Manager : Oliver Gregg
Address : 314 Old Airport Road, Unit 116
Yellowknife, Northwest Territories Canada X1A 3T3
Telephone : 1 867 446 5593
Date Samples Received : 09-May-2022 11:00
Date Analysis Commenced : 10-May-2022
Issue Date : 11-May-2022 17:24

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits
- Reference Material (RM) Report; Recovery and Acceptance Limits
- Method Blank (MB) Report; Recovery and Acceptance Limits
- Laboratory Control Sample (LCS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

| Signatories | Position | Laboratory Department |
|--------------|---------------------------------|---------------------------------------|
| Jing Liu | Lab Assistant | Inorganics, Edmonton, Alberta |
| Miles Gropen | Department Manager - Inorganics | Inorganics, Burnaby, British Columbia |
| Paul Cushing | Team Leader - Organics | Organics, Burnaby, British Columbia |
| Robin Weeks | Team Leader - Metals | Metals, Burnaby, British Columbia |

Page : 2 of 8
Work Order : YL2200422
Client : KBL Environmental Ltd.
Project : 22-071NT



General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Services number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percentage Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.



Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test specific).

| Sub-Matrix: Water | | | | | Laboratory Duplicate (DUP) Report | | | | | | |
|---|------------------|--------------------------------|-------------|------------|-----------------------------------|----------|-----------------|------------------|----------------------|------------------|-----------|
| Laboratory sample ID | Client sample ID | Analyte | CAS Number | Method | LOR | Unit | Original Result | Duplicate Result | RPD(%) or Difference | Duplicate Limits | Qualifier |
| Physical Tests (QC Lot: 483389) | | | | | | | | | | | |
| VA22A9961-001 | Anonymous | pH | ---- | E108 | 0.10 | pH units | 8.12 | 8.18 | 0.736% | 4% | ---- |
| Total Metals (QC Lot: 483152) | | | | | | | | | | | |
| VA22A9962-001 | Anonymous | antimony, total | 7440-36-0 | E420 | 0.00010 | mg/L | 0.00634 | 0.00622 | 1.91% | 20% | ---- |
| | | arsenic, total | 7440-38-2 | E420 | 0.00010 | mg/L | 0.00055 | 0.00056 | 0.000006 | Diff <2x LOR | ---- |
| | | barium, total | 7440-39-3 | E420 | 0.00010 | mg/L | 0.0203 | 0.0205 | 1.02% | 20% | ---- |
| | | beryllium, total | 7440-41-7 | E420 | 0.000100 | mg/L | <0.000100 | <0.000100 | 0 | Diff <2x LOR | ---- |
| | | boron, total | 7440-42-8 | E420 | 0.010 | mg/L | <0.010 | <0.010 | 0 | Diff <2x LOR | ---- |
| | | iron, total | 7439-89-6 | E420 | 0.010 | mg/L | 0.020 | 0.021 | 0.001 | Diff <2x LOR | ---- |
| | | manganese, total | 7439-96-5 | E420 | 0.00010 | mg/L | 0.0167 | 0.0166 | 0.631% | 20% | ---- |
| | | selenium, total | 7782-49-2 | E420 | 0.000050 | mg/L | 0.000091 | 0.000088 | 0.000004 | Diff <2x LOR | ---- |
| | | uranium, total | 7440-61-1 | E420 | 0.000010 | mg/L | 0.000017 | 0.000015 | 0.000002 | Diff <2x LOR | ---- |
| | zinc, total | 7440-66-6 | E420 | 0.0030 | mg/L | <0.0030 | <0.0030 | 0 | Diff <2x LOR | ---- | |
| Aggregate Organics (QC Lot: 484591) | | | | | | | | | | | |
| SK2201916-006 | Anonymous | phenols, total (4AAP) | ---- | E562 | 0.0010 | mg/L | <0.0010 | <0.0010 | 0 | Diff <2x LOR | ---- |
| Volatile Organic Compounds (QC Lot: 483551) | | | | | | | | | | | |
| YL2200422-001 | EMD Berm 1 | benzene | 71-43-2 | E611A | 0.50 | µg/L | <0.50 | <0.50 | 0 | Diff <2x LOR | ---- |
| | | ethylbenzene | 100-41-4 | E611A | 0.50 | µg/L | 1.70 | 1.64 | 0.06 | Diff <2x LOR | ---- |
| | | methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 0.50 | µg/L | <0.50 | <0.50 | 0 | Diff <2x LOR | ---- |
| | | styrene | 100-42-5 | E611A | 0.50 | µg/L | <0.50 | <0.50 | 0 | Diff <2x LOR | ---- |
| | | toluene | 108-88-3 | E611A | 0.50 | µg/L | 2.39 | 2.33 | 0.06 | Diff <2x LOR | ---- |
| | | xylene, m+p- | 179601-23-1 | E611A | 0.40 | µg/L | 7.69 | 7.07 | 8.36% | 30% | ---- |
| | | xylene, o- | 95-47-6 | E611A | 0.30 | µg/L | 5.67 | 5.22 | 8.36% | 30% | ---- |
| Hydrocarbons (QC Lot: 483550) | | | | | | | | | | | |
| YL2200422-001 | EMD Berm 1 | F1 (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | <100 | 0.0% | 30% | ---- |
| | | VHw (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | <100 | 0.0% | 30% | ---- |



Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

| Analyte | CAS Number | Method | LOR | Unit | Result | Qualifier |
|---|-------------|------------|---------|------|-----------|-----------|
| Total Metals (QCLot: 483152) | | | | | | |
| antimony, total | 7440-36-0 | E420 | 0.0001 | mg/L | <0.00010 | ---- |
| arsenic, total | 7440-38-2 | E420 | 0.0001 | mg/L | <0.00010 | ---- |
| barium, total | 7440-39-3 | E420 | 0.0001 | mg/L | <0.00010 | ---- |
| beryllium, total | 7440-41-7 | E420 | 0.00002 | mg/L | <0.000020 | ---- |
| boron, total | 7440-42-8 | E420 | 0.01 | mg/L | <0.010 | ---- |
| iron, total | 7439-89-6 | E420 | 0.01 | mg/L | <0.010 | ---- |
| manganese, total | 7439-96-5 | E420 | 0.0001 | mg/L | <0.00010 | ---- |
| selenium, total | 7782-49-2 | E420 | 0.00005 | mg/L | <0.000050 | ---- |
| uranium, total | 7440-61-1 | E420 | 0.00001 | mg/L | <0.000010 | ---- |
| zinc, total | 7440-66-6 | E420 | 0.003 | mg/L | <0.0030 | ---- |
| Aggregate Organics (QCLot: 484591) | | | | | | |
| phenols, total (4AAP) | ---- | E562 | 0.001 | mg/L | <0.0010 | ---- |
| Volatile Organic Compounds (QCLot: 483551) | | | | | | |
| benzene | 71-43-2 | E611A | 0.5 | µg/L | <0.50 | ---- |
| ethylbenzene | 100-41-4 | E611A | 0.5 | µg/L | <0.50 | ---- |
| methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 0.5 | µg/L | <0.50 | ---- |
| styrene | 100-42-5 | E611A | 0.5 | µg/L | <0.50 | ---- |
| toluene | 108-88-3 | E611A | 0.5 | µg/L | <0.50 | ---- |
| xylene, m+p- | 179601-23-1 | E611A | 0.4 | µg/L | <0.40 | ---- |
| xylene, o- | 95-47-6 | E611A | 0.3 | µg/L | <0.30 | ---- |
| Hydrocarbons (QCLot: 483524) | | | | | | |
| F2 (C10-C16) | ---- | E601 | 100 | µg/L | <100 | ---- |
| Hydrocarbons (QCLot: 483550) | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | ---- |
| VHw (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | ---- |
| Polycyclic Aromatic Hydrocarbons (QCLot: 483523) | | | | | | |
| acenaphthene | 83-32-9 | E641A | 0.01 | µg/L | <0.010 | ---- |
| acenaphthylene | 208-96-8 | E641A | 0.01 | µg/L | <0.010 | ---- |
| anthracene | 120-12-7 | E641A | 0.01 | µg/L | <0.010 | ---- |
| benz(a)anthracene | 56-55-3 | E641A | 0.01 | µg/L | <0.010 | ---- |
| benzo(a)pyrene | 50-32-8 | E641A | 0.005 | µg/L | <0.0050 | ---- |
| benzo(b+j)fluoranthene | n/a | E641A | 0.01 | µg/L | <0.010 | ---- |
| benzo(g,h,i)perylene | 191-24-2 | E641A | 0.01 | µg/L | <0.010 | ---- |



Sub-Matrix: Water

| Analyte | CAS Number | Method | LOR | Unit | Result | Qualifier |
|--|------------|--------|-------|------|---------|-----------|
| Polycyclic Aromatic Hydrocarbons (QCLot: 483523) - continued | | | | | | |
| benzo(k)fluoranthene | 207-08-9 | E641A | 0.01 | µg/L | <0.010 | ---- |
| chrysene | 218-01-9 | E641A | 0.01 | µg/L | <0.010 | ---- |
| dibenz(a,h)anthracene | 53-70-3 | E641A | 0.005 | µg/L | <0.0050 | ---- |
| fluoranthene | 206-44-0 | E641A | 0.01 | µg/L | <0.010 | ---- |
| fluorene | 86-73-7 | E641A | 0.01 | µg/L | <0.010 | ---- |
| indeno(1,2,3-c,d)pyrene | 193-39-5 | E641A | 0.01 | µg/L | <0.010 | ---- |
| naphthalene | 91-20-3 | E641A | 0.05 | µg/L | <0.050 | ---- |
| phenanthrene | 85-01-8 | E641A | 0.02 | µg/L | <0.020 | ---- |
| pyrene | 129-00-0 | E641A | 0.01 | µg/L | <0.010 | ---- |



Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water

| | | | | | Laboratory Control Sample (LCS) Report | | | | |
|--|-------------|------------|---------|----------|--|--------------|---------------------|------|-----------|
| | | | | | Spike | Recovery (%) | Recovery Limits (%) | | |
| Analyte | CAS Number | Method | LOR | Unit | Concentration | LCS | Low | High | Qualifier |
| Physical Tests (QCLot: 483389) | | | | | | | | | |
| pH | ---- | E108 | ---- | pH units | 7 pH units | 99.7 | 98.0 | 102 | ---- |
| Total Metals (QCLot: 483152) | | | | | | | | | |
| antimony, total | 7440-36-0 | E420 | 0.0001 | mg/L | 1 mg/L | 107 | 80.0 | 120 | ---- |
| arsenic, total | 7440-38-2 | E420 | 0.0001 | mg/L | 1 mg/L | 104 | 80.0 | 120 | ---- |
| barium, total | 7440-39-3 | E420 | 0.0001 | mg/L | 0.25 mg/L | 104 | 80.0 | 120 | ---- |
| beryllium, total | 7440-41-7 | E420 | 0.00002 | mg/L | 0.1 mg/L | 103 | 80.0 | 120 | ---- |
| boron, total | 7440-42-8 | E420 | 0.01 | mg/L | 1 mg/L | 99.1 | 80.0 | 120 | ---- |
| iron, total | 7439-89-6 | E420 | 0.01 | mg/L | 1 mg/L | 102 | 80.0 | 120 | ---- |
| manganese, total | 7439-96-5 | E420 | 0.0001 | mg/L | 0.25 mg/L | 105 | 80.0 | 120 | ---- |
| selenium, total | 7782-49-2 | E420 | 0.00005 | mg/L | 1 mg/L | 104 | 80.0 | 120 | ---- |
| uranium, total | 7440-61-1 | E420 | 0.00001 | mg/L | 0.005 mg/L | 101 | 80.0 | 120 | ---- |
| zinc, total | 7440-66-6 | E420 | 0.003 | mg/L | 0.5 mg/L | 103 | 80.0 | 120 | ---- |
| Aggregate Organics (QCLot: 484591) | | | | | | | | | |
| phenols, total (4AAP) | ---- | E562 | 0.001 | mg/L | 0.02 mg/L | 103 | 85.0 | 115 | ---- |
| Volatile Organic Compounds (QCLot: 483551) | | | | | | | | | |
| benzene | 71-43-2 | E611A | 0.5 | µg/L | 100 µg/L | 96.5 | 70.0 | 130 | ---- |
| ethylbenzene | 100-41-4 | E611A | 0.5 | µg/L | 100 µg/L | 104 | 70.0 | 130 | ---- |
| methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 0.5 | µg/L | 100 µg/L | 97.2 | 70.0 | 130 | ---- |
| styrene | 100-42-5 | E611A | 0.5 | µg/L | 100 µg/L | 102 | 70.0 | 130 | ---- |
| toluene | 108-88-3 | E611A | 0.5 | µg/L | 100 µg/L | 99.6 | 70.0 | 130 | ---- |
| xylene, m+p- | 179601-23-1 | E611A | 0.4 | µg/L | 200 µg/L | 105 | 70.0 | 130 | ---- |
| xylene, o- | 95-47-6 | E611A | 0.3 | µg/L | 100 µg/L | 103 | 70.0 | 130 | ---- |
| Hydrocarbons (QCLot: 483524) | | | | | | | | | |
| F2 (C10-C16) | ---- | E601 | 100 | µg/L | 3538 µg/L | 109 | 70.0 | 130 | ---- |
| Hydrocarbons (QCLot: 483550) | | | | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | 6310 µg/L | 85.5 | 70.0 | 130 | ---- |
| VHw (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | 6310 µg/L | 78.2 | 70.0 | 130 | ---- |
| Polycyclic Aromatic Hydrocarbons (QCLot: 483523) | | | | | | | | | |
| acenaphthene | 83-32-9 | E641A | 0.01 | µg/L | 0.5 µg/L | 112 | 60.0 | 130 | ---- |



Sub-Matrix: Water

| | | | | | Laboratory Control Sample (LCS) Report | | | | |
|--|------------|--------|-------|------|--|--------------|---------------------|------|-----------|
| | | | | | Spike | Recovery (%) | Recovery Limits (%) | | |
| Analyte | CAS Number | Method | LOR | Unit | Concentration | LCS | Low | High | Qualifier |
| Polycyclic Aromatic Hydrocarbons (QCLOT: 483523) - continued | | | | | | | | | |
| acenaphthylene | 208-96-8 | E641A | 0.01 | µg/L | 0.5 µg/L | 111 | 60.0 | 130 | ---- |
| anthracene | 120-12-7 | E641A | 0.01 | µg/L | 0.5 µg/L | 124 | 60.0 | 130 | ---- |
| benz(a)anthracene | 56-55-3 | E641A | 0.01 | µg/L | 0.5 µg/L | 118 | 60.0 | 130 | ---- |
| benzo(a)pyrene | 50-32-8 | E641A | 0.005 | µg/L | 0.5 µg/L | 116 | 60.0 | 130 | ---- |
| benzo(b+j)fluoranthene | n/a | E641A | 0.01 | µg/L | 0.5 µg/L | 102 | 60.0 | 130 | ---- |
| benzo(g,h,i)perylene | 191-24-2 | E641A | 0.01 | µg/L | 0.5 µg/L | 120 | 60.0 | 130 | ---- |
| benzo(k)fluoranthene | 207-08-9 | E641A | 0.01 | µg/L | 0.5 µg/L | 110 | 60.0 | 130 | ---- |
| chrysene | 218-01-9 | E641A | 0.01 | µg/L | 0.5 µg/L | 115 | 60.0 | 130 | ---- |
| dibenz(a,h)anthracene | 53-70-3 | E641A | 0.005 | µg/L | 0.5 µg/L | 116 | 60.0 | 130 | ---- |
| fluoranthene | 206-44-0 | E641A | 0.01 | µg/L | 0.5 µg/L | 115 | 60.0 | 130 | ---- |
| fluorene | 86-73-7 | E641A | 0.01 | µg/L | 0.5 µg/L | 118 | 60.0 | 130 | ---- |
| indeno(1,2,3-c,d)pyrene | 193-39-5 | E641A | 0.01 | µg/L | 0.5 µg/L | 120 | 60.0 | 130 | ---- |
| naphthalene | 91-20-3 | E641A | 0.05 | µg/L | 0.5 µg/L | 104 | 50.0 | 130 | ---- |
| phenanthrene | 85-01-8 | E641A | 0.02 | µg/L | 0.5 µg/L | 123 | 60.0 | 130 | ---- |
| pyrene | 129-00-0 | E641A | 0.01 | µg/L | 0.5 µg/L | 115 | 60.0 | 130 | ---- |



Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

| Sub-Matrix: Water | | | | | Matrix Spike (MS) Report | | | | | |
|--|------------------|--------------------------------|-------------|------------|--------------------------|------------|--------------|---------------------|------|-----------|
| | | | | | Spike | | Recovery (%) | Recovery Limits (%) | | |
| Laboratory sample ID | Client sample ID | Analyte | CAS Number | Method | Concentration | Target | MS | Low | High | Qualifier |
| Total Metals (QCLot: 483152) | | | | | | | | | | |
| YL2200422-001 | EMD Berm 1 | antimony, total | 7440-36-0 | E420 | 0.0373 mg/L | 0.04 mg/L | 93.4 | 70.0 | 130 | ---- |
| | | arsenic, total | 7440-38-2 | E420 | 0.0405 mg/L | 0.04 mg/L | 101 | 70.0 | 130 | ---- |
| | | barium, total | 7440-39-3 | E420 | 0.0402 mg/L | 0.04 mg/L | 100 | 70.0 | 130 | ---- |
| | | beryllium, total | 7440-41-7 | E420 | 0.0758 mg/L | 0.08 mg/L | 94.7 | 70.0 | 130 | ---- |
| | | boron, total | 7440-42-8 | E420 | ND mg/L | 0.2 mg/L | ND | 70.0 | 130 | ---- |
| | | iron, total | 7439-89-6 | E420 | 3.91 mg/L | 4 mg/L | 97.8 | 70.0 | 130 | ---- |
| | | manganese, total | 7439-96-5 | E420 | ND mg/L | 0.04 mg/L | ND | 70.0 | 130 | ---- |
| | | selenium, total | 7782-49-2 | E420 | 0.0817 mg/L | 0.08 mg/L | 102 | 70.0 | 130 | ---- |
| | | uranium, total | 7440-61-1 | E420 | 0.00786 mg/L | 0.008 mg/L | 98.2 | 70.0 | 130 | ---- |
| | | zinc, total | 7440-66-6 | E420 | 0.817 mg/L | 0.8 mg/L | 102 | 70.0 | 130 | ---- |
| Aggregate Organics (QCLot: 484591) | | | | | | | | | | |
| SK2201916-006 | Anonymous | phenols, total (4AAP) | ---- | E562 | 0.0214 mg/L | 0.02 mg/L | 107 | 75.0 | 125 | ---- |
| Volatile Organic Compounds (QCLot: 483551) | | | | | | | | | | |
| YL2200422-001 | EMD Berm 1 | benzene | 71-43-2 | E611A | 98.6 µg/L | 100 µg/L | 98.6 | 70.0 | 130 | ---- |
| | | ethylbenzene | 100-41-4 | E611A | 103 µg/L | 100 µg/L | 103 | 70.0 | 130 | ---- |
| | | methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 98.8 µg/L | 100 µg/L | 98.8 | 70.0 | 130 | ---- |
| | | styrene | 100-42-5 | E611A | 102 µg/L | 100 µg/L | 102 | 70.0 | 130 | ---- |
| | | toluene | 108-88-3 | E611A | 100 µg/L | 100 µg/L | 100 | 70.0 | 130 | ---- |
| | | xylene, m+p- | 179601-23-1 | E611A | 208 µg/L | 200 µg/L | 104 | 70.0 | 130 | ---- |
| | | xylene, o- | 95-47-6 | E611A | 103 µg/L | 100 µg/L | 103 | 70.0 | 130 | ---- |
| Hydrocarbons (QCLot: 483550) | | | | | | | | | | |
| YL2200422-002 | EMD Berm 2 | F1 (C6-C10) | ---- | E581.VH+F1 | 4520 µg/L | 6310 µg/L | 71.6 | 60.0 | 140 | ---- |
| | | VHw (C6-C10) | ---- | E581.VH+F1 | 4050 µg/L | 6310 µg/L | 64.2 | 60.0 | 140 | ---- |



COC Number: 21 -

Canada Toll Free: 1 800 668 9878

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUG 2020 FRCA

Failure to complete all portions of this form may delay analysis. Please fill in this form IEGIRI.Y. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

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

APPENDIX B

Appendix B: Outgoing Soil and Water

From: [Katie Oliver](#)
To: Lloyd_Gruben@gov.nt.ca
Cc: [Skylar Kraus](#); [Nicole Prince](#)
Subject: RE: Inuvik STF Outgoing Water Analytical
Date: July 27, 2022 1:51:00 PM
Attachments: [image001.jpg](#)

Hi Lloyd;

Thank you for taking my call. As per our conversation we are approved to discharge the water.

Thank you;

Thank you | Merci | Mársı | Kinanāskomitin | Hǎı' | Quana | Qujannamiik | Quyanainni | Máhsı | Máhsı | Mahsi



Katie Oliver, MBA, CET, PMP

General 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

This email and any accompanying attachments may contain confidential information and are intended only for the named recipients. Content may not be used or relied upon by any party other than KBL's client unless otherwise authorized in writing by KBL. Any unauthorized use of information contained in this email is at the sole risk of the user. If you have received this email in error, please notify the sender and destroy the email.

From: Katie Oliver
Sent: July 26, 2022 1:10 PM
To: Lloyd_Gruben@gov.nt.ca
Cc: [Skylar Kraus <SKraus@kblenv.com>](mailto:SKraus@kblenv.com); [Nicole Prince <nprince@kblenv.com>](mailto:nprince@kblenv.com)
Subject: Inuvik STF Outgoing Water Analytical

Lloyd;

Please find attached water sampling results for 98m3 of water treated at the Inuvik Soil Treatment

Facility. As per our permit we are submitting the results to the inspector.

Water will be discharge to the Facility's discharge point SNP 0037-3 at no more than 300L per minute and not to exceed 50m3 per day. We are planning on completing the discharge this week on Wednesday and Thursday afternoon.

Thank you;

Thank you | Merci | Mársı | Kinanāskomitin | Hąǵ' | Quana | Qujannamiik | Quyanainni | Máhsı | Máhsı | Mahsı



Katie Oliver, MBA, CET, PMP

General 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

This email and any accompanying attachments may contain confidential information and are intended only for the named recipients. Content may not be used or relied upon by any party other than KBL's client unless otherwise authorized in writing by KBL. Any unauthorized use of information contained in this email is at the sole risk of the user. If you have received this email in error, please notify the sender and destroy the email.

From: [Katie Oliver](#)
To: [Lloyd Gruben](#)
Cc: [Wendy Bidwell](#); [Norman Snowshoe](#)
Subject: RE: Outbound Soil - Inuvik STF
Date: October 14, 2022 5:00:00 PM
Attachments: [image001.jpg](#)

Hi Lloyd;

Thank you for the clarification. We will not be removing the soil that exceeds, only the soil that meets criteria. We will schedule the removal for as soon as the permit renewal is received.

Thank you;

Thank you | Merci | Mársı | Kinanāskomitin | Hǫı' | Quana | Qujannamiik | Quyanainni | Máhsı | Máhsı | Mahsı



Katie Oliver, MBA, CET, PMP

General 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

This email and any accompanying attachments may contain confidential information and are intended only for the named recipients. Content may not be used or relied upon by any party other than KBL's client unless otherwise authorized in writing by KBL. Any unauthorized use of information contained in this email is at the sole risk of the user. If you have received this email in error, please notify the sender and destroy the email.

From: Lloyd Gruben <Lloyd_Gruben@gov.nt.ca>
Sent: October 14, 2022 4:37 PM
To: Katie Oliver <koliver@kblenv.com>
Cc: Wendy Bidwell <Wendy_Bidwell@gov.nt.ca>; Norman Snowshoe <Norman_Snowshoe@gov.nt.ca>
Subject: FW: Outbound Soil - Inuvik STF

Good Afternoon Katie

KBL must meet the criteria set out in license G17L1-0002 prior removal of any treated material from the facility. Upon review of the results forwarded, it was noted that certain parameters (i.e. F2 & F3 fractions) still exceed license Effluent Quality Criteria (EQC). Given this and as per Part E. 19 of the license, KBL cannot remove this material. The Town of Inuvik's Water license does not outline any acceptance criteria for treated PHC soil. Most Landfill facilities in the Territories can only accept treated soils that meet Industrial re-use criteria outlined in [ENR's Contaminated Sites Remediation Guidelines](#). Table 1 below outlines criteria for industrial re-use:

Table 1 below presents a summary of Tier 1 remediation criteria for petroleum hydrocarbons (PHC) in surface soil. Additional remediation criteria for other contaminants in soil (i.e., BTEX, metals, PAHs) can be found in Appendix 5. Table 1. Summary of Tier 1 levels (mg/kg) for PHCs in surface soil.*

Table 1. Summary of Tier 1 levels (mg/kg) for PHCs in surface soil.*

| Land Use | Soil Texture | Fraction 1 | Fraction 2 | Fraction 3 | Fraction 4 |
|----------------------|---------------------|-------------------------|--------------------------|------------|------------|
| Agricultural | Coarse-grained soil | 130 | 450 (150 ^a) | 400 | 2800 |
| | Fine-grained soil | 260 (180 ^b) | 900 (250 ^b) | 800 | 5600 |
| Residential/Parkland | Coarse-grained soil | 30 ^c | 150 ^c | 400 | 2800 |
| | Fine-grained soil | 260 (180 ^b) | 900 (250 ^b) | 800 | 5600 |
| Commercial | Coarse-grained soil | 310 (230 ^a) | 760 (150 ^a) | 1700 | 3300 |
| | Fine-grained soil | 660 (180 ^b) | 1500 (250 ^b) | 2500 | 6600 |
| Industrial | Coarse-grained soil | 310 (230 ^a) | 760 (150 ^a) | 1700 | 3300 |
| | Fine-grained soil | 660 (180 ^b) | 1500 (250 ^b) | 2500 | 6600 |

* Additional Tier 1 levels for PHC soils are presented in the Appendix 3.

a = Where applicable, for protection against contaminated groundwater discharge to an adjacent surface water body, ter.

ar residence with slab-on-grade construction.

As you will note, the criteria in KBL's license is the same as the acceptance criteria in the above noted guidelines.

In addition, KBL does not currently have an active water license, thus the inspector cannot authorize any activities associated with license operations until an active license is in place.

Please contact the inspector with this request once the active license is in place and treated soils meet re-use criteria noted above.

Regards,

Lloyd Gruben

Water Resource Officer

Inuvik Region

Department of Environment and Natural Resources

Government of Northwest Territories

Phone: 867-678-6652

Cell: 867-678-0623



Fax: 867-678-6699

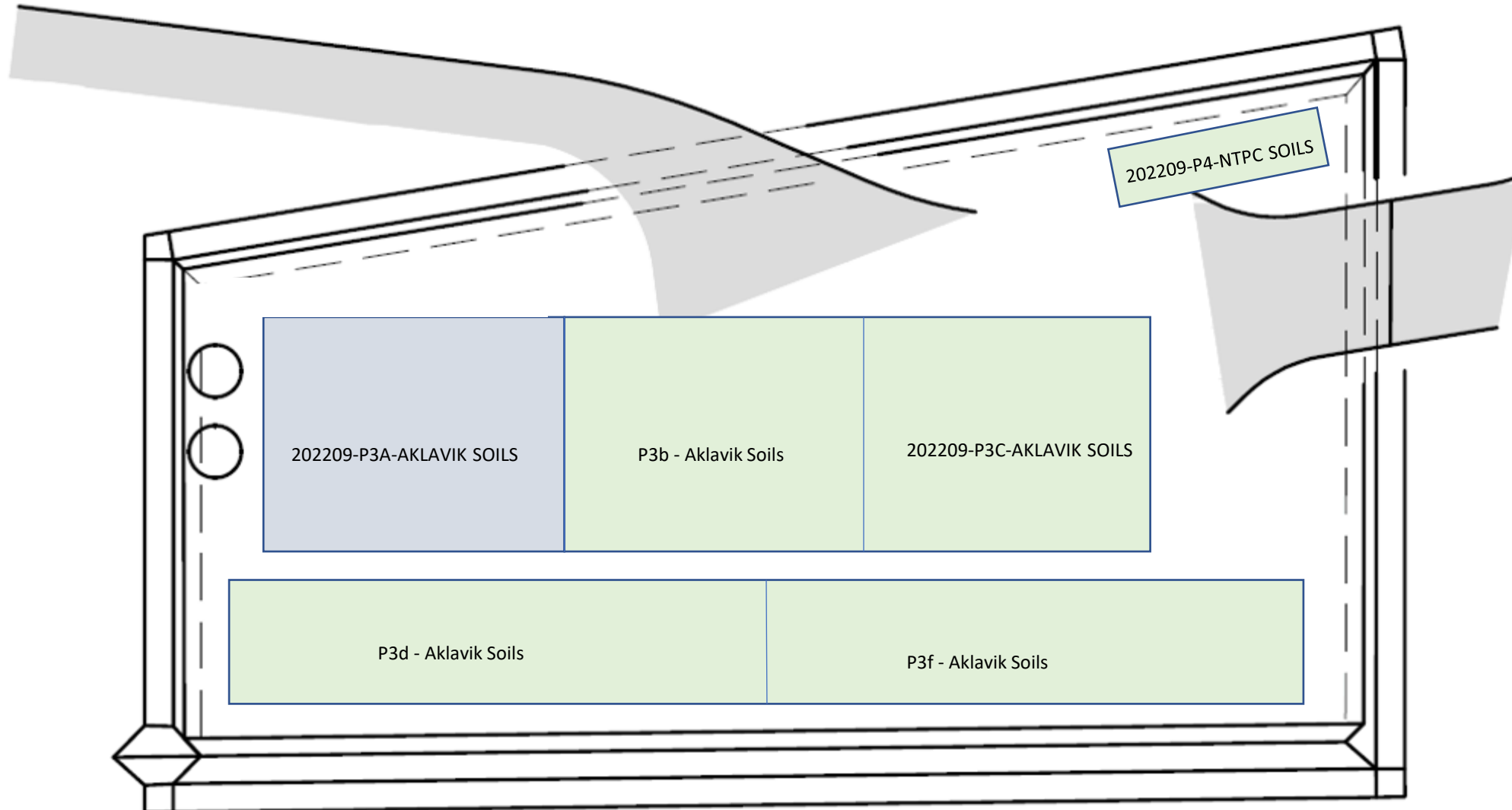
www.gov.nt.ca

| | | Date Sampled | 29-Jun-2022 | 29-Jun-2022 |
|---|-----------------------------|---------------|-------------------|-------------------|
| | | ALS Sample ID | YL220079 7-001 | YL220079 7-002 |
| Parameter | KBL Permit Discharge Limits | Units | Sub-Matrix: Water | Sub-Matrix: Water |
| antimony, total | 0.006 | mg/L | <0.00010 | <0.00020 |
| arsenic, total | 0.005 | mg/L | 0.00016 | <0.00020 |
| barium, total | 1 | mg/L | 0.0218 | 0.0237 |
| beryllium, total | 100 | mg/L | <0.00002 0 | 0.000504 |
| boron, total | 1.5 | mg/L | 0.034 | 0.088 |
| iron, total | 0.3 | mg/L | <0.010 | <0.020 |
| manganese, total | 0.05 | mg/L | 0.00724 | 0.00845 |
| selenium, total | 0.001 | mg/L | <0.00005 0 | <0.00010 0 |
| uranium, total | 0.02 | mg/L | 0.000034 | 0.000280 |
| zinc, total | 0.03 | mg/L | 0.0068 | 0.0198 |
| phenols, total (4AAP) | 0.004 | mg/L | <0.0010 | <0.0010 |
| benzene | 5 | µg/L | <0.50 | <0.50 |
| ethylbenzene | 2.4 | µg/L | <0.50 | <0.50 |
| styrene | 72 | µg/L | <0.50 | <0.50 |
| toluene | 24 | µg/L | <0.50 | <0.50 |
| xylene, total | 300 | µg/L | 0.54 | <0.50 |
| F1 (C6-C10) | 2200 | µg/L | <100 | <100 |
| F2 (C10-C16) | 1100 | µg/L | <300 | <300 |
| acenaphthene | 5.8 | µg/L | <0.010 | <0.010 |
| acenaphthylene | 46 | µg/L | <0.010 | <0.010 |
| anthracene | 0.012 | µg/L | <0.010 | <0.010 |
| benz(a)anthracene | 0.018 | µg/L | <0.010 | <0.010 |
| benzo(a)pyrene | 0.017 | µg/L | <0.0050 | <0.0050 |
| benzo(b+j)fluoranthene | 0.48 | µg/L | <0.010 | <0.010 |
| benzo(k)fluoranthene | 0.48 | µg/L | <0.010 | <0.010 |
| chrysene | 1.4 | µg/L | <0.010 | <0.010 |
| dibenz(a,h)anthracene | 0.28 | µg/L | <0.0050 | <0.0050 |
| fluoranthene | 0.04 | µg/L | <0.010 | <0.010 |
| fluorene | 3 | µg/L | <0.010 | <0.010 |
| indeno(1,2,3-c,d)pyrene | 0.23 | µg/L | <0.010 | <0.010 |
| naphthalene | 1.1 | µg/L | 0.065 | <0.050 |
| phenanthrene | 0.4 | µg/L | <0.020 | <0.020 |
| pyrene | 0.025 | µg/L | <0.010 | <0.010 |
| B(a)P total potency equivalents [B(a)P TPE] | 0.01 | µg/L | <0.010 | <0.010 |



Legend

-  Soil Passes reuse criteria
-  Soil requires remediation



PROJECT
INUVIK
SOIL TREATMENT FACILITY

TITLE
SOIL TREATMENT PAD

DRAWING NUMBER
3924-00-102

REV. NO.
0

| | | | General | PHCs | | | | BTEX | | | | Inorganics |
|--|------------|--------------------------|--------------------|---------------|-------|-------|-------|---------|---------|--------------|--------------|------------|
| | | | Soil Particle Size | F1 minus BTEX | F2 | F3 | F4 | Benzene | Toluene | Ethylbenzene | Xylene Total | Moisture |
| | | | - | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | % |
| Inuvik STF Outgoing Criteria - ADC Fine Grained Soil (mg/kg) | | | - | 660 | 1,500 | 2,500 | 6,600 | 5 | 0.8 | 20 | 20 | - |
| Sample Code | Date | Field ID | | | | | | | | | | |
| YL2201261-001 | 08-12-2022 | P4 - NTPC Soils | FINE | 21.3 | 1,530 | 1,790 | 1,140 | 0.0179 | 0.120 | 0.070 | 0.437 | 15.9 |
| YL2201752-001 | 10-02-2022 | 202209-P4-NTPC SOILS | - | 202 | 1210 | 1490 | 95 | 0.0288 | <0.050 | 0.372 | 0.651 | 30.2 |
| YL2201261-002 | 08-12-2022 | P3a - Aklavik Soils | FINE | 921 | 1,920 | 2,200 | 80 | 0.0735 | 0.208 | 4.18 | 17.4 | 22.5 |
| YL2201752-002 | 10-02-2022 | 202209-P3A-AKLAVIK SOILS | - | 141 | 2100 | 1070 | 555 | 0.0190 | 0.066 | 0.114 | 0.681 | 17.2 |
| YL2201261-003 | 08-12-2022 | P3b - Aklavik Soils | FINE | 102 | 827 | 987 | 58 | 0.0074 | <0.050 | 0.057 | 0.805 | 27.3 |
| YL2201261-004 | 08-12-2022 | P3c - Aklavik Soils | FINE | 112 | 1,870 | 2,710 | 107 | 0.0303 | <0.050 | 0.934 | 1.24 | 24.6 |
| YL2201752-003 | 10-02-2022 | 202209-P3C-AKLAVIK SOILS | - | 179 | 1350 | 1570 | <50 | 0.0214 | <0.050 | 0.368 | 0.904 | 26.9 |
| YL2201261-005 | 08-12-2022 | P3d - Aklavik Soils | FINE | 140 | 1,360 | 1,940 | 149 | 0.0194 | 0.065 | 0.460 | 1.13 | 24.1 |
| YL2201261-007 | 08-12-2022 | P3f - Aklavik Soils | FINE | 157 | 1,340 | 1,940 | 90 | 0.0176 | <0.050 | 0.436 | 1.06 | 22.6 |

Exceeding only Fine Grained
"-" Not Analyzed

CERTIFICATE OF ANALYSIS

Work Order : **YL2200486**

Amendment : **1**

Client : **KBL Environmental Ltd.**

Contact : Katie Oliver

Address : 17 Cameron Road PO Box 1895
Yellowknife NT Canada X1A 2P4

Telephone : 780 893 3305

Project : 4200

PO : 22-071NT

C-O-C number : ----

Sampler : ----

Site : ----

Quote number : YL22-KBLE100-001

No. of samples received : 5

No. of samples analysed : 5

Page : 1 of 5

Laboratory : Yellowknife - Environmental

Account Manager : Oliver Gregg

Address : 314 Old Airport Road, Unit 116
Yellowknife NT Canada X1A 3T3

Telephone : 1 867 446 5593

Date Samples Received : 17-May-2022 15:25

Date Analysis Commenced : 19-May-2022

Issue Date : 03-Jun-2022 09:24

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

| <i>Signatories</i> | <i>Position</i> | <i>Laboratory Department</i> |
|--------------------|-----------------|-------------------------------|
| Austin Wasylyshyn | Lab Analyst | Metals, Edmonton, Alberta |
| Christian Murera | Lab Analyst | Organics, Edmonton, Alberta |
| Fahad Husain | Lab Assistant | Inorganics, Edmonton, Alberta |
| Joan Wu | Lab Analyst | Metals, Edmonton, Alberta |
| Leah Yee | Lab Assistant | Inorganics, Edmonton, Alberta |
| Yan Zhang | Lab Analyst | Organics, Edmonton, Alberta |



General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances
LOR: Limit of Reporting (detection limit).

| Unit | Description |
|----------|-------------------------|
| - | No Unit |
| % | percent |
| mg/kg | milligrams per kilogram |
| pH units | pH units |

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Workorder Comments

Sample(s) XXX: Soil jar was submitted as VOC sample container. VOC results may be biased low, and do not meet federal (CCME) or provincial requirements (for BC, AB-Tier1, MB, ON, SK).



Analytical Results

Sub-Matrix: Soil/Solid

Client sample ID

| (Matrix: Soil/Solid) | | | | | Bags Unit 65-01 | Bags Unit 65-02 | Bags Unit 110-02 | Bags Unit 110-01 | Bags-PSPC-01 |
|-----------------------------|------------|--------|--------|----------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Client sampling date / time | | | | | 13-May-2022 12:00 | 13-May-2022 12:40 | 13-May-2022 13:15 | 13-May-2022 12:26 | 13-May-2022 12:52 |
| Analyte | CAS Number | Method | LOR | Unit | YL2200486-001 | YL2200486-002 | YL2200486-003 | YL2200486-004 | YL2200486-005 |
| | | | | | Result | Result | Result | Result | Result |
| Physical Tests | | | | | | | | | |
| moisture | ---- | E144 | 0.25 | % | 23.0 | 19.2 | 17.6 | 17.0 | 19.4 |
| pH (1:2 soil:water) | ---- | E108 | 0.10 | pH units | 7.02 | 6.91 | 7.41 | 7.24 | 7.42 |
| Particle Size | | | | | | | | | |
| sand (>0.075mm) | ---- | E178 | 1.0 | % | 54.0 | 54.9 | 76.2 | 47.8 | 44.2 |
| finer (<0.075mm) | ---- | E178 | 1.0 | % | 46.0 | 45.1 | 23.8 | 52.2 | 55.8 |
| texture class | ---- | E178 | - | - | Coarse | Coarse | Coarse | Fine | Fine |
| Metals | | | | | | | | | |
| aluminum | 7429-90-5 | E440 | 50 | mg/kg | 12200 | 12100 | 7850 | 11500 | 10100 |
| antimony | 7440-36-0 | E440 | 0.10 | mg/kg | 1.25 | 1.19 | 1.83 | 1.28 | 1.17 |
| arsenic | 7440-38-2 | E440 | 0.10 | mg/kg | 13.3 | 13.6 | 86.7 | 16.0 | 16.4 |
| barium | 7440-39-3 | E440 | 0.50 | mg/kg | 460 | 452 | 247 | 521 | 474 |
| beryllium | 7440-41-7 | E440 | 0.10 | mg/kg | 0.74 | 0.66 | 0.87 | 0.67 | 0.69 |
| bismuth | 7440-69-9 | E440 | 0.20 | mg/kg | 0.28 | 0.26 | <0.20 | 0.23 | <0.20 |
| boron | 7440-42-8 | E440 | 5.0 | mg/kg | 9.0 | 8.7 | 12.9 | 8.4 | 7.6 |
| cadmium | 7440-43-9 | E440 | 0.020 | mg/kg | 0.435 | 0.434 | 0.536 | 0.391 | 0.410 |
| calcium | 7440-70-2 | E440 | 50 | mg/kg | 4660 | 4800 | 68500 | 11500 | 15600 |
| chromium | 7440-47-3 | E440 | 0.50 | mg/kg | 25.7 | 26.5 | 39.6 | 49.5 | 95.9 |
| cobalt | 7440-48-4 | E440 | 0.10 | mg/kg | 13.8 | 12.6 | 26.1 | 11.9 | 11.9 |
| copper | 7440-50-8 | E440 | 0.50 | mg/kg | 45.4 | 42.1 | 22.1 | 41.6 | 38.0 |
| iron | 7439-89-6 | E440 | 50 | mg/kg | 39600 | 33400 | 97900 | 37600 | 44500 |
| lead | 7439-92-1 | E440 | 0.50 | mg/kg | 14.5 | 13.8 | 16.6 | 13.7 | 12.8 |
| lithium | 7439-93-2 | E440 | 2.0 | mg/kg | 24.2 | 23.5 | 15.1 | 21.4 | 18.4 |
| magnesium | 7439-95-4 | E440 | 20 | mg/kg | 4480 | 4030 | 10400 | 4830 | 6070 |
| manganese | 7439-96-5 | E440 | 1.0 | mg/kg | 283 | 230 | 6370 | 394 | 674 |
| mercury | 7439-97-6 | E510 | 0.0050 | mg/kg | 0.0671 | 0.0647 | 0.160 | 0.0701 | 0.0647 |
| molybdenum | 7439-98-7 | E440 | 0.10 | mg/kg | 3.76 | 3.68 | 6.13 | 3.38 | 3.86 |
| nickel | 7440-02-0 | E440 | 0.50 | mg/kg | 54.1 | 49.8 | 61.6 | 56.6 | 76.3 |
| phosphorus | 7723-14-0 | E440 | 50 | mg/kg | 440 | 426 | 7320 | 475 | 766 |
| potassium | 7440-09-7 | E440 | 100 | mg/kg | 1240 | 1190 | 1000 | 1340 | 1130 |
| selenium | 7782-49-2 | E440 | 0.20 | mg/kg | 1.21 | 1.07 | 2.61 | 1.03 | 0.95 |



Analytical Results

Sub-Matrix: Soil/Solid

Client sample ID

(Matrix: Soil/Solid)

| | | | | | Bags Unit 65-01 | Bags Unit 65-02 | Bags Unit 110-02 | Bags Unit 110-01 | Bags-PSPC-01 |
|--|-------------|------------|--------|-------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Client sampling date / time | | | | | 13-May-2022 12:00 | 13-May-2022 12:40 | 13-May-2022 13:15 | 13-May-2022 12:26 | 13-May-2022 12:52 |
| Analyte | CAS Number | Method | LOR | Unit | YL2200486-001 | YL2200486-002 | YL2200486-003 | YL2200486-004 | YL2200486-005 |
| | | | | | Result | Result | Result | Result | Result |
| Metals | | | | | | | | | |
| silver | 7440-22-4 | E440 | 0.10 | mg/kg | 0.17 | 0.17 | 0.18 | 0.15 | 0.15 |
| sodium | 7440-23-5 | E440 | 50 | mg/kg | 344 | 258 | 464 | 116 | 107 |
| strontium | 7440-24-6 | E440 | 0.50 | mg/kg | 32.3 | 32.9 | 231 | 44.4 | 54.6 |
| sulfur | 7704-34-9 | E440 | 1000 | mg/kg | <1000 | <1000 | 14700 | <1000 | 1000 |
| thallium | 7440-28-0 | E440 | 0.050 | mg/kg | 0.214 | 0.209 | 0.362 | 0.216 | 0.205 |
| tin | 7440-31-5 | E440 | 2.0 | mg/kg | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 |
| titanium | 7440-32-6 | E440 | 1.0 | mg/kg | 11.9 | 11.7 | 42.7 | 10.3 | 11.5 |
| tungsten | 7440-33-7 | E440 | 0.50 | mg/kg | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| uranium | 7440-61-1 | E440 | 0.050 | mg/kg | 0.617 | 0.614 | 1.90 | 0.708 | 0.672 |
| vanadium | 7440-62-2 | E440 | 0.20 | mg/kg | 41.7 | 42.1 | 61.2 | 38.9 | 36.7 |
| zinc | 7440-66-6 | E440 | 2.0 | mg/kg | 172 | 159 | 123 | 147 | 143 |
| zirconium | 7440-67-7 | E440 | 1.0 | mg/kg | 1.4 | 1.2 | 3.2 | 1.4 | 1.4 |
| Volatile Organic Compounds [Fuels] | | | | | | | | | |
| benzene | 71-43-2 | E611A | 0.0050 | mg/kg | <0.0050 | <0.0050 | <0.0050 | 0.0274 | 0.0265 |
| ethylbenzene | 100-41-4 | E611A | 0.015 | mg/kg | <0.015 | <0.015 | <0.015 | 0.307 | 0.433 |
| toluene | 108-88-3 | E611A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| xylene, m+p- | 179601-23-1 | E611A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | 0.382 | 0.258 |
| xylene, o- | 95-47-6 | E611A | 0.050 | mg/kg | <0.050 | <0.050 | <0.050 | 0.093 | 0.126 |
| xylenes, total | 1330-20-7 | E611A | 0.075 | mg/kg | <0.075 | <0.075 | <0.075 | 0.475 | 0.384 |
| Volatile Organic Compounds Surrogates | | | | | | | | | |
| bromofluorobenzene, 4- | 460-00-4 | E611A | 0.10 | % | 77.5 | 87.5 | 106 | 108 | 104 |
| difluorobenzene, 1,4- | 540-36-3 | E611A | 0.10 | % | 86.0 | 87.6 | 87.6 | 82.9 | 81.0 |
| Hydrocarbons | | | | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 5.0 | mg/kg | <5.0 | <5.0 | 5.1 | 158 | 132 |
| F1-BTEX | ---- | EC580 | 5.0 | mg/kg | <5.0 | <5.0 | 5.1 | 157 | 131 |
| F2 (C10-C16) | ---- | E601.SG | 30 | mg/kg | 298 | 287 | <30 | 1240 | 1680 |
| F3 (C16-C34) | ---- | E601.SG | 50 | mg/kg | 385 | 336 | 93 | 420 | 601 |
| F4 (C34-C50) | ---- | E601.SG | 50 | mg/kg | 76 | 55 | 52 | <50 | <50 |
| chromatogram to baseline at nC50 | n/a | E601.SG | - | - | No | Yes | Yes | Yes | Yes |
| Hydrocarbons Surrogates | | | | | | | | | |
| bromobenzotrifluoride, 2- (F2-F4 surr) | 392-83-6 | E601.SG | 1.0 | % | 83.6 | 87.8 | 83.4 | 90.3 | 91.8 |



Analytical Results

| | | | | | | | | | | |
|--|------------|------------|-----|------|------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Sub-Matrix: Soil/Solid (Matrix: Soil/Solid) | | | | | Client sample ID | Bags Unit 65-01 | Bags Unit 65-02 | Bags Unit 110-02 | Bags Unit 110-01 | Bags-PSPC-01 |
| Client sampling date / time | | | | | | 13-May-2022 12:00 | 13-May-2022 12:40 | 13-May-2022 13:15 | 13-May-2022 12:26 | 13-May-2022 12:52 |
| Analyte | CAS Number | Method | LOR | Unit | YL2200486-001 | YL2200486-002 | YL2200486-003 | YL2200486-004 | YL2200486-005 | |
| | | | | | Result | Result | Result | Result | Result | Result |
| Hydrocarbons Surrogates | | | | | | | | | | |
| dichlorotoluene, 3,4- | 97-75-0 | E581.VH+F1 | 1.0 | % | 89.3 | 86.1 | 93.0 | 95.9 | 83.3 | |

Please refer to the General Comments section for an explanation of any qualifiers detected.

QUALITY CONTROL INTERPRETIVE REPORT

| | | | |
|-------------------------|--|-----------------------|---|
| Work Order | : YL2200486 | Page | : 1 of 10 |
| Amendment | : 1 | | |
| Client | : KBL Environmental Ltd. | Laboratory | : Yellowknife - Environmental |
| Contact | : Katie Oliver | Account Manager | : Oliver Gregg |
| Address | : 17 Cameron Road PO Box 1895 Yellowknife NT Canada X1A 2P4 | Address | : 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3 |
| Telephone | : 780 893 3305 | Telephone | : 1 867 446 5593 |
| Project | : 4200 | Date Samples Received | : 17-May-2022 15:25 |
| PO | : 22-071NT | Issue Date | : 03-Jun-2022 09:24 |
| C-O-C number | : ---- | | |
| Sampler | : ---- | | |
| Site | : ---- | | |
| Quote number | : YL22-KBLE100-001 | | |
| No. of samples received | : 5 | | |
| No. of samples analysed | : 5 | | |

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO: Data Quality Objective.

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Soil/Solid

Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

| Analyte Group Container / Client Sample ID(s) | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|---|------------|---------------|--------------------------|---------------|--------|--------------|---------------|---------------|--------|------|
| | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 110-01 | E601.SG | 13-May-2022 | 19-May-2022 | 14 days | 6 days | ✓ | 19-May-2022 | 40 days | 0 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 110-02 | E601.SG | 13-May-2022 | 19-May-2022 | 14 days | 6 days | ✓ | 19-May-2022 | 40 days | 0 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 65-01 | E601.SG | 13-May-2022 | 19-May-2022 | 14 days | 6 days | ✓ | 19-May-2022 | 40 days | 0 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 65-02 | E601.SG | 13-May-2022 | 19-May-2022 | 14 days | 6 days | ✓ | 19-May-2022 | 40 days | 0 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags-PSPC-01 | E601.SG | 13-May-2022 | 19-May-2022 | 14 days | 6 days | ✓ | 19-May-2022 | 40 days | 0 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 110-01 | E581.VH+F1 | 13-May-2022 | 20-May-2022 | 0 days | 7 days | ✖ EHTR-FM | 20-May-2022 | 0 days | 0 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 110-02 | E581.VH+F1 | 13-May-2022 | 20-May-2022 | 0 days | 7 days | ✖ EHTR-FM | 20-May-2022 | 0 days | 0 days | ✓ |



Matrix: Soil/Solid

Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

| Analyte Group Container / Client Sample ID(s) | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|---|------------|---------------|--------------------------|---------------|--------|--------------|---------------|---------------|---------|------|
| | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 65-01 | E581.VH+F1 | 13-May-2022 | 20-May-2022 | 0 days | 7 days | * EHTR-FM | 20-May-2022 | 0 days | 0 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 65-02 | E581.VH+F1 | 13-May-2022 | 20-May-2022 | 0 days | 7 days | * EHTR-FM | 20-May-2022 | 0 days | 0 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags-PSPC-01 | E581.VH+F1 | 13-May-2022 | 20-May-2022 | 0 days | 7 days | * EHTR-FM | 20-May-2022 | 0 days | 0 days | ✓ |
| Metals : Mercury in Soil/Solid by CVAAS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 110-01 | E510 | 13-May-2022 | 24-May-2022 | ---- | ---- | | 25-May-2022 | 28 days | 12 days | ✓ |
| Metals : Mercury in Soil/Solid by CVAAS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 110-02 | E510 | 13-May-2022 | 24-May-2022 | ---- | ---- | | 25-May-2022 | 28 days | 12 days | ✓ |
| Metals : Mercury in Soil/Solid by CVAAS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 65-01 | E510 | 13-May-2022 | 24-May-2022 | ---- | ---- | | 25-May-2022 | 28 days | 12 days | ✓ |
| Metals : Mercury in Soil/Solid by CVAAS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 65-02 | E510 | 13-May-2022 | 24-May-2022 | ---- | ---- | | 25-May-2022 | 28 days | 12 days | ✓ |
| Metals : Mercury in Soil/Solid by CVAAS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags-PSPC-01 | E510 | 13-May-2022 | 24-May-2022 | ---- | ---- | | 25-May-2022 | 28 days | 12 days | ✓ |
| Metals : Metals in Soil/Solid by CRC ICPMS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 110-01 | E440 | 13-May-2022 | 24-May-2022 | ---- | ---- | | 25-May-2022 | 180 days | 12 days | ✓ |



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group Container / Client Sample ID(s) | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|--|--------|---------------|--------------------------|---------------|--------|------|---------------|---------------|---------|------|
| | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Metals : Metals in Soil/Solid by CRC ICPMS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 110-02 | E440 | 13-May-2022 | 24-May-2022 | ---- | ---- | | 25-May-2022 | 180 days | 12 days | ✓ |
| Metals : Metals in Soil/Solid by CRC ICPMS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 65-01 | E440 | 13-May-2022 | 24-May-2022 | ---- | ---- | | 25-May-2022 | 180 days | 12 days | ✓ |
| Metals : Metals in Soil/Solid by CRC ICPMS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 65-02 | E440 | 13-May-2022 | 24-May-2022 | ---- | ---- | | 25-May-2022 | 180 days | 12 days | ✓ |
| Metals : Metals in Soil/Solid by CRC ICPMS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags-PSPC-01 | E440 | 13-May-2022 | 24-May-2022 | ---- | ---- | | 25-May-2022 | 180 days | 12 days | ✓ |
| Particle Size : CCME fine/coarse Particle Size Analysis by wet sieve | | | | | | | | | | |
| LDPE bag Bags Unit 110-01 | E178 | 13-May-2022 | ---- | ---- | ---- | | 24-May-2022 | 180 days | 11 days | ✓ |
| Particle Size : CCME fine/coarse Particle Size Analysis by wet sieve | | | | | | | | | | |
| LDPE bag Bags Unit 110-02 | E178 | 13-May-2022 | ---- | ---- | ---- | | 24-May-2022 | 180 days | 11 days | ✓ |
| Particle Size : CCME fine/coarse Particle Size Analysis by wet sieve | | | | | | | | | | |
| LDPE bag Bags Unit 65-01 | E178 | 13-May-2022 | ---- | ---- | ---- | | 24-May-2022 | 180 days | 11 days | ✓ |
| Particle Size : CCME fine/coarse Particle Size Analysis by wet sieve | | | | | | | | | | |
| LDPE bag Bags Unit 65-02 | E178 | 13-May-2022 | ---- | ---- | ---- | | 24-May-2022 | 180 days | 11 days | ✓ |
| Particle Size : CCME fine/coarse Particle Size Analysis by wet sieve | | | | | | | | | | |
| LDPE bag Bags-PSPC-01 | E178 | 13-May-2022 | ---- | ---- | ---- | | 24-May-2022 | 180 days | 11 days | ✓ |



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group Container / Client Sample ID(s) | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|--|--------|---------------|--------------------------|---------------|--------|------|---------------|---------------|---------|------|
| | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Physical Tests : Moisture Content by Gravimetry | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 110-01 | E144 | 13-May-2022 | ---- | ---- | ---- | | 19-May-2022 | ---- | ---- | |
| Physical Tests : Moisture Content by Gravimetry | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 110-02 | E144 | 13-May-2022 | ---- | ---- | ---- | | 19-May-2022 | ---- | ---- | |
| Physical Tests : Moisture Content by Gravimetry | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 65-01 | E144 | 13-May-2022 | ---- | ---- | ---- | | 19-May-2022 | ---- | ---- | |
| Physical Tests : Moisture Content by Gravimetry | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 65-02 | E144 | 13-May-2022 | ---- | ---- | ---- | | 19-May-2022 | ---- | ---- | |
| Physical Tests : Moisture Content by Gravimetry | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags-PSPC-01 | E144 | 13-May-2022 | ---- | ---- | ---- | | 19-May-2022 | ---- | ---- | |
| Physical Tests : pH by Meter (1:2 Soil:Water Extraction) | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 110-01 | E108 | 13-May-2022 | 23-May-2022 | ---- | ---- | | 23-May-2022 | 30 days | 10 days | ✓ |
| Physical Tests : pH by Meter (1:2 Soil:Water Extraction) | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 110-02 | E108 | 13-May-2022 | 23-May-2022 | ---- | ---- | | 23-May-2022 | 30 days | 10 days | ✓ |
| Physical Tests : pH by Meter (1:2 Soil:Water Extraction) | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 65-01 | E108 | 13-May-2022 | 23-May-2022 | ---- | ---- | | 23-May-2022 | 30 days | 10 days | ✓ |
| Physical Tests : pH by Meter (1:2 Soil:Water Extraction) | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 65-02 | E108 | 13-May-2022 | 23-May-2022 | ---- | ---- | | 23-May-2022 | 30 days | 10 days | ✓ |



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|--|--------|---------------|--------------------------|---------------|--------|--------------|---------------|---------------|---------|------|
| | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Physical Tests : pH by Meter (1:2 Soil:Water Extraction) | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags-PSPC-01 | E108 | 13-May-2022 | 23-May-2022 | ---- | ---- | | 23-May-2022 | 30 days | 10 days | ✓ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 110-01 | E611A | 13-May-2022 | 20-May-2022 | 0 days | 7 days | ✖ EHTR-FM | 20-May-2022 | 0 days | 0 days | ✓ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 110-02 | E611A | 13-May-2022 | 20-May-2022 | 0 days | 7 days | ✖ EHTR-FM | 20-May-2022 | 0 days | 0 days | ✓ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 65-01 | E611A | 13-May-2022 | 20-May-2022 | 0 days | 7 days | ✖ EHTR-FM | 20-May-2022 | 0 days | 0 days | ✓ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags Unit 65-02 | E611A | 13-May-2022 | 20-May-2022 | 0 days | 7 days | ✖ EHTR-FM | 20-May-2022 | 0 days | 0 days | ✓ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass soil jar/Teflon lined cap Bags-PSPC-01 | E611A | 13-May-2022 | 20-May-2022 | 0 days | 7 days | ✖ EHTR-FM | 20-May-2022 | 0 days | 0 days | ✓ |

Legend & Qualifier Definitions

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended

Rec. HT: ALS recommended hold time (see units).



Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

| Quality Control Sample Type | | | Count | | Frequency (%) | | |
|--|------------|----------|-------|---------|---------------|----------|------------|
| Analytical Methods | Method | QC Lot # | QC | Regular | Actual | Expected | Evaluation |
| Laboratory Duplicates (DUP) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 494408 | 1 | 9 | 11.1 | 5.0 | ✔ |
| CCME fine/coarse Particle Size Analysis by wet sieve | E178 | 497789 | 1 | 6 | 16.6 | 5.0 | ✔ |
| CCME PHCs - F2-F4 by GC-FID | E601.SG | 493384 | 1 | 9 | 11.1 | 5.0 | ✔ |
| Mercury in Soil/Solid by CVAAS | E510 | 497691 | 1 | 5 | 20.0 | 5.0 | ✔ |
| Metals in Soil/Solid by CRC ICPMS | E440 | 497690 | 1 | 9 | 11.1 | 5.0 | ✔ |
| Moisture Content by Gravimetry | E144 | 493455 | 1 | 10 | 10.0 | 5.0 | ✔ |
| pH by Meter (1:2 Soil:Water Extraction) | E108 | 496964 | 1 | 6 | 16.6 | 5.0 | ✔ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 494409 | 1 | 9 | 11.1 | 5.0 | ✔ |
| Laboratory Control Samples (LCS) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 494408 | 1 | 9 | 11.1 | 5.0 | ✔ |
| CCME fine/coarse Particle Size Analysis by wet sieve | E178 | 497789 | 1 | 6 | 16.6 | 5.0 | ✔ |
| CCME PHCs - F2-F4 by GC-FID | E601.SG | 493384 | 2 | 9 | 22.2 | 10.0 | ✔ |
| Mercury in Soil/Solid by CVAAS | E510 | 497691 | 2 | 5 | 40.0 | 10.0 | ✔ |
| Metals in Soil/Solid by CRC ICPMS | E440 | 497690 | 2 | 9 | 22.2 | 10.0 | ✔ |
| Moisture Content by Gravimetry | E144 | 493455 | 1 | 10 | 10.0 | 5.0 | ✔ |
| pH by Meter (1:2 Soil:Water Extraction) | E108 | 496964 | 2 | 6 | 33.3 | 10.0 | ✔ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 494409 | 1 | 9 | 11.1 | 5.0 | ✔ |
| Method Blanks (MB) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 494408 | 1 | 9 | 11.1 | 5.0 | ✔ |
| CCME PHCs - F2-F4 by GC-FID | E601.SG | 493384 | 1 | 9 | 11.1 | 5.0 | ✔ |
| Mercury in Soil/Solid by CVAAS | E510 | 497691 | 1 | 5 | 20.0 | 5.0 | ✔ |
| Metals in Soil/Solid by CRC ICPMS | E440 | 497690 | 1 | 9 | 11.1 | 5.0 | ✔ |
| Moisture Content by Gravimetry | E144 | 493455 | 1 | 10 | 10.0 | 5.0 | ✔ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 494409 | 1 | 9 | 11.1 | 5.0 | ✔ |
| Matrix Spikes (MS) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 494408 | 1 | 9 | 11.1 | 5.0 | ✔ |



Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

| Analytical Methods | Method / Lab | Matrix | Method Reference | Method Descriptions |
|--|--|------------|---|---|
| pH by Meter (1:2 Soil:Water Extraction) | E108 Edmonton - Environmental | Soil/Solid | BC Lab Manual | pH is determined by potentiometric measurement with a pH electrode at ambient laboratory temperature (normally $20 \pm 5^{\circ}\text{C}$), and is carried out in accordance with procedures described in the BC Lab Manual (prescriptive method). The procedure involves mixing the dried (at $<60^{\circ}\text{C}$) and sieved (10mesh/2mm) sample with ultra pure water at a 1:2 ratio of sediment to water. The pH is then measured by a standard pH probe. |
| Moisture Content by Gravimetry | E144 Edmonton - Environmental | Soil/Solid | CCME PHC in Soil - Tier 1 | Moisture is measured gravimetrically by drying the sample at 105°C . Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage. |
| CCME fine/coarse Particle Size Analysis by wet sieve | E178 Edmonton - Environmental | Soil/Solid | CCME Vol 4 Analytical Methods | An air-dried sample is reduced to $< 2\text{ mm}$ size and mixed with a dispersing agent (sodium hexametaphosphate). The sample is washed through a 200 mesh (0.075 mm) sieve. The retained mass of sample is used to determine % sand fraction. If the percentage of sand is $>50\%$, the soil is considered to be coarse textured soil. If the percentage of sand is $<50\%$, the soil is considered to be fine textured. |
| Metals in Soil/Solid by CRC ICPMS | E440 Edmonton - Environmental | Soil/Solid | EPA 6020B (mod) | This method is intended to liberate metals that may be environmentally available. Samples are dried, then sieved through a 2 mm sieve, and digested with HNO_3 and HCl . Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, Tl, V, W, and Zr. Silicate minerals are not solubilized. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. This method does not adequately recover elemental sulfur, and is unsuitable for assessment of elemental sulfur standards or guidelines. Analysis is by Collision/Reaction Cell ICPMS. |
| Mercury in Soil/Solid by CVAAS | E510 Edmonton - Environmental | Soil/Solid | EPA 200.2/1631 Appendix (mod) | Samples are dried, then sieved through a 2 mm sieve, and digested with HNO_3 and HCl , followed by CVAAS analysis. |
| VH and F1 by Headspace GC-FID | E581.VH+F1 Edmonton - Environmental | Soil/Solid | BC MOE Lab Manual / CCME PHC in Soil - Tier 1 (mod) | Volatile Hydrocarbons (VH and F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. |
| CCME PHCs - F2-F4 by GC-FID | E601.SG Edmonton - Environmental | Soil/Solid | CCME PHC in Soil - Tier 1 | Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4). |
| BTEX by Headspace GC-MS | E611A Edmonton - Environmental | Soil/Solid | EPA 8260D (mod) | Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. |



| Analytical Methods | Method / Lab | Matrix | Method Reference | Method Descriptions |
|---|--|------------|--|---|
| F1-BTEX | EC580 Edmonton - Environmental | Soil/Solid | CCME PHC in Soil - Tier 1 | F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX). |
| Preparation Methods | Method / Lab | Matrix | Method Reference | Method Descriptions |
| Leach 1:2 Soil:Water for pH/EC | EP108 Edmonton - Environmental | Soil/Solid | BC WLAP METHOD: PH, ELECTROMETRIC, SOIL | The procedure involves mixing the dried (at <60°C) and sieved (No. 10 / 2mm) sample with deionized/distilled water at a 1:2 ratio of sediment to water. |
| Digestion for Metals and Mercury | EP440 Edmonton - Environmental | Soil/Solid | EPA 200.2 (mod) | Samples are dried, then sieved through a 2 mm sieve, and digested with HNO ₃ and HCl. This method is intended to liberate metals that may be environmentally available. |
| VOCs Methanol Extraction for Headspace Analysis | EP581 Edmonton - Environmental | Soil/Solid | EPA 5035A (mod) | VOCs in samples are extracted with methanol. Extracts are then prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. |
| PHCs and PAHs Hexane-Acetone Tumbler Extraction | EP601 Edmonton - Environmental | Soil/Solid | CCME PHC in Soil - Tier 1 (mod) | Samples are subsampled and Petroleum Hydrocarbons (PHC) and PAHs are extracted with 1:1 hexane:acetone using a rotary extractor. |
| Dry and Grind | EPP442 Edmonton - Environmental | Soil/Solid | Soil Sampling and Methods of Analysis, Carter 2008 | After removal of any coarse fragments and reservation of wet subsamples a portion of homogenized sample is set in a tray and dried at less than 60°C until dry. The sample is then particle size reduced with an automated crusher or mortar and pestle, typically to <2 mm. Further size reduction may be needed for particular tests. |



Environmental

QUALITY CONTROL REPORT

Work Order : **YL2200486**

Page : 1 of 11

Amendment : **1**

Client : KBL Environmental Ltd.

Laboratory : Yellowknife - Environmental

Contact : Katie Oliver

Account Manager : Oliver Gregg

Address : 17 Cameron Road PO Box 1895
Yellowknife NT Canada X1A 2P4

Address : 314 Old Airport Road, Unit 116
Yellowknife, Northwest Territories Canada X1A 3T3

Telephone : 780 893 3305

Telephone : 1 867 446 5593

Project : 4200

Date Samples Received : 17-May-2022 15:25

PO : 22-071NT

Date Analysis Commenced : 19-May-2022

C-O-C number : ----

Issue Date : 03-Jun-2022 09:24

Sampler : ----

Site : ----

Quote number : YL22-KBLE100-001

No. of samples received : 5

No. of samples analysed : 5

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Reference Material (RM) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

| Signatories | Position | Laboratory Department |
|-------------------|---------------|--|
| Austin Wasylyshyn | Lab Analyst | Edmonton Metals, Edmonton, Alberta |
| Christian Murera | Lab Analyst | Edmonton Organics, Edmonton, Alberta |
| Fahad Husain | Lab Assistant | Edmonton Inorganics, Edmonton, Alberta |
| Joan Wu | Lab Analyst | Edmonton Metals, Edmonton, Alberta |
| Leah Yee | Lab Assistant | Edmonton Inorganics, Edmonton, Alberta |
| Yan Zhang | Lab Analyst | Edmonton Organics, Edmonton, Alberta |



General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.



Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

| Sub-Matrix: Soil/Solid | | | | | Laboratory Duplicate (DUP) Report | | | | | | |
|---------------------------------|------------------|---------------------|------------|--------|-----------------------------------|----------|-----------------|------------------|----------------------|------------------|-----------|
| Laboratory sample ID | Client sample ID | Analyte | CAS Number | Method | LOR | Unit | Original Result | Duplicate Result | RPD(%) or Difference | Duplicate Limits | Qualifier |
| Physical Tests (QC Lot: 493455) | | | | | | | | | | | |
| EO2203518-001 | Anonymous | moisture | ---- | E144 | 0.25 | % | 43.4 | 47.3 | 8.80% | 20% | ---- |
| Physical Tests (QC Lot: 496964) | | | | | | | | | | | |
| YL2200486-001 | Bags Unit 65-01 | pH (1:2 soil:water) | ---- | E108 | 0.10 | pH units | 7.02 | 6.98 | 0.571% | 3% | ---- |
| Particle Size (QC Lot: 497789) | | | | | | | | | | | |
| YL2200486-001 | Bags Unit 65-01 | sand (>0.075mm) | ---- | E178 | 1.0 | % | 54.0 | 58.1 | 7.29% | 10% | ---- |
| Metals (QC Lot: 497690) | | | | | | | | | | | |
| EO2203489-001 | Anonymous | aluminum | 7429-90-5 | E440 | 50 | mg/kg | 7140 | 7150 | 0.0222% | 40% | ---- |
| | | antimony | 7440-36-0 | E440 | 0.10 | mg/kg | 0.40 | 0.40 | 0.0008 | Diff <2x LOR | ---- |
| | | arsenic | 7440-38-2 | E440 | 0.10 | mg/kg | 7.73 | 7.78 | 0.576% | 30% | ---- |
| | | barium | 7440-39-3 | E440 | 0.50 | mg/kg | 144 | 150 | 3.83% | 40% | ---- |
| | | beryllium | 7440-41-7 | E440 | 0.10 | mg/kg | 0.50 | 0.52 | 0.02 | Diff <2x LOR | ---- |
| | | bismuth | 7440-69-9 | E440 | 0.20 | mg/kg | <0.20 | <0.20 | 0 | Diff <2x LOR | ---- |
| | | boron | 7440-42-8 | E440 | 5.0 | mg/kg | 7.8 | 7.2 | 0.6 | Diff <2x LOR | ---- |
| | | cadmium | 7440-43-9 | E440 | 0.020 | mg/kg | 0.173 | 0.168 | 2.87% | 30% | ---- |
| | | calcium | 7440-70-2 | E440 | 50 | mg/kg | 15600 | 13000 | 17.9% | 30% | ---- |
| | | chromium | 7440-47-3 | E440 | 0.50 | mg/kg | 69.1 | 82.5 | 17.6% | 30% | ---- |
| | | cobalt | 7440-48-4 | E440 | 0.10 | mg/kg | 8.39 | 9.01 | 7.05% | 30% | ---- |
| | | copper | 7440-50-8 | E440 | 0.50 | mg/kg | 14.9 | 15.3 | 3.20% | 30% | ---- |
| | | lead | 7439-92-1 | E440 | 0.50 | mg/kg | 7.95 | 7.94 | 0.108% | 40% | ---- |
| | | lithium | 7439-93-2 | E440 | 2.0 | mg/kg | 9.8 | 9.8 | 0.06 | Diff <2x LOR | ---- |
| | | magnesium | 7439-95-4 | E440 | 20 | mg/kg | 6120 | 5730 | 6.57% | 30% | ---- |
| | | molybdenum | 7439-98-7 | E440 | 0.10 | mg/kg | 1.67 | 1.82 | 8.90% | 40% | ---- |
| | | nickel | 7440-02-0 | E440 | 0.50 | mg/kg | 51.2 | 58.8 | 13.9% | 30% | ---- |
| | | phosphorus | 7723-14-0 | E440 | 50 | mg/kg | 480 | 470 | 2.20% | 30% | ---- |
| | | potassium | 7440-09-7 | E440 | 100 | mg/kg | 970 | 980 | 0.609% | 40% | ---- |
| | | selenium | 7782-49-2 | E440 | 0.20 | mg/kg | 0.36 | 0.33 | 0.03 | Diff <2x LOR | ---- |
| | | silver | 7440-22-4 | E440 | 0.10 | mg/kg | <0.10 | <0.10 | 0 | Diff <2x LOR | ---- |
| | | sodium | 7440-23-5 | E440 | 50 | mg/kg | 186 | 188 | 1 | Diff <2x LOR | ---- |
| | | strontium | 7440-24-6 | E440 | 0.50 | mg/kg | 47.1 | 46.1 | 2.02% | 40% | ---- |
| | | sulfur | 7704-34-9 | E440 | 1000 | mg/kg | <1000 | <1000 | 0 | Diff <2x LOR | ---- |
| | | thallium | 7440-28-0 | E440 | 0.050 | mg/kg | 0.133 | 0.133 | 0.0004 | Diff <2x LOR | ---- |



Sub-Matrix: **Soil/Solid**

| Sub-Matrix: Soil/Solid | | | | | Laboratory Duplicate (DUP) Report | | | | | | |
|---|------------------|--------------|-------------|------------|-----------------------------------|-------|-----------------|------------------|----------------------|------------------|-----------|
| Laboratory sample ID | Client sample ID | Analyte | CAS Number | Method | LOR | Unit | Original Result | Duplicate Result | RPD(%) or Difference | Duplicate Limits | Qualifier |
| Metals (QC Lot: 497690) - continued | | | | | | | | | | | |
| EO2203489-001 | Anonymous | tin | 7440-31-5 | E440 | 2.0 | mg/kg | <2.0 | <2.0 | 0 | Diff <2x LOR | ---- |
| | | titanium | 7440-32-6 | E440 | 1.0 | mg/kg | 66.6 | 65.2 | 2.19% | 40% | ---- |
| | | tungsten | 7440-33-7 | E440 | 0.50 | mg/kg | <0.50 | <0.50 | 0 | Diff <2x LOR | ---- |
| | | uranium | 7440-61-1 | E440 | 0.050 | mg/kg | 0.952 | 0.927 | 2.73% | 30% | ---- |
| | | vanadium | 7440-62-2 | E440 | 0.20 | mg/kg | 24.0 | 24.4 | 1.45% | 30% | ---- |
| | | zinc | 7440-66-6 | E440 | 2.0 | mg/kg | 52.1 | 53.5 | 2.70% | 30% | ---- |
| | | zirconium | 7440-67-7 | E440 | 1.0 | mg/kg | 5.4 | 5.0 | 0.4 | Diff <2x LOR | ---- |
| Metals (QC Lot: 497691) | | | | | | | | | | | |
| YL2200486-001 | Bags Unit 65-01 | mercury | 7439-97-6 | E510 | 0.0050 | mg/kg | 0.0671 | 0.0588 | 13.2% | 40% | ---- |
| Volatile Organic Compounds (QC Lot: 494408) | | | | | | | | | | | |
| YL2200484-001 | Anonymous | benzene | 71-43-2 | E611A | 0.0050 | mg/kg | <0.0050 | <0.0050 | 0 | Diff <2x LOR | ---- |
| | | ethylbenzene | 100-41-4 | E611A | 0.015 | mg/kg | <0.015 | <0.015 | 0 | Diff <2x LOR | ---- |
| | | toluene | 108-88-3 | E611A | 0.050 | mg/kg | <0.050 | <0.050 | 0 | Diff <2x LOR | ---- |
| | | xylene, m+p- | 179601-23-1 | E611A | 0.050 | mg/kg | <0.050 | <0.050 | 0 | Diff <2x LOR | ---- |
| | | xylene, o- | 95-47-6 | E611A | 0.050 | mg/kg | <0.050 | <0.050 | 0 | Diff <2x LOR | ---- |
| Hydrocarbons (QC Lot: 493384) | | | | | | | | | | | |
| YL2200484-001 | Anonymous | F2 (C10-C16) | ---- | E601.SG | 30 | mg/kg | <30 | <30 | 0 | Diff <2x LOR | ---- |
| | | F3 (C16-C34) | ---- | E601.SG | 50 | mg/kg | <50 | <50 | 0 | Diff <2x LOR | ---- |
| | | F4 (C34-C50) | ---- | E601.SG | 50 | mg/kg | <50 | <50 | 0 | Diff <2x LOR | ---- |
| Hydrocarbons (QC Lot: 494409) | | | | | | | | | | | |
| YL2200484-001 | Anonymous | F1 (C6-C10) | ---- | E581.VH+F1 | 5.0 | mg/kg | <5.0 | <5.0 | 0 | Diff <2x LOR | ---- |



Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Soil/Solid

| Analyte | CAS Number | Method | LOR | Unit | Result | Qualifier |
|---------------------------------------|------------|--------|------|-------|--------|-----------|
| Physical Tests (QCLot: 493455) | | | | | | |
| moisture | ---- | E144 | 0.25 | % | <0.25 | ---- |
| Metals (QCLot: 497690) | | | | | | |
| aluminum | 7429-90-5 | E440 | 50 | mg/kg | <50 | ---- |
| antimony | 7440-36-0 | E440 | 0.1 | mg/kg | <0.10 | ---- |
| arsenic | 7440-38-2 | E440 | 0.1 | mg/kg | <0.10 | ---- |
| barium | 7440-39-3 | E440 | 0.5 | mg/kg | <0.50 | ---- |
| beryllium | 7440-41-7 | E440 | 0.1 | mg/kg | <0.10 | ---- |
| bismuth | 7440-69-9 | E440 | 0.2 | mg/kg | <0.20 | ---- |
| boron | 7440-42-8 | E440 | 5 | mg/kg | <5.0 | ---- |
| cadmium | 7440-43-9 | E440 | 0.02 | mg/kg | <0.020 | ---- |
| calcium | 7440-70-2 | E440 | 50 | mg/kg | <50 | ---- |
| chromium | 7440-47-3 | E440 | 0.5 | mg/kg | <0.50 | ---- |
| cobalt | 7440-48-4 | E440 | 0.1 | mg/kg | <0.10 | ---- |
| copper | 7440-50-8 | E440 | 0.5 | mg/kg | <0.50 | ---- |
| iron | 7439-89-6 | E440 | 50 | mg/kg | <50 | ---- |
| lead | 7439-92-1 | E440 | 0.5 | mg/kg | <0.50 | ---- |
| lithium | 7439-93-2 | E440 | 2 | mg/kg | <2.0 | ---- |
| magnesium | 7439-95-4 | E440 | 20 | mg/kg | <20 | ---- |
| manganese | 7439-96-5 | E440 | 1 | mg/kg | <1.0 | ---- |
| molybdenum | 7439-98-7 | E440 | 0.1 | mg/kg | <0.10 | ---- |
| nickel | 7440-02-0 | E440 | 0.5 | mg/kg | <0.50 | ---- |
| phosphorus | 7723-14-0 | E440 | 50 | mg/kg | <50 | ---- |
| potassium | 7440-09-7 | E440 | 100 | mg/kg | <100 | ---- |
| selenium | 7782-49-2 | E440 | 0.2 | mg/kg | <0.20 | ---- |
| silver | 7440-22-4 | E440 | 0.1 | mg/kg | <0.10 | ---- |
| sodium | 7440-23-5 | E440 | 50 | mg/kg | <50 | ---- |
| strontium | 7440-24-6 | E440 | 0.5 | mg/kg | <0.50 | ---- |
| sulfur | 7704-34-9 | E440 | 1000 | mg/kg | <1000 | ---- |
| thallium | 7440-28-0 | E440 | 0.05 | mg/kg | <0.050 | ---- |
| tin | 7440-31-5 | E440 | 2 | mg/kg | <2.0 | ---- |
| titanium | 7440-32-6 | E440 | 1 | mg/kg | <1.0 | ---- |
| tungsten | 7440-33-7 | E440 | 0.5 | mg/kg | <0.50 | ---- |
| uranium | 7440-61-1 | E440 | 0.05 | mg/kg | <0.050 | ---- |



Sub-Matrix: Soil/Solid

| Analyte | CAS Number | Method | LOR | Unit | Result | Qualifier |
|---|-------------|------------|-------|-------|---------|-----------|
| Metals (QCLot: 497690) - continued | | | | | | |
| vanadium | 7440-62-2 | E440 | 0.2 | mg/kg | <0.20 | ---- |
| zinc | 7440-66-6 | E440 | 2 | mg/kg | <2.0 | ---- |
| zirconium | 7440-67-7 | E440 | 1 | mg/kg | <1.0 | ---- |
| Metals (QCLot: 497691) | | | | | | |
| mercury | 7439-97-6 | E510 | 0.005 | mg/kg | <0.0050 | ---- |
| Volatile Organic Compounds (QCLot: 494408) | | | | | | |
| benzene | 71-43-2 | E611A | 0.005 | mg/kg | <0.0050 | ---- |
| ethylbenzene | 100-41-4 | E611A | 0.015 | mg/kg | <0.015 | ---- |
| toluene | 108-88-3 | E611A | 0.05 | mg/kg | <0.050 | ---- |
| xylene, m+p- | 179601-23-1 | E611A | 0.03 | mg/kg | <0.030 | ---- |
| xylene, o- | 95-47-6 | E611A | 0.03 | mg/kg | <0.030 | ---- |
| Hydrocarbons (QCLot: 493384) | | | | | | |
| F2 (C10-C16) | ---- | E601.SG | 25 | mg/kg | <25 | ---- |
| F3 (C16-C34) | ---- | E601.SG | 50 | mg/kg | <50 | ---- |
| F4 (C34-C50) | ---- | E601.SG | 50 | mg/kg | <50 | ---- |
| Hydrocarbons (QCLot: 494409) | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 5 | mg/kg | <5.0 | ---- |



Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Soil/Solid

| | | | | | Laboratory Control Sample (LCS) Report | | | | |
|--------------------------------|------------|--------|------|----------|--|--------------|---------------------|------|-----------|
| | | | | | Spike | Recovery (%) | Recovery Limits (%) | | |
| Analyte | CAS Number | Method | LOR | Unit | Concentration | LCS | Low | High | Qualifier |
| Physical Tests (QCLot: 493455) | | | | | | | | | |
| moisture | ---- | E144 | 0.25 | % | 50 % | 99.9 | 90.0 | 110 | ---- |
| Physical Tests (QCLot: 496964) | | | | | | | | | |
| pH (1:2 soil:water) | ---- | E108 | ---- | pH units | 6 pH units | 100 | 97.0 | 103 | ---- |
| Metals (QCLot: 497690) | | | | | | | | | |
| aluminum | 7429-90-5 | E440 | 50 | mg/kg | 200 mg/kg | 105 | 80.0 | 120 | ---- |
| antimony | 7440-36-0 | E440 | 0.1 | mg/kg | 100 mg/kg | 108 | 80.0 | 120 | ---- |
| arsenic | 7440-38-2 | E440 | 0.1 | mg/kg | 100 mg/kg | 103 | 80.0 | 120 | ---- |
| barium | 7440-39-3 | E440 | 0.5 | mg/kg | 25 mg/kg | 103 | 80.0 | 120 | ---- |
| beryllium | 7440-41-7 | E440 | 0.1 | mg/kg | 10 mg/kg | 103 | 80.0 | 120 | ---- |
| bismuth | 7440-69-9 | E440 | 0.2 | mg/kg | 100 mg/kg | 106 | 80.0 | 120 | ---- |
| boron | 7440-42-8 | E440 | 5 | mg/kg | 100 mg/kg | 101 | 80.0 | 120 | ---- |
| cadmium | 7440-43-9 | E440 | 0.02 | mg/kg | 10 mg/kg | 104 | 80.0 | 120 | ---- |
| calcium | 7440-70-2 | E440 | 50 | mg/kg | 5000 mg/kg | 98.2 | 80.0 | 120 | ---- |
| chromium | 7440-47-3 | E440 | 0.5 | mg/kg | 25 mg/kg | 104 | 80.0 | 120 | ---- |
| cobalt | 7440-48-4 | E440 | 0.1 | mg/kg | 25 mg/kg | 100 | 80.0 | 120 | ---- |
| copper | 7440-50-8 | E440 | 0.5 | mg/kg | 25 mg/kg | 104 | 80.0 | 120 | ---- |
| iron | 7439-89-6 | E440 | 50 | mg/kg | 100 mg/kg | 105 | 80.0 | 120 | ---- |
| lead | 7439-92-1 | E440 | 0.5 | mg/kg | 50 mg/kg | 99.8 | 80.0 | 120 | ---- |
| lithium | 7439-93-2 | E440 | 2 | mg/kg | 25 mg/kg | 104 | 80.0 | 120 | ---- |
| magnesium | 7439-95-4 | E440 | 20 | mg/kg | 5000 mg/kg | 103 | 80.0 | 120 | ---- |
| manganese | 7439-96-5 | E440 | 1 | mg/kg | 25 mg/kg | 102 | 80.0 | 120 | ---- |
| molybdenum | 7439-98-7 | E440 | 0.1 | mg/kg | 25 mg/kg | 103 | 80.0 | 120 | ---- |
| nickel | 7440-02-0 | E440 | 0.5 | mg/kg | 50 mg/kg | 100 | 80.0 | 120 | ---- |
| phosphorus | 7723-14-0 | E440 | 50 | mg/kg | 1000 mg/kg | 109 | 80.0 | 120 | ---- |
| potassium | 7440-09-7 | E440 | 100 | mg/kg | 5000 mg/kg | 103 | 80.0 | 120 | ---- |
| selenium | 7782-49-2 | E440 | 0.2 | mg/kg | 100 mg/kg | 105 | 80.0 | 120 | ---- |
| silver | 7440-22-4 | E440 | 0.1 | mg/kg | 10 mg/kg | 95.6 | 80.0 | 120 | ---- |
| sodium | 7440-23-5 | E440 | 50 | mg/kg | 5000 mg/kg | 106 | 80.0 | 120 | ---- |
| strontium | 7440-24-6 | E440 | 0.5 | mg/kg | 25 mg/kg | 104 | 80.0 | 120 | ---- |
| sulfur | 7704-34-9 | E440 | 1000 | mg/kg | 5000 mg/kg | 110 | 80.0 | 120 | ---- |
| thallium | 7440-28-0 | E440 | 0.05 | mg/kg | 100 mg/kg | 99.6 | 80.0 | 120 | ---- |
| tin | 7440-31-5 | E440 | 2 | mg/kg | 50 mg/kg | 103 | 80.0 | 120 | ---- |
| titanium | 7440-32-6 | E440 | 1 | mg/kg | 25 mg/kg | 100 | 80.0 | 120 | ---- |



Sub-Matrix: Soil/Solid

| | | | | | Laboratory Control Sample (LCS) Report | | | | |
|--|-------------|------------|-------|-------|--|--------------|---------------------|------|-----------|
| | | | | | Spike | Recovery (%) | Recovery Limits (%) | | |
| Analyte | CAS Number | Method | LOR | Unit | Concentration | LCS | Low | High | Qualifier |
| Metals (QCLot: 497690) - continued | | | | | | | | | |
| tungsten | 7440-33-7 | E440 | 0.5 | mg/kg | 10 mg/kg | 100 | 80.0 | 120 | ---- |
| uranium | 7440-61-1 | E440 | 0.05 | mg/kg | 0.5 mg/kg | 98.8 | 80.0 | 120 | ---- |
| vanadium | 7440-62-2 | E440 | 0.2 | mg/kg | 50 mg/kg | 106 | 80.0 | 120 | ---- |
| zinc | 7440-66-6 | E440 | 2 | mg/kg | 50 mg/kg | 100 | 80.0 | 120 | ---- |
| zirconium | 7440-67-7 | E440 | 1 | mg/kg | 10 mg/kg | 97.4 | 80.0 | 120 | ---- |
| Metals (QCLot: 497691) | | | | | | | | | |
| mercury | 7439-97-6 | E510 | 0.005 | mg/kg | 0.1 mg/kg | 113 | 70.0 | 130 | ---- |
| Volatile Organic Compounds (QCLot: 494408) | | | | | | | | | |
| benzene | 71-43-2 | E611A | 0.005 | mg/kg | 2.5 mg/kg | 121 | 70.0 | 130 | ---- |
| ethylbenzene | 100-41-4 | E611A | 0.015 | mg/kg | 2.5 mg/kg | 90.2 | 70.0 | 130 | ---- |
| toluene | 108-88-3 | E611A | 0.05 | mg/kg | 2.5 mg/kg | 101 | 70.0 | 130 | ---- |
| xylene, m+p- | 179601-23-1 | E611A | 0.03 | mg/kg | 5 mg/kg | 104 | 70.0 | 130 | ---- |
| xylene, o- | 95-47-6 | E611A | 0.03 | mg/kg | 2.5 mg/kg | 101 | 70.0 | 130 | ---- |
| Hydrocarbons (QCLot: 493384) | | | | | | | | | |
| F2 (C10-C16) | ---- | E601.SG | 25 | mg/kg | 576 mg/kg | 117 | 70.0 | 130 | ---- |
| F3 (C16-C34) | ---- | E601.SG | 50 | mg/kg | 1184 mg/kg | 104 | 70.0 | 130 | ---- |
| F4 (C34-C50) | ---- | E601.SG | 50 | mg/kg | 904 mg/kg | 106 | 70.0 | 130 | ---- |
| Hydrocarbons (QCLot: 494409) | | | | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 5 | mg/kg | 86 mg/kg | 78.2 | 70.0 | 130 | ---- |



Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Soil/Solid

| | | | | | Matrix Spike (MS) Report | | | | | |
|--|------------------|--------------|-------------|--------|--------------------------|-----------|--------------|---------------------|------|-----------|
| | | | | | Spike | | Recovery (%) | Recovery Limits (%) | | |
| Laboratory sample ID | Client sample ID | Analyte | CAS Number | Method | Concentration | Target | MS | Low | High | Qualifier |
| Volatile Organic Compounds (QCLot: 494408) | | | | | | | | | | |
| YL2200484-002 | Anonymous | benzene | 71-43-2 | E611A | 2.94 mg/kg | 2.5 mg/kg | 135 | 60.0 | 140 | ---- |
| | | ethylbenzene | 100-41-4 | E611A | 2.25 mg/kg | 2.5 mg/kg | 103 | 60.0 | 140 | ---- |
| | | toluene | 108-88-3 | E611A | 2.54 mg/kg | 2.5 mg/kg | 117 | 60.0 | 140 | ---- |
| | | xylene, m+p- | 179601-23-1 | E611A | 5.29 mg/kg | 5 mg/kg | 121 | 60.0 | 140 | ---- |
| | | xylene, o- | 95-47-6 | E611A | 2.61 mg/kg | 2.5 mg/kg | 120 | 60.0 | 140 | ---- |



Reference Material (RM) Report

A Reference Material (RM) is a homogenous material with known and well-established analyte concentrations. RMs are processed in an identical manner to test samples, and are used to monitor and control the accuracy and precision of a test method for a typical sample matrix. RM results are expressed as percent recovery of the target analyte concentration. RM targets may be certified target concentrations provided by the RM supplier, or may be ALS long-term mean values (for empirical test methods).

Sub-Matrix:

| Sub-Matrix: | | | | | Reference Material (RM) Report | | | | |
|--------------------------------|-----------------------|---------------------|------------|--------|--------------------------------|--------------------|---------------------|------|-----------|
| | | | | | RM Target Concentration | Recovery (%) RM | Recovery Limits (%) | | Qualifier |
| Laboratory sample ID | Reference Material ID | Analyte | CAS Number | Method | | | Low | High | |
| Physical Tests (QCLot: 496964) | | | | | | | | | |
| | RM | pH (1:2 soil:water) | ---- | E108 | 8.07 pH units | 97.4 | 96.0 | 104 | ---- |
| Particle Size (QCLot: 497789) | | | | | | | | | |
| | RM | sand (>0.075mm) | ---- | E178 | 36.4 % | 102 | 91.0 | 109 | ---- |
| Metals (QCLot: 497690) | | | | | | | | | |
| | RM | aluminum | 7429-90-5 | E440 | 9817 mg/kg | 93.7 | 70.0 | 130 | ---- |
| | RM | antimony | 7440-36-0 | E440 | 3.99 mg/kg | 96.5 | 70.0 | 130 | ---- |
| | RM | arsenic | 7440-38-2 | E440 | 3.73 mg/kg | 99.7 | 70.0 | 130 | ---- |
| | RM | barium | 7440-39-3 | E440 | 105 mg/kg | 98.7 | 70.0 | 130 | ---- |
| | RM | beryllium | 7440-41-7 | E440 | 0.349 mg/kg | 94.8 | 70.0 | 130 | ---- |
| | RM | boron | 7440-42-8 | E440 | 8.5 mg/kg | 95.7 | 40.0 | 160 | ---- |
| | RM | cadmium | 7440-43-9 | E440 | 0.91 mg/kg | 102 | 70.0 | 130 | ---- |
| | RM | calcium | 7440-70-2 | E440 | 31082 mg/kg | 95.8 | 70.0 | 130 | ---- |
| | RM | chromium | 7440-47-3 | E440 | 101 mg/kg | 87.3 | 70.0 | 130 | ---- |
| | RM | cobalt | 7440-48-4 | E440 | 6.9 mg/kg | 98.0 | 70.0 | 130 | ---- |
| | RM | copper | 7440-50-8 | E440 | 123 mg/kg | 103 | 70.0 | 130 | ---- |
| | RM | iron | 7439-89-6 | E440 | 23558 mg/kg | 99.6 | 70.0 | 130 | ---- |
| | RM | lead | 7439-92-1 | E440 | 267 mg/kg | 98.1 | 70.0 | 130 | ---- |
| | RM | lithium | 7439-93-2 | E440 | 9.5 mg/kg | 100 | 70.0 | 130 | ---- |
| | RM | magnesium | 7439-95-4 | E440 | 5509 mg/kg | 96.2 | 70.0 | 130 | ---- |
| | RM | manganese | 7439-96-5 | E440 | 269 mg/kg | 97.3 | 70.0 | 130 | ---- |
| | RM | molybdenum | 7439-98-7 | E440 | 1.03 mg/kg | 102 | 70.0 | 130 | ---- |
| | RM | nickel | 7440-02-0 | E440 | 26.7 mg/kg | 97.7 | 70.0 | 130 | ---- |
| | RM | phosphorus | 7723-14-0 | E440 | 752 mg/kg | 100 | 70.0 | 130 | ---- |
| | RM | potassium | 7440-09-7 | E440 | 1587 mg/kg | 90.3 | 70.0 | 130 | ---- |
| | RM | silver | 7440-22-4 | E440 | 4.06 mg/kg | 103 | 50.0 | 150 | ---- |
| | RM | sodium | 7440-23-5 | E440 | 797 mg/kg | 95.7 | 70.0 | 130 | ---- |
| | RM | strontium | 7440-24-6 | E440 | 86.1 mg/kg | 100 | 70.0 | 130 | ---- |
| | RM | thallium | 7440-28-0 | E440 | 0.0786 mg/kg | 91.3 | 40.0 | 160 | ---- |
| | RM | tin | 7440-31-5 | E440 | 10.6 mg/kg | 97.1 | 70.0 | 130 | ---- |



Sub-Matrix:

| Sub-Matrix: | | | | | Reference Material (RM) Report | | | | |
|------------------------------------|-----------------------|--------------|------------|---------|--------------------------------|--------------------|---------------------|------|-----------|
| | | | | | RM Target Concentration | Recovery (%) RM | Recovery Limits (%) | | Qualifier |
| Laboratory sample ID | Reference Material ID | Analyte | CAS Number | Method | | | Low | High | |
| Metals (QCLot: 497690) - continued | | | | | | | | | |
| | RM | titanium | 7440-32-6 | E440 | 839 mg/kg | 88.6 | 70.0 | 130 | ---- |
| | RM | uranium | 7440-61-1 | E440 | 0.52 mg/kg | 88.5 | 70.0 | 130 | ---- |
| | RM | vanadium | 7440-62-2 | E440 | 32.7 mg/kg | 96.2 | 70.0 | 130 | ---- |
| | RM | zinc | 7440-66-6 | E440 | 297 mg/kg | 97.4 | 70.0 | 130 | ---- |
| | RM | zirconium | 7440-67-7 | E440 | 5.73 mg/kg | 77.9 | 70.0 | 130 | ---- |
| Metals (QCLot: 497691) | | | | | | | | | |
| | RM | mercury | 7439-97-6 | E510 | 0.059 mg/kg | 91.1 | 70.0 | 130 | ---- |
| Hydrocarbons (QCLot: 493384) | | | | | | | | | |
| | RM | F2 (C10-C16) | ---- | E601.SG | 4316 mg/kg | 83.6 | 70.0 | 130 | ---- |
| | RM | F3 (C16-C34) | ---- | E601.SG | 12844 mg/kg | 90.4 | 70.0 | 130 | ---- |
| | RM | F4 (C34-C50) | ---- | E601.SG | 1156 mg/kg | 100 | 70.0 | 130 | ---- |



COC Number: 21 -

Page of

Canada Toll Free: 1 800 668 9878

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

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

ALSO 2020 FRONT!

CERTIFICATE OF ANALYSIS

Work Order : **YL2200797**
Client : **KBL Environmental Ltd.**
Contact : Nicole Prince
Address : 17 Cameron Road PO Box 1895
 Yellowknife NT Canada X1A 2P4
Telephone : 780-554-7259
Project : ----
PO : 4200ISTF
C-O-C number : 17-823726
Sampler : ----
Site : ----
Quote number : YL22-KBLE100-003
No. of samples received : 2
No. of samples analysed : 2

Page : 1 of 5
Laboratory : Yellowknife - Environmental
Account Manager : Oliver Gregg
Address : 314 Old Airport Road, Unit 116
 Yellowknife NT Canada X1A 3T3
Telephone : 1 867 446 5593
Date Samples Received : 04-Jul-2022 09:38
Date Analysis Commenced : 07-Jul-2022
Issue Date : 21-Jul-2022 16:15

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

| <i>Signatories</i> | <i>Position</i> | <i>Laboratory Department</i> |
|--------------------|---|-------------------------------------|
| Janice Leung | Supervisor - Organics Instrumentation | Organics, Burnaby, British Columbia |
| Kevin Duarte | Supervisor - Metals ICP Instrumentation | Metals, Burnaby, British Columbia |
| Ping Yeung | Team Leader - Inorganics | Inorganics, Edmonton, Alberta |



General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances
LOR: Limit of Reporting (detection limit).

| Unit | Description |
|------|----------------------|
| µg/L | micrograms per litre |
| mg/L | milligrams per litre |

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Sample Comments

| Sample | Client Id | Comment |
|---------------|-------------|--|
| YL2200797-001 | STF-TOTES-A | No raw containers received, therefore unable to report pH and TSS. |

Qualifiers

| Qualifier | Description |
|-----------|---|
| DLA | Detection Limit adjusted for required dilution. |



Analytical Results

| Sub-Matrix: Water | | | | | Client sample ID | STF-TOTES-A | STF-TOTES-B | ---- | ---- | ---- |
|--|-------------|------------|----------|------|----------------------|--------------------------|-------------|-------|-------|-------|
| (Matrix: Water) | | | | | | | | | | |
| Client sampling date / time | | | | | 29-Jun-2022 15:42 | 29-Jun-2022 15:56 | | | | |
| Analyte | CAS Number | Method | LOR | Unit | YL2200797-001 | YL2200797-002 | ----- | ----- | ----- | ----- |
| | | | | | Result | Result | ---- | ---- | ---- | ---- |
| Total Metals | | | | | | | | | | |
| antimony, total | 7440-36-0 | E420 | 0.00010 | mg/L | <0.00010 | <0.00020 ^{DLA} | ---- | ---- | ---- | ---- |
| arsenic, total | 7440-38-2 | E420 | 0.00010 | mg/L | 0.00016 | <0.00020 ^{DLA} | ---- | ---- | ---- | ---- |
| barium, total | 7440-39-3 | E420 | 0.00010 | mg/L | 0.0218 | 0.0237 | ---- | ---- | ---- | ---- |
| beryllium, total | 7440-41-7 | E420 | 0.000020 | mg/L | <0.000020 | 0.000504 | ---- | ---- | ---- | ---- |
| boron, total | 7440-42-8 | E420 | 0.010 | mg/L | 0.034 | 0.088 | ---- | ---- | ---- | ---- |
| iron, total | 7439-89-6 | E420 | 0.010 | mg/L | <0.010 | <0.020 ^{DLA} | ---- | ---- | ---- | ---- |
| manganese, total | 7439-96-5 | E420 | 0.00010 | mg/L | 0.00724 | 0.00845 | ---- | ---- | ---- | ---- |
| selenium, total | 7782-49-2 | E420 | 0.000050 | mg/L | <0.000050 | <0.000100 ^{DLA} | ---- | ---- | ---- | ---- |
| uranium, total | 7440-61-1 | E420 | 0.000010 | mg/L | 0.000034 | 0.000280 | ---- | ---- | ---- | ---- |
| zinc, total | 7440-66-6 | E420 | 0.0030 | mg/L | 0.0068 | 0.0198 | ---- | ---- | ---- | ---- |
| Aggregate Organics | | | | | | | | | | |
| phenols, total (4AAP) | ---- | E562 | 0.0010 | mg/L | <0.0010 | <0.0010 | ---- | ---- | ---- | ---- |
| Volatile Organic Compounds [Fuels] | | | | | | | | | | |
| benzene | 71-43-2 | E611A | 0.50 | µg/L | <0.50 | <0.50 | ---- | ---- | ---- | ---- |
| ethylbenzene | 100-41-4 | E611A | 0.50 | µg/L | <0.50 | <0.50 | ---- | ---- | ---- | ---- |
| methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 0.50 | µg/L | <0.50 | <0.50 | ---- | ---- | ---- | ---- |
| styrene | 100-42-5 | E611A | 0.50 | µg/L | <0.50 | <0.50 | ---- | ---- | ---- | ---- |
| toluene | 108-88-3 | E611A | 0.50 | µg/L | <0.50 | <0.50 | ---- | ---- | ---- | ---- |
| xylene, m+p- | 179601-23-1 | E611A | 0.40 | µg/L | <0.40 | <0.40 | ---- | ---- | ---- | ---- |
| xylene, o- | 95-47-6 | E611A | 0.30 | µg/L | 0.54 | <0.30 | ---- | ---- | ---- | ---- |
| xylenes, total | 1330-20-7 | E611A | 0.50 | µg/L | 0.54 | <0.50 | ---- | ---- | ---- | ---- |
| Volatile Organic Compounds Surrogates | | | | | | | | | | |
| bromofluorobenzene, 4- | 460-00-4 | E611A | 1.0 | % | 87.4 | 86.9 | ---- | ---- | ---- | ---- |
| difluorobenzene, 1,4- | 540-36-3 | E611A | 1.0 | % | 100 | 97.3 | ---- | ---- | ---- | ---- |
| Hydrocarbons | | | | | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | <100 | ---- | ---- | ---- | ---- |
| F2 (C10-C16) | ---- | E601 | 300 | µg/L | <300 | <300 | ---- | ---- | ---- | ---- |
| VHw (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | <100 | ---- | ---- | ---- | ---- |
| F1-BTEX | ---- | EC580 | 100 | µg/L | <100 | <100 | ---- | ---- | ---- | ---- |
| VPW | ---- | EC580A | 100 | µg/L | <100 | <100 | ---- | ---- | ---- | ---- |



Analytical Results

| | | | | | | | | | | |
|---|------------|------------|--------|------|----------------------|----------------------|-------------|-------|-------|------|
| Sub-Matrix: Water (Matrix: Water) | | | | | Client sample ID | STF-TOTES-A | STF-TOTES-B | ---- | ---- | ---- |
| Client sampling date / time | | | | | 29-Jun-2022 15:42 | 29-Jun-2022 15:56 | ---- | ---- | ---- | |
| Analyte | CAS Number | Method | LOR | Unit | YL2200797-001 | YL2200797-002 | ----- | ----- | ----- | |
| | | | | | Result | Result | ---- | ---- | ---- | |
| Hydrocarbons Surrogates | | | | | | | | | | |
| bromobenzotrifluoride, 2- (F2-F4 surr) | 392-83-6 | E601 | 1.0 | % | 85.3 | 86.1 | ---- | ---- | ---- | |
| dichlorotoluene, 3,4- | 97-75-0 | E581.VH+F1 | 1.0 | % | 103 | 102 | ---- | ---- | ---- | |
| Polycyclic Aromatic Hydrocarbons | | | | | | | | | | |
| acenaphthene | 83-32-9 | E641A | 0.010 | µg/L | <0.010 | <0.010 | ---- | ---- | ---- | |
| acenaphthylene | 208-96-8 | E641A | 0.010 | µg/L | <0.010 | <0.010 | ---- | ---- | ---- | |
| anthracene | 120-12-7 | E641A | 0.010 | µg/L | <0.010 | <0.010 | ---- | ---- | ---- | |
| benz(a)anthracene | 56-55-3 | E641A | 0.010 | µg/L | <0.010 | <0.010 | ---- | ---- | ---- | |
| benzo(a)pyrene | 50-32-8 | E641A | 0.0050 | µg/L | <0.0050 | <0.0050 | ---- | ---- | ---- | |
| benzo(b+j)fluoranthene | n/a | E641A | 0.010 | µg/L | <0.010 | <0.010 | ---- | ---- | ---- | |
| benzo(b+j+k)fluoranthene | n/a | E641A | 0.015 | µg/L | <0.015 | <0.015 | ---- | ---- | ---- | |
| benzo(g,h,i)perylene | 191-24-2 | E641A | 0.010 | µg/L | <0.010 | <0.010 | ---- | ---- | ---- | |
| benzo(k)fluoranthene | 207-08-9 | E641A | 0.010 | µg/L | <0.010 | <0.010 | ---- | ---- | ---- | |
| chrysene | 218-01-9 | E641A | 0.010 | µg/L | <0.010 | <0.010 | ---- | ---- | ---- | |
| dibenz(a,h)anthracene | 53-70-3 | E641A | 0.0050 | µg/L | <0.0050 | <0.0050 | ---- | ---- | ---- | |
| fluoranthene | 206-44-0 | E641A | 0.010 | µg/L | <0.010 | <0.010 | ---- | ---- | ---- | |
| fluorene | 86-73-7 | E641A | 0.010 | µg/L | <0.010 | <0.010 | ---- | ---- | ---- | |
| indeno(1,2,3-c,d)pyrene | 193-39-5 | E641A | 0.010 | µg/L | <0.010 | <0.010 | ---- | ---- | ---- | |
| naphthalene | 91-20-3 | E641A | 0.050 | µg/L | 0.065 | <0.050 | ---- | ---- | ---- | |
| phenanthrene | 85-01-8 | E641A | 0.020 | µg/L | <0.020 | <0.020 | ---- | ---- | ---- | |
| pyrene | 129-00-0 | E641A | 0.010 | µg/L | <0.010 | <0.010 | ---- | ---- | ---- | |
| B(a)P total potency equivalents [B(a)P TPE] | ---- | E641A | 0.010 | µg/L | <0.010 | <0.010 | ---- | ---- | ---- | |
| PAHs, total (EPA 16) | n/a | E641A | 0.065 | µg/L | 0.065 | <0.065 | ---- | ---- | ---- | |
| Polycyclic Aromatic Hydrocarbons Surrogates | | | | | | | | | | |
| chrysene-d12 | 1719-03-5 | E641A | 0.1 | % | 110 | 113 | ---- | ---- | ---- | |
| naphthalene-d8 | 1146-65-2 | E641A | 0.1 | % | 102 | 104 | ---- | ---- | ---- | |
| phenanthrene-d10 | 1517-22-2 | E641A | 0.1 | % | 107 | 109 | ---- | ---- | ---- | |
| Polychlorinated Biphenyls | | | | | | | | | | |
| polychlorinated biphenyls [PCBs], total | ---- | E685 | 1.0 | µg/L | <1.0 | <1.0 | ---- | ---- | ---- | |
| Polychlorinated Biphenyls Surrogates | | | | | | | | | | |
| decachlorobiphenyl | 2051-24-3 | E685 | 1.0 | % | 83.1 | 81.8 | ---- | ---- | ---- | |

Page : 5 of 5
Work Order : YL2200797
Client : KBL Environmental Ltd.
Project : ----



Please refer to the General Comments section for an explanation of any qualifiers detected.

QUALITY CONTROL INTERPRETIVE REPORT

| | | | |
|-------------------------|--|-----------------------|---|
| Work Order | : YL2200797 | Page | : 1 of 7 |
| Client | : KBL Environmental Ltd. | Laboratory | : Yellowknife - Environmental |
| Contact | : Nicole Prince | Account Manager | : Oliver Gregg |
| Address | : 17 Cameron Road PO Box 1895 Yellowknife NT Canada X1A 2P4 | Address | : 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3 |
| Telephone | : 780-554-7259 | Telephone | : 1 867 446 5593 |
| Project | : ---- | Date Samples Received | : 04-Jul-2022 09:38 |
| PO | : 4200ISTF | Issue Date | : 21-Jul-2022 16:11 |
| C-O-C number | : 17-823726 | | |
| Sampler | : ---- | | |
| Site | : ---- | | |
| Quote number | : YL22-KBLE100-003 | | |
| No. of samples received | : 2 | | |
| No. of samples analysed | : 2 | | |

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO: Data Quality Objective.

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water** Evaluation: ***** = Holding time exceedance ; **✓** = Within Holding Time

| Analyte Group | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|--|------------|---------------|--------------------------|---------------|---------|------|---------------|---------------|---------|------|
| | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Aggregate Organics : Phenols (4AAP) in Water by Colorimetry | | | | | | | | | | |
| Amber glass total (sulfuric acid) STF-TOTES-A | E562 | 29-Jun-2022 | ---- | ---- | ---- | | 15-Jul-2022 | 28 days | 16 days | ✓ |
| Aggregate Organics : Phenols (4AAP) in Water by Colorimetry | | | | | | | | | | |
| Amber glass total (sulfuric acid) STF-TOTES-B | E562 | 29-Jun-2022 | ---- | ---- | ---- | | 15-Jul-2022 | 28 days | 16 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) STF-TOTES-A | E601 | 29-Jun-2022 | 10-Jul-2022 | 14 days | 11 days | ✓ | 11-Jul-2022 | 40 days | 1 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) STF-TOTES-B | E601 | 29-Jun-2022 | 10-Jul-2022 | 14 days | 11 days | ✓ | 11-Jul-2022 | 40 days | 1 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass vial (sodium bisulfate) STF-TOTES-A | E581.VH+F1 | 29-Jun-2022 | 13-Jul-2022 | ---- | ---- | | 13-Jul-2022 | 14 days | 13 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass vial (sodium bisulfate) STF-TOTES-B | E581.VH+F1 | 29-Jun-2022 | 13-Jul-2022 | ---- | ---- | | 13-Jul-2022 | 14 days | 13 days | ✓ |
| Polychlorinated Biphenyls : PCB Aroclors by GC-ECD | | | | | | | | | | |
| Amber glass/Teflon lined cap STF-TOTES-A | E685 | 29-Jun-2022 | 14-Jul-2022 | ---- | ---- | | 15-Jul-2022 | 40 days | 1 days | ✓ |



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|--|--------|---------------|--------------------------|---------------|---------|------|---------------|---------------|---------|------|
| Container / Client Sample ID(s) | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Polychlorinated Biphenyls : PCB Aroclors by GC-ECD | | | | | | | | | | |
| Amber glass/Teflon lined cap STF-TOTES-B | E685 | 29-Jun-2022 | 14-Jul-2022 | ---- | ---- | | 15-Jul-2022 | 40 days | 1 days | ✓ |
| Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) STF-TOTES-A | E641A | 29-Jun-2022 | 10-Jul-2022 | 14 days | 11 days | ✓ | 11-Jul-2022 | 40 days | 1 days | ✓ |
| Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) STF-TOTES-B | E641A | 29-Jun-2022 | 10-Jul-2022 | 14 days | 11 days | ✓ | 11-Jul-2022 | 40 days | 1 days | ✓ |
| Total Metals : Total Metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE total (nitric acid) STF-TOTES-A | E420 | 29-Jun-2022 | ---- | ---- | ---- | | 08-Jul-2022 | 180 days | 9 days | ✓ |
| Total Metals : Total Metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE total (nitric acid) STF-TOTES-B | E420 | 29-Jun-2022 | ---- | ---- | ---- | | 08-Jul-2022 | 180 days | 9 days | ✓ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass vial (sodium bisulfate) STF-TOTES-A | E611A | 29-Jun-2022 | 13-Jul-2022 | ---- | ---- | | 13-Jul-2022 | 14 days | 13 days | ✓ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass vial (sodium bisulfate) STF-TOTES-B | E611A | 29-Jun-2022 | 13-Jul-2022 | ---- | ---- | | 13-Jul-2022 | 14 days | 13 days | ✓ |

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).



Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water** Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

| Quality Control Sample Type | Method | QC Lot # | Count | | Frequency (%) | | |
|--|------------|----------|-------|---------|---------------|----------|------------|
| | | | QC | Regular | Actual | Expected | Evaluation |
| Analytical Methods | | | | | | | |
| Laboratory Duplicates (DUP) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 559795 | 1 | 10 | 10.0 | 5.0 | ✓ |
| Phenols (4AAP) in Water by Colorimetry | E562 | 564780 | 1 | 20 | 5.0 | 5.0 | ✓ |
| Total Metals in Water by CRC ICPMS | E420 | 552554 | 1 | 20 | 5.0 | 5.0 | ✓ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 559794 | 1 | 8 | 12.5 | 5.0 | ✓ |
| Laboratory Control Samples (LCS) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 559795 | 1 | 10 | 10.0 | 5.0 | ✓ |
| CCME PHCs - F2-F4 by GC-FID | E601 | 556341 | 1 | 3 | 33.3 | 5.0 | ✓ |
| PAHs by Hexane LVI GC-MS | E641A | 556340 | 1 | 8 | 12.5 | 5.0 | ✓ |
| PCB Aroclors by GC-ECD | E685 | 562429 | 1 | 13 | 7.6 | 5.0 | ✓ |
| Phenols (4AAP) in Water by Colorimetry | E562 | 564780 | 1 | 20 | 5.0 | 5.0 | ✓ |
| Total Metals in Water by CRC ICPMS | E420 | 552554 | 1 | 20 | 5.0 | 5.0 | ✓ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 559794 | 1 | 8 | 12.5 | 5.0 | ✓ |
| Method Blanks (MB) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 559795 | 1 | 10 | 10.0 | 5.0 | ✓ |
| CCME PHCs - F2-F4 by GC-FID | E601 | 556341 | 1 | 3 | 33.3 | 5.0 | ✓ |
| PAHs by Hexane LVI GC-MS | E641A | 556340 | 1 | 8 | 12.5 | 5.0 | ✓ |
| PCB Aroclors by GC-ECD | E685 | 562429 | 1 | 13 | 7.6 | 5.0 | ✓ |
| Phenols (4AAP) in Water by Colorimetry | E562 | 564780 | 1 | 20 | 5.0 | 5.0 | ✓ |
| Total Metals in Water by CRC ICPMS | E420 | 552554 | 1 | 20 | 5.0 | 5.0 | ✓ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 559794 | 1 | 8 | 12.5 | 5.0 | ✓ |
| Matrix Spikes (MS) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 559795 | 1 | 10 | 10.0 | 5.0 | ✓ |
| Phenols (4AAP) in Water by Colorimetry | E562 | 564780 | 1 | 20 | 5.0 | 5.0 | ✓ |
| Total Metals in Water by CRC ICPMS | E420 | 552554 | 1 | 20 | 5.0 | 5.0 | ✓ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 559794 | 1 | 8 | 12.5 | 5.0 | ✓ |



Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

| Analytical Methods | Method / Lab | Matrix | Method Reference | Method Descriptions |
|--|---|--------|---|---|
| Total Metals in Water by CRC ICPMS | E420 Vancouver - Environmental | Water | EPA 200.2/6020B (mod) | Water samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method. |
| Phenols (4AAP) in Water by Colorimetry | E562 Edmonton - Environmental | Water | EPA 9066 | This automated method is based on the distillation of phenol and subsequent reaction of the distillate with alkaline ferricyanide (K ₃ Fe(CN) ₆) and 4-amino-antipyrine (4-AAP) to form a red complex which is measured colorimetrically. |
| VH and F1 by Headspace GC-FID | E581.VH+F1 Vancouver - Environmental | Water | BC MOE Lab Manual / CCME PHC in Soil - Tier 1 (mod) | Volatile Hydrocarbons (VH and F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. |
| CCME PHCs - F2-F4 by GC-FID | E601 Vancouver - Environmental | Water | CCME PHC in Soil - Tier 1 | Sample extracts are analyzed by GC-FID for CCME hydrocarbon fractions (F2-F4). |
| BTEX by Headspace GC-MS | E611A Vancouver - Environmental | Water | EPA 8260D (mod) | Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. |
| PAHs by Hexane LVI GC-MS | E641A Vancouver - Environmental | Water | EPA 8270E (mod) | Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS. |
| PCB Aroclors by GC-ECD | E685 Vancouver - Environmental | Water | EPA 8082A (mod) | PCB Aroclors are analyzed by GC-ECD |
| F1-BTEX | EC580 Vancouver - Environmental | Water | CCME PHC in Soil - Tier 1 | F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX). |
| VPH: VH-BTEX-Styrene | EC580A Vancouver - Environmental | Water | BC MOE Lab Manual (VPH in Water and Solids) (mod) | Volatile Petroleum Hydrocarbons (VPH) is calculated as follows: VPHw = Volatile Hydrocarbons (VH6-10) minus benzene, toluene, ethylbenzene, xylenes (BTEX) and styrene. |
| Preparation Methods | Method / Lab | Matrix | Method Reference | Method Descriptions |



| <i>Preparation Methods</i> | <i>Method / Lab</i> | <i>Matrix</i> | <i>Method Reference</i> | <i>Method Descriptions</i> |
|---|---|---------------|-------------------------|---|
| VOCs Preparation for Headspace Analysis | EP581 Vancouver - Environmental | Water | EPA 5021A (mod) | Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into the GC/MS-FID system. |
| PHCs and PAHs Hexane Extraction | EP601 Vancouver - Environmental | Water | EPA 3511 (mod) | Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction. |
| PCB Aroclors Extraction | EP685 Vancouver - Environmental | Water | EPA 3510C (mod) | PCBs are extracted using an organic solvent liquid-liquid extraction. The hexane extract undergoes one or more of the following clean-up procedures (if required): florisil clean-up, silica gel clean-up, sulphur clean-up and/or sulphuric acid clean-up. |



Environmental

QUALITY CONTROL REPORT

Work Order : **YL2200797**

Client : KBL Environmental Ltd.

Contact : Nicole Prince

Address : 17 Cameron Road PO Box 1895
Yellowknife NT Canada X1A 2P4

Telephone : 780-554-7259

Project : ----

PO : 4200ISTF

C-O-C number : 17-823726

Sampler : ----

Site : ----

Quote number : YL22-KBLE100-003

No. of samples received : 2

No. of samples analysed : 2

Page : 1 of 9

Laboratory : Yellowknife - Environmental

Account Manager : Oliver Gregg

Address : 314 Old Airport Road, Unit 116
Yellowknife, Northwest Territories Canada X1A 3T3

Telephone : 1 867 446 5593

Date Samples Received : 04-Jul-2022 09:38

Date Analysis Commenced : 07-Jul-2022

Issue Date : 21-Jul-2022 16:12

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

| <i>Signatories</i> | <i>Position</i> | <i>Laboratory Department</i> |
|--------------------|---|---|
| Janice Leung | Supervisor - Organics Instrumentation | Vancouver Organics, Burnaby, British Columbia |
| Kevin Duarte | Supervisor - Metals ICP Instrumentation | Vancouver Metals, Burnaby, British Columbia |
| Ping Yeung | Team Leader - Inorganics | Edmonton Inorganics, Edmonton, Alberta |

Page : 2 of 9
Work Order : YL2200797
Client : KBL Environmental Ltd.
Project : ----



General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.



Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

| Sub-Matrix: Water | | | | | Laboratory Duplicate (DUP) Report | | | | | | |
|---|------------------|--------------------------------|-------------|------------|-----------------------------------|------|-----------------|------------------|----------------------|------------------|-----------|
| Laboratory sample ID | Client sample ID | Analyte | CAS Number | Method | LOR | Unit | Original Result | Duplicate Result | RPD(%) or Difference | Duplicate Limits | Qualifier |
| Total Metals (QC Lot: 552554) | | | | | | | | | | | |
| CG2208562-009 | Anonymous | antimony, total | 7440-36-0 | E420 | 0.00010 | mg/L | <0.00010 | <0.00010 | 0 | Diff <2x LOR | ---- |
| | | arsenic, total | 7440-38-2 | E420 | 0.00010 | mg/L | <0.00010 | <0.00010 | 0 | Diff <2x LOR | ---- |
| | | barium, total | 7440-39-3 | E420 | 0.00010 | mg/L | <0.00010 | <0.00010 | 0 | Diff <2x LOR | ---- |
| | | beryllium, total | 7440-41-7 | E420 | 0.000020 | mg/L | <0.020 µg/L | <0.000020 | 0 | Diff <2x LOR | ---- |
| | | boron, total | 7440-42-8 | E420 | 0.010 | mg/L | <0.010 | <0.010 | 0 | Diff <2x LOR | ---- |
| | | iron, total | 7439-89-6 | E420 | 0.010 | mg/L | <0.010 | <0.010 | 0 | Diff <2x LOR | ---- |
| | | manganese, total | 7439-96-5 | E420 | 0.00010 | mg/L | <0.00010 | <0.00010 | 0 | Diff <2x LOR | ---- |
| | | selenium, total | 7782-49-2 | E420 | 0.000050 | mg/L | <0.050 µg/L | <0.000050 | 0 | Diff <2x LOR | ---- |
| | | uranium, total | 7440-61-1 | E420 | 0.000010 | mg/L | <0.000010 | <0.000010 | 0 | Diff <2x LOR | ---- |
| | | zinc, total | 7440-66-6 | E420 | 0.0030 | mg/L | <0.0030 | <0.0030 | 0 | Diff <2x LOR | ---- |
| Aggregate Organics (QC Lot: 564780) | | | | | | | | | | | |
| VA22B4476-007 | Anonymous | phenols, total (4AAP) | ---- | E562 | 0.0010 | mg/L | <0.0010 | <0.0010 | 0 | Diff <2x LOR | ---- |
| Volatile Organic Compounds (QC Lot: 559795) | | | | | | | | | | | |
| KS2202375-008 | Anonymous | benzene | 71-43-2 | E611A | 0.50 | µg/L | <0.50 | <0.50 | 0 | Diff <2x LOR | ---- |
| | | ethylbenzene | 100-41-4 | E611A | 0.50 | µg/L | <0.50 | <0.50 | 0 | Diff <2x LOR | ---- |
| | | methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 0.50 | µg/L | <0.50 | <0.50 | 0 | Diff <2x LOR | ---- |
| | | styrene | 100-42-5 | E611A | 0.50 | µg/L | <0.50 | <0.50 | 0 | Diff <2x LOR | ---- |
| | | toluene | 108-88-3 | E611A | 0.50 | µg/L | <0.50 | <0.50 | 0 | Diff <2x LOR | ---- |
| | | xylene, m+p- | 179601-23-1 | E611A | 0.40 | µg/L | <0.40 | <0.40 | 0 | Diff <2x LOR | ---- |
| | | xylene, o- | 95-47-6 | E611A | 0.30 | µg/L | <0.30 | <0.30 | 0 | Diff <2x LOR | ---- |
| Hydrocarbons (QC Lot: 559794) | | | | | | | | | | | |
| KS2202375-008 | Anonymous | F1 (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | <100 | 0.0% | 30% | ---- |
| | | VHw (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | <100 | 0.0% | 30% | ---- |



Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

| Analyte | CAS Number | Method | LOR | Unit | Result | Qualifier |
|---|-------------|------------|---------|------|-----------|-----------|
| Total Metals (QCLot: 552554) | | | | | | |
| antimony, total | 7440-36-0 | E420 | 0.0001 | mg/L | <0.00010 | ---- |
| arsenic, total | 7440-38-2 | E420 | 0.0001 | mg/L | <0.00010 | ---- |
| barium, total | 7440-39-3 | E420 | 0.0001 | mg/L | <0.00010 | ---- |
| beryllium, total | 7440-41-7 | E420 | 0.00002 | mg/L | <0.000020 | ---- |
| boron, total | 7440-42-8 | E420 | 0.01 | mg/L | <0.010 | ---- |
| iron, total | 7439-89-6 | E420 | 0.01 | mg/L | <0.010 | ---- |
| manganese, total | 7439-96-5 | E420 | 0.0001 | mg/L | <0.00010 | ---- |
| selenium, total | 7782-49-2 | E420 | 0.00005 | mg/L | <0.000050 | ---- |
| uranium, total | 7440-61-1 | E420 | 0.00001 | mg/L | <0.000010 | ---- |
| zinc, total | 7440-66-6 | E420 | 0.003 | mg/L | <0.0030 | ---- |
| Aggregate Organics (QCLot: 564780) | | | | | | |
| phenols, total (4AAP) | ---- | E562 | 0.001 | mg/L | <0.0010 | ---- |
| Volatile Organic Compounds (QCLot: 559795) | | | | | | |
| benzene | 71-43-2 | E611A | 0.5 | µg/L | <0.50 | ---- |
| ethylbenzene | 100-41-4 | E611A | 0.5 | µg/L | <0.50 | ---- |
| methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 0.5 | µg/L | <0.50 | ---- |
| styrene | 100-42-5 | E611A | 0.5 | µg/L | <0.50 | ---- |
| toluene | 108-88-3 | E611A | 0.5 | µg/L | <0.50 | ---- |
| xylene, m+p- | 179601-23-1 | E611A | 0.4 | µg/L | <0.40 | ---- |
| xylene, o- | 95-47-6 | E611A | 0.3 | µg/L | <0.30 | ---- |
| Hydrocarbons (QCLot: 556341) | | | | | | |
| F2 (C10-C16) | ---- | E601 | 100 | µg/L | <100 | ---- |
| Hydrocarbons (QCLot: 559794) | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | ---- |
| VHw (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | ---- |
| Polycyclic Aromatic Hydrocarbons (QCLot: 556340) | | | | | | |
| acenaphthene | 83-32-9 | E641A | 0.01 | µg/L | <0.010 | ---- |
| acenaphthylene | 208-96-8 | E641A | 0.01 | µg/L | <0.010 | ---- |
| anthracene | 120-12-7 | E641A | 0.01 | µg/L | <0.010 | ---- |
| benz(a)anthracene | 56-55-3 | E641A | 0.01 | µg/L | <0.010 | ---- |
| benzo(a)pyrene | 50-32-8 | E641A | 0.005 | µg/L | <0.0050 | ---- |
| benzo(b+j)fluoranthene | n/a | E641A | 0.01 | µg/L | <0.010 | ---- |
| benzo(g,h,i)perylene | 191-24-2 | E641A | 0.01 | µg/L | <0.010 | ---- |



Sub-Matrix: Water

| Analyte | CAS Number | Method | LOR | Unit | Result | Qualifier |
|--|------------|--------|-------|------|---------|-----------|
| Polycyclic Aromatic Hydrocarbons (QCLot: 556340) - continued | | | | | | |
| benzo(k)fluoranthene | 207-08-9 | E641A | 0.01 | µg/L | <0.010 | ---- |
| chrysene | 218-01-9 | E641A | 0.01 | µg/L | <0.010 | ---- |
| dibenz(a,h)anthracene | 53-70-3 | E641A | 0.005 | µg/L | <0.0050 | ---- |
| fluoranthene | 206-44-0 | E641A | 0.01 | µg/L | <0.010 | ---- |
| fluorene | 86-73-7 | E641A | 0.01 | µg/L | <0.010 | ---- |
| indeno(1,2,3-c,d)pyrene | 193-39-5 | E641A | 0.01 | µg/L | <0.010 | ---- |
| naphthalene | 91-20-3 | E641A | 0.05 | µg/L | <0.050 | ---- |
| phenanthrene | 85-01-8 | E641A | 0.02 | µg/L | <0.020 | ---- |
| pyrene | 129-00-0 | E641A | 0.01 | µg/L | <0.010 | ---- |



Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water

| | | | | | Laboratory Control Sample (LCS) Report | | | | |
|--|-------------|------------|---------|------|--|--------------|---------------------|------|-----------|
| | | | | | Spike | Recovery (%) | Recovery Limits (%) | | |
| Analyte | CAS Number | Method | LOR | Unit | Concentration | LCS | Low | High | Qualifier |
| Total Metals (QCLot: 552554) | | | | | | | | | |
| antimony, total | 7440-36-0 | E420 | 0.0001 | mg/L | 1 mg/L | 108 | 80.0 | 120 | ---- |
| arsenic, total | 7440-38-2 | E420 | 0.0001 | mg/L | 1 mg/L | 106 | 80.0 | 120 | ---- |
| barium, total | 7440-39-3 | E420 | 0.0001 | mg/L | 0.25 mg/L | 103 | 80.0 | 120 | ---- |
| beryllium, total | 7440-41-7 | E420 | 0.00002 | mg/L | 0.1 mg/L | 112 | 80.0 | 120 | ---- |
| boron, total | 7440-42-8 | E420 | 0.01 | mg/L | 1 mg/L | 104 | 80.0 | 120 | ---- |
| iron, total | 7439-89-6 | E420 | 0.01 | mg/L | 1 mg/L | 113 | 80.0 | 120 | ---- |
| manganese, total | 7439-96-5 | E420 | 0.0001 | mg/L | 0.25 mg/L | 107 | 80.0 | 120 | ---- |
| selenium, total | 7782-49-2 | E420 | 0.00005 | mg/L | 1 mg/L | 106 | 80.0 | 120 | ---- |
| uranium, total | 7440-61-1 | E420 | 0.00001 | mg/L | 0.005 mg/L | 108 | 80.0 | 120 | ---- |
| zinc, total | 7440-66-6 | E420 | 0.003 | mg/L | 0.5 mg/L | 106 | 80.0 | 120 | ---- |
| Aggregate Organics (QCLot: 564780) | | | | | | | | | |
| phenols, total (4AAP) | ---- | E562 | 0.001 | mg/L | 0.02 mg/L | 94.6 | 85.0 | 115 | ---- |
| Volatile Organic Compounds (QCLot: 559795) | | | | | | | | | |
| benzene | 71-43-2 | E611A | 0.5 | µg/L | 100 µg/L | 93.9 | 70.0 | 130 | ---- |
| ethylbenzene | 100-41-4 | E611A | 0.5 | µg/L | 100 µg/L | 90.6 | 70.0 | 130 | ---- |
| methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 0.5 | µg/L | 100 µg/L | 98.9 | 70.0 | 130 | ---- |
| styrene | 100-42-5 | E611A | 0.5 | µg/L | 100 µg/L | 96.1 | 70.0 | 130 | ---- |
| toluene | 108-88-3 | E611A | 0.5 | µg/L | 100 µg/L | 98.2 | 70.0 | 130 | ---- |
| xylene, m+p- | 179601-23-1 | E611A | 0.4 | µg/L | 200 µg/L | 97.3 | 70.0 | 130 | ---- |
| xylene, o- | 95-47-6 | E611A | 0.3 | µg/L | 100 µg/L | 93.4 | 70.0 | 130 | ---- |
| Hydrocarbons (QCLot: 556341) | | | | | | | | | |
| F2 (C10-C16) | ---- | E601 | 100 | µg/L | 3538 µg/L | 106 | 70.0 | 130 | ---- |
| Hydrocarbons (QCLot: 559794) | | | | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | 6310 µg/L | 105 | 70.0 | 130 | ---- |
| VHw (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | 6310 µg/L | 105 | 70.0 | 130 | ---- |
| Polycyclic Aromatic Hydrocarbons (QCLot: 556340) | | | | | | | | | |
| acenaphthene | 83-32-9 | E641A | 0.01 | µg/L | 0.5 µg/L | 94.9 | 60.0 | 130 | ---- |
| acenaphthylene | 208-96-8 | E641A | 0.01 | µg/L | 0.5 µg/L | 94.7 | 60.0 | 130 | ---- |
| anthracene | 120-12-7 | E641A | 0.01 | µg/L | 0.5 µg/L | 112 | 60.0 | 130 | ---- |
| benz(a)anthracene | 56-55-3 | E641A | 0.01 | µg/L | 0.5 µg/L | 116 | 60.0 | 130 | ---- |



Sub-Matrix: Water

| | | | | | Laboratory Control Sample (LCS) Report | | | | |
|--|------------|--------|-------|------|--|--------------|---------------------|------|-----------|
| | | | | | Spike | Recovery (%) | Recovery Limits (%) | | |
| Analyte | CAS Number | Method | LOR | Unit | Concentration | LCS | Low | High | Qualifier |
| Polycyclic Aromatic Hydrocarbons (QCLot: 556340) - continued | | | | | | | | | |
| benzo(a)pyrene | 50-32-8 | E641A | 0.005 | µg/L | 0.5 µg/L | 104 | 60.0 | 130 | ---- |
| benzo(b+j)fluoranthene | n/a | E641A | 0.01 | µg/L | 0.5 µg/L | 104 | 60.0 | 130 | ---- |
| benzo(g,h,i)perylene | 191-24-2 | E641A | 0.01 | µg/L | 0.5 µg/L | 114 | 60.0 | 130 | ---- |
| benzo(k)fluoranthene | 207-08-9 | E641A | 0.01 | µg/L | 0.5 µg/L | 110 | 60.0 | 130 | ---- |
| chrysene | 218-01-9 | E641A | 0.01 | µg/L | 0.5 µg/L | 117 | 60.0 | 130 | ---- |
| dibenz(a,h)anthracene | 53-70-3 | E641A | 0.005 | µg/L | 0.5 µg/L | 111 | 60.0 | 130 | ---- |
| fluoranthene | 206-44-0 | E641A | 0.01 | µg/L | 0.5 µg/L | 110 | 60.0 | 130 | ---- |
| fluorene | 86-73-7 | E641A | 0.01 | µg/L | 0.5 µg/L | 107 | 60.0 | 130 | ---- |
| indeno(1,2,3-c,d)pyrene | 193-39-5 | E641A | 0.01 | µg/L | 0.5 µg/L | 115 | 60.0 | 130 | ---- |
| naphthalene | 91-20-3 | E641A | 0.05 | µg/L | 0.5 µg/L | 84.4 | 50.0 | 130 | ---- |
| phenanthrene | 85-01-8 | E641A | 0.02 | µg/L | 0.5 µg/L | 112 | 60.0 | 130 | ---- |
| pyrene | 129-00-0 | E641A | 0.01 | µg/L | 0.5 µg/L | 112 | 60.0 | 130 | ---- |



Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

| Sub-Matrix: Water | | | | | Matrix Spike (MS) Report | | | | | |
|--|------------------|--------------------------------|-------------|------------|--------------------------|------------|--------------|---------------------|------|-----------|
| | | | | | Spike | | Recovery (%) | Recovery Limits (%) | | |
| Laboratory sample ID | Client sample ID | Analyte | CAS Number | Method | Concentration | Target | MS | Low | High | Qualifier |
| Total Metals (QCLot: 552554) | | | | | | | | | | |
| CG2208562-010 | Anonymous | antimony, total | 7440-36-0 | E420 | 0.0200 mg/L | 0.02 mg/L | 100.0 | 70.0 | 130 | ---- |
| | | arsenic, total | 7440-38-2 | E420 | 0.0192 mg/L | 0.02 mg/L | 96.2 | 70.0 | 130 | ---- |
| | | barium, total | 7440-39-3 | E420 | 0.0192 mg/L | 0.02 mg/L | 95.8 | 70.0 | 130 | ---- |
| | | beryllium, total | 7440-41-7 | E420 | 0.0416 mg/L | 0.04 mg/L | 104 | 70.0 | 130 | ---- |
| | | boron, total | 7440-42-8 | E420 | 0.102 mg/L | 0.1 mg/L | 102 | 70.0 | 130 | ---- |
| | | iron, total | 7439-89-6 | E420 | 1.98 mg/L | 2 mg/L | 99.0 | 70.0 | 130 | ---- |
| | | manganese, total | 7439-96-5 | E420 | 0.0199 mg/L | 0.02 mg/L | 99.4 | 70.0 | 130 | ---- |
| | | selenium, total | 7782-49-2 | E420 | 0.0401 mg/L | 0.04 mg/L | 100 | 70.0 | 130 | ---- |
| | | uranium, total | 7440-61-1 | E420 | 0.00398 mg/L | 0.004 mg/L | 99.6 | 70.0 | 130 | ---- |
| | | zinc, total | 7440-66-6 | E420 | 0.406 mg/L | 0.4 mg/L | 101 | 70.0 | 130 | ---- |
| Aggregate Organics (QCLot: 564780) | | | | | | | | | | |
| VA22B4476-007 | Anonymous | phenols, total (4AAP) | ---- | E562 | 0.0191 mg/L | 0.02 mg/L | 95.7 | 75.0 | 125 | ---- |
| Volatile Organic Compounds (QCLot: 559795) | | | | | | | | | | |
| KS2202375-008 | Anonymous | benzene | 71-43-2 | E611A | 95.7 µg/L | 100 µg/L | 95.7 | 60.0 | 140 | ---- |
| | | ethylbenzene | 100-41-4 | E611A | 87.5 µg/L | 100 µg/L | 87.5 | 60.0 | 140 | ---- |
| | | methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 96.4 µg/L | 100 µg/L | 96.4 | 60.0 | 140 | ---- |
| | | styrene | 100-42-5 | E611A | 89.9 µg/L | 100 µg/L | 89.9 | 60.0 | 140 | ---- |
| | | toluene | 108-88-3 | E611A | 98.2 µg/L | 100 µg/L | 98.2 | 60.0 | 140 | ---- |
| | | xylene, m+p- | 179601-23-1 | E611A | 188 µg/L | 200 µg/L | 94.1 | 60.0 | 140 | ---- |
| | | xylene, o- | 95-47-6 | E611A | 89.6 µg/L | 100 µg/L | 89.6 | 60.0 | 140 | ---- |
| | | Hydrocarbons (QCLot: 559794) | | | | | | | | |
| KS2202375-011 | Anonymous | F1 (C6-C10) | ---- | E581.VH+F1 | 4560 µg/L | 6310 µg/L | 72.3 | 60.0 | 140 | ---- |
| | | VHw (C6-C10) | ---- | E581.VH+F1 | 4160 µg/L | 6310 µg/L | 65.9 | 60.0 | 140 | ---- |





Chain of Custody (COC) / Analytical Request Form

15th Ave. S.W.

Doc Number 47 000706

Page 10

www.alsglobal.com

Canada Toll Free: 1 800 668 0878

[illegible]

ALS Environmental
Canadian Locations (Toll Free 1-800-668-9878)
EMERGENCY SPILL RESPONSE: +1 855 838 LABS (5227)



British Columbia / Yukon

Vancouver, BC
 8081 Lougheed Hwy
 Burnaby, BC
 V5A 1W9
 After Hours / Emergency

Ph: 604-253-4188
 Fax: 604-253-6700
 Ph: 604-220-4188

Fort St. John, BC
 8212 100 Avenue
 Fort St. John, BC
 V1J 1W6
 After Hours / Emergency

Ph: 250-261-5517
 Fax: 250-261-5587
 Ph: 250-261-4947

Terrace, BC
 2912 Molitor Street
 Terrace, BC
 V8G 3A4
 After Hours / Emergency

Ph: 250-635-3309
 Ph: 250-615-7089

Kamloops, BC
 1445 McGill Rd, Unit 2B
 Kamloops, BC
 V2C 6K7
 After Hours / Emergency

Ph: 250-372-3588
 Fax: 250-372-3670
 Ph: 250-572-1458

Victoria, BC
 #104-1027 Pandora Avenue
 Victoria, BC
 V8V 3P6
 After Hours / Emergency

Ph: 250-413-3243
 Ph: 250-415-9556

Whitehorse, YT
 12 - 151 Industrial Road
 Whitehorse, YT
 Y1A 2V3
 After Hours / Emergency

Ph: 867-668-6689
 Ph: 867-335-5416

Prairies / NWT

Edmonton, AB
 9450-17 Ave NW
 Edmonton, Alberta
 T6N 1M9
 After Hours / Emergency

Ph: 780-413-5227
 Fax: 780-437-2311
 Ph: 780-913-2299

Calgary, AB
 2559-29th Street NE
 Calgary, AB
 T1Y 7B5
 After Hours / Emergency

Ph: 403-407-1800
 Fax: 403-407-1761
 Ph: 403-651-1471

Saskatoon, SK
 819 - 58 Street East
 Saskatoon, SK
 S7K 6X5
 After Hours / Emergency

Ph: 306-668-8370
 Fax: 306-668-8383
 Ph: 306-715-1269

Fort McMurray, AB
 Bay 1, 245 MacDonald Crescent
 Fort McMurray, AB
 T9H 4B5
 After Hours / Emergency

Ph: 780-791-1524
 Fax: 780-791-1586
 Ph: 780-714-8482

Grande Prairie, AB
 9505-111th Street
 Grande Prairie, AB
 T8V 5W1
 After Hours / Emergency

Ph: 780-539-5196
 Fax: 403-291-0298
 Ph: 780-651-1471

Regina, SK
 1119 Osler Street
 Regina, SK
 S4R 8R4
 After Hours / Emergency

Ph: 306-525-0970
 Ph: 306-216-2480

Winnipeg, MB
 1329 Niakwa Road East, Unit 12
 Winnipeg, MB
 R2J 3T4
 After Hours / Emergency

Ph: 204-255-9720
 Fax: 204-255-9721
 Ph: 204-784-6677

Yellowknife, NT
 116 - 314 Old Airport Road
 Yellowknife, NT
 X1A 3T3
 After Hours / Emergency

Ph: 867-873-5593
 Fax: 867-920-4238
 Ph: 867-446-5593

Ontario

Thunder Bay, ON
 1081 Barton Street
 Thunder Bay, ON
 P7B 5N3
 After Hours / Emergency

Ph: 807-623-6463
 Fax: 807-623-7598
 Ph: 807-624-4482

Burlington, ON
 1435 Norjohn Court, Unit 1
 Burlington, ON
 L7L 0E6

Ph: 905-331-3111
 Fax: 905-331-4567

Mississauga, ON
 5730 Coopers Avenue, Unit 30
 Mississauga, ON
 L4Z 2E9
 After Hours / Emergency

Ph: 905-507-6910
 Fax: 905-507-6927
 Ph: 416-817-2944

Waterloo, ON
 60 Northland Road, Unit 1
 Waterloo, ON
 N2V 2B8
 After Hours / Emergency

Ph: 519-886-6910
 Fax: 519-886-9047
 Ph: 519-589-0044

London, ON
 309 Exeter Road, Unit #29
 London, ON
 N6L 1C1
 After Hours / Emergency

Ph: 519-652-6044
 Fax: 519-652-0671
 Ph: 519-719-4201

Ottawa, ON
 190 Colonnade Road, Unit 7
 Nepean, ON
 K2E 7J5
 After Hours / Emergency

Ph: 613-225-8279
 Fax: 613-225-2801
 Ph: 613-513-4731

Richmond Hill, ON
 95 West Beaver Creek Road, Unit 1
 Richmond Hill, ON
 L4B 1H2
 After Hours / Emergency

Ph: 905-881-9887
 Fax: 905-881-8062
 Ph: 416-817-2944



Environmental

CERTIFICATE OF ANALYSIS

Work Order : **YL2201736**
Client : **KBL Environmental Ltd.**
Contact : Katie Oliver
Address : 17 Cameron Road PO Box 1895
Yellowknife NT Canada X1A 2P4
Telephone : 780 893 3305
Project : 22-107NT
PO : ---
C-O-C number : ---
Sampler : ---
Site : ---
Quote number : YL22-KBLE100-001
No. of samples received : 1
No. of samples analysed : 1

Page : 1 of 4
Laboratory : Yellowknife - Environmental
Account Manager : Oliver Gregg
Address : 314 Old Airport Road, Unit 116
Yellowknife NT Canada X1A 3T3
Telephone : 1 867 446 5593
Date Samples Received : 03-Oct-2022 11:30
Date Analysis Commenced : 06-Oct-2022
Issue Date : 11-Oct-2022 09:58

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

| <i>Signatories</i> | <i>Position</i> | <i>Laboratory Department</i> |
|--------------------|---------------------------------------|-------------------------------------|
| Janice Leung | Supervisor - Organics Instrumentation | Organics, Burnaby, British Columbia |



General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances
LOR: Limit of Reporting (detection limit).

| Unit | Description |
|------|----------------------|
| µg/L | micrograms per litre |

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Qualifiers

| Qualifier | Description |
|-----------|---|
| DLCI | Detection Limit Raised: Chromatographic interference due to co-elution. |



Analytical Results

| | | | | | | | | | | |
|--|-------------|------------|--------|------|-----------------------------|----------------------|-------|-------|-------|------|
| Sub-Matrix: Water (Matrix: Water) | | | | | Client sample ID | 22-107-01 | ---- | ---- | ---- | ---- |
| | | | | | Client sampling date / time | 29-Sep-2022 18:00 | ---- | ---- | ---- | ---- |
| Analyte | CAS Number | Method | LOR | Unit | YL2201736-001 | ----- | ----- | ----- | ----- | |
| | | | | | Result | ---- | ---- | ---- | ---- | |
| Volatile Organic Compounds [Fuels] | | | | | | | | | | |
| benzene | 71-43-2 | E611A | 0.50 | µg/L | <0.50 | ---- | ---- | ---- | ---- | |
| ethylbenzene | 100-41-4 | E611A | 0.50 | µg/L | <0.50 | ---- | ---- | ---- | ---- | |
| methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 0.50 | µg/L | <0.50 | ---- | ---- | ---- | ---- | |
| styrene | 100-42-5 | E611A | 0.50 | µg/L | <0.50 | ---- | ---- | ---- | ---- | |
| toluene | 108-88-3 | E611A | 0.50 | µg/L | <0.50 | ---- | ---- | ---- | ---- | |
| xylene, m+p- | 179601-23-1 | E611A | 0.40 | µg/L | <0.40 | ---- | ---- | ---- | ---- | |
| xylene, o- | 95-47-6 | E611A | 0.30 | µg/L | <0.30 | ---- | ---- | ---- | ---- | |
| xylenes, total | 1330-20-7 | E611A | 0.50 | µg/L | <0.50 | ---- | ---- | ---- | ---- | |
| Hydrocarbons | | | | | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | ---- | ---- | ---- | ---- | |
| F2 (C10-C16) | ---- | E601 | 300 | µg/L | 360 | ---- | ---- | ---- | ---- | |
| F3 (C16-C34) | ---- | E601 | 300 | µg/L | 640 | ---- | ---- | ---- | ---- | |
| F4 (C34-C50) | ---- | E601 | 300 | µg/L | <300 | ---- | ---- | ---- | ---- | |
| VHw (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | ---- | ---- | ---- | ---- | |
| F1-BTEX | ---- | EC580 | 100 | µg/L | <100 | ---- | ---- | ---- | ---- | |
| VPHw | ---- | EC580A | 100 | µg/L | <100 | ---- | ---- | ---- | ---- | |
| Hydrocarbons Surrogates | | | | | | | | | | |
| bromobenzotrifluoride, 2- (F2-F4 surr) | 392-83-6 | E601 | 1.0 | % | 97.3 | ---- | ---- | ---- | ---- | |
| dichlorotoluene, 3,4- | 97-75-0 | E581.VH+F1 | 1.0 | % | 81.8 | ---- | ---- | ---- | ---- | |
| Volatile Organic Compounds Surrogates | | | | | | | | | | |
| bromofluorobenzene, 4- | 460-00-4 | E611A | 1.0 | % | 80.3 | ---- | ---- | ---- | ---- | |
| difluorobenzene, 1,4- | 540-36-3 | E611A | 1.0 | % | 100 | ---- | ---- | ---- | ---- | |
| Polycyclic Aromatic Hydrocarbons | | | | | | | | | | |
| acenaphthene | 83-32-9 | E641A | 0.010 | µg/L | <0.013 ^{DLCI} | ---- | ---- | ---- | ---- | |
| acenaphthylene | 208-96-8 | E641A | 0.010 | µg/L | <0.010 | ---- | ---- | ---- | ---- | |
| acridine | 260-94-6 | E641A | 0.010 | µg/L | <0.102 ^{DLCI} | ---- | ---- | ---- | ---- | |
| anthracene | 120-12-7 | E641A | 0.010 | µg/L | <0.014 ^{DLCI} | ---- | ---- | ---- | ---- | |
| benz(a)anthracene | 56-55-3 | E641A | 0.010 | µg/L | <0.010 | ---- | ---- | ---- | ---- | |
| benzo(a)pyrene | 50-32-8 | E641A | 0.0050 | µg/L | <0.0050 | ---- | ---- | ---- | ---- | |
| benzo(b+j)fluoranthene | n/a | E641A | 0.010 | µg/L | <0.010 | ---- | ---- | ---- | ---- | |



Analytical Results

| | | | | | | | | | | |
|---|------------|--------|--------|------|-----------------------------|----------------------|-------|-------|-------|------|
| Sub-Matrix: Water | | | | | Client sample ID | 22-107-01 | ---- | ---- | ---- | ---- |
| (Matrix: Water) | | | | | | | | | | |
| | | | | | Client sampling date / time | 29-Sep-2022 18:00 | ---- | ---- | ---- | ---- |
| Analyte | CAS Number | Method | LOR | Unit | YL2201736-001 | ----- | ----- | ----- | ----- | |
| | | | | | Result | ---- | ---- | ---- | ---- | |
| Polycyclic Aromatic Hydrocarbons | | | | | | | | | | |
| benzo(b+j+k)fluoranthene | n/a | E641A | 0.015 | µg/L | <0.015 | ---- | ---- | ---- | ---- | |
| benzo(g,h,i)perylene | 191-24-2 | E641A | 0.010 | µg/L | <0.010 | ---- | ---- | ---- | ---- | |
| benzo(k)fluoranthene | 207-08-9 | E641A | 0.010 | µg/L | <0.010 | ---- | ---- | ---- | ---- | |
| chrysene | 218-01-9 | E641A | 0.010 | µg/L | <0.010 | ---- | ---- | ---- | ---- | |
| dibenz(a,h)anthracene | 53-70-3 | E641A | 0.0050 | µg/L | <0.0050 | ---- | ---- | ---- | ---- | |
| fluoranthene | 206-44-0 | E641A | 0.010 | µg/L | 0.018 | ---- | ---- | ---- | ---- | |
| fluorene | 86-73-7 | E641A | 0.010 | µg/L | 0.058 | ---- | ---- | ---- | ---- | |
| indeno(1,2,3-c,d)pyrene | 193-39-5 | E641A | 0.010 | µg/L | <0.010 | ---- | ---- | ---- | ---- | |
| methylnaphthalene, 1- | 90-12-0 | E641A | 0.010 | µg/L | 0.046 | ---- | ---- | ---- | ---- | |
| methylnaphthalene, 1+2- | ---- | E641A | 0.015 | µg/L | 0.070 | ---- | ---- | ---- | ---- | |
| methylnaphthalene, 2- | 91-57-6 | E641A | 0.010 | µg/L | 0.024 | ---- | ---- | ---- | ---- | |
| naphthalene | 91-20-3 | E641A | 0.050 | µg/L | <0.050 | ---- | ---- | ---- | ---- | |
| phenanthrene | 85-01-8 | E641A | 0.020 | µg/L | 0.036 | ---- | ---- | ---- | ---- | |
| pyrene | 129-00-0 | E641A | 0.010 | µg/L | 0.053 | ---- | ---- | ---- | ---- | |
| quinoline | 91-22-5 | E641A | 0.050 | µg/L | <0.050 | ---- | ---- | ---- | ---- | |
| B(a)P total potency equivalents [B(a)P TPE] | ---- | E641A | 0.010 | µg/L | <0.010 | ---- | ---- | ---- | ---- | |
| PAHs, high molecular weight (BC AWQ) | n/a | E641A | 0.030 | µg/L | 0.071 | ---- | ---- | ---- | ---- | |
| PAHs, low molecular weight (BC AWQ) | n/a | E641A | 0.060 | µg/L | 0.094 | ---- | ---- | ---- | ---- | |
| PAHs, total (CCME Sewer 18) | n/a | E641A | 0.070 | µg/L | 0.235 | ---- | ---- | ---- | ---- | |
| PAHs, total (EPA 16) | n/a | E641A | 0.065 | µg/L | 0.165 | ---- | ---- | ---- | ---- | |
| Polycyclic Aromatic Hydrocarbons Surrogates | | | | | | | | | | |
| chrysene-d12 | 1719-03-5 | E641A | 0.1 | % | 107 | ---- | ---- | ---- | ---- | |
| naphthalene-d8 | 1146-65-2 | E641A | 0.1 | % | 91.4 | ---- | ---- | ---- | ---- | |
| phenanthrene-d10 | 1517-22-2 | E641A | 0.1 | % | 103 | ---- | ---- | ---- | ---- | |

Please refer to the General Comments section for an explanation of any qualifiers detected.

QUALITY CONTROL INTERPRETIVE REPORT

| | | | |
|-------------------------|--|-----------------------|---|
| Work Order | : YL2201736 | Page | : 1 of 5 |
| Client | : KBL Environmental Ltd. | Laboratory | : Yellowknife - Environmental |
| Contact | : Katie Oliver | Account Manager | : Oliver Gregg |
| Address | : 17 Cameron Road PO Box 1895 Yellowknife NT Canada X1A 2P4 | Address | : 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3 |
| Telephone | : 780 893 3305 | Telephone | : 1 867 446 5593 |
| Project | : 22-107NT | Date Samples Received | : 03-Oct-2022 11:30 |
| PO | : ---- | Issue Date | : 11-Oct-2022 09:58 |
| C-O-C number | : ---- | | |
| Sampler | : ---- | | |
| Site | : ---- | | |
| Quote number | : YL22-KBLE100-001 | | |
| No. of samples received | : 1 | | |
| No. of samples analysed | : 1 | | |

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO: Data Quality Objective.

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|--|------------|---------------|--------------------------|---------------|--------|------|---------------|---------------|--------|------|
| | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) 22-107-01 | E601 | 29-Sep-2022 | 06-Oct-2022 | 14 days | 7 days | ✓ | 07-Oct-2022 | 40 days | 1 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass vial (sodium bisulfate) 22-107-01 | E581.VH+F1 | 29-Sep-2022 | 07-Oct-2022 | ---- | ---- | | 08-Oct-2022 | 14 days | 8 days | ✓ |
| Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) 22-107-01 | E641A | 29-Sep-2022 | 06-Oct-2022 | 14 days | 7 days | ✓ | 07-Oct-2022 | 40 days | 0 days | ✓ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass vial (sodium bisulfate) 22-107-01 | E611A | 29-Sep-2022 | 07-Oct-2022 | ---- | ---- | | 08-Oct-2022 | 14 days | 8 days | ✓ |

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).



Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

| Quality Control Sample Type | | | Count | | Frequency (%) | | |
|---|------------|----------|-------|---------|---------------|----------|------------|
| Analytical Methods | Method | QC Lot # | QC | Regular | Actual | Expected | Evaluation |
| Laboratory Duplicates (DUP) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 686863 | 1 | 17 | 5.8 | 5.0 | ✔ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 686864 | 1 | 14 | 7.1 | 5.0 | ✔ |
| Laboratory Control Samples (LCS) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 686863 | 1 | 17 | 5.8 | 5.0 | ✔ |
| CCME PHCs - F2-F4 by GC-FID | E601 | 684445 | 1 | 2 | 50.0 | 5.0 | ✔ |
| PAHs by Hexane LVI GC-MS | E641A | 684443 | 1 | 9 | 11.1 | 5.0 | ✔ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 686864 | 1 | 14 | 7.1 | 5.0 | ✔ |
| Method Blanks (MB) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 686863 | 1 | 17 | 5.8 | 5.0 | ✔ |
| CCME PHCs - F2-F4 by GC-FID | E601 | 684445 | 1 | 2 | 50.0 | 5.0 | ✔ |
| PAHs by Hexane LVI GC-MS | E641A | 684443 | 1 | 9 | 11.1 | 5.0 | ✔ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 686864 | 1 | 14 | 7.1 | 5.0 | ✔ |
| Matrix Spikes (MS) | | | | | | | |
| BTEX by Headspace GC-MS | E611A | 686863 | 1 | 17 | 5.8 | 5.0 | ✔ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 686864 | 1 | 14 | 7.1 | 5.0 | ✔ |



Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

| Analytical Methods | Method / Lab | Matrix | Method Reference | Method Descriptions |
|---|---|--------|---|---|
| VH and F1 by Headspace GC-FID | E581.VH+F1 Vancouver - Environmental | Water | BC MOE Lab Manual / CCME PHC in Soil - Tier 1 (mod) | Volatile Hydrocarbons (VH and F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. |
| CCME PHCs - F2-F4 by GC-FID | E601 Vancouver - Environmental | Water | CCME PHC in Soil - Tier 1 | Sample extracts are analyzed by GC-FID for CCME hydrocarbon fractions (F2-F4). |
| BTEX by Headspace GC-MS | E611A Vancouver - Environmental | Water | EPA 8260D (mod) | Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. |
| PAHs by Hexane LVI GC-MS | E641A Vancouver - Environmental | Water | EPA 8270E (mod) | Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS. |
| F1-BTEX | EC580 Vancouver - Environmental | Water | CCME PHC in Soil - Tier 1 | F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX). |
| VPH: VH-BTEX-Styrene | EC580A Vancouver - Environmental | Water | BC MOE Lab Manual (VPH in Water and Solids) (mod) | Volatile Petroleum Hydrocarbons (VPH) is calculated as follows: VPHw = Volatile Hydrocarbons (VH6-10) minus benzene, toluene, ethylbenzene, xylenes (BTEX) and styrene. |
| Preparation Methods | Method / Lab | Matrix | Method Reference | Method Descriptions |
| VOCs Preparation for Headspace Analysis | EP581 Vancouver - Environmental | Water | EPA 5021A (mod) | Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into the GC/MS-FID system. |
| PHCs and PAHs Hexane Extraction | EP601 Vancouver - Environmental | Water | EPA 3511 (mod) | Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction. |



Environmental

QUALITY CONTROL REPORT

Work Order : **YL2201736**

Client : KBL Environmental Ltd.

Contact : Katie Oliver

Address : 17 Cameron Road PO Box 1895
Yellowknife NT Canada X1A 2P4

Telephone : 780 893 3305

Project : 22-107NT

PO : ----

C-O-C number : ----

Sampler : ----

Site : ----

Quote number : YL22-KBLE100-001

No. of samples received : 1

No. of samples analysed : 1

Page : 1 of 7

Laboratory : Yellowknife - Environmental

Account Manager : Oliver Gregg

Address : 314 Old Airport Road, Unit 116
Yellowknife, Northwest Territories Canada X1A 3T3

Telephone : 1 867 446 5593

Date Samples Received : 03-Oct-2022 11:30

Date Analysis Commenced : 06-Oct-2022

Issue Date : 11-Oct-2022 09:58

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

| <i>Signatories</i> | <i>Position</i> | <i>Laboratory Department</i> |
|--------------------|---------------------------------------|---|
| Janice Leung | Supervisor - Organics Instrumentation | Vancouver Organics, Burnaby, British Columbia |



General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

- Key :
- Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
 - CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
 - DQO = Data Quality Objective.
 - LOR = Limit of Reporting (detection limit).
 - RPD = Relative Percent Difference
 - # = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

| Sub-Matrix: Water | | | | | Laboratory Duplicate (DUP) Report | | | | | | |
|---|------------------|--------------------------------|-------------|------------|-----------------------------------|------|-----------------|------------------|----------------------|------------------|-----------|
| Laboratory sample ID | Client sample ID | Analyte | CAS Number | Method | LOR | Unit | Original Result | Duplicate Result | RPD(%) or Difference | Duplicate Limits | Qualifier |
| Volatile Organic Compounds (QC Lot: 686863) | | | | | | | | | | | |
| VA22C3483-001 | Anonymous | benzene | 71-43-2 | E611A | 0.50 | µg/L | <0.50 | <0.50 | 0 | Diff <2x LOR | ---- |
| | | ethylbenzene | 100-41-4 | E611A | 0.50 | µg/L | <0.50 | <0.50 | 0 | Diff <2x LOR | ---- |
| | | methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 0.50 | µg/L | <0.50 | <0.50 | 0 | Diff <2x LOR | ---- |
| | | styrene | 100-42-5 | E611A | 0.50 | µg/L | <0.50 | <0.50 | 0 | Diff <2x LOR | ---- |
| | | toluene | 108-88-3 | E611A | 0.50 | µg/L | <0.50 | <0.50 | 0 | Diff <2x LOR | ---- |
| | | xylene, m+p- | 179601-23-1 | E611A | 0.40 | µg/L | <0.40 | <0.40 | 0 | Diff <2x LOR | ---- |
| | | xylene, o- | 95-47-6 | E611A | 0.30 | µg/L | <0.30 | <0.30 | 0 | Diff <2x LOR | ---- |
| Hydrocarbons (QC Lot: 686864) | | | | | | | | | | | |
| VA22C3718-001 | Anonymous | F1 (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | <100 | 0.0% | 30% | ---- |
| | | VHw (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | <100 | 0.0% | 30% | ---- |



Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

| Analyte | CAS Number | Method | LOR | Unit | Result | Qualifier |
|---|-------------|------------|-------|------|---------|-----------|
| Volatile Organic Compounds (QCLot: 686863) | | | | | | |
| benzene | 71-43-2 | E611A | 0.5 | µg/L | <0.50 | ---- |
| ethylbenzene | 100-41-4 | E611A | 0.5 | µg/L | <0.50 | ---- |
| methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 0.5 | µg/L | <0.50 | ---- |
| styrene | 100-42-5 | E611A | 0.5 | µg/L | <0.50 | ---- |
| toluene | 108-88-3 | E611A | 0.5 | µg/L | <0.50 | ---- |
| xylene, m+p- | 179601-23-1 | E611A | 0.4 | µg/L | <0.40 | ---- |
| xylene, o- | 95-47-6 | E611A | 0.3 | µg/L | <0.30 | ---- |
| Hydrocarbons (QCLot: 684445) | | | | | | |
| F2 (C10-C16) | ---- | E601 | 100 | µg/L | <100 | ---- |
| F3 (C16-C34) | ---- | E601 | 250 | µg/L | <250 | ---- |
| F4 (C34-C50) | ---- | E601 | 250 | µg/L | <250 | ---- |
| Hydrocarbons (QCLot: 686864) | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | ---- |
| VHw (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | ---- |
| Polycyclic Aromatic Hydrocarbons (QCLot: 684443) | | | | | | |
| acenaphthene | 83-32-9 | E641A | 0.01 | µg/L | <0.010 | ---- |
| acenaphthylene | 208-96-8 | E641A | 0.01 | µg/L | <0.010 | ---- |
| acridine | 260-94-6 | E641A | 0.01 | µg/L | <0.010 | ---- |
| anthracene | 120-12-7 | E641A | 0.01 | µg/L | <0.010 | ---- |
| benz(a)anthracene | 56-55-3 | E641A | 0.01 | µg/L | <0.010 | ---- |
| benzo(a)pyrene | 50-32-8 | E641A | 0.005 | µg/L | <0.0050 | ---- |
| benzo(b+j)fluoranthene | n/a | E641A | 0.01 | µg/L | <0.010 | ---- |
| benzo(g,h,i)perylene | 191-24-2 | E641A | 0.01 | µg/L | <0.010 | ---- |
| benzo(k)fluoranthene | 207-08-9 | E641A | 0.01 | µg/L | <0.010 | ---- |
| chrysene | 218-01-9 | E641A | 0.01 | µg/L | <0.010 | ---- |
| dibenz(a,h)anthracene | 53-70-3 | E641A | 0.005 | µg/L | <0.0050 | ---- |
| fluoranthene | 206-44-0 | E641A | 0.01 | µg/L | <0.010 | ---- |
| fluorene | 86-73-7 | E641A | 0.01 | µg/L | <0.010 | ---- |
| indeno(1,2,3-c,d)pyrene | 193-39-5 | E641A | 0.01 | µg/L | <0.010 | ---- |
| methylnaphthalene, 1- | 90-12-0 | E641A | 0.01 | µg/L | <0.010 | ---- |
| methylnaphthalene, 2- | 91-57-6 | E641A | 0.01 | µg/L | <0.010 | ---- |
| naphthalene | 91-20-3 | E641A | 0.05 | µg/L | <0.050 | ---- |
| phenanthrene | 85-01-8 | E641A | 0.02 | µg/L | <0.020 | ---- |



Sub-Matrix: Water

| Analyte | CAS Number | Method | LOR | Unit | Result | Qualifier |
|--|------------|--------|------|------|--------|-----------|
| Polycyclic Aromatic Hydrocarbons (QCLot: 684443) - continued | | | | | | |
| pyrene | 129-00-0 | E641A | 0.01 | µg/L | <0.010 | ---- |
| quinoline | 91-22-5 | E641A | 0.05 | µg/L | <0.050 | ---- |



Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

| Sub-Matrix: Water | | | | | Laboratory Control Sample (LCS) Report | | | | |
|--|-------------|------------|-------|------|--|--------------|---------------------|------|-----------|
| | | | | | Spike | Recovery (%) | Recovery Limits (%) | | Qualifier |
| | | | | | Concentration | LCS | Low | High | |
| Analyte | CAS Number | Method | LOR | Unit | Concentration | LCS | Low | High | Qualifier |
| Volatile Organic Compounds (QCLot: 686863) | | | | | | | | | |
| benzene | 71-43-2 | E611A | 0.5 | µg/L | 100 µg/L | 98.3 | 70.0 | 130 | ---- |
| ethylbenzene | 100-41-4 | E611A | 0.5 | µg/L | 100 µg/L | 99.4 | 70.0 | 130 | ---- |
| methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 0.5 | µg/L | 100 µg/L | 100 | 70.0 | 130 | ---- |
| styrene | 100-42-5 | E611A | 0.5 | µg/L | 100 µg/L | 95.8 | 70.0 | 130 | ---- |
| toluene | 108-88-3 | E611A | 0.5 | µg/L | 100 µg/L | 104 | 70.0 | 130 | ---- |
| xylene, m+p- | 179601-23-1 | E611A | 0.4 | µg/L | 200 µg/L | 105 | 70.0 | 130 | ---- |
| xylene, o- | 95-47-6 | E611A | 0.3 | µg/L | 100 µg/L | 99.2 | 70.0 | 130 | ---- |
| Hydrocarbons (QCLot: 684445) | | | | | | | | | |
| F2 (C10-C16) | ---- | E601 | 100 | µg/L | 3538 µg/L | 120 | 70.0 | 130 | ---- |
| F3 (C16-C34) | ---- | E601 | 250 | µg/L | 7053 µg/L | 109 | 70.0 | 130 | ---- |
| F4 (C34-C50) | ---- | E601 | 250 | µg/L | 5051 µg/L | 109 | 70.0 | 130 | ---- |
| Hydrocarbons (QCLot: 686864) | | | | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | 6310 µg/L | 78.4 | 70.0 | 130 | ---- |
| VHw (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | 6310 µg/L | 70.6 | 70.0 | 130 | ---- |
| Polycyclic Aromatic Hydrocarbons (QCLot: 684443) | | | | | | | | | |
| acenaphthene | 83-32-9 | E641A | 0.01 | µg/L | 0.5 µg/L | 90.9 | 60.0 | 130 | ---- |
| acenaphthylene | 208-96-8 | E641A | 0.01 | µg/L | 0.5 µg/L | 95.0 | 60.0 | 130 | ---- |
| acridine | 260-94-6 | E641A | 0.01 | µg/L | 0.5 µg/L | 105 | 60.0 | 130 | ---- |
| anthracene | 120-12-7 | E641A | 0.01 | µg/L | 0.5 µg/L | 104 | 60.0 | 130 | ---- |
| benz(a)anthracene | 56-55-3 | E641A | 0.01 | µg/L | 0.5 µg/L | 96.9 | 60.0 | 130 | ---- |
| benzo(a)pyrene | 50-32-8 | E641A | 0.005 | µg/L | 0.5 µg/L | 92.4 | 60.0 | 130 | ---- |
| benzo(b+j)fluoranthene | n/a | E641A | 0.01 | µg/L | 0.5 µg/L | 72.8 | 60.0 | 130 | ---- |
| benzo(g,h,i)perylene | 191-24-2 | E641A | 0.01 | µg/L | 0.5 µg/L | 101 | 60.0 | 130 | ---- |
| benzo(k)fluoranthene | 207-08-9 | E641A | 0.01 | µg/L | 0.5 µg/L | 80.9 | 60.0 | 130 | ---- |
| chrysene | 218-01-9 | E641A | 0.01 | µg/L | 0.5 µg/L | 102 | 60.0 | 130 | ---- |
| dibenz(a,h)anthracene | 53-70-3 | E641A | 0.005 | µg/L | 0.5 µg/L | 103 | 60.0 | 130 | ---- |
| fluoranthene | 206-44-0 | E641A | 0.01 | µg/L | 0.5 µg/L | 103 | 60.0 | 130 | ---- |
| fluorene | 86-73-7 | E641A | 0.01 | µg/L | 0.5 µg/L | 98.6 | 60.0 | 130 | ---- |
| indeno(1,2,3-c,d)pyrene | 193-39-5 | E641A | 0.01 | µg/L | 0.5 µg/L | 117 | 60.0 | 130 | ---- |
| methylnaphthalene, 1- | 90-12-0 | E641A | 0.01 | µg/L | 0.5 µg/L | 88.3 | 60.0 | 130 | ---- |
| methylnaphthalene, 2- | 91-57-6 | E641A | 0.01 | µg/L | 0.5 µg/L | 87.9 | 60.0 | 130 | ---- |
| naphthalene | 91-20-3 | E641A | 0.05 | µg/L | 0.5 µg/L | 84.2 | 50.0 | 130 | ---- |



Sub-Matrix: Water

| | | | | | Laboratory Control Sample (LCS) Report | | | | |
|--|------------|--------|------|------|--|--------------|---------------------|------|-----------|
| | | | | | Spike | Recovery (%) | Recovery Limits (%) | | |
| Analyte | CAS Number | Method | LOR | Unit | Concentration | LCS | Low | High | Qualifier |
| Polycyclic Aromatic Hydrocarbons (QCLot: 684443) - continued | | | | | | | | | |
| phenanthrene | 85-01-8 | E641A | 0.02 | µg/L | 0.5 µg/L | 105 | 60.0 | 130 | ---- |
| pyrene | 129-00-0 | E641A | 0.01 | µg/L | 0.5 µg/L | 104 | 60.0 | 130 | ---- |
| quinoline | 91-22-5 | E641A | 0.05 | µg/L | 0.5 µg/L | 113 | 60.0 | 130 | ---- |

Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Water

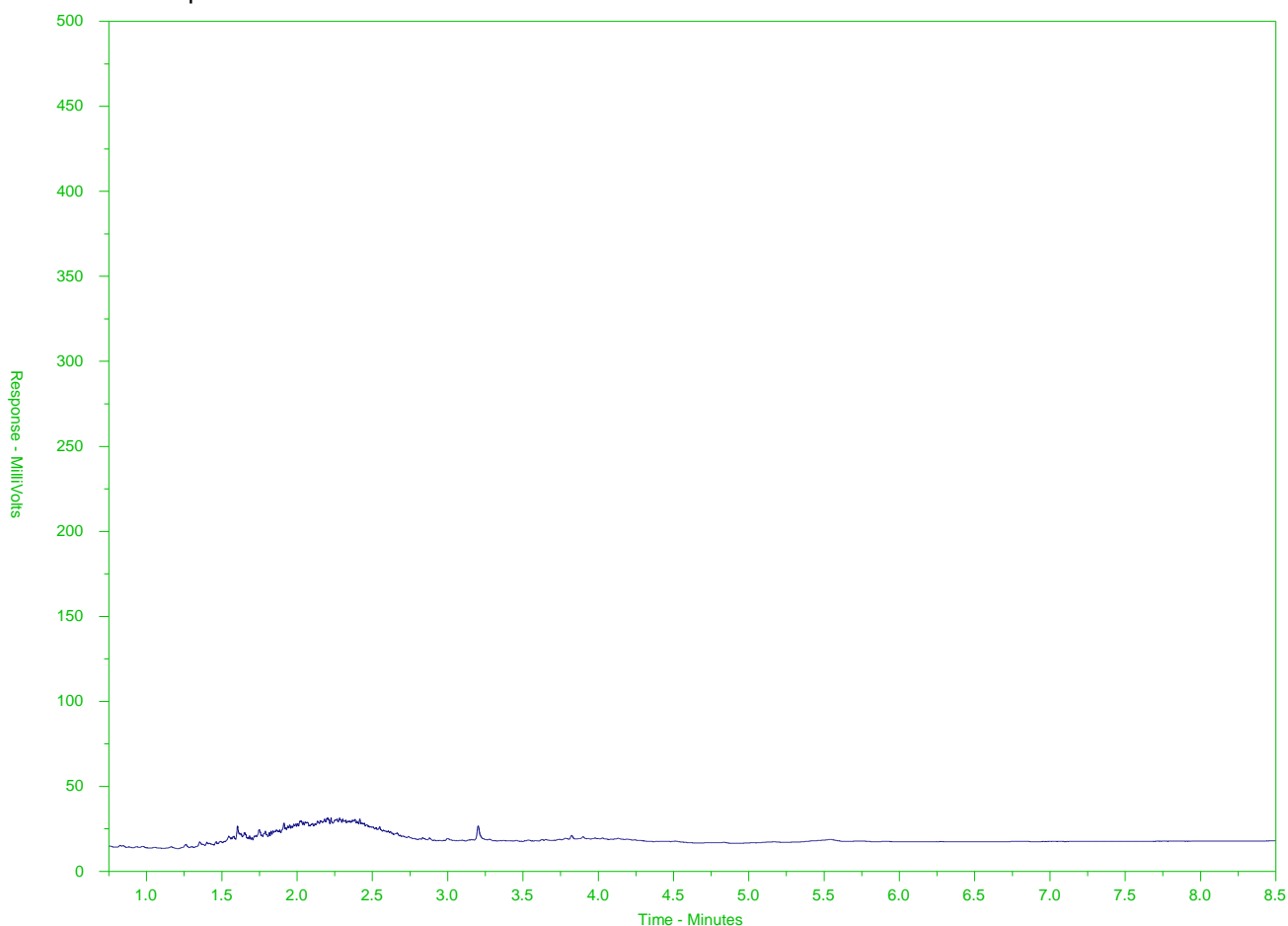
| Sub-Matrix: Water | | | | | Matrix Spike (MS) Report | | | | | |
|--|------------------|--------------------------------|-------------|------------|--------------------------|-----------|--------------|---------------------|------|-----------|
| | | | | | Spike | | Recovery (%) | Recovery Limits (%) | | |
| Laboratory sample ID | Client sample ID | Analyte | CAS Number | Method | Concentration | Target | MS | Low | High | Qualifier |
| Volatile Organic Compounds (QCLot: 686863) | | | | | | | | | | |
| VA22C3483-001 | Anonymous | benzene | 71-43-2 | E611A | 99.4 µg/L | 100 µg/L | 99.4 | 60.0 | 140 | ---- |
| | | ethylbenzene | 100-41-4 | E611A | 97.8 µg/L | 100 µg/L | 97.8 | 60.0 | 140 | ---- |
| | | methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 103 µg/L | 100 µg/L | 103 | 60.0 | 140 | ---- |
| | | styrene | 100-42-5 | E611A | 99.8 µg/L | 100 µg/L | 99.8 | 60.0 | 140 | ---- |
| | | toluene | 108-88-3 | E611A | 100 µg/L | 100 µg/L | 100 | 60.0 | 140 | ---- |
| | | xylene, m+p- | 179601-23-1 | E611A | 201 µg/L | 200 µg/L | 101 | 60.0 | 140 | ---- |
| | | xylene, o- | 95-47-6 | E611A | 99.8 µg/L | 100 µg/L | 99.8 | 60.0 | 140 | ---- |
| Hydrocarbons (QCLot: 686864) | | | | | | | | | | |
| VA22C3718-002 | Anonymous | F1 (C6-C10) | ---- | E581.VH+F1 | 4310 µg/L | 6310 µg/L | 68.3 | 60.0 | 140 | ---- |
| | | VHw (C6-C10) | ---- | E581.VH+F1 | 3890 µg/L | 6310 µg/L | 61.6 | 60.0 | 140 | ---- |



CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: YL2201736-001-E601
Client Sample ID: 22-107-01



| ← F2 → | | ← F3 → | | ← F4 → | |
|-----------------------|-------|-----------------------------------|-------|--------|--------|
| nC10 | nC16 | | nC34 | | nC50 |
| 174°C | 287°C | | 481°C | | 575°C |
| 346°F | 549°F | | 898°F | | 1067°F |
| ← Gasoline → | | ← Motor Oils/ Lube Oils/ Grease → | | | |
| ← Diesel/ Jet Fuels → | | | | | |

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) 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 and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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 using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR library can be found at www.alsglobal.com.

APPENDIX C

Appendix C: SDS for Amendments

SAFETY DATA SHEET

SDS # 190708-04

Ivey-sol® Surfactant Remediation Technology

Ivey-sol® Formulations: 103, 106, 106 and 108

1. Identification

| | |
|--------------------------------|---|
| Product identifier: | Ivey-sol® 103, 106, 108 |
| Other means of identification: | Not applicable |
| Recommended use: | Remediation surfactant |
| Restriction on use: | Not applicable |
| Manufacturer/Supplier Address: | Ivey International Inc. Unit 7, 19122-27 Avenue, Surrey, BC Canada V3Z5T1 |
| Global Suppliers Locations: | USA, Europe, S.E. Asia, South America |
| Emergency telephone number: | Tel: +1 (604) 538-1168 (Not available 24 hours) Toll Free: +1 800 246-2744 |
| Emergency/Support Email: | info@iveyinternational.com |

2. Hazard Identification

WHMIS 2015/OSHA Hazcom 2012/GHS Classification:

- Serious Eye Damage/Irritation Category 2
- Skin Corrosion/Irritation Category 3

Label elements:

Signal word: Warning

Pictograms: Hazard statements:



H316 – May causes mild skin irritation.

H319 – may causes eye irritation.

Precautionary Statements:

P264 - Wash contacted areas thoroughly after handling.

P280 - Wear eye protection.

P305/P351/P338 - If In Eyes: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do so.
Continue rinsing.

P332/P313 - If skin irritation occurs: Get medical advice/attention.

P337/P313 - If eye irritation persists: Get medical advice/attention

3. Composition / Information on Ingredients

| Chemical Name | CAS No. | Concentration (v/v) | Other Identifiers |
|--------------------------------------|-------------|---------------------|-----------------------|
| Biodegradable Non-ionic Surfactant 1 | Proprietary | 1-10% | <i>Not applicable</i> |
| Biodegradable Non-ionic Surfactant 2 | Proprietary | 1-10% | <i>Not applicable</i> |
| Biodegradable Non-ionic Surfactant 3 | Proprietary | 1-10% | <i>Not applicable</i> |
| Biodegradable Non-ionic Surfactant 4 | Proprietary | 1-10% | <i>Not applicable</i> |
| Biodegradable Non-ionic Surfactant 5 | Proprietary | 1-10% | <i>Not applicable</i> |
| Biodegradable Non-ionic Surfactant 6 | Proprietary | 1-10% | <i>Not applicable</i> |
| Preservative | 4080-31-3 | <5% | Food Grade (Optional) |
| Scent | 8016 | <1% | <i>Optional</i> |
| Water | 7732-18-5 | <90% | <i>Not applicable</i> |

Regulatory Note: Chemical names, CAS numbers and actual concentrations have been withheld as part of a confidential business information claim with HMIRA Registry #11724 filed on 2017-07-17.

4. First-aid Measures

Inhalation: No adverse effects anticipated by this route when handled according to section 7 of document. However, if necessary, move person to fresh air.

Skin contact: Generally will not irritate skin. Wash contact areas with soap and water. If irritation persists, seek medical attention.

Eye contact: May cause eye irritation. Flush eyes with plenty of water for at least 15 minutes, remove contact lenses if present and easy to do so. If irritation persists, seek medical attention.



Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. If necessary, seek medical attention.

Most Important Symptoms and Effects, Acute and Delayed

Acute Symptoms:

Eye Contact: May be irritating to the eyes. Occasional contact through splashing is not expected to affect the eyes. If irritation occurs, effect will be transient.

Chronic Symptoms: Not Applicable

Immediate Medical Attention and Special Treatment: Not Applicable

5. Fire-Fighting Measures

Suitable extinguishing media: Not flammable.
Use extinguishing media for surrounding fire.

Unsuitable extinguishing media: Not applicable

Specific hazards arising from the hazardous product: Not available

Special protective equipment for fire-fighters: Not available

6. Accidental release measures

Personal Precautions, Protective Equipment:
Observe good industrial hygiene practices. Use personal protective equipment as recommended in Section 8. Avoid breathing vapors, mist or gas.
Ensure adequate ventilation.

Emergency Procedures:
Eliminate and/or contain source with inert material (sand, earth, absorbent pads, etc.).
Wear basic eye and skin protection. Floor may be slightly slippery; so use care to avoid falling. Avoid discharge to natural waters, and/or dilute with water. Transfer liquids to suitable containers for recovery, re-use or disposal. Contact Ivey for technical assistance if required.

7. Handling and Storage

Precautions for Safe Handling:

Practice good housekeeping. Avoid breathing excessive vapors. Ensure adequate ventilation. Avoid contact with skin and eyes. Wear protective gloves. Wash thoroughly after handling.

Conditions for Safe Storage:

Keep closed or sealed when not in use. Do not allow to freeze, keep $>0^{\circ}\text{C}$.

8. Exposure Controls / Personal Protection

Control parameters: Not available

Appropriate

Engineering Controls: General mechanical room ventilation is expected to be satisfactory.

Individual

Protections Measures: Eye/face protection: Mono goggles or similar.

Skin protection:

Latex gloves, or similar, would be sufficient.
Normal work clothes.

Respiratory Protection:

None expected to be needed. However, if an engineered / industrial application where vapors and/or misting may occur, wear MSHA/NIOSH approved half mask air purifying respirator

9. Physical and Chemical Properties

Appearance: Liquid, cloudy

Odor: Mild

Odor threshold: Not available

pH: 7 (+/- 0.5) (1% solution)

Melting Point: $\sim 0^{\circ}\text{C}$

Freezing point: $\sim 0^{\circ}\text{C}$

Boiling Point: Not available

Flash Point: Not applicable

Evaporation Rate: <0.01

Flammability: Not applicable

Lower flammable/

Explosive limit: Not applicable

Upper flammable/
Explosive Limit: Not applicable
Vapour Pressure: <0.01 mm Hg
Vapour Density: >1
Relative Density: 0.99-1.04
Solubility: 100% (Completely miscible in water)
Partition Coefficient: Not available (n-octanol / water)
Auto-Ignition
Temperature: Not applicable
Decomposition
Temperature: Not available
Viscosity: Not available

10. Stability and Reactivity

Reactivity: Not reactive.
Chemical Stability: Stable.
Possibility of
Hazardous Reactions: Not applicable
Conditions to Avoid: Prolonged excessive heat may cause product decomposition. Freezing should also be avoided as it may cause product decomposition. In some cases freezing may cause irreversible changes.
Incompatible Materials: Normally un-reactive; however avoid strong bases at high temperatures, strong acids, strong oxidizing agents, and materials with reactive hydroxyl compounds. These compounds would damage the mixture and reduce its effectiveness during application.
Hazardous Decomposition
Products: Not applicable

11. Toxicological Information

Likely Routes of Exposure

Inhalation: No
Skin contact: No
Eye contact: Yes
Ingestion: No

Acute Toxicity:

LD50 - Oral (Rat): = >43.000mg/kg (rat) mg/kg
LD50 - Dermal (Rabbit): >58.000mg/kg (rabbit) mg/kg
Inhalation: Not available

Skin corrosion/irritation: Mild irritation
 Serious eye damage/irritation: Eye irritation
 Respiratory or skin sensitization: No
 Germ cell mutagenicity: No
 Carcinogenicity: None known or expected
 Reproductive toxicity: No

12. Ecological Information

Toxicity: Low potential to affect aquatic organisms when used in accordance with Ivey International Inc. In-situ and Ex-situ Remediation Application Guidelines.

| Acute toxicity | Time | Species | Method | Evaluation | Remarks |
|-------------------------------|------|---------------|----------|----------------|----------------|
| LC/50 = 0.07695% | 96h | Rainbow trout | OECD 203 | Not applicable | Not applicable |
| LC/50 = 0.11% | 48h | Daphnia magna | OECD 202 | Not applicable | Not applicable |
| EC/50 = Not applicable | 72h | Algae | OECD 201 | Not applicable | Not applicable |

Persistence and degradability: >90% biodegradable in < 28 days.*
 Bio-accumulative potential: Not available
 Mobility in soil: Completely miscible with water.
 Other adverse effects: Not available

Based on actual testing or on data for similar material(s). Degradation Biodegradation reached in Modified OECD Screening Test (OECD Test No.301 E) after 28 days: 90 %. Biodegradation reached in CO2 Evolution Test (Modified Sturm Test, (OECD Test No. 301 B) after 28 days: 70 %.

13. Disposal Considerations

Product/Packaging:
 For aqueous mixture solutions; aerobic biological wastewater treatment systems are effective in treating said mixtures. Ivey-sol does not have any known negative affect on coagulant or flocculent water treatment processes.

14. Transport Information

UN Number: Not applicable
Proper Shipping Name: Not applicable
Technical Name: Not applicable

Transport Hazard Class: Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

15. Regulatory Information

UN GHS Classification: Classified in accordance with GHS 5th revised edition.
WHMIS Classification: Classified in accordance with HPR August 29, 2016 revised edition.
CPR Compliance: This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR.
CEPA Compliance: All ingredients of this product are listed on the DSL.

16. Other Information

Creation Date: July 5, 2017

Revision Date: Updated October 2, 2017, October 18, 2018, July 7, 2019

Disclaimer: This Safety Data Sheet (SDS) was prepared by iHazmat Regulatory Ltd., (www.iHazmat.com) using information provided by Ivey International Inc. The information in this SDS is offered for your consideration and guidance when working with this product. As per usual practice, accuracy of the information included is based on what was provided by the manufacturer and sole liability for the accuracy of these documents falls to Ivey International Inc.

This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of Ivey International Inc.

SDS Created By: iHazmat Regulatory Ltd.
www.iHazmat.com



SAFETY DATA SHEET

KLARAID* CDP1311

1. Identification

| | |
|-------------------------------|--|
| Product identifier | KLARAID CDP1311 |
| Other means of identification | None. |
| Version # | 1.2 |
| Prepared by | This SDS has been prepared by SUEZ Regulatory Department (1-215-355-3300). |
| Revision date | May-13-2018 |
| Supersedes date | Dec-17-2017 |
| Recommended use | Coagulant Coagulant |
| Recommended restrictions | None known. |

Company/undertaking identification

SUEZ Water Technologies & Solutions Canada
3239 Dundas Street West
Oakville, Ontario, L6M 4B2
T 905-465-3030

Emergency telephone

(800) 877-1940

2. Hazard(s) identification

| | | |
|------------------|---|---|
| Physical hazards | Corrosive to metals | Category 1 |
| Health hazards | Serious eye damage/eye irritation | Category 2 |
| | Specific target organ toxicity, single exposure | Category 3 respiratory tract irritation |

Label elements



| | |
|--------------------------|---|
| Signal word | Warning |
| Hazard statement | May be corrosive to metals. Causes serious eye irritation. May cause respiratory irritation. |
| Precautionary statement | |
| Prevention | Keep only in original packaging. Avoid breathing mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear eye protection/face protection. |
| Response | IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER/doctor if you feel unwell. If eye irritation persists: Get medical advice/attention. Absorb spillage to prevent material-damage. |
| Storage | Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in corrosive resistant container with a resistant inner liner. |
| Disposal | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Other hazards | None known. |
| Supplemental information | None. |

3. Composition/information on ingredients

Mixtures

| Components | CAS # | Percent (wt/wt) |
|---|------------|-----------------|
| Aluminium chlorhydroxide | 12042-91-0 | 30 - 60 |
| Epichlorohydrin-dimethylamine copolymer | 25988-97-0 | 3 - 7 |

Composition comments Information for specific product ingredients as required by the WHMIS Regulations is listed. Refer to additional sections of this SDS for our assessment of the potential hazards of this formulation.

4. First-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact Wash off with soap and water.

Eye contact Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion Rinse mouth.

Most important symptoms/effects, acute and delayed Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers / tanks with water spray.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Avoid breathing mist or vapor. Avoid contact with eyes. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Keep only in the original container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits****US. ACGIH Threshold Limit Values**

| Components | Type | Value | Form |
|---|------|---------|----------------------|
| Aluminium chlorhydroxide (CAS 12042-91-0) | TWA | 1 mg/m3 | Respirable fraction. |

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

| Components | Type | Value |
|---|------|---------|
| Aluminium chlorhydroxide (CAS 12042-91-0) | TWA | 2 mg/m3 |

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

| Components | Type | Value | Form |
|---|------|---------|-------------|
| Aluminium chlorhydroxide (CAS 12042-91-0) | TWA | 1 mg/m3 | Respirable. |

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

| Components | Type | Value | Form |
|---|------|---------|----------------------|
| Aluminium chlorhydroxide (CAS 12042-91-0) | TWA | 1 mg/m3 | Respirable fraction. |

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

| Components | Type | Value | Form |
|---|------|---------|----------------------|
| Aluminium chlorhydroxide (CAS 12042-91-0) | TWA | 1 mg/m3 | Respirable fraction. |

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

| Components | Type | Value |
|---|------|---------|
| Aluminium chlorhydroxide (CAS 12042-91-0) | TWA | 2 mg/m3 |

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Splash proof chemical goggles.

Skin protection**Hand protection**

Wear appropriate chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Suitable gloves can be recommended by the glove supplier. Glove selection must take into account any solvents and other hazards present.

Other

Wear suitable protective clothing.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties**Appearance**

Liquid

Color

Colorless to yellow

Odor

Mild

Odor threshold

Not available.

pH (concentrated product)

3.7

| | |
|--|----------------------------|
| pH in aqueous solution | 4.5 (5% SOL.) |
| Melting point/freezing point | 23 °F (-5 °C) |
| Initial boiling point and boiling range | > 212 °F (> 100 °C) |
| Flash point | > 200 °F (> 93 °C) P-M(CC) |
| Evaporation rate | < 1 (Ether = 1) |
| Flammability (solid, gas) | Not applicable. |

Upper/lower flammability or explosive limits

| | |
|---------------------------------------|----------------|
| Flammability limit - lower (%) | Not available. |
| Flammability limit - upper (%) | Not available. |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |

| | |
|--|----------------|
| Vapor pressure | 18 mm Hg |
| Vapor pressure temp. | 70 °F (21 °C) |
| Vapor density | < 1 (Air = 1) |
| Relative density | 1.31 |
| Relative density temperature | 70 °F (21 °C) |
| Solubility(ies) | |
| Solubility (water) | 100 % |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | 42 cps |
| Viscosity temperature | 70 °F (21 °C) |

Other information

| | |
|-----------------------------|------------------|
| Explosive properties | Not explosive. |
| Oxidizing properties | Not oxidizing. |
| Pour point | 28 °F (-2 °C) |
| Specific gravity | 1.312 |
| VOC | 0 % (Calculated) |

10. Stability and reactivity

| | |
|---|--|
| Reactivity | May be corrosive to metals. |
| Chemical stability | Material is stable under normal conditions. |
| Possibility of hazardous reactions | Hazardous polymerization does not occur. |
| Conditions to avoid | Avoid temperatures exceeding the flash point. Contact with incompatible materials. |
| Incompatible materials | Strong oxidizing agents. Metals. |
| Hazardous decomposition products | Hydrogen chloride. Oxides of carbon and nitrogen. |

11. Toxicological information

Information on likely routes of exposure

| | |
|---|---|
| Inhalation | May cause irritation to the respiratory system. Prolonged inhalation may be harmful. |
| Skin contact | No adverse effects due to skin contact are expected. |
| Eye contact | Causes serious eye irritation. |
| Ingestion | Expected to be a low ingestion hazard. |
| Symptoms related to the physical, chemical and toxicological characteristics | Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. |

Information on toxicological effects

Acute toxicity May cause respiratory irritation.

| Product | Species | Test Results |
|--|---------|--|
| KLARAID CDP1311 (CAS Mixture) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | > 5000 mg/kg, (Calculated according to GHS additivity formula) |
| <i>Oral</i> | | |
| LD50 | Rat | > 5000 mg/kg, (Calculated according to GHS additivity formula) |
| Components | Species | Test Results |
| Aluminium chlorhydroxide (CAS 12042-91-0) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | > 2000 mg/kg |
| <i>Oral</i> | | |
| LD50 | Rat | > 2000 mg/kg |
| Epichlorohydrin-dimethylamine copolymer (CAS 25988-97-0) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | > 2000 mg/kg |

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization

Canada - Alberta OELs: Irritant

Aluminium chlorhydroxide (CAS 12042-91-0) Irritant

Respiratory sensitization This product is not expected to cause respiratory sensitization.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Not classified.

ACGIH Carcinogens

Aluminium chlorhydroxide (CAS 12042-91-0) A4 Not classifiable as a human carcinogen.

Canada - Manitoba OELs: carcinogenicity

Aluminium chlorhydroxide (CAS 12042-91-0) Not classifiable as a human carcinogen.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Based on available data, the classification criteria are not met.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity

| Product | Species | Test Results |
|-------------------------------|----------------|--|
| KLARAID CDP1311 (CAS Mixture) | | |
| LC50 | Fathead Minnow | 8.3 mg/L, Static Renewal Bioassay, 96 hour |

| Product | | Species | Test Results |
|----------------------|------|----------------|--|
| Aquatic Crustacea | NOEL | Fathead Minnow | 3.1 mg/L, Static Renewal Bioassay, 96 hour |
| | LC50 | Daphnia magna | 6.3 mg/L, Static Renewal Bioassay, 48 hour |
| | NOEL | Daphnia magna | 3.1 mg/L, Static Renewal Bioassay, 48 hour |
| | LC50 | Rainbow Trout | 3.2 mg/L, Static Renewal Bioassay, 96 hour |
| | NOEL | Rainbow Trout | 1.6 mg/L, Static Renewal Bioassay, 96 hour |

| Components | | Species | Test Results |
|--|------|--------------------------------|--------------------|
| Epichlorohydrin-dimethylamine copolymer (CAS 25988-97-0) | | | |
| | EC50 | Daphnia Magna | > 10 mg/l, 48 hour |
| | LC50 | Zebra fish (Brachydanio rerio) | > 10 mg/l, 96 hour |

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

Persistence and degradability

No data is available on the degradability of this product.

- COD (mgO₂/g) 35 (calculated data)
- BOD 5 (mgO₂/g) 1 (calculated data)
- BOD 28 (mgO₂/g) 1 (calculated data)
- Closed Bottle Test (% Degradation in 28 days) 6 (calculated data)
- Zahn-Wellens Test (% Degradation in 28 days) 1 (calculated data)
- TOC (mg C/g) 15 (calculated data)

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

| | |
|-----------------------------------|---|
| TDG | |
| UN number | UN3264 |
| UN proper shipping name | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (ALUMINUM CHLORHYDROXIDE) |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | - |
| Packing group | III |
| Environmental hazards | Not available. |

The goods described above have been classified using a combination of testing, technical data, calculations and manufacturer knowledge in accordance with Part 2, Classification. TDG Classification is valid for road or rail transport only. For shipment by air or water, refer to IATA or IMDG regulations.

DOT

Not regulated as a dangerous good.

Some containers may be exempt from Dangerous Goods/Hazmat Transport Regulations, please check BOL for exact container classification.

IMDG

| | |
|-------------------------------------|---|
| UN number | UN3264 |
| UN proper shipping name | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (ALUMINUM CHLORHYDROXIDE) |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | - |
| Packing group | III |
| Environmental hazards | |
| Marine pollutant | No. |
| EmS | F-A, S-B |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |

IATA

| | |
|-------------------------------------|---|
| UN number | UN3264 |
| UN proper shipping name | Corrosive liquid, acidic, inorganic, n.o.s. (ALUMINUM CHLORHYDROXIDE) |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | - |
| Packing group | III |
| Environmental hazards | No. |
| ERG Code | 154 |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |

IATA; IMDG; TDG



15. Regulatory information

Canadian regulations

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

Inventory status

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|---|-------------------------------|
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date Dec-12-2016

Revision date May-13-2018

Version # 1.2

List of abbreviations

CAS: Chemical Abstract Service Registration Number
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.
ACGIH: American Conference of Governmental Industrial Hygienists
NOEL: No Observed Effect Level
STEL: Short Term Exposure Limit
LC50: Lethal Concentration, 50%
LD50: Lethal Dose, 50%
TWA: Time Weighted Average
BOD: Biochemical Oxygen Demand
COD: Chemical Oxygen Demand
TOC: Total Organic Carbon
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code
TLV: Threshold Limit Value

References: No data available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

* Trademark of SUEZ. May be registered in one or more countries.

APPENDIX D

Appendix D: Facility inspections and summary of Corrective Actions

Appendix E: Engagement Activities

From: [AlecSandra Macdonald](#)
To: [Katie Oliver](#)
Subject: Re: Water Licence Inspection Report_KBL Environmental Ltd_ G17L1 -002, July 28, 2022
Date: August 30, 2022 11:43:25 AM

Thank You Katie,
We'll add this to the record.

AlecSandra

Get [Outlook for Android](#)

From: Katie Oliver <koliver@kblenv.com>
Sent: Tuesday, August 30, 2022, 10:20 a.m.
To: AlecSandra Macdonald <AMacdonald@glwb.com>; Leonard DeBastien <L.Debastien@glwb.com>; Lloyd Gruben <Lloyd_Gruben@gov.nt.ca>
Cc: Norman Snowshoe <Norman_Snowshoe@gov.nt.ca>; Wendy Bidwell <Wendy_Bidwell@gov.nt.ca>; Jeff Dirks <jdirks@kblenv.com>; Richard Reimer <rreimer@kblenv.com>; Lance Hayman <lhayman@kblenv.com>
Subject: RE: Water Licence Inspection Report_KBL Environmental Ltd_ G17L1 -002, July 28, 2022

Good Morning;

Please find attached a photo confirmation that the debris removal has occurred as scheduled.

Thank you;

Thank you | Merci | Mársı | Kinanāskomitin | Hąı' | Quana | Qujannamiik | Quyanainni | Máhsı | Máhsı | Mahsi



Katie Oliver, MBA, CET, PMP

General 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

This email and any accompanying attachments may contain confidential information and are intended only for the named recipients. Content may not be used or relied upon by any party other than KBL's client unless otherwise authorized in writing by KBL. Any unauthorized use of information contained in

this email is at the sole risk of the user. If you have received this email in error, please notify the sender and destroy the email.

From: Katie Oliver

Sent: August 23, 2022 3:34 PM

To: AlecSandra Macdonald (AMacdonald@glwb.com) <AMacdonald@glwb.com>; Leonard DeBastien (L.Debastien@glwb.com) <L.Debastien@glwb.com>; Lloyd Gruben <Lloyd_Gruben@gov.nt.ca>

Cc: Norman Snowshoe <Norman_Snowshoe@gov.nt.ca>; Wendy Bidwell <Wendy_Bidwell@gov.nt.ca>; Jeff Dirks <jdirks@kblenv.com>; Richard Reimer <rreimer@kblenv.com>; Lance Hayman <lhayman@kblenv.com>

Subject: RE: Water Licence Inspection Report_KBL Environmental Ltd_ G17L1 -002, July 28, 2022

Good Afternoon Lloyd;

Thank you for the inspection report. Please see below for updates to the action items / comments in the report.

- A. During the inspection it was noted that the SNP station 0037-3 (Drainage Ditch) was not signed. Please post a sign at this SNP station location.
 - a. A sign was present at SNP station 0037-3 (Drainage Ditch) during the inspection. Please see attached a photo of the SNP location in question dated July 28th, 2022.
- B. Check if fencing has been erected to prevent wildlife from entering the facility.
 - a. KBL can confirm that fencing has been installed. Please see attached a picture of the fencing.
- C. Check if maintenance work has been done to correct cracking along facility berms to prevent structural collapse, or release of contaminants.
 - a. Inspection of the reported cracks indicate that they caused by rain and/or settling at the site. Repairs were completed during fencing installation and a picture is attached.
- D. Check if all debris in and around the facility has been picked up and properly disposed of.
 - a. Two types of debris were observed in the inspection. Figure 1 illustrates debris to the south of the STF. The STF was construction on a former landfill site and erosion is causing debris to protrude from the hillside. In addition, debris from the adjoining landfill has blow to the areas surrounding the KBL lease area. Would ENR please clarify if it is the intent that KBL remove landfill debris from outside the fenced KBL STF lease area?
 - b. The debris on the KBL lease area includes excess liner from the installation of the STF as shown in Figure 8. KBL has schedule debris removal for tomorrow morning, August 24th, 2022. A confirmation photo will be sent once completed.
- E. Inquire with GLWB whether KBL Environmental Ltd. has submitted an application for water license renewal. KBL Environmental Ltd. cannot operate at this facility, or accept any new material until an active water license is in place.

- a. An application has been submitted and KBL acknowledges that additional material cannot be received at this time. KBL continues to complete maintenance activities at the facility to manage the soil and water present.
1. KBL Environmental Ltd is operating with an expired water license. The license expired June 24, 2022. KBL Environmental Ltd. must submit an application for license renewal as soon as possible and must not operate until an active license is in place.
 - a. An application has been submitted and KBL acknowledges that additional material cannot be received at this time. KBL continues to complete maintenance activities at the facility to manage the soil and water present.
2. Analytical results for sampling of soil, water and snow must be sent to the inspector prior to acceptance at the facility to confirm water license criteria is met as per license condition Part E, Item 15. The inspector has not received any analytical results for materials currently in the facility to date.
 - a. Acknowledged. Please note that soil and water currently at the facility was submitted to the inspector prior to acceptance. Soil and water at the Facility originated from two sources:
 - i. NTPC Aklavik Remediation. Mr. Lloyd Gruben is the inspector assigned to this spill. A Remediation Action Plan was prepared and submitted to Mr. Gruben on May 28, 2021 outlining the sampling results and intent to bring soil and water to the KBL Soil Treatment Facility. Mr. Gruben oversaw the remediation activities and was kept up to date on the remediation at the site, including transportation of materials to the KBL facility, in March and April 2022.
 - ii. NTPC Inuvik 2022 Spill. Mr. Bradley Voudrach is the inspector assigned to this spill. KBL met with the inspector on several occasions at the spill site and provided Mr. Voudrach with Remediation Action Plans on May 11, 2022 outlining the sampling results and intent to bring soil and water to the KBL Soil Treatment Facility. In addition, analytical was sent to inspector, Mr. Lloyd Gruben on May 12, 2022. In preparation for the Facility inspection copies were requested by Mr. Gruben and resent on 7-20-2022.
3. Debris was noted laying all over the facility rather than collecting and disposing of it at the Solid Waste Disposal Facility. As per license condition Part E, Item 11 this debris needs to be cleaned up and properly disposed of.
 - a. The debris on the KBL lease area includes excess liner from the installation of the STF as shown in Figure 8. KBL has schedule debris removal for tomorrow morning, August 24th, 2022. A confirmation photo will be sent once completed.
4. During the inspection it was noted that windrows exceed maximum height. Guidance on proper operation of Petroleum Hydrocarbon Contaminated Soil Treatment Facilities can be found in the Guideline for Petroleum Hydrocarbon Contaminated Soil Treatment Facilities in the Northwest Territories.
 - a. KBL measured the windrow on May 4, 2022 during maintenance activities at the site and confirmed that the permitted 4m was not exceeded. Since the completion of the inspection, the windrow was separated into two separate windrows on August 12, 2022 and it has been confirmed that the new windrows do not exceed the 4m height

requirement.

Thank you;

Thank you | Merci | Mársı | Kinanāskomitin | Hąǵ' | Quana | Qujannamiik | Quyanainni | Máhsı | Máhsı | Mahsı



Katie Oliver, MBA, CET, PMP

General 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

This email and any accompanying attachments may contain confidential information and are intended only for the named recipients. Content may not be used or relied upon by any party other than KBL's client unless otherwise authorized in writing by KBL. Any unauthorized use of information contained in this email is at the sole risk of the user. If you have received this email in error, please notify the sender and destroy the email.

From: Lloyd Gruben <Lloyd_Gruben@gov.nt.ca>

Sent: August 19, 2022 3:38 PM

To: AlecSandra Macdonald (AMacdonald@glwb.com) <AMacdonald@glwb.com>; Leonard DeBastien (L.Debastien@glwb.com) <L.Debastien@glwb.com>

Cc: Wendy Bidwell <Wendy_Bidwell@gov.nt.ca>; Norman Snowshoe <Norman_Snowshoe@gov.nt.ca>; Katie Oliver <koliver@kblenv.com>; Renee White <rwhite@kblenv.com>

Subject: Water Licence Inspection Report_KBL Environmental Ltd_ G17L1 -002, July 28, 2022

WARNING: E-mail failed SPF checks (Visit sirkit.ca for an explanation)

Good Afternoon,

Please find attached a copy of the July 28, 2022 Inspection Report for KBL Environmental Ltd's Soil Treatment Facility water licence. The original hardcopy will be mailed out to you. If you have any questions or concerns with regard to the attached report, please don't hesitate to contact me.

Lloyd Gruben

Water Resource Officer

Inuvik Region
Department of Environment and Natural Resources
Government of Northwest Territories

Phone: 867-678-6652

Cell: 867-678-0623

Fax: 867-678-6699

www.gov.nt.ca

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

April 18, 2022

Time:

12:00

Inspector:

Harder Enterprise Rep

Weather:

-6, sunny

Current activities on site:

Prising soil in STE

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

yes, bagged and piled

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

2 Empty

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | Berm liner visible on sides |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| WTP | Pond level | N/A | | | |
| | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

Don Allen

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

April 25, 2022

Time:

12:00

Inspector:

~~Placing~~ Harder Enterprise rep

Weather:

Light misty sunny

Current activities on site:

Placing soil in STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Yes (Kylgord and pond)

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

of TW tanks

2 Empty

Review Maintenance Log (Y/N)

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | Berm liner visible on sides |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | N/A | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

Over the

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

May 2, 2022

Time:

12:00

Inspector:

Harber Enterprise Rep

Weather:

9, mostly sunny

Current activities on site:

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Yes, egg and p/w

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

of TW tanks

2 Empty

Review Maintenance Log (Y/N)

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | N/A | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | X | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | Liner visible on berm |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | In bags and being hauled |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| WTP | Pond level | X | | | |
| | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

John Allen

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

Inspector:

Current activities on site:

May 9, 2022

Haider Enterprise Rep

Time:

12:00

Weather:

6, cloudy

Water in Cell?

Soil on Pad?

Treated water tank in use?

Review Maintenance Log (Y/N)

Freeboard in ditch

Freeboard in Pond

If yes, fill out page 2 (x)

of TW tanks

Outstanding work order (Y/N)

N/A

N/A

2 Empty

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | N/A | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | X | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | Liner visible in berm |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | In bags and bagged |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| WTP | Pond level | X | | | |
| | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

Que-Allie

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY): MAY 16, 2022 Time: 12:00
 Inspector: Harder Enterprise REP Weather: 2. mostly sunny
 Current activities on site:

Water in Cell? N/A Freeboard in ditch N/A
 Soil on Pad? Yes (64900) and 9100 Freeboard in Pond N/A
 Treated water tank in use? N/A If yes, fill out page 2 (x)
 Review Maintenance Log (Y/N) N/A # of TW tanks 2 Empty
 Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | N/A | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | X | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | Liner visible on berm |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | In grass and being hauled |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

Handwritten signature

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

May 23, 2022

Time:

12:00

Inspector:

Harder Enterprise rep

Weather:

-6, mostly sunny

Current activities on site:

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

yes, August and prior

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

2 Empty

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | N/A | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | X | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | Liner visible on berm |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | In bags and bags hauled |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

John Allen

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

May 29, 2022

Time:

13:00

Inspector:

Harder Enterprise Rep

Weather:

4 mostly cloudy

Current activities on site:

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Yes, kept and p.c.

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

2 Empty

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | N/A | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A X | | | |
| | Evidence of soil tracking | N/A X | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | Liner visible on berm |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | In bags and being hauled |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| WTP | Pond level | X | | | |
| | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

David Allen

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

June 6, 2022

Time:

12:00

Inspector:

Harold Enterprise Rep

Weather:

0. mostly cloudy

Current activities on site:

Placing soil in STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Yes, dug up and piled

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

2 Empty

Outstanding work order (Y/N)

| Site Conditions | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | |
| | Signage visible/in good condition | N/A | | |
| Spill Kit | On site | X | | |
| | Lid secured | X | | |
| | Contents checked | X | | |
| Storage Shed | Locked | X | | |
| | PPE available | X | | |
| | Trash pump in containment | N/A | | |
| | Pump fuel in containment | X | | |
| | Soil amendments in containment | N/A | | |
| | SDS' available | X | | |
| | Sample kit contents checked | X | | |
| Wildlife | Observed on site (identify type) | X | | |
| | Damage to facility | X | | |
| | Birds on or near pond | X | | |
| | Bears in or near facility | X | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | |
| | Rutting | N/A | | |
| | Ice | N/A | | |
| | Evidence of soil tracking | X | | |
| Soil Pad | Berm stability | X | | |
| | Liner visible | X | | Berm liner visible |
| | Road stability | X | | |
| | Drainage system working | X | | |
| | Dust control | X | | |
| | Soil piles in good condition | X | | In bag soil pile loose |
| | Water tanks in good condition | N/A X | | |
| Water Retention Pond | Erosion | N/A X | | |
| | Liner visible | N/A X | | |
| | Filter cloth on pump intake | N/A | | |
| | Tarp intact & secure | N/A | | |
| | Pond level | X | | 3/4 full |
| WTP | Flow meter working | N/A | | |
| | System function | N/A | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

David Allen

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

June 13, 2022

Time:

12:00

Inspector:

Harper Enterprise Rep

Weather:

S, mostly cloudy

Current activities on site:

Placing soil in STP

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Yes, bagged and P/N

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

of TW tanks

2 Empty

Review Maintenance Log (Y/N)

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | X | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | Berm liner visible |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | In bagged soil pile logs |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | 3/4 full |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

Quevally

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

Inspector:

Current activities on site:

Water in Cell?

Soil on Pad?

Treated water tank in use?

Review Maintenance Log (Y/N)

Time:

Weather:

Freeboard in ditch

Freeboard in Pond

If yes, fill out page 2 (x)

of TW tanks

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | | | | |
| | Signage visible/in good condition | | | | |
| Spill Kit | On site | | | | |
| | Lid secured | | | | |
| Storage Shed | Contents checked | | | | |
| | Locked | | | | |
| | PPE available | | | | |
| | Trash pump in containment | | | | |
| | Pump fuel in containment | | | | |
| | Soil amendments in containment | | | | |
| | SDS' available | | | | |
| | Sample kit contents checked | | | | |
| Wildlife | Observed on site (identify type) | | | | |
| | Damage to facility | | | | |
| | Birds on or near pond | | | | |
| Facility Grounds | Bears in or near facility | | | | |
| | Evidence of spills/leaks/staining | | | | |
| | Rutting | | | | |
| | Ice | | | | |
| Soil Pad | Evidence of soil tracking | | | | |
| | Berm stability | | | | |
| | Liner visible | | | | Berm liner visible |
| | Road stability | | | | |
| | Drainage system working | | | | |
| | Dust control | | | | |
| | Soil piles in good condition | | | | In bag soil pile / deep |
| Water Retention Pond | Water tanks in good condition | | | | |
| | Erosion | | | | |
| | Liner visible | | | | |
| | Filter cloth on pump intake | | | | |
| WTP | Tarp intact & secure | | | | |
| | Pond level | | | | |
| | Flow meter working | | | | 3/4 full |
| | System function | | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

Qua-Allie

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

January 3, 2022

Time:

12:00

Inspector:

Harper Enterprise Rep

Weather:

-35, partly cloudy

Current activities on site:

Placing soil in STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Yes, bagged

Freeboard in Pond

N/A

Treated water tank in use?

If yes, fill out page 2 (x)

of TW tanks

2 Empty

Review Maintenance Log (Y/N)

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | ✓ | | | |
| | Lid secured | ✓ | | | |
| | Contents checked | ✓ | | | |
| Storage Shed | Locked | ✓ | | | |
| | PPE available | ✓ | | | |
| | Trash pump in containment | NA | | | |
| | Pump fuel in containment | ✓ | | | |
| | Soil amendments in containment | NA | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | Berm Liner visible |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | In bags |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| WTP | Pond level | N/A | | | |
| | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

Harper

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

Inspector:

Current activities on site:

Water in Cell?

Soil on Pad?

Treated water tank in use?

Review Maintenance Log (Y/N)

Time:

Weather:

Freeboard in ditch

Freeboard in Pond

If yes, fill out page 2 (x)

of TW tanks

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | ✓ | | | |
| | Lid secured | ✓ | | | |
| | Contents checked | ✓ | | | |
| Storage Shed | Locked | ✓ | | | |
| | PPE available | ✓ | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | ✓ | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS ¹ available | ✓ | | | |
| | Sample kit contents checked | ✓ | | | |
| Wildlife | Observed on site (identify type) | ✓ | | | |
| | Damage to facility | ✓ | | | |
| | Birds on or near pond | ✓ | | | |
| | Bears in or near facility | ✓ | | | |
| Facility Grounds | Evidence of spills/leaks/staining | ✓ | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | ✓ | | | |
| | Liner visible | ✓ | | | Berm liner visible |
| | Road stability | ✓ | | | |
| | Drainage system working | ✓ | | | |
| | Dust control | ✓ | | | |
| | Soil piles in good condition | ✓ | | | Fr bags |
| | Water tanks in good condition | ✓ | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | ✓ | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| WTP | Pond level | N/A | | | |
| | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

Overall

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

January 17, 2022

Time:

1200

Inspector:

Harder Enterprise Rep

Weather:

-30, mostly sunny

Current activities on site:

Placing soil in STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Yes, 6000

Freeboard in Pond

N/A

Treated water tank in use?

If yes, fill out page 2 (x)

of TW tanks

2 Empty

Review Maintenance Log (Y/N)

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | x | | | |
| | Lid secured | x | | | |
| | Contents checked | x | | | |
| Storage Shed | Locked | x | | | |
| | PPE available | x | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | v | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | x | | | |
| | Sample kit contents checked | x | | | |
| Wildlife | Observed on site (identify type) | x | | | |
| | Damage to facility | x | | | |
| | Birds on or near pond | x | | | |
| | Bears in or near facility | x | | | |
| Facility Grounds | Evidence of spills/leaks/staining | x | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | x | | | |
| | Liner visible | x | | | Berm liner visible |
| | Road stability | x | | | |
| | Drainage system working | x | | | |
| | Dust control | x | | | |
| | Soil piles in good condition | x | | | In Bags |
| | Water tanks in good condition | x | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | x | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | N/A | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

John Allen

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

January 24, 2022

Time:

1200

Inspector:

Harder Enterprise Rep

Weather:

-6, Mostly cloudy

Current activities on site:

placing soil in STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Yes, bagged

Freeboard in Pond

N/A

Treated water tank in use?

If yes, fill out page 2 (x)

of TW tanks

2 Empty

Review Maintenance Log (Y/N)

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | N/A X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | X AFA | | | |
| | Sample kit contents checked | X | | | |
| | Observed on site (identify type) | X | | | |
| Wildlife | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| | Evidence of spills/leaks/staining | X | | | |
| Facility Grounds | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | N/A | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

One All

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

January 31, 2022

Time:

1200

Inspector:

Harold Enterprise Rep

Weather:

-19, Snowing

Current activities on site:

Placing soil in STF

Freeboard in ditch

N/A

Water in Cell?

N/A

Freeboard in Pond

N/A

Soil on Pad?

Yes, bagged

If yes, fill out page 2 (x)

Treated water tank in use?

of TW tanks

2 Empty

Review Maintenance Log (Y/N)

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS ¹ available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| WTP | Pond level | N/A | | | |
| | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

[Signature]

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

February 7, 2022

Time:

12:00

Inspector:

Harder Enterprise Rep

Weather:

-34/snow

Current activities on site:

Placing soil in JH

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Yes, bagged

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

2 Empty

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | X | | | |
| Wildlife | Sample kit contents checked | X | | | |
| | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| Facility Grounds | Bears in or near facility | X | | | |
| | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| Soil Pad | Evidence of soil tracking | N/A | | | |
| | Berm stability | X | | | |
| | Liner visible | X | | | Berm liner visible |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| Water Retention Pond | Soil piles in good condition | X | | | In bags |
| | Water tanks in good condition | X | | | |
| | Erosion | N/A | | | |
| | Liner visible | X | | | |
| WTP | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | N/A | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

Paul Alb

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

February 14, 2022

Time:

12:00

Inspector:

Harder Enterprise Rep

Weather:

-29, Sunny

Current activities on site:

Placing soil in STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Yes (by hand)

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

2 Empty

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | Berm liner visible |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | In bags |
| | Water tanks in good condition | X | | | In bags |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| WTP | Pond level | N/A | | | |
| | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

Paula

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

February 21, 2022

Time:

12:00

Inspector:

Harper Enterprise Rep

Weather:

-23, mostly sunny

Current activities on site:

Placing soil in silt

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Yes, bagged

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

2 Empty

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | Berm liner visible |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | In bags |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X N/A | | | liner visible |
| | Filter cloth on pump intake | X N/A | | | |
| | Tarp intact & secure | X N/A | | | |
| | Pond level | X N/A | | | |
| WTP | Flow meter working | X N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

[Signature]

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

February 28, 2022

Time:

12:00

Inspector:

Harter Enterprise Rep

Weather:

-23, mostly sunny

Current activities on site:

Placing soil in STF

Freeboard in ditch

N/A

Water in Cell?

N/A

Freeboard in Pond

N/A

Soil on Pad?

yes, bagged

If yes, fill out page 2 (x)

Treated water tank in use?

N/A

of TW tanks

2 Empty

Review Maintenance Log (Y/N)

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | Berm liner visible |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | In bags |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | N/A | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

One-Alla

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

March 6, 2022

Time:

12:00

Inspector:

Harter Enterprise Rep

Weather:

-10, snow

Current activities on site:

Placing Soil in STF

Water in Cell?

N/A

Freeboard in ditch

Soil on Pad?

yes/bagged in pile

Freeboard in Pond

If yes, fill out page 2 (x)

Treated water tank in use?

N/A

of TW tanks

2 Empty

Review Maintenance Log (Y/N)

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | Liner visible on sides |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | In bags |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| WTP | Pond level | N/A | | | |
| | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

[Signature]

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

March 14, 2022

Time:

12:00

Inspector:

Harold Enterprise Rep

Weather:

-17, mostly cloudy

Current activities on site:

Placing Soil in STF

Water in Cell?

N/A

Freeboard in ditch

Soil on Pad?

yes (hugged and piled)

Freeboard in Pond

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

2 Empty

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | Liner visible on sides |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | In bags |
| Water Retention Pond | Water tanks in good condition | X | | | In bags |
| | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| WTP | Pond level | N/A | | | |
| | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

One-Cell

KBL Environmental LTD.

Weekly Inspection Checklist

In-vit Soil Treatment Facility

Date (MM/DD/YY):

Inspector:

Current activities on site:

March 21, 2022

Harbor Enterprise Rep

Placing soil in STF

Time:

12:00

Weather:

-27 mostly cloudy

Water in Cell?

Soil on Pad?

Treated water tank in use?

Review Maintenance Log (Y/N)

Freeboard in ditch

Freeboard in Pond

If yes, fill out page 2 (x)

of TW tanks

Outstanding work order (Y/N)

N/A

Tested and OK

N/A

2 Empty

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | Liner visible on sides |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | In bags |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | N/A | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

[Signature]

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

Inspector:

Current activities on site:

March 28, 2022

Harder Enterprise Rep

Placing soil in str

Time:

12:00

Weather:

-24/sunny

Water in Cell?

Soil on Pad?

Treated water tank in use?

Review Maintenance Log (Y/N)

Freeboard in ditch

Freeboard in Pond

If yes, fill out page 2 (x)

of TW tanks

Outstanding work order (Y/N)

N/A

yes, 6495 and 6100

N/A

2 Empty

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | Liner Visible on sides |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | In 6495 |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | N/A | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

Alan Allen

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

April 4, 2022

Time:

12:00

Inspector:

Harper Enterprise Rep

Weather:

-26, snow

Current activities on site:

Placing soil in STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Yes, dugged and piled

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

2 Empty

Outstanding work order (Y/N)

| Site Conditions | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|-----------------------------------|------------------|---------------------------|--|---|
| Access | | | | |
| Gate in working order | N/A | | | |
| Signage visible/in good condition | N/A | | | |
| Spill Kit | | | | |
| On site | X | | | |
| Lid secured | X | | | |
| Contents checked | X | | | |
| Storage Shed | | | | |
| Locked | X | | | |
| PPE available | X | | | |
| Trash pump in containment | N/A | | | |
| Pump fuel in containment | X | | | |
| Soil amendments in containment | N/A | | | |
| SDS' available | X | | | |
| Sample kit contents checked | X | | | |
| Wildlife | | | | |
| Observed on site (identify type) | X | | | |
| Damage to facility | X | | | |
| Birds on or near pond | X | | | |
| Bears in or near facility | X | | | |
| Facility Grounds | | | | |
| Evidence of spills/leaks/staining | X | | | |
| Rutting | N/A | | | |
| Ice | N/A | | | |
| Evidence of soil tracking | N/A | | | |
| Soil Pad | | | | |
| Berm stability | X | | | |
| Liner visible | X | | | Berm liner visible on sides |
| Road stability | X | | | |
| Drainage system working | X | | | |
| Dust control | X | | | |
| Soil piles in good condition | X | | | |
| Water tanks in good condition | X | | | |
| Water Retention Pond | | | | |
| Erosion | N/A | | | |
| Liner visible | X | | | |
| Filter cloth on pump intake | N/A | | | |
| Tarp intact & secure | N/A | | | |
| Pond level | N/A | | | |
| WTP | | | | |
| Flow meter working | N/A | | | |
| System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

Drucille

KBL Environmental LTD.

Weekly Inspection Checklist

Date (MM/DD/YY): April 11 2022 Time: 12:00
 Inspector: Harper Enterprise Rep Weather: -16 sunny
 Current activities on site: Placing soil in STF
 Water in Cell? N/A Freeboard in ditch N/A
 Soil on Pad? Yes, dug out and put in Freeboard in Pond N/A
 Treated water tank in use? N/A If yes, fill out page 2 (x)
 Review Maintenance Log (Y/N) N/A # of TW tanks 2 Empty
 Outstanding work order (Y/N)

| Site Conditions | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|-----------------------------------|------------------|---------------------------|--|--|
| Access | | | | |
| Gate in working order | N/A | | | |
| Signage visible/in good condition | N/A | | | |
| Spill Kit | | | | |
| On site | X | | | |
| Lid secured | X | | | |
| Contents checked | X | | | |
| Storage Shed | | | | |
| Locked | X | | | |
| PPE available | X | | | |
| Trash pump in containment | N/A | | | |
| Pump fuel in containment | X | | | |
| Soil amendments in containment | N/A | | | |
| SDS' available | X | | | |
| Sample kit contents checked | X | | | |
| Wildlife | | | | |
| Observed on site (identify type) | X | | | |
| Damage to facility | X | | | |
| Birds on or near pond | X | | | |
| Bears in or near facility | X | | | |
| Facility Grounds | | | | |
| Evidence of spills/leaks/staining | X | | | |
| Rutting | N/A | | | |
| Ice | N/A | | | |
| Evidence of soil tracking | N/A | | | |
| Soil Pad | | | | |
| Berm stability | X | | | |
| Liner visible | X | | | Berm liner visible on sides |
| Road stability | X | | | |
| Drainage system working | X | | | |
| Dust control | X | | | |
| Soil piles in good condition | X | | | |
| Water tanks in good condition | X | | | |
| Water Retention Pond | | | | |
| Erosion | N/A | | | |
| Liner visible | X | | | |
| Filter cloth on pump intake | N/A | | | |
| Tarp intact & secure | N/A | | | |
| Pond level | N/A | | | |
| WTP | | | | |
| Flow meter working | N/A | | | |
| System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

Over the

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

07/02/22

Time:

11:00 AM

Inspector:

Jesse Harder

Weather:

Sunny + 22°C

Current activities on site:

Soil in STF

Water in Cell?

N/A

Soil on Pad?

Yes / Piled

Treated water tank in use?

N/A

Review Maintenance Log (Y/N)

Freeboard in ditch

N/A

Freeboard in Pond

N/A

If yes, fill out page 2 (x)

of TW tanks

2 Full

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | 3/4 Full |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

July 2/22 JH

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

07/11/22

Time:

10:00 Am

Inspector:

Owen Allen

Weather:

overcast 18°C

Current activities on site:

Soil in STE

Freeboard in ditch

N/A

Water in Cell?

N/A

Freeboard in Pond

N/A

Soil on Pad?

Yes Piled

If yes, fill out page 2 (x)

Treated water tank in use?

N/A

of TW tanks

2 Full

Review Maintenance Log (Y/N)

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | x | | | |
| | Lid secured | x | | | |
| | Contents checked | x | | | |
| Storage Shed | Locked | x | | | |
| | PPE available | x | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | x | | | |
| | Soil amendments in containment | x | | | |
| | SDS' available | x | | | |
| | Sample kit contents checked | x | | | |
| Wildlife | Observed on site (identify type) | x | | | |
| | Damage to facility | x | | | |
| | Birds on or near pond | x | | | |
| | Bears in or near facility | x | | | |
| Facility Grounds | Evidence of spills/leaks/staining | x | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | x | | | |
| | Liner visible | x | | | |
| | Road stability | x | | | |
| | Drainage system working | x | | | |
| | Dust control | x | | | |
| | Soil piles in good condition | x | | | Full Compacted/BAGs |
| | Water tanks in good condition | x | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | x | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | x | | | Full |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

July 11/22 OA

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

07/25/22

Time:

10:00 AM

Inspector:

Owen Allen

Weather:

Sunny 24°C

Current activities on site:

Soil STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Yes Piled

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

2 Full

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

July 25/23 OA

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

7/18/22

Time:

10:00 Am

Inspector:

Owen Allen

Weather:

Sunny -20°C

Current activities on site:

Water in Cell?

Freeboard in ditch

Soil on Pad?

Freeboard in Pond

Treated water tank in use?

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

Outstanding work order (Y/N)

2 Full

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| Storage Shed | Contents checked | X | | | |
| | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| WTP | Pond level | X | | | |
| | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

July 18/22 OA

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

08/01/22

Time:

10:05 AM

Inspector:

Jesse Harder

Weather:

18°C

Current activities on site:

Soil in STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

yes Piled

Freeboard in Pond

N/A

Treated water tank in use?

yes

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

2 Full

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <i>*additional comments on Page 2</i> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

08/01/22 JH

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

08/08/22

Time:

10:05 AM

Inspector:

Jesse Harder

Weather:

16°C overcast

Current activities on site:

Soil in STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Yes Piled

Freeboard in Pond

N/A

Treated water tank in use?

Yes

If yes, fill out page 2 (x)

of TW tanks

2 Full TANKS

Review Maintenance Log (Y/N)

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

Aug 08/22 JHH

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

08/15/22

Time:

11:30 Am

Inspector:

Jesse Harder

Weather:

15c Raining

Current activities on site:

Soil in STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Yes, Piled

Freeboard in Pond

N/A

Treated water tank in use?

NO

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

2 Full

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

Aug 15/22 *[Signature]*

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

08/22/22

Time:

10:15 AM

Inspector:

Jesse Hauder

Weather:

Raining 17°C

Current activities on site:

Soil in STF

Water in Cell?

NO

Freeboard in ditch

N/A

Soil on Pad?

Yes Piled

Freeboard in Pond

N/A

Treated water tank in use?

NO

If yes, fill out page 2 (x)

2 Full

Review Maintenance Log (Y/N)

of TW tanks

2 Full

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

08/22/22 JH

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

08/29/22

Time:

1:30 pm

Inspector:

Jesse Harder

Weather:

overcast 20 °C

Current activities on site:

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Dited

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

of TW tanks

2

Review Maintenance Log (Y/N)

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

Aug 29, 22 *ettt*

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

09/05/22

Time:

9:30 AM

Inspector:

Jesse Harder

Weather:

10°C Rainy

Current activities on site:

STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Piled/turned

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

2

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| WTP | Pond level | X | | | |
| | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

Sept. 05/22 JH

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

09/12/22

Time:

9:52 AM

Inspector:

Owen Allen

Weather:

72 overcast

Current activities on site:

STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Piled

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

of TW tanks

2

Review Maintenance Log (Y/N)

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | X | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

9/12/22

OA

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

9/19/22

Time:

11:36 AM

Inspector:

Owen Allen

Weather:

Cloudy 5°C

Current activities on site:

STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Piled

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

N/A

Review Maintenance Log (Y/N)

of TW tanks

2

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| Soil Pad | Evidence of soil tracking | N/A | | | |
| | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| Water Retention Pond | Water tanks in good condition | X | | | |
| | Erosion | X | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| WTP | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

9/19/22 OA

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

9/26/22

Time:

1:27 PM

Inspector:

Owen Allen

Weather:

Overcast 3°C

Current activities on site:

STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Piled/turned

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

2

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | X | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| Soil Pad | Evidence of soil tracking | N/A | | | |
| | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| Water Retention Pond | Water tanks in good condition | X | | | |
| | Erosion | X | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| WTP | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

10/03/22

Time:

1:28 PM

Inspector:

Owen Allen

Weather:

overcast -1°C

Current activities on site:

STP

Water in Cell?

N/A

Soil on Pad?

Tilled / Turned

Treated water tank in use?

N/A

Review Maintenance Log (Y/N)

Freeboard in ditch

N/A

Freeboard in Pond

N/A

If yes, fill out page 2 (x)

of TW tanks

2

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | ✓ | | | |
| Spill Kit | On site | ✓ | | | |
| | Lid secured | ✓ | | | |
| Storage Shed | Contents checked | ✓ | | | |
| | Locked | ✓ | | | |
| | PPE available | ✓ | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | ✓ | | | |
| | Soil amendments in containment | ✓ | | | |
| | SDS' available | ✓ | | | |
| | Sample kit contents checked | ✓ | | | |
| Wildlife | Observed on site (identify type) | ✓ | | | |
| | Damage to facility | ✓ | | | |
| | Birds on or near pond | ✓ | | | |
| | Bears in or near facility | ✓ | | | |
| Facility Grounds | Evidence of spills/leaks/staining | ✓ | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | ✓ | | | |
| | Liner visible | ✓ | | | |
| | Road stability | ✓ | | | |
| | Drainage system working | ✓ | | | |
| | Dust control | ✓ | | | |
| | Soil piles in good condition | ✓ | | | |
| Water Retention Pond | Water tanks in good condition | ✓ | | | |
| | Erosion | ✓ | | | |
| | Liner visible | ✓ | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| WTP | Pond level | ✓ | | | |
| | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

10/03/22 OA

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

10/11/22

Time:

11:10 Am

Inspector:

Owen Allen

Weather:

Cloudy - 3

Current activities on site:

Soil in STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Yes 1 Pilling

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

2

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

10/18/22

Time:

11:15 AM

Inspector:

Owen Allen

Weather:

-5°C overcast

Current activities on site:

soil in STI

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

N/A

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

2

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| WTP | Pond level | X | | | |
| | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

18/10/22 OA

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

25/10/22

Time:

9:52 AM

Inspector:

Owen Allen

Weather:

-14°C overcast snow

Current activities on site:

Soil in STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

yes piled

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

2

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | N/A | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| | | | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | N/A | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

25/10/22 OA

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

1/Nov/22

Time:

10:05 AM

Inspector:

Owen Allen

Weather:

Overcast -15°C Snow

Current activities on site:

STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

N/A

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

2

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| | Observed on site (identify type) | X | | | |
| Wildlife | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| | Evidence of spills/leaks/staining | X | | | |
| Facility Grounds | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | X | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

1/Nov/22 OA

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

8/Nov/22

Time:

10:08 Am

Inspector:

Dwen Allen

Weather:

Cloudy -9

Current activities on site:

STF

Water in Cell?

N/A

Soil on Pad?

Pilled

Treated water tank in use?

N/A

Review Maintenance Log (Y/N)

Freeboard in ditch

N/A

Freeboard in Pond

N/A

If yes, fill out page 2 (x)

of TW tanks

2

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | X | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

8/Nov/22 OA

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

15 / 11 / 22

Time:

10:11 AM

Inspector:

OWCA Allen

Weather:

-14°C showing over-cast

Current activities on site:

STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Pilled

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

of TW tanks

2

Review Maintenance Log (Y/N)

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| Soil Pad | Evidence of soil tracking | N/A | | | |
| | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| Water Retention Pond | Water tanks in good condition | X | | | |
| | Erosion | X | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| WTP | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

15/11/22 OA

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

22/11/22

Time:

10:07 AM

Inspector:

DWEN Allen

Weather:

-7°C Overcast

Current activities on site:

STF NWI-on site w/ excavator

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

filled

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

2

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | X | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| WTP | Pond level | X | | | |
| | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

22/11/22 OA

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

29/11/22

Time:

10:11 Am

Inspector:

Owen Allen

Weather:

-30°C

Current activities on site:

STF NWI Moving soil to top of Land Fill

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Piled

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

of TW tanks

2

Review Maintenance Log (Y/N)

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | X | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

29/11/22 OA

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

06/Dec/22

Time:

10:11 Am

Inspector:

Dawn Allen

Weather:

-25°C overcast

Current activities on site:

STF - NWI - knowing soil

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Being Moved

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

of TW tanks

2

Review Maintenance Log (Y/N)

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | X | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

06 Dec 22 DA

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

12/12/22

Time:

9:58 AM

Inspector:

Dwain Allen

Weather:

-20°C overcast

Current activities on site:

STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

N/A filled

Freeboard in Pond

N/A

If yes, fill out page 2 (x)

Treated water tank in use?

N/A

of TW tanks

2

Review Maintenance Log (Y/N)

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | X | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

12/12/22 *aa*

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

12/20/22

Time:

10:15 Am

Inspector:

Owen Allen

Weather:

overcast

Current activities on site:

STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

N/A Piled

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

of TW tanks

2

Review Maintenance Log (Y/N)

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment <small>*additional comments on Page 2</small> |
|----------------------------|-----------------------------------|------------------|---------------------------|--|--|
| Access | Gate in working order | N/A | | | |
| | Signage visible/in good condition | N/A | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | X | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| WTP | Pond level | X | | | |
| | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

12/20/22 OA

KBL Environmental LTD.

Weekly Inspection Checklist

Inuvik Soil Treatment Facility

Date (MM/DD/YY):

28/12/22

Time:

10:15 AM

Inspector:

Owen Allen

Weather:

overcast

Current activities on site:

STF

Water in Cell?

N/A

Freeboard in ditch

N/A

Soil on Pad?

Pilled

Freeboard in Pond

N/A

Treated water tank in use?

N/A

If yes, fill out page 2 (x)

Review Maintenance Log (Y/N)

of TW tanks

Outstanding work order (Y/N)

| Site Conditions | | OK (x or N/A) | Needs Attention (x) | Entered into Maintenance Log (Y/N, Initial) | Comment *additional comments on Page 2 |
|----------------------------|-----------------------------------|------------------|---------------------------|--|---|
| Access | Gate in working order | MA | | | |
| | Signage visible/in good condition | MA | | | |
| Spill Kit | On site | X | | | |
| | Lid secured | X | | | |
| | Contents checked | X | | | |
| Storage Shed | Locked | X | | | |
| | PPE available | X | | | |
| | Trash pump in containment | N/A | | | |
| | Pump fuel in containment | X | | | |
| | Soil amendments in containment | X | | | |
| | SDS' available | X | | | |
| | Sample kit contents checked | X | | | |
| Wildlife | Observed on site (identify type) | X | | | |
| | Damage to facility | X | | | |
| | Birds on or near pond | X | | | |
| | Bears in or near facility | X | | | |
| Facility Grounds | Evidence of spills/leaks/staining | X | | | |
| | Rutting | N/A | | | |
| | Ice | N/A | | | |
| | Evidence of soil tracking | N/A | | | |
| Soil Pad | Berm stability | X | | | |
| | Liner visible | X | | | |
| | Road stability | X | | | |
| | Drainage system working | X | | | |
| | Dust control | X | | | |
| | Soil piles in good condition | X | | | |
| | Water tanks in good condition | X | | | |
| Water Retention Pond | Erosion | X | | | |
| | Liner visible | X | | | |
| | Filter cloth on pump intake | N/A | | | |
| | Tarp intact & secure | N/A | | | |
| | Pond level | X | | | |
| WTP | Flow meter working | N/A | | | |
| | System function | N/A | | | |

*placing an X in a shaded box requires entry into Maintenance Log and follow-up.

Office Back-up: Date (DD/MM/YY) Initial

28/12/22 OA

APPENDIX E

Appendix E: Engagement Activities

Katie Oliver

From: AlecSandra Macdonald <AMacdonald@glwb.com>
Sent: February 25, 2022 10:20 AM
To: Katie Oliver
Subject: RE: Water Licence G17L1-002 - Public Engagement

Hi Katie,

Thanks for reaching out. Your first point of contact for Engagement within the Gwich'in Settlement Area is Leigh-Ann Williams-Jones at GTC Lands and Resources. She should be able to provide direction for your engagement activities. I also recommend contacting Nihtat Gwich'in Council and Inuvik Native Band, information below.

Gwich'in Tribal Council – Lands and Resources
Director
Leigh-Ann
Williams Jones
leighann.williamsjones@gwichintribal.ca
(867) – 777-7927

Inuvik Native Band
Chief
Robert
Charlie
chief@inuviknativeband.ca
(867) 777-5868

Nihtat Gwich'in Council (Inuvik)
President
Kelly
McLeod
president@nihtatgwichin.ca
(867) 777-6650

Please don't hesitate to reach out if you require any assistance as you move forward with your application.

Mahsi,
AlecSandra Macdonald
Regulatory Specialist
Gwich'in Land and Water Board
Alex Moses-Greenland Building | 105 Veterans Way
P.O. Box 2018 | Inuvik, NT | X0E 0T0
(867) 777-4954
✉ amacdonald@glwb.com | www.glwb.com



All correspondence to the Board, including emails, letters, faxes and attachments are public documents and may be posted to the public registry.

From: Katie Oliver <koliver@kblenv.com>
Sent: February 24, 2022 8:33 AM
To: AlecSandra Macdonald <AMacdonald@glwb.com>
Subject: Water Licence G17L1-002 - Public Engagement

Good Morning AlecSandra;

We are preparing to renew our Water Licence (G17L1-002) for the Inuvik Soil Treatment Facility. Would you please forward me the list of GLWB - Engagement Contacts?

Thank you;



Katie Oliver, MBA, CET, PMP

General 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

This email and any accompanying attachments may contain confidential information and are intended only for the named recipients. Content may not be used or relied upon by any party other than KBL's client unless otherwise authorized in writing by KBL. Any unauthorized use of information contained in this email is at the sole risk of the user. If you have received this email in error, please notify the sender and destroy the email.

Katie Oliver

From: Katie Oliver
Sent: February 28, 2022 10:25 AM
To: leighann.williamsjones@gwichintribal.ca
Subject: KBL Inuvik Soil Treatment Facility Renewal (G17L1-002)

Good Morning Leigh-Ann;

KBL Environmental Ltd. (KBL) will be submitting a renewal application of the Inuvik Soil Treatment Facility Type B Water License (G17L1-002) to the Gwich'in Land and Water Board. The renewal does not contemplate any significant changes to the design or operation of the facility. The Gwich'in Land and Water Board recommended I reach out to you for further direction on engagement activities prior to the submission of the application.

If you have any questions or concerns about the proposed project, please contact me. KBL welcomes the opportunity to discuss the project with you in advance of our renewal submission.

Regards,



Katie Oliver, MBA, CET, PMP

General 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

This email and any accompanying attachments may contain confidential information and are intended only for the named recipients. Content may not be used or relied upon by any party other than KBL's client unless otherwise authorized in writing by KBL. Any unauthorized use of information contained in this email is at the sole risk of the user. If you have received this email in error, please notify the sender and destroy the email.

Katie Oliver

From: Katie Oliver
Sent: February 28, 2022 10:25 AM
To: chief@inuviknativeband.ca
Subject: KBL Inuvik Soil Treatment Facility Renewal (G17L1-002)

Good Morning Chief Robert;

KBL Environmental Ltd. (KBL) will be submitting a renewal application of the Inuvik Soil Treatment Facility Type B Water License (G17L1-002) to the Gwich'in Land and Water Board. Your organization has been identified as potentially having an interest in the project. In accordance with the Engagement Plan associated with this renewal, this email serves to inform you of KBL's renewal of our water licence. The renewal does not contemplate any significant changes to the design or operation of the facility.

If you have any questions or concerns about the proposed project, please contact me. KBL welcomes the opportunity to discuss the project with you in advance of our renewal submission.

Regards,



Katie Oliver, MBA, CET, PMP

General 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

This email and any accompanying attachments may contain confidential information and are intended only for the named recipients. Content may not be used or relied upon by any party other than KBL's client unless otherwise authorized in writing by KBL. Any unauthorized use of information contained in this email is at the sole risk of the user. If you have received this email in error, please notify the sender and destroy the email.

Katie Oliver

From: Katie Oliver
Sent: February 28, 2022 10:25 AM
To: president@nihtatgwichin.ca
Subject: KBL Inuvik Soil Treatment Facility Renewal (G17L1-002)

Good Morning Kelly;

KBL Environmental Ltd. (KBL) will be submitting a renewal application of the Inuvik Soil Treatment Facility Type B Water License (G17L1-002) to the Gwich'in Land and Water Board. Your organization has been identified as potentially having an interest in the project. In accordance with the Engagement Plan associated with this renewal, this email serves to inform you of KBL's renewal of our water licence. The renewal does not contemplate any significant changes to the design or operation of the facility.

If you have any questions or concerns about the proposed project, please contact me. KBL welcomes the opportunity to discuss the project with you in advance of our renewal submission.

Regards,



Katie Oliver, MBA, CET, PMP

General 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

This email and any accompanying attachments may contain confidential information and are intended only for the named recipients. Content may not be used or relied upon by any party other than KBL's client unless otherwise authorized in writing by KBL. Any unauthorized use of information contained in this email is at the sole risk of the user. If you have received this email in error, please notify the sender and destroy the email.

From: [Christina Martin](#)
To: [Katie Oliver](#)
Cc: [Leigh-Ann Williams-Jones](#)
Subject: RE: KBL Inuvik Soil Treatment Facility Renewal (G17L1-002)
Date: May 9, 2022 9:43:56 AM
Attachments: [image001.png](#)

Good morning Katie,

We would like to let you know that no follow-up questions or concerns were brought to the GTC's Lands & Resources attention re. our information session with you..

From our perspective, please consider KBL's pre-engagement consultations with the GTC to be complete.

We look forward to reviewing your LUP application and will be in touch with any future questions.

Thank you for your time, and have a great day,



Christina Martin

Lands & Resources Coordinator

GWICH'IN TRIBAL COUNCIL

P: 867-777-7925

F: 867-777-7919

E: Christina.Martin@gwichintribal.ca

Gwich'in Land, Culture & Economy for a Better Future.

From: Katie Oliver <koliver@kblenv.com>
Sent: April 25, 2022 11:46 AM
To: Christina Martin <Christina.Martin@gwichintribal.ca>
Cc: Leigh-Ann Williams-Jones <LeighAnn.WilliamsJones@gwichintribal.ca>
Subject: RE: KBL Inuvik Soil Treatment Facility Renewal (G17L1-002)

Hi Christina;

Thursday at 3pm works perfectly. Is there anything I should prepare or specific questions you may have that I can prepare in advance?

Thanks;

Thank you | Merci | Mársi | Kinanāskomitin | Hǫ́ǫ' | Quana | Qujannamiik | Quyanainni | Máhsı | Máhsı | Mahsi

Katie Oliver, MBA, CET, PMP



General 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

This email and any accompanying attachments may contain confidential information and are intended only for the named recipients. Content may not be used or relied upon by any party other than KBL's client unless otherwise authorized in writing by KBL. Any unauthorized use of information contained in this email is at the sole risk of the user. If you have received this email in error, please notify the sender and destroy the email.

From: Christina Martin <Christina.Martin@gwichintribal.ca>

Sent: April 25, 2022 11:44 AM

To: Katie Oliver <koliver@kblenv.com>

Cc: Leigh-Ann Williams-Jones <LeighAnn.WilliamsJones@gwichintribal.ca>

Subject: RE: KBL Inuvik Soil Treatment Facility Renewal (G17L1-002)

Good morning Katie,

Would you be available for an online meeting with myself and our Lands and Resources Manager, Leigh-Ann, on Thursday afternoon (April 28th)? Suggesting 3:00 MT.

If so, I'll send along a Teams meeting invitation.

Thank you,



Christina Martin

Lands & Resources Coordinator

GWICH'IN TRIBAL COUNCIL

P: 867-777-7925

F: 867-777-7919

E: Christina.Martin@gwichintribal.ca

Gwich'in Land, Culture & Economy for a Better Future.

From: Katie Oliver <koliver@kblenv.com>
Sent: April 21, 2022 10:17 AM
To: Christina Martin <Christina.Martin@gwichintribal.ca>
Cc: Leigh-Ann Williams-Jones <LeighAnn.WilliamsJones@gwichintribal.ca>
Subject: RE: KBL Inuvik Soil Treatment Facility Renewal (G17L1-002)

Hi Christina;

I am available to meet tomorrow afternoon, or next week on Monday or Tuesday afternoon or anytime Thursday and Friday.

Thanks;

Thank you | Merci | Mársı | Kinanāskomitin | Hą́ı' | Quana | Qujannamiik | Quyanainni | Máhsı | Máhsı | Mahsı



Katie Oliver, MBA, CET, PMP

General 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

This email and any accompanying attachments may contain confidential information and are intended only for the named recipients. Content may not be used or relied upon by any party other than KBL's client unless otherwise authorized in writing by KBL. Any unauthorized use of information contained in this email is at the sole risk of the user. If you have received this email in error, please notify the sender and destroy the email.

From: Christina Martin <Christina.Martin@gwichintribal.ca>
Sent: April 21, 2022 9:37 AM
To: Katie Oliver <koliver@kblenv.com>
Cc: Leigh-Ann Williams-Jones <LeighAnn.WilliamsJones@gwichintribal.ca>
Subject: FW: KBL Inuvik Soil Treatment Facility Renewal (G17L1-002)

Good morning Katie,

My name is Christina, I'm the Lands and Resources Coordinator at the Gwich'in Tribal Council. Please accept my apologies for my delayed response to you. We appreciate that you reached out to us regarding the Water Licence Renewal at the soil treatment facility.

We would like to request a meeting with KBL and our Lands Department and invite the Nihtat Renewable Resource Council and Nihtat Gwich'in Council to join us.

I'll get back to you with availabilities and please let me know yours; we could set it up either in-person with KBL's local personnel, or virtually.

Thank you,



Christina Martin

Lands & Resources Coordinator

GWICH'IN TRIBAL COUNCIL

P: 867-777-7925

F: 867-777-7919

E: Christina.Martin@gwichintribal.ca

Gwich'in Land, Culture & Economy for a Better Future.

From: Katie Oliver <koliver@kblenv.com>

Sent: Monday, February 28, 2022 10:25 AM

To: Leigh-Ann Williams-Jones <LeighAnn.WilliamsJones@gwichintribal.ca>

Subject: KBL Inuvik Soil Treatment Facility Renewal (G17L1-002)

Good Morning Leigh-Ann;

KBL Environmental Ltd. (KBL) will be submitting a renewal application of the Inuvik Soil Treatment Facility Type B Water License (G17L1-002) to the Gwich'in Land and Water Board. The renewal does not contemplate any significant changes to the design or operation of the facility. The Gwich'in Land and Water Board recommended I reach out to you for further direction on engagement activities prior to the submission of the application.

If you have any questions or concerns about the proposed project, please contact me. KBL welcomes the opportunity to discuss the project with you in advance of our renewal submission.

Regards,

Katie Oliver, MBA, CET, PMP

General 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

This email and any accompanying attachments may contain confidential information and are intended only for the named recipients. Content may not be used or relied upon by any party other than KBL's client unless otherwise authorized in writing by KBL. Any unauthorized use of information contained in this email is at the sole risk of the user. If you have received this email in error, please notify the sender and destroy the email.