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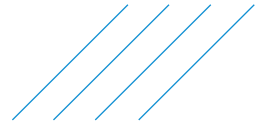
Step B Soil Characterization Program

**Bradner North Enhancement Area, Fraser
Valley Highway 1 Corridor Improvement
Program, Abbotsford, BC**

Ministry of Transportation and Infrastructure

December 15, 2023

SNC-Lavalin Project: 694890



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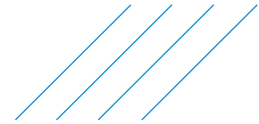


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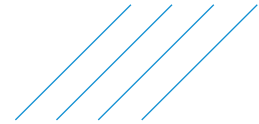


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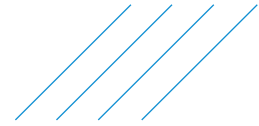
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- 694890-401A – Detailed Soil Analytical Results – Bradner North (Stripping)
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1 Introduction

As requested by the Ministry of Transportation and Infrastructure (MoTI), SNC-Lavalin Inc. (SNC-Lavalin) has conducted a Step B Soil Characterization program for the Bradner North Environmental Habitat Enhancement Area along the Fraser Valley Highway 1 Corridor Improvement Program (FVH1CP), City of Abbotsford, BC (i.e., the Project Area).

The Project Area consists of a proposed environmental offsetting area for a new stream channel and a riparian area, with an access lane to facilitate construction and maintenance. The Project Area is located immediately north of the existing Bradner Rest Area.

All work was completed in accordance with terms and conditions of MoTI “As and When” contract 860 CS 5298 with SNC-Lavalin. The soil characterization work was completed in general accordance with BC ENV Technical Guidance 1¹ (TG1) and MoTI’s Technical Circular T-03/20², as described in more detail in [Section 1.1](#) and [Section 1.3](#) below. A Notice to Reader is provided in [Section 7](#).

1.1 Project Objectives

As per MoTI’s Technical Circular T-03/20, all MoTI projects that plan to relocate soil on and/or off site must screen project areas for the presence of *Contaminated Sites Regulation*³ (CSR) Schedule 2 activities and high-risk sites (i.e., Step A – Screening Projects). If the Step A Screening identifies CSR Schedule 2 activities and/or high-risk sites, then additional investigation would be required to confirm the absence/presence of contamination in the soil cut area only (i.e., Step B – Soil Characterization). If the soil is found to be contaminated in the Step B, a soil management strategy will be developed in accordance with the Ministry of Environment & Climate Change Strategy (ENV) guidance and regulations and in consultation with a MoTI Geoscientist (i.e., Step C – Soil Management Strategy).

The objective of this Step B Soil Characterization program by SNC-Lavalin was to determine soil quality within the planned soil cuts, to assist with soil management decisions within the Project Area. Soil characterization was required to support soil relocation during construction and off-site disposal.

1.2 Project Area - Drawings and Reports

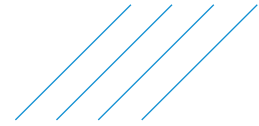
SNC-Lavalin reviewed the following design drawings and cross sections provided by MoTI to identify the construction boundaries, as well as the proposed extents of excavation cuts and fills, and assist with the development of investigation plans:

- *Project No. 12947, Fraser Valley Highway 1 Corridor Improvement Program, Bradner North Environmental Habitat Enhancement, 100 % Detailed Design*, prepared for MoTI by McElhanney, dated October 27, 2023.

¹ Technical Guidance Document 1: *Site Characterization and Confirmation Testing*, BC Ministry of Environment & Climate Change Strategy, March 2023.

² *Identification and Characterization of Potentially Contaminated Soil*. Technical Circular T-03/20. Ministry of Transportation and Infrastructure, dated August 4, 2020.

³ *Contaminated Sites Regulation (CSR)*, B.C. Reg. 375/96, includes amendments up to B.C. Reg. 133/2022, March 1, 2023.



SNC-Lavalin reviewed the following report provided by MoTI:

- *Step A Project Screening: Highway 1 Widening From 1.6km West 264 Street to 2.5km East of Whatcom Road, Abbotsford, BC (Rev. 1)*, prepared by Active Earth Engineering, dated October 26, 2021 (Active Earth, 2021).

1.3 Conceptual Site Model and Sampling Frequency

According to the Step A Screening Report (Active Earth, 2021) and an email from Active Earth dated November 6, 2023, no *Contaminated Sites Regulation*⁴ (CSR) Schedule 2 activities were identified within the Project Area. In addition, no High-Risk properties were identified. Soil sampling targeted the surface Stripping Material (top 0-0.5 m, generally), and Type D Material within the depth of construction.

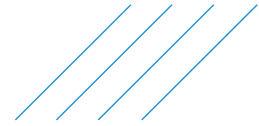
The soil characterization work was completed in general accordance with BC ENV TG1 and MoTI's Technical Circular T-03/20. As there are no Schedule 2 sites in close proximity to the Project Area Soils, wider delineation spacing of approximately 120 m or less was used to characterize the soil in the cut zones in the Project Area. In these areas, professional judgement was used for recommended spacing to characterize the soil and delineate any impacts.

It should be noted that the soil characterization work was associated only with proposed cut areas described in the above Project drawings, within the Project Area. The Step B work did not characterize all unsuitable material outside the proposed cuts in the Project Area or from any embankment stripping (if applicable) associated with SS 201.14 in MOTI's *2020 Standard Specifications for Highway Construction Volume 1 of 2*. Any uncharacterized soil due to the above or resulting from design changes made subsequent to this report, should be preferentially managed and re-used on site. Otherwise, the material should be characterized if off-site disposal is required.

The potential contaminants of concern (PCOCs) were based on results from previous testing along FVH1CP and included metals and polycyclic aromatic hydrocarbons (PAHs) associated with unknown quality of soil. Testing for PCOCs was done in general accordance with the Contaminated Sites Approved Professionals (CSAP) PCOC Selection and Guidance document (2018)⁵, at the discretion of the Qualified Professional (QP) for the Project, Mr. Harbey Bains, P.Eng., CSAP.

⁴ *Contaminated Sites Regulation* (CSR), B.C. Reg. 375/96, includes amendments up to B.C. Reg. 133/2022, March 1, 2023.

⁵ Society of Contaminated Sites Approved Professionals of British Columbia. (2018). *Potential Contaminants of Concern at Commercial and Industrial Land Uses*. Retrieved from: <https://csapsociety.bc.ca/wpcontent/uploads/r-PCOC-Guidance-June-2018-V1.0-002.pdf>.



2 Regulatory Framework

The regulatory statutes and criteria applicable to Project Area for soil disposal purposes are:

- *Environmental Management Act* (EMA), B.C. Reg. 133/2022 / effective March 1, 2023;
- *Contaminated Sites Regulation* (CSR), B.C. Reg. 375/96, includes amendments up to B.C. Reg. 133/2022, March 1, 2023; and
- *Hazardous Waste Regulation* (HWR), B.C. Reg. 63/88, last amended July 7, 2023 by B.C. Reg. 170/2023.

On-Site Standards

The Project Area is located to the north of the exiting Bradner Rest Area, with proposed plans for a new stream channel and a riparian area, with an access lane to facilitate construction and maintenance. Based on City of Abbotsford zoning map, the Project Area is zoned as “A1 – Agricultural One Zone” as such the applicable soil standards for the assessment of soil quality are the CSR agricultural land use (AL) soil standards, including matrix and generic standards (Schedule 3.1).

The following site-specific factors are applicable for AL soil standards and the most stringent of each is applied to data analysis:

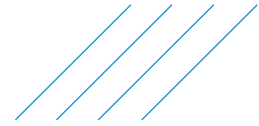
- Human intake of contaminated soil (mandatory for all sites);
- Toxicity to soil invertebrates and plants (mandatory for all sites);
- Livestock ingesting soil and fodder;
- Major microbial impairment;
- Groundwater flow to surface water used by freshwater aquatic life;
- Groundwater used for drinking water;
- Groundwater used for livestock watering; and
- Groundwater used for irrigation.

In addition, given the proximity of the Project Area to the Highway Right-Of-Way and the potential for soil relocation within the Highway ROW or to other disposal or relocation areas, the analytical results were also compared to the CSR Industrial Land Use (IL) soil standards, including matrix and generic standards (Schedule 3.1).

The following site-specific factors are applicable for IL soil standards and the most stringent of each is applied to data analysis:

- Human intake of contaminated soil (mandatory for all sites);
- Toxicity to soil invertebrates and plants (mandatory for all sites);
- Groundwater flow to surface water used by freshwater aquatic life; and
- Groundwater used for drinking water.

The HWR soil standards are also relevant to soil transported and disposed off site.



Other Standards (for Potential Relocation)

Uncontaminated soil from the Project Area may potentially be transported to an agricultural property, and as such, other standards selected for comparison are the CSR AL, including matrix and generic standards (Schedule 3.1). Conservative pH values and most stringent site-specific factors were selected.

- Human intake of contaminated soil (mandatory for all sites);
- Toxicity to soil invertebrates and plants (mandatory for all sites);
- Livestock ingesting soil and fodder;
- Major microbial impairment;
- Groundwater flow to surface water used by freshwater or marine aquatic life, whichever is most stringent;
- Groundwater used for drinking water;
- Groundwater used for livestock watering; and
- Groundwater used for irrigation.

For unknown destination IL receiving sites, conservative pH values and most stringent site-specific factors from the list below for IL use were selected for the applicable standard.

- Human intake of contaminated soil (mandatory for all sites);
- Toxicity to soil invertebrates and plants (mandatory for all sites);
- Groundwater flow to surface water used by freshwater or marine aquatic life, whichever is most stringent and
- Groundwater used for drinking water.

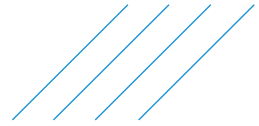
One potential destination being considered by MoTI at the date of this report is Strong Pit, located at 1461 and 1505 Bradner Road in Abbotsford, BC (“Strong Pit Site”). The Strong Pit Site is located within the Agricultural Land Reserve (ALR) and is subject to the provisions of the *Agricultural Land Commission Act*⁶ (ALCA) and associated Regulations. However, an application for the site was approved by the Agricultural Land Commission on October 1, 1998 for the continued use of the site as a gravel pit, with a requirement to be reclaimed to mine standards at its conclusion. A number of investigations were completed at the Strong Pit Site from 2009 to 2023 by Ausenco Sustainability Inc. (and formerly Hemmera Envirochem Inc.). In 2023, Ausenco completed a soil pH assessment⁷ for the Strong Pit Site pursuant with Technical Guidance Document 5⁸ (TG5), and the median pH was calculated to be 6.63. For the purposes of this report, the applicable land use standards for the Strong Pit Site are the AL standards. For Strong Pit, the most stringent site-specific factors were selected.

- Human intake of contaminated soil (mandatory for all sites);
- Toxicity to soil invertebrates and plants (mandatory for all sites);
- Livestock ingesting soil and fodder;

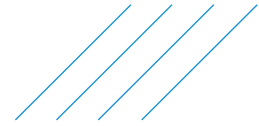
⁶ *Agricultural Land Commission Act* (ALCA) [SBC 2002] Chapter 36, May 30, 2002.

⁷ Ausenco. 2023. Results of Soil pH Assessment, Strong Pit, Abbotsford, BC, dated May 9, 2023.

⁸ Technical Guidance Document 5: *Sampling and Determining Soil pH at Soil Relocation Receiving Sites*, BC Ministry of Environment & Climate Change Strategy, March 2023.



- Groundwater flow to surface water used by freshwater aquatic life (marine aquatic life pathway not applicable);
- Groundwater used for drinking water;
- Groundwater used for livestock watering; and
- Groundwater used for irrigation.



3 Scope of Work

SNC-Lavalin completed field investigations in November 2023 to facilitate soil characterization of the Project Area. The general scope of work comprised of the following:

- Collection of soil samples along the proposed Bradner North Environmental Habitat Enhancement Area in general accordance with the cut depths identified in the design drawings;
- Preparation of a site-specific health and safety plan to MoTI and Charter Project Delivery Inc. (Charter PDI) prior to initiation of the field work activities. The HASP incorporated requirements identified MoTI's Pre-Construction QA and Health and Safety Management Plan dated April 2022;
- Completion of a BC One Call and review of utility drawings provided by MoTI or others;
- Subcontracting Geoscan Subsurface Surveys (Geoscan) of Burnaby, BC to complete field locates prior to subsurface investigations;
- Subcontracting VanMars Drilling Ltd. (Van Mars) of Abbotsford, BC to support SNC-Lavalin during the soil sampling;
- Submission of soil samples to Bureau Veritas (BV) of Burnaby, BC for laboratory analyses;
- Data reduction, tabulation of analytical results; and
- Preparation of this report.

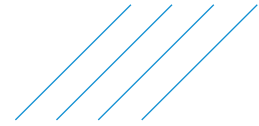
3.1 Field Methodology

Field work activities for the Project Area were conducted by SNC-Lavalin on November 20, 2023. Sampling locations specific to the Project Area are shown on attached [Drawings 694890-401A](#) and [694890-401B](#). This task consisted of the collection of soil samples from the Stripping and Type D Materials within the Project Area. The "A" drawing provides the Stripping Material locations and results, and the "B" drawing provides the Type D Material locations and results.

All field activities were completed following SNC-Lavalin's Preferred Operating Procedures (POPs), MoTI's Technical Circular T-03/20 and industry best practices. Quality Assurance/Quality Control (QA/QC) measures were implemented for all sampling and analyses to ensure that all data is representative and are summarized in [Appendix I](#).

A total of 5 boreholes BH23-105 to BH23-109 were advanced to a maximum depth of 1.6 metres below ground surface (m bgs). Sample locations (X, Y) were recorded by SNC-Lavalin using GPS.

Soil conditions at each investigation location was logged with respect to soil type, colour, density, moisture content, and evidence of contamination. Soil samples were collected at regular intervals or changes in soil stratigraphy. Soil samples were collected into plastic sampling bags. Sample selection was based upon indications of contamination (i.e., visual observations), and associated PCOCs. Samples were stored in an ice-chilled cooler and delivered with appropriate chain-of-custody documentation to BV Analytical Services in Burnaby, BC for selective analysis of saturated paste sodium and chloride and metal parameters. Following soil sampling, all boreholes were backfilled with soil cuttings.



4 Results

The results of the field activities completed in the Project Area are presented in the following sections.

4.1 Field Observations

Soil conditions and observations at each borehole location are presented in Boreholes Logs ([Appendix II](#)).

4.2 Soil Analytical Results

Tabulated soil analytical results compared to CSR AL and IL soil standards are presented in the attached [Tables 1 and 2](#). Laboratory soil analytical reports are included in [Appendix III](#). The soil analytical results are summarized on [Drawing 694890-401A](#) (for Stripping Material) and [Drawing 694890-401B](#) (for Type D Material).

4.2.1 Stripping Material

A total of 8 samples (and 2 duplicates) representing shallow Stripping Material within the Project Area were collected and tested, and the following parameters exceeded the applicable standards for select PAH parameters:

Table A: Summary of Exceedances – Stripping Material

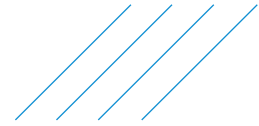
| Parameter Exceeded | pH Dependent | Number of Samples Greater than CSR AL | Number of Samples Greater than CSR AL (Strong Pit pH) | Number of Samples Greater than CSR IL | CSR AL Standard (ug/g) | CSR AL Standard (Strong Pit) (ug/g) | CSR IL Standard (ug/g) |
|-------------------------|--------------|---------------------------------------|---|---------------------------------------|------------------------|-------------------------------------|------------------------|
| Phenanthrene | No | 2 | 2 | - | 0.1 | 0.1 | 50 |
| Pyrene | No | 3 | 3 | - | 0.1 | 0.1 | 100 |
| Benzo(b) fluoranthene | No | 2 | 2 | - | 0.1 | 0.1 | 10 |
| Benzo(b+j) fluoranthene | No | 2 | 2 | - | 0.1 | 0.1 | 10 |

Notes:

- See Regulatory Framework section for details on the site-specific factors used for determining matrix standards for CSR AL, CSR AL (Strong Pit), and CSR IL.

The applicable AL standards were exceeded for phenanthrene, pyrene, benzo(b)fluoranthene and benzo(b+j)fluoranthene within the Stripping Material.

It should be noted that the PAH results were also lab tested with a silica-gel clean up method (to potentially correct for organics) and the results were unchanged. A copy of the lab reports with the silica-gel method is included in [Appendix III](#).



4.2.2 Type D Material

A total of 11 samples representing Type D Material within the Project Area were collected and tested, and the following parameters exceeded the applicable standards for select metals:

Table B: Summary of Exceedances – Type D Material

| Parameter Exceeded | pH Dependent | Number of Samples Greater than CSR AL | Number of Samples Greater than CSR AL (Strong Pit pH) | Number of Samples Greater than CSR IL | CSR AL Standard (ug/g) | CSR AL Standard (Strong Pit) (ug/g) | CSR IL Standard (ug/g) |
|--------------------|--------------|---------------------------------------|---|---------------------------------------|------------------------|-------------------------------------|------------------------|
| Trivalent Chromium | No | 1 | 1 | - | 60 ^a | 60 ^a | 60 ^a |
| Iron | No | 4 | 4 | - | 35,000 | 35,000 | 150,000 |

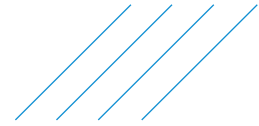
Notes:

- ^a – Individual standards exist for Chromium (III) and Chromium (VI), reported values represent most stringent standard.
- See Regulatory Framework section for details on the site-specific factors used for determining matrix standards for CSR AL, CSR AL (Strong Pit), and CSR IL.

The applicable AL standards exceeded in one sample for trivalent chromium and four samples for iron.

4.3 Quality Assurance/Quality Control

A QA/QC program was implemented to ensure the integrity of all sampling and analysis and to ensure that all data was handled accordingly. Overall, the results are considered adequate to confirm that the data is considered reliable and reproducible. Details and results of the QA/QC program are provided in [Appendix I](#).



5 Soil Results Summary

Tabulated soil analytical results compared to CSR AL and IL soil standards are presented in [Tables 1 and 2](#) (attached).

The Step B Soil Characterization the Project Area identified three soil classifications:

- AL+ / IL- Industrial Quality Soils;
- AL- Agricultural Quality Soils – Strong Pit (suitable for relocation to Strong Pit, based on site pH of 6.63); and
- AL- Agricultural Quality Soils – All Sites (i.e., meets AL standards for all receiving sites⁹).

A review of the data indicated soil should be separated into populations based on the CSM described in [Section 1.3](#), and into two main soil categories (Stripping Material and Type D Material) within the proposed soil cuts in the Project Area.

As noted in [Section 1.3](#), the soil characterization work was associated only with proposed cut areas described in the above Project drawings, in the above-defined areas, with potential for contamination. The Step B work did not characterize all unsuitable material outside the station ranges in the Project Area defined in [Section 1](#) (Introduction) from embankment stripping (if applicable) associated with *SS 201.14 in MOTI's 2020 Standard Specifications for Highway Construction Volume 1 of 2*. Any uncharacterized soil due to the above or resulting from design changes made subsequent to this report, should be preferentially managed and re-used on site. Otherwise, the material should be characterized if off-site disposal is required.

In general, for delineation of AL+ soil, the lateral and vertical extents were based on approximate equal distances to the nearest boreholes or sample depths (if vertical) that had soil concentrations below those standards at similar soil units (i.e., Stripping Material or Type D Material). Delineation depths also factored in the extent of the associated soil cut in the Project Area.

The locations of Industrial Quality, Agricultural Quality (Strong Pit or all) Type D Material and Stripping Material that may be encountered as a part of proposed construction activities in the Project Area are presented on the attached [Drawing 694890-401A](#) (for Stripping Material) and [Drawing 694890-401B](#) (for Type D Material). The estimated volumes of Industrial Quality and Agricultural Quality Type D Material and Stripping Material, associated within the Project Area are summarized in [Table C](#), below.

⁹ Applicable standards at receiving sites are dependent on pH of the receiving site, and the applicable water use pathways.

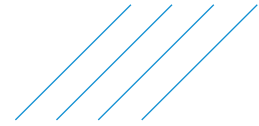
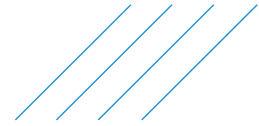


Table C: Soil Classification Summary – Project Area

| Station Range | Classification Depth | Contaminants Remaining* | Estimated Volumes** (m ³) | | | |
|---|----------------------|---|---------------------------------------|-------------|---------|-----|
| | | | AL- (Strong Pit) | AL- (Other) | AL+/IL- | IL+ |
| Access Road – Stripping Material | | | | | | |
| 100+00 to 100+50 | 0 m to 0.5 m | Phenanthrene, Pyrene, Benzo(b)fluoranthene and Benzo(b+j)fluoranthene | | | 380 | |
| 100+50 to 101+30 | 0 m to 0.5 m | n/a | 610 | ✓ | | |
| 101+30 to 102+00 | 0 m to 0.5 m | Phenanthrene, Pyrene, Benzo(b)fluoranthene and Benzo(b+j)fluoranthene | | | 530 | |
| 102+00 to 103+05 | 0 m to 0.5 m | n/a | 800 | ✓ | | |
| Access Road – Type D Material | | | | | | |
| 100+00 to 100+50 | 0.5 m to 3 m | Trivalent Chromium and Iron | | | 465 | |
| 100+50 to 101+30 | 0.5 m to 3 m | n/a | 745 | ✓ | | |
| 101+30 to 103+05 | 0.5 m to 3 m | Iron | | | 1,630 | |
| Channel – Stripping Material | | | | | | |
| 10+00 to 10+70 | 0 m to 0.5 m | Phenanthrene, Pyrene, Benzo(b)fluoranthene and Benzo(b+j)fluoranthene | | | 370 | |
| 10+70 to 11+50 | 0 m to 0.5 m | n/a | 420 | ✓ | | |
| 11+50 to 12+30 | 0 m to 0.5 m | Pyrene | | | 420 | |
| 12+30 to 13+30 | 0 m to 0.5 m | n/a | 525 | ✓ | | |
| 13+30 to 15+03 | 0 m to 0.5 m | Phenanthrene, Pyrene, Benzo(b)fluoranthene and Benzo(b+j)fluoranthene | | | 915 | |
| Channel – Type D Material | | | | | | |
| 10+00 to 10+70 | 0.5 m to 3 m | Trivalent Chromium and Iron | | | 60 | |
| 10+70 to 11+50 | 0.5 m to 3 m | n/a | 70 | ✓ | | |
| 11+50 to 15+03 | 0.5 m to 3 m | iron | | | 290 | |

** Soil Volumes based on MoTI Design Drawings R1-EHA-201 to 202, Fraser Valley Highway 1 Corridor Improvement Program, Bradner North Environmental Habitat Enhancement, 100 % Detailed Design, Project 12947, Ministry of Transportation and Infrastructure, October 27, 2023.

✓ Suitable for relocation to all potential agricultural receiving sites. Soil meets the applicable standard (at all pH ranges and water use pathways) for potential receiving sites with the designated land use standard.

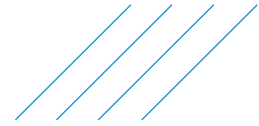


6 Conclusions

The extent of Industrial Quality, Agricultural Quality (Strong Pit or all) Type D Material and Stripping Material that may be encountered as a part of proposed construction activities at the Project Area are presented on the attached [Drawings 694890-401A](#) and [694890-401B](#). The estimated volumes of Industrial Quality (AL+/IL-) and Agricultural Quality (AL-) Type D Material and Stripping Material associated with the proposed construction at the Project Area are summarized in [Table C](#) in [Section 5](#).

It should be noted that conservative site-specific factors for determining matrix standards for CSR AL, and CSR IL were used, as the disposal site(s) locations and receiving site pH values were not known (except for Strong Pit). For parameters with exceedances that exhibited standards that were pH dependent, the receiving site pH could affect the number of samples that exceed for a given land use. As the receiving site location is unknown, the most stringent pH value was used for the applicable standard, except for AL (Strong Pit). Also noteworthy, the applicable site-specific groundwater use can also have significance to the applicable standards if the receiving site has pathways that are not applicable (such as groundwater used for irrigation, groundwater used for livestock watering, groundwater used for drinking water, and groundwater flow to surface water (freshwater or marine) used by aquatic life).

Based on the results of the Step B Soil Characterization program, SNC-Lavalin recommends a Step C Soil Management Strategy for the soils to be excavated the Project Area.



7 Notice to Reader

This report has been prepared and the work referred to in this report have been undertaken by SNC-Lavalin Inc. (SNC-Lavalin) for the exclusive use of the Ministry of Transportation and Infrastructure (MoTI), each of which has been party to the development of the scope of work and understands its limitations. The methodology, findings, conclusions and recommendations in this report are based solely upon the scope of work and subject to the time and budgetary considerations described in the proposal and/or contract pursuant to which this report was issued. MoTI may rely on this report as may any Authorized Users as defined by Contract 860-CS-5298. Any use, reliance on, or decision made by any other third party based on this report is the sole responsibility of such third party. SNC-Lavalin accepts no liability or responsibility for any damages that may be suffered or incurred by any third party as a result of the use of, reliance on, or any decision made based on this report.

The soil chemical results are based on the specific standards and conditions applicable at this site. The application of these results to prospective soil receiver sites must consider the standards and conditions applicable at those sites. It is recommended the Contractor retain an Approved Qualified Professional to assist with determining suitable soil relocation options, and to conduct further soil quality assessment as warranted.

The findings, conclusions and recommendations in this report (i) have been developed in a manner consistent with the level of skill normally exercised by professionals currently practicing under similar conditions in the area, and (ii) reflect SNC-Lavalin's best judgement based on information available at the time of preparation of this report. No other warranties, either expressed or implied, are made with respect to the professional services provided to MoTI or the findings, conclusions and recommendations contained in this report. The findings and conclusions contained in this report are valid only as of the date of this report and may be based, in part, upon information provided by others. If any of the information is inaccurate, new information is discovered or project parameters change, modifications to this report may be necessary.

This report must be read as a whole, as sections taken out of context may be misleading. If discrepancies occur between the preliminary (draft) and final version of this report, it is the final version that takes precedence. Nothing in this report is intended to constitute or provide a legal opinion.

Copying of this report is not permitted without the written permission of MoTI or SNC-Lavalin.

Tables

- 1: Summary of Analytical Results for Total Metals in Soil – Bradner North
- 2: Summary of Analytical Results for Polycyclic Aromatic Hydrocarbons in Soil – Bradner North



TABLE 1: Summary of Analytical Results for Total Metals in Soil – Bradner North

| Sample Location | Sample ID | Sample Date (yyyy mm dd) | Depth Interval (m) | pH | | Total Metals | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--------------------------|--------------------|----------|---------------|---------------|--------------|-------------|----------------|--------------------|--------------|-------------------|---------------------------|--------------------------|-------------|-------------|---------------------|-----------|------------------------|----------------|--------------|-----------------|-------------|---------------------|----------------|----------------|---------------|----------|---------------|--------------|---------------|-----------|----------------------|
| | | | | pH units | Aluminum µg/g | Antimony µg/g | Arsenic µg/g | Barium µg/g | Beryllium µg/g | Boron µg/g | Cadmium µg/g | Chromium µg/g | Chromium, hexavalent µg/g | Chromium, trivalent µg/g | Cobalt µg/g | Copper µg/g | Iron µg/g | Lead µg/g | Lithium µg/g | Manganese µg/g | Mercury µg/g | Molybdenum µg/g | Nickel µg/g | Selenium µg/g | Silver µg/g | Strontium µg/g | Thallium µg/g | Tin µg/g | Tungsten µg/g | Uranium µg/g | Vanadium µg/g | Zinc µg/g | |
| BH23-105 | BH23-105-01 | 2023 11 20 | 0.0 - 0.2 | 3.82 | 10,300 | 0.85 | 9.44 | 56.6 | < 0.20 | 2.8 | 0.153 | 27.2 | - | - | 3.88 | 23.7 | 19,700 | 90.0 | 6.56 | 162 | 0.235 | 0.99 | 14.1 | < 0.50 | 0.127 | 24.3 | < 0.050 | 0.88 | < 0.50 | 0.373 | 44.3 | 47.0 | |
| | BH23-105-02 | Duplicate | 0.0 - 0.2 | 3.71 | 7,650 | 0.80 | 8.17 | 58.2 | < 0.20 | 2.7 | 0.152 | 20.8 | - | - | 3.04 | 27.2 | 15,300 | 101 | 4.93 | 117 | 0.253 | 0.88 | 11.8 | < 0.50 | 0.115 | 28.0 | < 0.050 | 0.88 | < 0.50 | 0.299 | 33.6 | 42.3 | |
| | QA/QC RPD% | | | | * | 30 | 6 | 14 | 3 | * | * | * | 27 | - | - | 24 | 14 | 25 | 12 | 28 | 32 | * | 12 | 18 | * | * | 14 | * | 0 | * | 22 | 27 | 11 |
| | BH23-105-03 | 2023 11 20 | 0.5 - 0.6 | 5.00 | 34,900 | 0.33 | 6.65 | 92.0 | 0.58 | 2.7 | 0.223 | 77.2 | < 0.080 | 77 | 15.0 | 20.7 | 36,100 | 6.99 | 22.0 | 568 | 0.123 | 1.31 | 44.5 | 0.64 | 0.245 | 13.2 | 0.103 | 0.61 | < 0.50 | 0.803 | 75.2 | 86.1 | |
| BH23-106 | BH23-106-01 | 2023 11 20 | 0.0 - 0.2 | 4.69 | 20,300 | 0.76 | 3.72 | 94.9 | 0.91 | 2.1 | 0.263 | 30.6 | - | - | 5.61 | 18.4 | 13,600 | 26.2 | 10.9 | 229 | 0.170 | 1.09 | 18.7 | 1.13 | 0.250 | 18.1 | 0.061 | 0.64 | < 0.50 | 1.04 | 29.8 | 28.8 | |
| | BH23-106-04 | 2023 11 20 | 0.8 - 1.0 | 6.58 | 18,800 | 0.35 | 6.46 | 106 | 0.40 | 1.8 | 0.073 | 51.3 | - | - | 10.9 | 25.9 | 27,900 | 3.84 | 12.7 | 514 | 0.053 | 1.30 | 33.5 | < 0.50 | < 0.050 | 36.4 | 0.080 | 0.32 | < 0.50 | 0.754 | 70.2 | 43.6 | |
| | BH23-106-05 | 2023 11 20 | 1.5 - 1.6 | 7.05 | 18,500 | 0.49 | 8.74 | 99.8 | 0.42 | 5.3 | 0.158 | 50.7 | - | - | 13.6 | 39.1 | 32,200 | 4.58 | 14.5 | 524 | 0.076 | 1.05 | 44.2 | < 0.50 | 0.082 | 44.7 | 0.110 | 0.43 | < 0.50 | 0.508 | 78.7 | 64.0 | |
| | BH23-107-01 | 2023 11 20 | 0.0 - 0.2 | 4.12 | 15,800 | 0.72 | 8.44 | 59.7 | 0.28 | 4.6 | 0.188 | 28.3 | - | - | 6.43 | 19.3 | 22,700 | 46.0 | 9.31 | 501 | 0.232 | 0.72 | 16.5 | 0.60 | 0.146 | 12.6 | 0.087 | 0.89 | < 0.50 | 0.412 | 47.2 | 46.5 | |
| BH23-107 | BH23-107-02 | Duplicate | 0.0 - 0.2 | 4.34 | 18,800 | 0.61 | 7.71 | 66.1 | 0.35 | 3.0 | 0.223 | 32.5 | - | - | 8.76 | 17.3 | 26,300 | 31.9 | 11.3 | 840 | 0.188 | 0.70 | 19.7 | < 0.50 | 0.153 | 11.2 | 0.091 | 0.70 | < 0.50 | 0.427 | 55.2 | 56.7 | |
| | QA/QC RPD% | | | | * | 17 | 17 | 9 | 10 | * | * | * | 14 | - | - | 31 | 11 | 15 | 36 | 19 | 51 | * | 3 | 18 | * | * | 12 | * | 24 | * | 4 | 16 | 20 |
| | BH23-107-03 | 2023 11 20 | 0.5 - 0.6 | 4.81 | 29,300 | 0.35 | 4.52 | 95.3 | 0.62 | 2.8 | 0.320 | 42.7 | - | - | 12.5 | 17.0 | 31,000 | 8.94 | 17.0 | 863 | 0.131 | 0.79 | 34.0 | 0.53 | 0.178 | 10.9 | 0.121 | 0.59 | < 0.50 | 0.654 | 62.1 | 84.4 | |
| | BH23-107-05 | 2023 11 20 | 1.2 - 1.4 | 6.74 | 21,600 | 0.44 | 8.06 | 123 | 0.48 | 3.9 | 0.168 | 53.8 | - | - | 16.0 | 45.7 | 35,300 | 5.68 | 15.1 | 684 | 0.066 | 0.48 | 53.4 | < 0.50 | 0.055 | 56.5 | 0.114 | 0.50 | < 0.50 | 0.443 | 79.8 | 79.4 | |
| BH23-108 | BH23-108-01 | 2023 11 20 | 0.0 - 0.2 | 3.64 | 13,000 | 0.80 | 7.91 | 61.5 | < 0.20 | 3.1 | 0.110 | 23.0 | - | - | 3.44 | 17.8 | 15,500 | 54.9 | 8.00 | 99.6 | 0.227 | 0.80 | 14.6 | < 0.50 | 0.137 | 23.0 | 0.058 | 0.98 | < 0.50 | 0.337 | 37.7 | 32.2 | |
| | BH23-108-02 | Duplicate | 0.0 - 0.2 | 3.83 | 17,700 | 0.73 | 8.42 | 63.2 | 0.21 | 2.8 | 0.137 | 28.2 | - | - | 4.02 | 16.8 | 18,900 | 42.5 | 10.6 | 105 | 0.191 | 0.93 | 16.9 | < 0.50 | 0.157 | 17.4 | 0.066 | 0.96 | < 0.50 | 0.433 | 46.8 | 40.1 | |
| | QA/QC RPD% | | | | * | 31 | 9 | 6 | 3 | * | * | * | 20 | - | - | 16 | 6 | 20 | 25 | 28 | 5 | * | 15 | 15 | * | * | 28 | * | 2 | * | 25 | 22 | 22 |
| | BH23-108-03 | 2023 11 20 | 0.5 - 0.6 | 5.10 | 31,900 | 0.29 | 3.89 | 99.3 | 0.62 | 2.4 | 0.179 | 48.7 | - | - | 10.9 | 22.1 | 28,400 | 8.05 | 17.6 | 235 | 0.115 | 0.99 | 32.2 | 0.56 | 0.225 | 12.0 | 0.093 | 0.64 | < 0.50 | 0.655 | 70.8 | 69.8 | |
| BH23-109 | BH23-108-04 | 2023 11 20 | 0.9 - 1.1 | 7.08 | 21,800 | 0.44 | 8.94 | 138 | 0.50 | 3.1 | 0.131 | 55.1 | - | - | 17.1 | 44.1 | 35,500 | 5.23 | 16.8 | 869 | 0.062 | 1.09 | 51.3 | < 0.50 | < 0.050 | 47.1 | 0.107 | 0.47 | < 0.50 | 0.536 | 82.0 | 64.9 | |
| | BH23-108-05 | 2023 11 20 | 1.4 - 1.5 | 7.23 | 18,000 | 0.43 | 7.71 | 100 | 0.43 | 3.8 | 0.112 | 48.1 | - | - | 14.3 | 38.5 | 32,000 | 4.78 | 15.5 | 524 | 0.059 | 0.56 | 45.1 | < 0.50 | < 0.050 | 47.5 | 0.095 | 0.45 | < 0.50 | 0.396 | 74.2 | 68.9 | |
| | BH23-109-01 | 2023 11 20 | 0.0 - 0.2 | 3.66 | 8,720 | 0.83 | 7.47 | 110 | < 0.20 | 4.9 | 0.268 | 18.2 | - | - | 2.28 | 30.8 | 13,500 | 48.6 | 3.46 | 192 | 0.281 | 0.90 | 10.3 | 0.59 | 0.204 | 40.3 | < 0.050 | 1.00 | < 0.50 | 0.329 | 35.2 | 53.1 | |
| | BH23-109-03 | 2023 11 20 | 0.9 - 1.1 | 6.74 | 28,400 | 0.47 | 3.14 | 195 | 0.57 | 2.2 | 0.082 | 52.7 | - | - | 15.4 | 30.7 | 45,100 | 6.74 | 12.9 | 761 | 0.067 | 0.62 | 33.7 | < 0.50 | < 0.050 | 55.0 | 0.072 | 0.60 | < 0.50 | 2.30 | 96.7 | 54.3 | |
| BH23-109 | BH23-109-04 | 2023 11 20 | 1.5 - 1.6 | 6.92 | 17,800 | 0.39 | 5.24 | 117 | 0.42 | 2.2 | < 0.050 | 52.2 | - | - | 12.0 | 36.2 | 32,200 | 3.96 | 9.42 | 350 | < 0.050 | 0.55 | 37.8 | < 0.50 | < 0.050 | 39.5 | 0.057 | 0.37 | < 0.50 | 0.729 | 86.1 | 50.6 | |
| | BC Standard | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CSR Agricultural Land Use (AL) ^a | | | | n/a | 40,000 | 20 | 10 | 350 | 1-85 ^c | 8,500 | 1-10 ^c | 60 ^b | 60 | 60 | 25 | 75-150 ^c | 35,000 | 120 | 30 | 2,000 | 0.6 | 3 | 70-150 ^c | 4 ^d | 20 | 9,500 | 2 | 5 | 15 | 15 | 100 | 150-200 ^c |
| | CSR Industrial Land Use (IL) ^a | | | | n/a | 250,000 | 40 | 10 | 350 | 1-350 ^c | 1,000,000 | 1-50 ^c | 60 ^b | 60 | 250 | 25 | 75-300 ^c | 150,000 | 120-1,000 ^c | 450 | 2,000 | 75 | 15 | 70-250 ^c | 4 ^d | 40 | 150,000 | 25 | 300 | 200 | 30 | 100 | 150-450 ^c |
| Strong Pit Agricultural Land Use (AL) - Median pH 6.63 ^a | | | | n/a | 40,000 | 20 | 10 | 350 | 4 | 8,500 | 1 | 60 ^b | 60 | 60 | 25 | 150 | 35,000 | 120 | 30 | 2,000 | 0.6 | 3 | 70 | 4 ^d | 20 | 9,500 | 2 | 5 | 15 | 15 | 100 | 150 | |

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Associated Bureau Veritas Laboratories file(s): C394778, C394781, C394799.

All terms defined within the body of SNC-Lavalin's report.

< Denotes concentration less than indicated detection limit.

- Denotes analysis not conducted or calculation not completed.

n/a Denotes no applicable standard.

QA/QC RPD Denotes quality assurance/quality control relative percent difference.

* RPDs are not calculated where one or more concentrations are less than five times the RDL.

RDL Denotes reported detection limit.

- BOLD** Concentration greater than the CSR Agricultural Land Use (AL) standard
- SHADED** Concentration greater than the CSR Industrial Land Use (IL) standard
- OUTLINE** Concentration greater than Strong Pit Agricultural Land Use (AL) - Median pH 6.63 standard

^a The site-specific factors used for determining the matrix standards for this site include: intake of contaminated soil, groundwater used for drinking water, groundwater used for irrigation, groundwater used for livestock watering, livestock ingesting soil and fodder, toxicity to soil invertebrates and plants, major microbial functional impairment, and groundwater flow to surface water used by freshwater aquatic life (whichever is most stringent).

^b Individual standards exist for Cr +3 and Cr +6. Reported value represents more stringent standard.

^c Standard varies with pH.

^d Regional background soil quality estimate for Selenium, as provided in Table 1 of Protocol 4; for Contaminated Sites, Establishing Local Background Concentrations in Soil.

TABLE 2: Summary of Analytical Results for Polycyclic Aromatic Hydrocarbons in Soil – Bradner North

| Sample Location | Sample ID | Sample Date (yyyy mm dd) | Depth Interval (m) | Polycyclic Aromatic Hydrocarbons | | | | | | | | | | | | | | | | | | | |
|---|-------------|--------------------------|--------------------|----------------------------------|-----------------------------|-----------------------------|---------------------|-------------------|---------------|-------------------|-----------------|-------------------|-------------|------------------------|---------------|---------------------------|-----------------------------|---------------------------|---------------------|-----------------------------|----------------------------|---------------------------|----------------|
| | | | | Naphthalene µg/g | Methyl naphthalene, 1- µg/g | Methyl naphthalene, 2- µg/g | Acenaphthylene µg/g | Acenaphthene µg/g | Fluorene µg/g | Phenanthrene µg/g | Anthracene µg/g | Fluoranthene µg/g | Pyrene µg/g | Benz(a)anthracene µg/g | Chrysene µg/g | Benzo(b)fluoranthene µg/g | Benzo(b+j)fluoranthene µg/g | Benzo(k)fluoranthene µg/g | Benzo(a)pyrene µg/g | Indeno(1,2,3-cd)pyrene µg/g | Dibenz(a,h)anthracene µg/g | Benzo(g,h,i)perylene µg/g | Quinoline µg/g |
| BH23-105 | BH23-105-01 | 2023 11 20 | 0.0 - 0.2 | < 0.010 | < 0.050 | < 0.020 | < 0.0050 | 0.0058 | < 0.020 | 0.16 | < 0.0040 | 0.39 | 0.33 | 0.093 | 0.24 | 0.15 | 0.24 | 0.089 | 0.12 | 0.088 | < 0.020 | 0.086 | < 0.050 |
| | BH23-105-03 | 2023 11 20 | 0.5 - 0.6 | < 0.010 | < 0.050 | < 0.020 | < 0.0050 | < 0.0050 | < 0.020 | < 0.010 | < 0.0040 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.050 | < 0.050 |
| BH23-106 | BH23-106-01 | 2023 11 20 | 0.0 - 0.2 | < 0.041 | < 0.21 | < 0.082 | < 0.021 | < 0.021 | < 0.082 | 0.049 | < 0.016 | 0.089 | 0.089 | < 0.082 | < 0.082 | < 0.082 | < 0.082 | < 0.082 | < 0.082 | < 0.082 | < 0.082 | < 0.21 | < 0.21 |
| | BH23-107-01 | 2023 11 20 | 0.0 - 0.2 | < 0.010 | < 0.050 | < 0.020 | < 0.0050 | < 0.0050 | < 0.020 | 0.061 | 0.0071 | 0.13 | 0.13 | 0.034 | 0.081 | 0.049 | 0.081 | 0.033 | 0.037 | 0.036 | < 0.020 | < 0.050 | < 0.050 |
| BH23-107 | BH23-107-03 | 2023 11 20 | 0.5 - 0.6 | < 0.010 | < 0.050 | < 0.020 | < 0.0050 | < 0.0050 | < 0.020 | < 0.010 | < 0.0040 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.050 | < 0.050 |
| | BH23-108-01 | 2023 11 20 | 0.0 - 0.2 | < 0.022 | < 0.11 | < 0.044 | < 0.011 | < 0.011 | < 0.044 | 0.052 | < 0.0088 | 0.099 | 0.090 | < 0.044 | 0.075 | 0.071 | 0.071 | < 0.044 | < 0.044 | < 0.044 | < 0.044 | < 0.11 | < 0.11 |
| BH23-109 | BH23-109-01 | 2023 11 20 | 0.0 - 0.2 | < 0.021 | < 0.11 | < 0.042 | < 0.011 | < 0.011 | < 0.042 | 0.11 | 0.012 | 0.25 | 0.20 | 0.062 | 0.14 | 0.11 | 0.16 | 0.049 | 0.091 | 0.045 | < 0.042 | < 0.11 | < 0.11 |
| | BH23-109-03 | 2023 11 20 | 0.9 - 1.1 | < 0.010 | < 0.050 | < 0.020 | < 0.0050 | < 0.0050 | < 0.020 | < 0.010 | < 0.0040 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.020 | < 0.050 | < 0.050 | |
| BC Standard | | | | | | | | | | | | | | | | | | | | | | | |
| CSR Agricultural Land Use (AL) ^a | | | | 0.6 | 250 | 60 | n/a | 950 | 600 | 0.1 | 2.5 | 50 | 0.1 | 0.1 | 200 | 0.1 | 0.1 | 0.1 | 5 | 0.1 | 0.1 | n/a | 2.5 |
| CSR Industrial Land Use (IL) ^a | | | | 20 | 1,000 | 950 | n/a | 15,000 | 9,500 | 50 | 30 | 200 | 100 | 10 | 4,500 | 10 | 10 | 10 | 50 | 10 | 10 | n/a | 10 |
| Strong Pit Agricultural Land Use (AL) - Median pH 6.63 ^a | | | | 0.6 | 250 | 60 | n/a | 950 | 600 | 0.1 | 2.5 | 50 | 0.1 | 0.1 | 200 | 0.1 | 0.1 | 0.1 | 5 | 0.1 | 0.1 | n/a | 2.5 |

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- Denotes analysis not conducted or calculation not completed.

n/a Denotes no applicable standard.

QA/QC RPD Denotes quality assurance/quality control relative percent difference.

* RPDs are not calculated where one or more concentrations are less than five times the RDL.

RDL Denotes reported detection limit.

BOLD Concentration greater than the CSR Agricultural Land Use (AL) standard

SHADED Concentration greater than the CSR Industrial Land Use (IL) standard

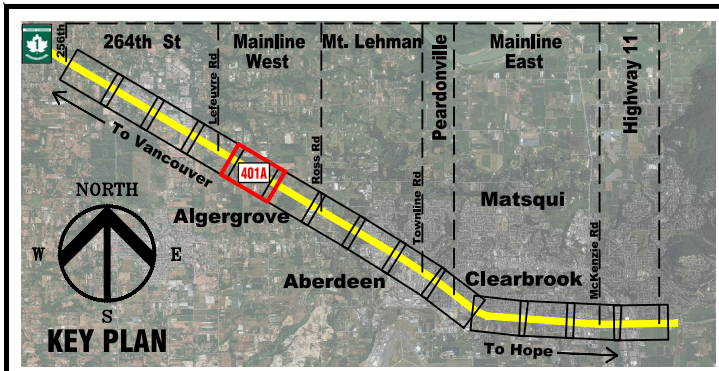
OUTLINE Concentration greater than Strong Pit Agricultural Land Use (AL) - Median pH 6.63 standard

^a The site-specific factors used for determining the matrix standards for this site include: intake of contaminated soil, groundwater used for drinking water, groundwater used for irrigation, groundwater used for livestock watering, livestock ingesting soil and fodder, toxicity to soil invertebrates and plants, major microbial functional impairment, and groundwater flow to surface water used by freshwater aquatic life (whichever is most stringent).

Drawings

- 694890-401A – Detailed Soil Analytical Results – Bradner North (Stripping)
- 694890-401B – Detailed Soil Analytical Results – Bradner North (Type D)





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| LOCATION | Sample Depth | Cr | Fe | Other Metals | PHE | PYR | B(b)F | B(b)F | Other PAHs |
|----------|--------------|------|--------|--------------|------|------|-------|-------|------------|
| BH23-109 | 0.0 - 0.2 | 18.2 | 13,500 | <AL/IL | 0.11 | 0.20 | 0.11 | 0.16 | <AL/IL |

LEGEND

- LOT BOUNDARY
- - - RIGHT-OF-WAY
- PAVEMENT EDGE
- - - - - LOCATION OF SOIL CUT OR INFILLING
- 1020 STATION MARKER
- ⊕ BOREHOLE
- CONCENTRATION(S) LESS THAN OR EQUAL TO THE APPLICABLE CSR AL/IL STANDARDS
- CONCENTRATION(S) GREATER THAN THE APPLICABLE CSR IL STANDARDS
- CONCENTRATION(S) GREATER THAN THE APPLICABLE CSR AL STANDARD
- CONCENTRATION GREATER THAN THE APPLICABLE CSR IL STANDARD
- CONCENTRATION GREATER THAN THE APPLICABLE CSR IL STANDARD

| CSR AGRICULTURAL LAND USE (AL) STANDARD (µg/g) ^b | Cr | Cr(III) | Fe | Other Metals | PHE | PYR | B(b)F | B(b)F | Other PAHs |
|---|----|---------|---------|--------------|-----|-----|-------|-------|------------|
| 60 | 60 | 60 | 35,000 | SEE TABLES | 0.1 | 0.1 | 0.1 | 0.1 | SEE TABLES |
| CSR INDUSTRIAL LAND USE (IL) STANDARD (µg/g) ^b | 60 | 250 | 150,000 | SEE TABLES | 50 | 100 | 10 | 10 | SEE TABLES |

BRADNER REST AREA

| LOCATION | Sample Depth | Cr | Fe | Other Metals | PHE | PYR | B(b)F | B(b)F | Other PAHs |
|----------|--------------|------|--------|--------------|-------|-------|--------|--------|------------|
| BH23-105 | 0.0 - 0.2 | 27.2 | 19,700 | <AL/IL | 0.16 | 0.33 | 0.15 | 0.24 | <AL/IL |
| BH23-106 | 0.0 - 0.2 | 30.6 | 13,600 | <AL/IL | 0.049 | 0.089 | <0.082 | <0.082 | <AL/IL |
| BH23-107 | 0.0 - 0.2 | 28.3 | 22,700 | <AL/IL | 0.061 | 0.13 | 0.049 | 0.081 | <AL/IL |
| BH23-108 | 0.0 - 0.2 | 23.0 | 15,500 | <AL/IL | 0.052 | 0.090 | 0.071 | 0.071 | <AL/IL |
| BH23-109 | 0.0 - 0.2 | 18.2 | 13,500 | <AL/IL | 0.11 | 0.20 | 0.11 | 0.16 | <AL/IL |

NOTES

1. ORIGINAL DRAWING IN COLOUR.
2. "o" DENOTES SOIL STATISTICALLY MEETS CSR AL AND/OR IL STANDARDS. SEE REPORT FOR DETAILS.
3. "b" DENOTES SEE REPORT REGULATORY FRAMEWORK AND APPLICABLE PATHWAYS AND SITE-SPECIFIC FACTORS.
4. "c" DENOTES pH DEPENDENT.
5. FOR STRONG PIT, RECEIVING SITE pH=6.63.

| LOCATION | Sample Depth | Cr | Fe | Other Metals | PHE | PYR | B(b)F | B(b)F | Other PAHs |
|----------|--------------|------|--------|--------------|-------|-------|--------|--------|------------|
| BH23-105 | 0.0 - 0.2 | 27.2 | 19,700 | <AL/IL | 0.16 | 0.33 | 0.15 | 0.24 | <AL/IL |
| BH23-106 | 0.0 - 0.2 | 30.6 | 13,600 | <AL/IL | 0.049 | 0.089 | <0.082 | <0.082 | <AL/IL |
| BH23-107 | 0.0 - 0.2 | 28.3 | 22,700 | <AL/IL | 0.061 | 0.13 | 0.049 | 0.081 | <AL/IL |
| BH23-108 | 0.0 - 0.2 | 23.0 | 15,500 | <AL/IL | 0.052 | 0.090 | 0.071 | 0.071 | <AL/IL |
| BH23-109 | 0.0 - 0.2 | 18.2 | 13,500 | <AL/IL | 0.11 | 0.20 | 0.11 | 0.16 | <AL/IL |

REFERENCE DRAWINGS

| DWG. NO. | DATE | DESCRIPTION |
|----------|---------|------------------------|
| 2023 | 2023 | BING AERIAL IMAGERY |
| 2022-04 | 2022-04 | ASSOCIATED ENGINEERING |

REVISIONS

| REV. | DATE | DESCRIPTION | BY | CHK |
|------|------------|------------------|-----|-----|
| 0 | 2023-12-15 | ISSUED TO CLIENT | PES | SR |

CLIENT NAME: MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE

PROJECT LOCATION: HIGHWAY 1 - 264th STREET TO WHATCOM ROAD, ABBOTSFORD, BC

TITLE: DETAILED SOIL ANALYTICAL RESULTS - BRADNER NORTH (STRIPPING)

SCALE: 1:1,500

DATE: 2023-11-24

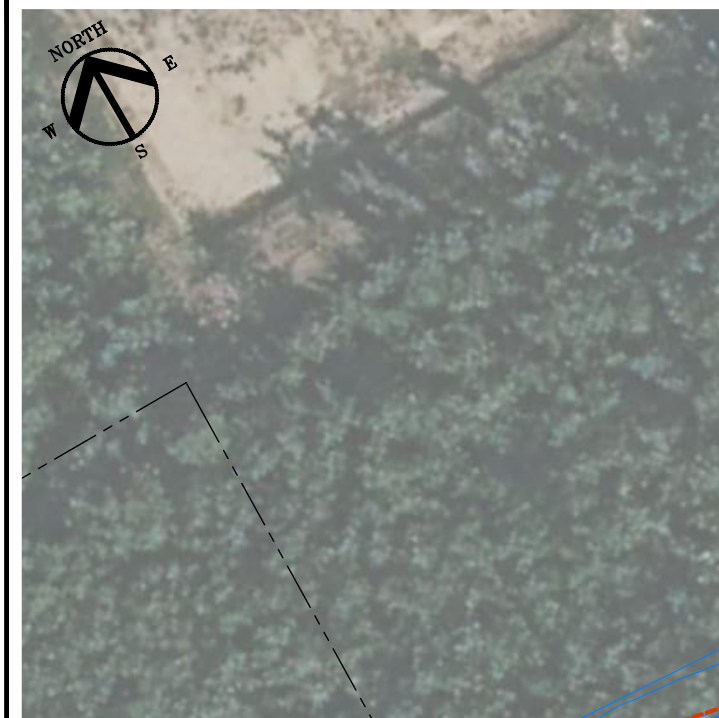
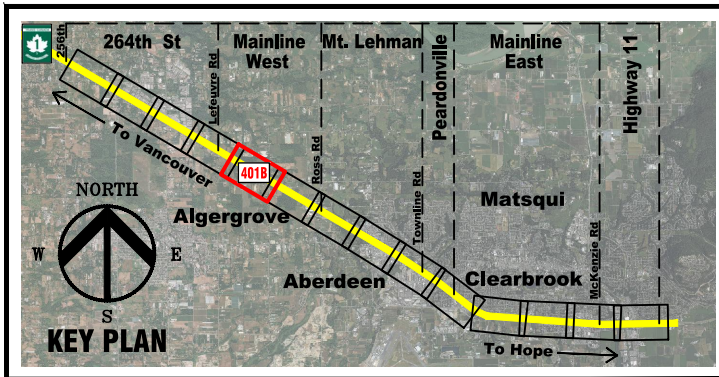
DWG No: 694890-401A

REV.: 0

CHK'D: EW

PLOT: 20231214.1745

CADFILE: 694890R05



Notice to Reader: The soil chemical results shown are based on the specific standards and conditions applicable at this site. The application of these results to prospective soil receiver sites must consider the standards and conditions applicable at those sites. It is recommended the Contractor retain an Approved Qualified Professional to assist with determining suitable soil relocation options, and to conduct further soil quality assessment as warranted.

| LOCATION | ANALYTICAL SOIL RESULTS | | | | | | | | |
|-------------|-------------------------|------|--------|--------------|--------|--------|--------|--------|------------|
| BH23-109 | Sample Depth | Cr | Fe | Other Metals | PHE | PYR | B(b)F | B(b)F | Other PAHs |
| BH23-109-03 | 0.9 - 1.1 | 52.7 | 45,100 | <AL/IL | <0.010 | <0.020 | <0.020 | <0.020 | <AL/IL |

SAMPLE ID: BH23-109-03
 DEPTH OF SAMPLE (m): 0.9 - 1.1
BLUE - CONCENTRATION GREATER THAN THE APPLICABLE CSR AL STANDARD
GREEN - CONCENTRATION LESS THAN OR EQUAL TO THE APPLICABLE CSR AL/IL STANDARDS
RED - CONCENTRATION GREATER THAN THE APPLICABLE CSR IL STANDARD

| | Cr | Cr(III) | Fe | Other Metals | PHE | PYR | B(b)F | B(b)F | Other PAHs |
|---|----|---------|---------|--------------|-----|-----|-------|-------|------------|
| CSR AGRICULTURAL LAND USE (AL) STANDARD (µg/g) ^b | 60 | 60 | 35,000 | SEE TABLES | 0.1 | 0.1 | 0.1 | 0.1 | SEE TABLES |
| CSR INDUSTRIAL LAND USE (IL) STANDARD (µg/g) ^b | 60 | 250 | 150,000 | SEE TABLES | 50 | 100 | 10 | 10 | SEE TABLES |

LEGEND

- LOT BOUNDARY
- - - RIGHT-OF-WAY
- PAVEMENT EDGE
- - - - - LOCATION OF SOIL CUT OR INFILLING
- 1020 STATION MARKER
- ⊕ BOREHOLE
- CONCENTRATION(S) LESS THAN OR EQUAL TO THE APPLICABLE CSR AL/IL STANDARDS
- CONCENTRATION(S) GREATER THAN THE APPLICABLE CSR IL STANDARDS
- CONCENTRATION(S) GREATER THAN THE APPLICABLE CSR AL STANDARD
- ▭ ADVANCE WORK MEDIAN BOUNDARIES

NOTES

1. ORIGINAL DRAWING IN COLOUR.
2. "a" DENOTES SOIL STATISTICALLY MEETS CSR AL AND/OR IL STANDARDS. SEE REPORT FOR DETAILS.
3. "b" DENOTES SEE REPORT REGULATORY FRAMEWORK AND APPLICABLE PATHWAYS AND SITE-SPECIFIC FACTORS.
4. "c" DENOTES pH DEPENDENT.
5. FOR STRONG PIT, RECEIVING SITE pH=6.63.
6. "*" DENOTES VALUE REPRESENTS Cr(III).

REFERENCE DRAWINGS

| DWG. NO. | DATE | DESCRIPTION |
|------------|---------|------------------------|
| 2023 | 2023 | BING AERIAL IMAGERY |
| FIGURE 2-5 | 2022-04 | ASSOCIATED ENGINEERING |

REVISIONS

| REV. | DATE | DESCRIPTION | BY | CHK |
|------|------------|------------------|-----|-----|
| 0 | 2023-12-15 | ISSUED TO CLIENT | PES | SR |

CLIENT NAME: MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
PROJECT LOCATION: HIGHWAY 1 - 264th STREET TO WHATCOM ROAD, ABBOTSFORD, BC
TITLE: DETAILED SOIL ANALYTICAL RESULTS - BRADNER NORTH (TYPE D)
DWN BY: PES **SCALE:** 1:1,500 **DATE:** 2023-11-29 **DWG No:** 694890-05 **REV:** 0
CHK'D: EW **PLOT:** 20231214.1746 **CADFILE:** 694890R05 **694890-401B**

| BH23-105 | Sample Depth | Cr | Fe | Other Metals | PHE | PYR | B(b)F | B(b)F | Other PAHs |
|-------------|--------------|------|--------|--------------|--------|--------|--------|--------|------------|
| BH23-105-03 | 0.5 - 0.6 | 77* | 38,100 | <AL/IL | <0.010 | <0.020 | <0.020 | <0.020 | <AL/IL |
| BH23-105-05 | 1.4 - 1.5 | 53.7 | 34,000 | <AL/IL | - | - | - | - | - |

| BH23-106 | Sample Depth | Cr | Fe | Other Metals |
|-------------|--------------|------|--------|--------------|
| BH23-106-04 | 0.8 - 1.0 | 51.3 | 27,900 | <AL/IL |
| BH23-106-05 | 1.5 - 1.6 | 50.7 | 32,200 | <AL/IL |

| BH23-107 | Sample Depth | Cr | Fe | Other Metals | PHE | PYR | B(b)F | B(b)F | Other PAHs |
|-------------|--------------|------|--------|--------------|--------|--------|--------|--------|------------|
| BH23-107-03 | 0.5 - 0.6 | 42.7 | 31,000 | <AL/IL | <0.010 | <0.020 | <0.020 | <0.020 | <AL/IL |
| BH23-107-05 | 1.2 - 1.4 | 53.8 | 35,300 | <AL/IL | - | - | - | - | - |

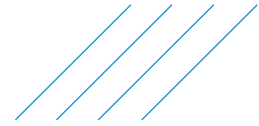
| BH23-108 | Sample Depth | Cr | Fe | Other Metals |
|-------------|--------------|------|--------|--------------|
| BH23-108-03 | 0.5 - 0.6 | 48.7 | 28,400 | <AL/IL |
| BH23-108-04 | 0.9 - 1.1 | 55.1 | 35,500 | <AL/IL |
| BH23-108-05 | 1.4 - 1.5 | 48.1 | 32,000 | <AL/IL |

| BH23-109 | Sample Depth | Cr | Fe | Other Metals | PHE | PYR | B(b)F | B(b)F | Other PAHs |
|-------------|--------------|------|--------|--------------|--------|--------|--------|--------|------------|
| BH23-109-03 | 0.9 - 1.1 | 52.7 | 45,100 | <AL/IL | <0.010 | <0.020 | <0.020 | <0.020 | <AL/IL |
| BH23-109-04 | 1.5 - 1.6 | 52.2 | 32,200 | <AL/IL | - | - | - | - | - |

Appendix I

Quality Assurance/Quality Control





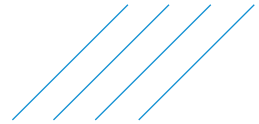
Quality Assurance / Quality Control (QA/QC)

SNC-Lavalin Inc. (SNC-Lavalin) implemented strict QA/QC measures for all sampling and analysis to ensure that all data is representative. The QA/QC program included the following:

- Senior supervision of field staff;
- Use of in house trained personnel;
- Implementation of SNC-Lavalin's Preferred Operating Procedures (POPs);
- Written field instructions;
- Documentation of all field activities;
- Samples will be collected in a manner appropriate for prevention of cross-contamination and other field sampling errors. Samples were collected using appropriate decontaminated tools, equipment, and contaminant-free containers specifically designed for such use and appropriate to the intended analyses;
- Chain-of-Custody documentation for sample submission:
 - Use of an appropriate coding system for submitting samples to the analytical laboratory to ensure that information concerning location or expected concentration is unavailable to the analyst(s). A chain-of-custody form was established to trace the movement and handling of samples from the field to their final destination.
 - Use of a Canadian Association for Laboratory Accreditation Inc. (CALA) accredited laboratory.
 - Adherence to laboratory sampling and analysis protocols (e.g., hold times, sample containers, preservatives, detection limits, and approved methodology).
 - Procedures to confirmation accurate transcription of laboratory data into tables.
 - Review of laboratory QA/QC performance (standards, spike recoveries etc.) to confirm results are within acceptable limits.
 - Submission and analysis of blind field duplicate samples at a rate of 10% of total samples.

Relative Percent Difference Calculation

The QA/QC procedure involved the calculation of the Relative Percent Difference (RPD) for each sample parameter analyzed in both the original and the duplicate samples. The calculated RPDs for samples are included in the attached tables. RPDs less than 50% is soil, groundwater and soil vapour (comparative with the acceptability targets indicated in the 2013 British Columbia Field Sampling Manual published by the BC Ministry of Environment & Climate Change Strategy) indicate that the variability is within SNC-Lavalin's target range. As analytical results are less quantifiable near the laboratory detection limits (MDLs), a RPD calculation was not applied where the measured concentrations of both the original and the duplicate sample were less than five times the MDLs.



QA/QC Results

During the investigations, a total of 19 soil samples (including 3 duplicates) were collected and analyzed for various parameters within the Project Area. The results of the duplicate samples indicated that the RPDs were within acceptable limits or variability could not be calculated because parameter concentrations were within the Practical Quantitation Limit (PQL).

Overall, the results are considered adequate to confirm that the data is considered reliable and reproducible.

Appendix II

Borehole Logs





Ministry of
Transportation
and Infrastructure

SUMMARY LOG

Drill Hole #: **BH23-105**

Project: **Whatcom Rd**

Location: Bradner North

Date(s) Drilled: 2023-11-20

Company: SNC Lavalin Inc.

Prepared by: 694890
SNC Lavalin Inc.

Datum:
Northing/Easting: 541200 , 5436627

Alignment:
Station/Offset:

Driller:

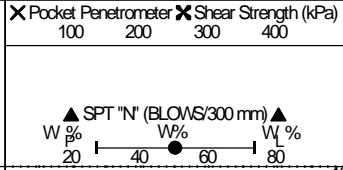
Drill Make/Model: Shovel

Drilling Method: Shovel

Logged by: MAH Reviewed by: JO

Elevation:

| DEPTH (m) | DRILLING DETAILS | X Pocket Penetrometer | | X Shear Strength (kPa) | | SAMPLE TYPE | SAMPLE NO | RECOVERY (%) | SOIL SYMBOL | SOIL DESCRIPTION | CLASSIFICATION | COMMENTS TESTING Drillers Estimate {G % S % F %} | DEPTH (m) |
|-----------|------------------|-----------------------|-----|------------------------|-----|-------------|-----------|--------------|-------------|--|----------------|--|-----------|
| | | 100 | 200 | 300 | 400 | | | | | | | | |
| 0 | | | | | | | | | | BLACK ORGANIC LAYER (decaying vegetation). 0.15m | OR | * denotes blind filed duplicate | |
| 0.15 | | | | | | | 05-03 | | | SAND, silty, fine grained, brown, medium density, damp, some organics (roots/rootlets/detritus). | SM | | |
| 1.1 | | | | | | | 05-04 | | | Below 1.0 m - wet. | | | |
| 1.55 | | | | | | | 05-05 | | | SILT, some sand, fine grained, trace gravel, light greyish brown, very firm, wet. | CL | | |
| 1.55 | | | | | | | | | | Bottom of hole 1.55 m. | | | |



Legend

| | | | | |
|---------------|---------------|---------------------|---------------------|---------------|
| A-Auger | B-Becker | C-Core | G-Grab | V-Vane |
| L#-Lab Sample | S-Split Spoon | O-Odex (air rotary) | W-Wash (mud return) | T-Shelby Tube |

Final Depth of Hole: 1.55 m
Depth to Top of Rock:
Page 1 of 1

MOTI-SOIL-REV3 MOTI BRADNER.GPJ MOTI DATATEMPLATE REV3.GDT 12-6-23



Ministry of
Transportation
and Infrastructure

SUMMARY LOG

Drill Hole #: **BH23-106**

Prepared by: 694890
SNC Lavalin Inc.

Project: **Whatcom Rd**
Location: Bradner North
Datum:
Northing/Easting: 541235 , 5436688
Elevation:

Alignment:
Station/Offset:

Date(s) Drilled: 2023-11-20
Company: SNC Lavalin Inc.
Driller:
Drill Make/Model: Hand Auger
Drilling Method: Hand Auger

Logged by: MAH Reviewed by: JO

| DEPTH (m) | DRILLING DETAILS | X Pocket Penetrometer X Shear Strength (kPa) | | SAMPLE TYPE | SAMPLE NO | RECOVERY (%) | SOIL SYMBOL | SOIL DESCRIPTION | CLASSIFICATION | COMMENTS TESTING Drillers Estimate {G % S % F %} | DEPTH (m) |
|-----------|------------------|--|---------|-------------|----------------|--------------|-------------|--|----------------|--|-----------|
| | | 100 200 | 300 400 | | | | | | | | |
| 0 | | | | | 106-01, 106-02 | | | ORGANIC SILT (decaying vegetation), black, soft, wet, organics (roots/rootlets). 0.25m | OL | * denotes blind filed duplicate | 0 |
| | | | | | 06-03 | | | SILT, some sand, fine grained, organics brownish grey, soft, wet (decaying vegetation). 0.6m | OL | | 0.25 |
| | | | | | 06-04 | | | SILT, some sand, fine grained, brown, firm, wet (TILL-LIKE). | OL | | 0.6 |
| 1 | | | | | 06-05 | | | Bottom of hole 1.55 m. 1.55m | OL | | 1.55 |
| 2 | | | | | | | | | | | 2 |
| 3 | | | | | | | | | | | 3 |
| 4 | | | | | | | | | | | 4 |
| 5 | | | | | | | | | | | 5 |
| 6 | | | | | | | | | | | 6 |
| 7 | | | | | | | | | | | 7 |
| 8 | | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | 10 |

MOTI-SOIL-REV3 MOTI BRADNER.GPJ MOTI DATATEMPLATE REV3.GDT 12-6-23

Legend

| | | | | |
|---------------|---------------|---------------------|---------------------|---------------|
| A-Auger | B-Becker | C-Core | G-Grab | V-Vane |
| L#-Lab Sample | S-Split Spoon | O-Odex (air rotary) | W-Wash (mud return) | T-Shelby Tube |

Final Depth of Hole: 1.55 m
Depth to Top of Rock:
Page 1 of 1



Ministry of
Transportation
and Infrastructure

SUMMARY LOG

Drill Hole #: **BH23-107**

Prepared by: 694890
SNC Lavalin Inc.

Project: **Whatcom Rd**
Location: Bradner North
Datum:
Northing/Easting: 541307, 5436671
Elevation:

Alignment:
Station/Offset:

Date(s) Drilled: 2023-11-20
Company: SNC Lavalin Inc.
Driller:
Drill Make/Model: Hand Auger
Drilling Method: Hand Auger

Logged by: MAH Reviewed by: JO

| DEPTH (m) | DRILLING DETAILS | X Pocket Penetrometer | | X Shear Strength (kPa) | | SAMPLE TYPE | SAMPLE NO | RECOVERY (%) | SOIL SYMBOL | SOIL DESCRIPTION | CLASSIFICATION | COMMENTS TESTING Drillers Estimate {G % S % F %} | DEPTH (m) |
|-----------|------------------|--------------------------|-----|------------------------|-----|-------------|-----------|--------------|-------------|--|----------------|--|-----------|
| | | 100 | 200 | 300 | 400 | | | | | | | | |
| 0 | | ▲ SPT "N" (BLOWS/300 mm) | | ▲ Wp % | | | | | | ORGANICS (detritus), black, loose, soft. 0.15m | OR | * denotes blind filed duplicate | |
| | | Wp % | | Wp % | | | | | | SILT, sandy, fine grained, brown, soft, moist, organics (decaying material/roots/rootlets). 0.7m | SAS | | |
| 1 | | | | | | | | | | SILT, some sand, fine grained, (TILL-LIKE), trace clay, trace sand, medium and coarse grained, trace gravel, fine, rounded, light greyish brown, firm, wet. Below 1.1 m - grey, hard. 1.4m | OL | | 1 |
| 2 | | | | | | | | | | Bottom of hole 1.4 m. | | | 2 |
| 3 | | | | | | | | | | | | | 3 |
| 4 | | | | | | | | | | | | | 4 |
| 5 | | | | | | | | | | | | | 5 |
| 6 | | | | | | | | | | | | | 6 |
| 7 | | | | | | | | | | | | | 7 |
| 8 | | | | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | | | 10 |

MOTI-SOIL-REV3 MOTI BRADNER.GPJ MOTI DATATEMPLATE REV3.GDT 12-6-23

| | | | | | |
|---------------------|---------------|---------------|---------------------|---------------------|---------------|
| Legend | A-Auger | B-Becker | C-Core | G-Grab | V-Vane |
| Sample Type: | L#-Lab Sample | S-Split Spoon | O-Odex (air rotary) | W-Wash (mud return) | T-Shelby Tube |

Final Depth of Hole: 1.4 m
Depth to Top of Rock:
Page 1 of 1



Ministry of
Transportation
and Infrastructure

SUMMARY LOG

Drill Hole #: **BH23-108**

Prepared by: 694890
SNC Lavalin Inc.

Project: **Whatcom Rd**
Location: Bradner North
Datum:
Northing/Easting: 541372 , 5436698
Elevation:

Alignment:
Station/Offset:

Date(s) Drilled: 2023-11-20
Company: SNC Lavalin Inc.
Driller:
Drill Make/Model: Hand Auger
Drilling Method: Hand Auger

Logged by: MAH Reviewed by: JO

| DEPTH (m) | DRILLING DETAILS | X Pocket Penetrometer X Shear Strength (kPa) | | SAMPLE TYPE | SAMPLE NO | RECOVERY (%) | SOIL SYMBOL | SOIL DESCRIPTION | CLASSIFICATION | COMMENTS TESTING Drillers Estimate {G % S % F %} | DEPTH (m) |
|-----------|------------------|--|-----|-------------|-----------|--------------|-------------|---|----------------|--|-----------|
| | | 100 | 200 | | | | | | | | |
| 0 | | | | | | | | ORGANICS (roots/rootlets/debris). 0.15m | OR | * denotes blind filed duplicate | |
| | | | | | 08-03 | | | ORGANIC SILT, some sand, fine grained, brown, soft, moist (roots/rootlets/detritus). | OL | | |
| 1 | | | | | 08-04 | | | SILT, some sand, fine grained, (TILL-LIKE), light greyish brown, some orange mottling, firm, wet. | OL | | 1 |
| | | | | | 08-05 | | | | | | |
| 2 | | | | | | | | Bottom of hole 1.55 m. | | | 2 |
| 3 | | | | | | | | | | | 3 |
| 4 | | | | | | | | | | | 4 |
| 5 | | | | | | | | | | | 5 |
| 6 | | | | | | | | | | | 6 |
| 7 | | | | | | | | | | | 7 |
| 8 | | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | 10 |

MOTI-SOIL-REV3 MOTI BRADNER.GPJ MOTI DATATEMPLATE REV3.GDT 12-6-23

Legend

| | | | | |
|---------------|---------------|---------------------|---------------------|---------------|
| A-Auger | B-Becker | C-Core | G-Grab | V-Vane |
| L#-Lab Sample | S-Split Spoon | O-Odex (air rotary) | W-Wash (mud return) | T-Shelby Tube |

Final Depth of Hole: 1.55 m
Depth to Top of Rock:
Page 1 of 1



Ministry of
Transportation
and Infrastructure

SUMMARY LOG

Drill Hole #: **BH23-109**

Prepared by: 694890
SNC Lavalin Inc.

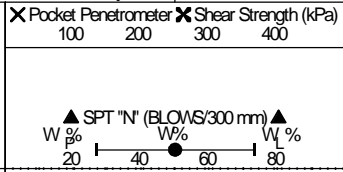
Project: **Whatcom Rd**
Location: Bradner North
Datum:
Northing/Easting: 541424 , 5436592
Elevation:

Alignment:
Station/Offset:

Date(s) Drilled: 2023-11-20
Company: SNC Lavalin Inc.
Driller:
Drill Make/Model: Hand Auger
Drilling Method: Hand Auger

Logged by: MAH Reviewed by: JO

| DEPTH (m) | DRILLING DETAILS | X Pocket Penetrometer | | X Shear Strength (kPa) | | SAMPLE TYPE | SAMPLE NO | RECOVERY (%) | SOIL SYMBOL | SOIL DESCRIPTION | CLASSIFICATION | COMMENTS TESTING Drillers Estimate {G % S % F %} | DEPTH (m) |
|-----------|------------------|-----------------------|-----|------------------------|-----|-------------|-----------|--------------|-------------|---|----------------|--|-----------|
| | | 100 | 200 | 300 | 400 | | | | | | | | |
| 0 | | | | | | | | | | ORGANICS (roots/rootlets/detritus). 0.15m | OR | | |
| | | | | | | | | | | ORGANIC SILT, dark brown, soft, wet. | OL | | |
| 1 | | | | | | | | | | SILT, some sand, fine grained, grey, soft, wet. | OL | | 1 |
| | | | | | | | | | | SILT, some sand, fine grained, (TILL-LIKE), light greyish brown, some orange mottling, hard, wet. | OL | | |
| | | | | | | | | | | Bottom of hole 1.55 m. | | | |
| 2 | | | | | | | | | | | | | 2 |
| 3 | | | | | | | | | | | | | 3 |
| 4 | | | | | | | | | | | | | 4 |
| 5 | | | | | | | | | | | | | 5 |
| 6 | | | | | | | | | | | | | 6 |
| 7 | | | | | | | | | | | | | 7 |
| 8 | | | | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | | | 10 |



MOTI-SOIL-REV3 MOTI BRADNER.GPJ MOTI DATATEMPLATE REV3.GDT 12-6-23

Legend

| | | | | |
|---------------|---------------|---------------------|---------------------|---------------|
| A-Auger | B-Becker | C-Core | G-Grab | V-Vane |
| L#-Lab Sample | S-Split Spoon | O-Odex (air rotary) | W-Wash (mud return) | T-Shelby Tube |

Final Depth of Hole: 1.55 m
Depth to Top of Rock:
Page 1 of 1

Appendix III

Analytical Laboratory Reports





Your Project #: 694890
 Site Location: BRADNER NORTH
 Your C.O.C. #: G161051

Attention: Sai Rajajayavel

ATKINSREALIS CANADA INC.
 BURNABY, ENVIRONMENT DIVISION
 1300-3777 Kingsway Avenue
 BURNABY, BC
 CANADA V5H 3Z7

Report Date: 2023/12/14
 Report #: R3441027
 Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C394778

Received: 2023/11/21, 08:00

Sample Matrix: Soil
 # Samples Received: 4

| Analyses | Quantity | Date | Date | Laboratory Method | Analytical Method |
|---|----------|------------|------------|----------------------------------|----------------------|
| | | Extracted | Analyzed | | |
| Elements by ICPMS (total) (1) | 3 | 2023/11/22 | 2023/11/22 | BBY7SOP-00004 / BBY7SOP-00001 | EPA 6020b R2 m |
| Moisture | 1 | 2023/11/21 | 2023/11/22 | BBY8SOP-00017 | BCMOE BCLM Dec2000 m |
| Moisture | 1 | 2023/11/29 | 2023/11/30 | BBY8SOP-00017 | BCMOE BCLM Dec2000 m |
| Moisture | 1 | 2023/11/29 | 2023/12/13 | BBY8SOP-00017 | BCMOE BCLM Dec2000 m |
| Non Routine/Non Validated Matrix Tested (2) | 1 | N/A | 2023/12/12 | | |
| PAH in Soil by GC/MS (SIM) | 1 | 2023/11/21 | 2023/11/22 | BBY8SOP-00022 | BCMOE BCLM Jul2017m |
| PAH in Soil by GC/MS (SIM) | 1 | 2023/11/29 | 2023/11/30 | BBY8SOP-00022 | BCMOE BCLM Jul2017m |
| PAH in Soil by GC/MS (SIM) | 1 | 2023/11/29 | 2023/12/13 | BBY8SOP-00022 | BCMOE BCLM Jul2017m |
| Total PAH and B(a)P Calculation (3) | 1 | N/A | 2023/11/22 | BBY WI-00033 | Auto Calc |
| Total PAH and B(a)P Calculation (3) | 1 | N/A | 2023/11/30 | BBY WI-00033 | Auto Calc |
| Total PAH and B(a)P Calculation (3) | 1 | N/A | 2023/12/14 | BBY WI-00033 | Auto Calc |
| pH (2:1 DI Water Extract) | 3 | 2023/11/22 | 2023/11/22 | BBY6SOP-00028 | BCMOE BCLM Mar2005 m |
| EPH in Soil by SG GC/FID | 1 | 2023/11/29 | 2023/12/13 | BBY8SOP-00029 | BCMOE BCLM Dec2016 m |

Remarks:

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

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

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

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



Your Project #: 694890
Site Location: BRADNER NORTH
Your C.O.C. #: G161051

Attention: Sai Rajajayavel

ATKINSREALIS CANADA INC.
BURNABY, ENVIRONMENT DIVISION
1300-3777 Kingsway Avenue
BURNABY, BC
CANADA V5H 3Z7

Report Date: 2023/12/14
Report #: R3441027
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C394778

Received: 2023/11/21, 08:00

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

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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

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

(1) The sample is prepared per the BC MOE Lab Manual "Strong Acid Leachable Metals (SALM) in Soil - Prescriptive", Revision Nov 6, 2015.

(2) Sample(s) analyzed using methodologies that have not been subjected to Bureau Veritas' standard validation process for the submitted matrix and is not an accredited method.

Analysis performed with client consent, however results should be viewed with discretion.

(3) Total PAHs in Soil include: Quinoline, Naphthalene, 1-Methylnaphthalene, 2-Methylnaphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Acridine, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b&j)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, and Benzo(g,h,i)perylene.

Total PAHs in Sediment include (B.C. Reg. 116/2018, Schedule 3.4): Naphthalene, 2-Methylnaphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(a)pyrene, and Dibenz(a,h)anthracene.

Encryption Key

Debbie Nordbruket
Key Account Specialist
14 Dec 2023 15:46:04

Please direct all questions regarding this Certificate of Analysis to:

Debbie Nordbruket, Key Account Specialist

Email: Debra.NORDBRUGET@bureauveritas.com

Phone# (250)385-6112

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



**BUREAU
VERITAS**

Bureau Veritas Job #: C394778
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Sampler Initials: MAH

RESULTS OF CHEMICAL ANALYSES OF SOIL

| | | | |
|--------------------------|--------------|--|-----------------|
| Bureau Veritas ID | | CGK172 | |
| Sampling Date | | 2023/11/20 15:35 | |
| COC Number | | G161051 | |
| | UNITS | BH23-109-01 WITH SG CLEANUP | QC Batch |
| MISCELLANEOUS | | | |
| Sample Matrix | N/A | SG ON PAH | ONSITE |



BUREAU
VERITAS

Bureau Veritas Job #: C394778
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Sampler Initials: MAH

PHYSICAL TESTING (SOIL)

| | | | | | | | | |
|--|--------------|---------------------|-----------------|---------------------|-----------------|--|------------|-----------------|
| Bureau Veritas ID | | CEZ955 | | CEZ957 | | CGK172 | | |
| Sampling Date | | 2023/11/20 15:35 | | 2023/11/20 15:45 | | 2023/11/20 15:35 | | |
| COC Number | | G161051 | | G161051 | | G161051 | | |
| | UNITS | BH23-109-01 | QC Batch | BH23-109-03 | QC Batch | BH23-109-01 WITH SG CLEANUP | RDL | QC Batch |
| Physical Properties | | | | | | | | |
| Moisture | % | 58 | B216760 | 31 | B207343 | 58 (1) | 0.30 | B216760 |
| RDL = Reportable Detection Limit (1) From CGK172-01 | | | | | | | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394778
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Sampler Initials: MAH

TOTAL PETROLEUM HYDROCARBONS (SOIL)

| | | | | |
|----------------------------------|--------------|--|------------|-----------------|
| Bureau Veritas ID | | CGK172 | | |
| Sampling Date | | 2023/11/20 15:35 | | |
| COC Number | | G161051 | | |
| | UNITS | BH23-109-01 WITH SG CLEANUP | RDL | QC Batch |
| Hydrocarbons | | | | |
| SG BC-CSR EPH (C10-C19) | mg/kg | <100 | 100 | B231981 |
| SG BC-CSR EPH (C19-C32) | mg/kg | <100 | 100 | B231981 |
| Surrogate Recovery (%) | | | | |
| SG O-TERPHENYL (sur.) | % | 71 | | B231981 |
| RDL = Reportable Detection Limit | | | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394778
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Sampler Initials: MAH

CSR/CCME METALS IN SOIL WITH HG (SOIL)

| Bureau Veritas ID | | CEZ955 | CEZ957 | CEZ958 | | |
|--|-------|---------------------|---------------------|---------------------|-------|----------|
| Sampling Date | | 2023/11/20 15:35 | 2023/11/20 15:45 | 2023/11/20 15:50 | | |
| COC Number | | G161051 | G161051 | G161051 | | |
| | UNITS | BH23-109-01 | BH23-109-03 | BH23-109-04 | RDL | QC Batch |
| Physical Properties | | | | | | |
| Soluble (2:1) pH | pH | 3.66 | 6.74 | 6.92 | N/A | B207905 |
| Total Metals by ICPMS | | | | | | |
| Total Aluminum (Al) | mg/kg | 8720 | 28400 | 17800 | 100 | B207904 |
| Total Antimony (Sb) | mg/kg | 0.83 | 0.47 | 0.39 | 0.10 | B207904 |
| Total Arsenic (As) | mg/kg | 7.47 | 3.14 | 5.24 | 0.20 | B207904 |
| Total Barium (Ba) | mg/kg | 110 | 195 | 117 | 0.10 | B207904 |
| Total Beryllium (Be) | mg/kg | <0.20 | 0.57 | 0.42 | 0.20 | B207904 |
| Total Bismuth (Bi) | mg/kg | 0.23 | 0.11 | <0.10 | 0.10 | B207904 |
| Total Boron (B) | mg/kg | 4.9 | 2.2 | 2.2 | 1.0 | B207904 |
| Total Cadmium (Cd) | mg/kg | 0.268 | 0.082 | <0.050 | 0.050 | B207904 |
| Total Calcium (Ca) | mg/kg | 2990 | 5270 | 4740 | 100 | B207904 |
| Total Chromium (Cr) | mg/kg | 18.2 | 52.7 | 52.2 | 0.50 | B207904 |
| Total Cobalt (Co) | mg/kg | 2.28 | 15.4 | 12.0 | 0.10 | B207904 |
| Total Copper (Cu) | mg/kg | 30.8 | 30.7 | 36.2 | 0.50 | B207904 |
| Total Iron (Fe) | mg/kg | 13500 | 45100 | 32200 | 100 | B207904 |
| Total Lead (Pb) | mg/kg | 48.6 | 6.74 | 3.96 | 0.10 | B207904 |
| Total Lithium (Li) | mg/kg | 3.46 | 12.9 | 9.42 | 0.50 | B207904 |
| Total Magnesium (Mg) | mg/kg | 1380 | 8790 | 6920 | 100 | B207904 |
| Total Manganese (Mn) | mg/kg | 192 | 761 | 350 | 0.20 | B207904 |
| Total Mercury (Hg) | mg/kg | 0.281 | 0.067 | <0.050 | 0.050 | B207904 |
| Total Molybdenum (Mo) | mg/kg | 0.90 | 0.62 | 0.55 | 0.10 | B207904 |
| Total Nickel (Ni) | mg/kg | 10.3 | 33.7 | 37.8 | 0.50 | B207904 |
| Total Phosphorus (P) | mg/kg | 779 | 167 | 585 | 10 | B207904 |
| Total Potassium (K) | mg/kg | 449 | 721 | 697 | 100 | B207904 |
| Total Selenium (Se) | mg/kg | 0.59 | <0.50 | <0.50 | 0.50 | B207904 |
| Total Silver (Ag) | mg/kg | 0.204 | <0.050 | <0.050 | 0.050 | B207904 |
| Total Sodium (Na) | mg/kg | <100 | 482 | 331 | 100 | B207904 |
| Total Strontium (Sr) | mg/kg | 40.3 | 55.0 | 39.5 | 0.10 | B207904 |
| Total Thallium (Tl) | mg/kg | <0.050 | 0.072 | 0.057 | 0.050 | B207904 |
| Total Tin (Sn) | mg/kg | 1.00 | 0.60 | 0.37 | 0.10 | B207904 |
| Total Titanium (Ti) | mg/kg | 525 | 1140 | 963 | 1.0 | B207904 |
| RDL = Reportable Detection Limit N/A = Not Applicable | | | | | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394778
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Sampler Initials: MAH

CSR/CCME METALS IN SOIL WITH HG (SOIL)

| Bureau Veritas ID | | CEZ955 | CEZ957 | CEZ958 | | |
|----------------------------------|-------|---------------------|---------------------|---------------------|-------|----------|
| Sampling Date | | 2023/11/20 15:35 | 2023/11/20 15:45 | 2023/11/20 15:50 | | |
| COC Number | | G161051 | G161051 | G161051 | | |
| | UNITS | BH23-109-01 | BH23-109-03 | BH23-109-04 | RDL | QC Batch |
| Total Tungsten (W) | mg/kg | <0.50 | <0.50 | <0.50 | 0.50 | B207904 |
| Total Uranium (U) | mg/kg | 0.329 | 2.30 | 0.729 | 0.050 | B207904 |
| Total Vanadium (V) | mg/kg | 35.2 | 96.7 | 86.1 | 1.0 | B207904 |
| Total Zinc (Zn) | mg/kg | 53.1 | 54.3 | 50.6 | 1.0 | B207904 |
| Total Zirconium (Zr) | mg/kg | 1.91 | 8.64 | 7.38 | 0.50 | B207904 |
| RDL = Reportable Detection Limit | | | | | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394778
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Sampler Initials: MAH

CSR PAH IN SOIL BY GC-MS (SOIL)

| | | | | | | | | | | |
|--------------------------|--------------|---------------------|------------|-----------------|---------------------|------------|-----------------|--|------------|-----------------|
| Bureau Veritas ID | | CEZ955 | | | CEZ957 | | | CGK172 | | |
| Sampling Date | | 2023/11/20 15:35 | | | 2023/11/20 15:45 | | | 2023/11/20 15:35 | | |
| COC Number | | G161051 | | | G161051 | | | G161051 | | |
| | UNITS | BH23-109-01 | RDL | QC Batch | BH23-109-03 | RDL | QC Batch | BH23-109-01 WITH SG CLEANUP | RDL | QC Batch |

| | | | | | | | | | | |
|------------------------------|-------|------|------|---------|--------|-------|---------|-------|------|---------|
| Calculated Parameters | | | | | | | | | | |
| Low Molecular Weight PAH's | mg/kg | 0.12 | 0.11 | B216546 | <0.050 | 0.050 | B206893 | <0.43 | 0.43 | B230600 |
| High Molecular Weight PAH's | mg/kg | 0.99 | 0.11 | B216546 | <0.050 | 0.050 | B206893 | 0.46 | 0.43 | B230600 |
| Total PAH | mg/kg | 1.1 | 0.11 | B216546 | <0.050 | 0.050 | B206893 | 0.57 | 0.43 | B230600 |

| | | | | | | | | | | |
|-----------------------------|-------|------------|--------|---------|---------|--------|---------|------------|-------|---------|
| Polycyclic Aromatics | | | | | | | | | | |
| Quinoline | mg/kg | <0.11 (1) | 0.11 | B217281 | <0.050 | 0.050 | B207674 | | | |
| Naphthalene | mg/kg | <0.021 (1) | 0.021 | B217281 | <0.010 | 0.010 | B207674 | <0.085 (1) | 0.085 | B231032 |
| 1-Methylnaphthalene | mg/kg | <0.11 (1) | 0.11 | B217281 | <0.050 | 0.050 | B207674 | <0.43 (1) | 0.43 | B231032 |
| 2-Methylnaphthalene | mg/kg | <0.042 (1) | 0.042 | B217281 | <0.020 | 0.020 | B207674 | <0.17 (1) | 0.17 | B231032 |
| Acenaphthylene | mg/kg | <0.011 (1) | 0.011 | B217281 | <0.0050 | 0.0050 | B207674 | <0.043 (1) | 0.043 | B231032 |
| Acenaphthene | mg/kg | <0.011 (1) | 0.011 | B217281 | <0.0050 | 0.0050 | B207674 | <0.043 (1) | 0.043 | B231032 |
| Fluorene | mg/kg | <0.042 (1) | 0.042 | B217281 | <0.020 | 0.020 | B207674 | <0.17 (1) | 0.17 | B231032 |
| Phenanthrene | mg/kg | 0.11 (1) | 0.021 | B217281 | <0.010 | 0.010 | B207674 | 0.11 (1) | 0.085 | B231032 |
| Anthracene | mg/kg | 0.012 (1) | 0.0084 | B217281 | <0.0040 | 0.0040 | B207674 | <0.034 (1) | 0.034 | B231032 |
| Fluoranthene | mg/kg | 0.25 (1) | 0.042 | B217281 | <0.020 | 0.020 | B207674 | 0.25 (1) | 0.17 | B231032 |
| Pyrene | mg/kg | 0.20 (1) | 0.042 | B217281 | <0.020 | 0.020 | B207674 | 0.21 (1) | 0.17 | B231032 |
| Benzo(a)anthracene | mg/kg | 0.062 (1) | 0.042 | B217281 | <0.020 | 0.020 | B207674 | <0.17 (1) | 0.17 | B231032 |
| Chrysene | mg/kg | 0.14 (1) | 0.042 | B217281 | <0.020 | 0.020 | B207674 | <0.17 (1) | 0.17 | B231032 |
| Benzo(b&j)fluoranthene | mg/kg | 0.16 (1) | 0.042 | B217281 | <0.020 | 0.020 | B207674 | <0.17 (1) | 0.17 | B231032 |
| Benzo(b)fluoranthene | mg/kg | 0.11 (1) | 0.042 | B217281 | <0.020 | 0.020 | B207674 | <0.17 (1) | 0.17 | B231032 |
| Benzo(k)fluoranthene | mg/kg | 0.049 (1) | 0.042 | B217281 | <0.020 | 0.020 | B207674 | <0.17 (1) | 0.17 | B231032 |
| Benzo(a)pyrene | mg/kg | 0.091 (1) | 0.042 | B217281 | <0.020 | 0.020 | B207674 | <0.17 (1) | 0.17 | B231032 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.045 (1) | 0.042 | B217281 | <0.020 | 0.020 | B207674 | <0.17 (1) | 0.17 | B231032 |
| Dibenz(a,h)anthracene | mg/kg | <0.042 (1) | 0.042 | B217281 | <0.020 | 0.020 | B207674 | <0.17 (1) | 0.17 | B231032 |
| Benzo(g,h,i)perylene | mg/kg | <0.11 (1) | 0.11 | B217281 | <0.050 | 0.050 | B207674 | <0.43 (1) | 0.43 | B231032 |

| | | | | | | | | | | |
|-------------------------------|---|----|--|---------|-----|--|---------|-----|--|---------|
| Surrogate Recovery (%) | | | | | | | | | | |
| D10-ANTHRACENE (sur.) | % | 84 | | B217281 | 101 | | B207674 | 100 | | B231032 |
| D8-ACENAPHTHYLENE (sur.) | % | 83 | | B217281 | 70 | | B207674 | 73 | | B231032 |
| D8-NAPHTHALENE (sur.) | % | 87 | | B217281 | 71 | | B207674 | 79 | | B231032 |
| TERPHENYL-D14 (sur.) | % | 88 | | B217281 | 101 | | B207674 | 91 | | B231032 |

RDL = Reportable Detection Limit

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



BUREAU
VERITAS

Bureau Veritas Job #: C394778
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Sampler Initials: MAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

| | |
|-----------|-------|
| Package 1 | 6.3°C |
|-----------|-------|

Version #3: Report reissued to include results for CSR PAH in Soil on sample BH23-109-01 as per client request received 2023/11/29.

Version #4: Report reissued to include results for CSR TEH and PAH's with Silica Gel Cleanup on sample BH23-109-01 (original sample CEZ955, re-logged for reporting purposes as BH23-109-01 WITH SG CLEANUP / CGK172) as per client request received 2023/12/11.

Sample CGK172 [BH23-109-01 WITH SG CLEANUP] : Silica Gel Cleanup performed on original PAH/TEH sample extract CEZ955-01 as requested by client. See BBY PDF-00149 for more details.

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C394778

Report Date: 2023/12/14

QUALITY ASSURANCE REPORT

ATKINSREALIS CANADA INC.

Client Project #: 694890

Site Location: BRADNER NORTH

Sampler Initials: MAH

| QC Batch | Parameter | Date | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|----------|--------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|-------------|-----------|
| | | | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits | % Recovery | QC Limits |
| B207674 | D10-ANTHRACENE (sur.) | 2023/11/21 | 98 | 50 - 140 | 95 | 50 - 140 | 107 | % | | | | |
| B207674 | D8-ACENAPHTHYLENE (sur.) | 2023/11/21 | 73 | 50 - 140 | 73 | 50 - 140 | 81 | % | | | | |
| B207674 | D8-NAPHTHALENE (sur.) | 2023/11/21 | 70 | 50 - 140 | 68 | 50 - 140 | 76 | % | | | | |
| B207674 | TERPHENYL-D14 (sur.) | 2023/11/21 | 102 | 50 - 140 | 99 | 50 - 140 | 111 | % | | | | |
| B217281 | D10-ANTHRACENE (sur.) | 2023/11/29 | 90 | 50 - 140 | 94 | 50 - 140 | 103 | % | | | | |
| B217281 | D8-ACENAPHTHYLENE (sur.) | 2023/11/29 | 85 | 50 - 140 | 89 | 50 - 140 | 95 | % | | | | |
| B217281 | D8-NAPHTHALENE (sur.) | 2023/11/29 | 81 | 50 - 140 | 80 | 50 - 140 | 85 | % | | | | |
| B217281 | TERPHENYL-D14 (sur.) | 2023/11/29 | 93 | 50 - 140 | 96 | 50 - 140 | 105 | % | | | | |
| B231032 | D10-ANTHRACENE (sur.) | 2023/12/13 | | | 109 | 50 - 140 | 107 | % | | | | |
| B231032 | D8-ACENAPHTHYLENE (sur.) | 2023/12/13 | | | 80 | 50 - 140 | 79 | % | | | | |
| B231032 | D8-NAPHTHALENE (sur.) | 2023/12/13 | | | 74 | 50 - 140 | 74 | % | | | | |
| B231032 | TERPHENYL-D14 (sur.) | 2023/12/13 | | | 93 | 50 - 140 | 92 | % | | | | |
| B231981 | SG O-TERPHENYL (sur.) | 2023/12/13 | | | 88 | 50 - 130 | 92 | % | | | | |
| B207343 | Moisture | 2023/11/22 | | | | | <0.30 | % | 0.60 | 20 | | |
| B207674 | 1-Methylnaphthalene | 2023/11/22 | 86 | 50 - 140 | 89 | 50 - 140 | <0.050 | mg/kg | NC | 50 | | |
| B207674 | 2-Methylnaphthalene | 2023/11/22 | 75 | 50 - 140 | 78 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Acenaphthene | 2023/11/22 | 79 | 50 - 140 | 81 | 50 - 140 | <0.0050 | mg/kg | NC | 50 | | |
| B207674 | Acenaphthylene | 2023/11/22 | 78 | 50 - 140 | 80 | 50 - 140 | <0.0050 | mg/kg | NC | 50 | | |
| B207674 | Anthracene | 2023/11/22 | 111 | 50 - 140 | 106 | 50 - 140 | <0.0040 | mg/kg | NC | 50 | | |
| B207674 | Benzo(a)anthracene | 2023/11/22 | 90 | 50 - 140 | 91 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Benzo(a)pyrene | 2023/11/22 | 85 | 50 - 140 | 86 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Benzo(b&j)fluoranthene | 2023/11/22 | 89 | 50 - 140 | 92 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Benzo(b)fluoranthene | 2023/11/22 | 81 | 50 - 140 | 86 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Benzo(g,h,i)perylene | 2023/11/22 | 83 | 50 - 140 | 83 | 50 - 140 | <0.050 | mg/kg | NC | 50 | | |
| B207674 | Benzo(k)fluoranthene | 2023/11/22 | 84 | 50 - 140 | 88 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Chrysene | 2023/11/22 | 95 | 50 - 140 | 96 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Dibenz(a,h)anthracene | 2023/11/22 | 84 | 50 - 140 | 84 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Fluoranthene | 2023/11/22 | 114 | 50 - 140 | 102 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Fluorene | 2023/11/22 | 88 | 50 - 140 | 90 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Indeno(1,2,3-cd)pyrene | 2023/11/22 | 88 | 50 - 140 | 87 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Naphthalene | 2023/11/22 | 76 | 50 - 140 | 77 | 50 - 140 | <0.010 | mg/kg | NC | 50 | | |
| B207674 | Phenanthrene | 2023/11/22 | 97 | 50 - 140 | 93 | 50 - 140 | <0.010 | mg/kg | NC | 50 | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394778

Report Date: 2023/12/14

QUALITY ASSURANCE REPORT(CONT'D)

ATKINSREALIS CANADA INC.

Client Project #: 694890

Site Location: BRADNER NORTH

Sampler Initials: MAH

| QC Batch | Parameter | Date | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|----------|-----------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|-------------|-----------|
| | | | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits | % Recovery | QC Limits |
| B207674 | Pyrene | 2023/11/22 | 113 | 50 - 140 | 100 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Quinoline | 2023/11/22 | 107 | 50 - 140 | 107 | 50 - 140 | <0.050 | mg/kg | NC | 50 | | |
| B207904 | Total Aluminum (Al) | 2023/11/22 | NC | 75 - 125 | 108 | 75 - 125 | <100 | mg/kg | 2.6 | 40 | 96 | 70 - 130 |
| B207904 | Total Antimony (Sb) | 2023/11/22 | 95 | 75 - 125 | 107 | 75 - 125 | <0.10 | mg/kg | 11 | 30 | 108 | 70 - 130 |
| B207904 | Total Arsenic (As) | 2023/11/22 | 102 | 75 - 125 | 111 | 75 - 125 | <0.20 | mg/kg | 3.0 | 30 | 89 | 70 - 130 |
| B207904 | Total Barium (Ba) | 2023/11/22 | 103 | 75 - 125 | 108 | 75 - 125 | <0.10 | mg/kg | 2.2 | 40 | 102 | 70 - 130 |
| B207904 | Total Beryllium (Be) | 2023/11/22 | 98 | 75 - 125 | 105 | 75 - 125 | <0.20 | mg/kg | 0.55 | 30 | 96 | 70 - 130 |
| B207904 | Total Bismuth (Bi) | 2023/11/22 | 93 | 75 - 125 | 103 | 75 - 125 | <0.10 | mg/kg | | | | |
| B207904 | Total Boron (B) | 2023/11/22 | 105 | 75 - 125 | 108 | 75 - 125 | <1.0 | mg/kg | 1.3 | 30 | | |
| B207904 | Total Cadmium (Cd) | 2023/11/22 | 101 | 75 - 125 | 108 | 75 - 125 | <0.050 | mg/kg | 3.0 | 30 | 97 | 70 - 130 |
| B207904 | Total Calcium (Ca) | 2023/11/22 | 132 (1) | 75 - 125 | 110 | 75 - 125 | <100 | mg/kg | | | 99 | 70 - 130 |
| B207904 | Total Chromium (Cr) | 2023/11/22 | 98 | 75 - 125 | 111 | 75 - 125 | <0.50 | mg/kg | 2.8 | 30 | 102 | 70 - 130 |
| B207904 | Total Cobalt (Co) | 2023/11/22 | 97 | 75 - 125 | 107 | 75 - 125 | <0.10 | mg/kg | 0.94 | 30 | 100 | 70 - 130 |
| B207904 | Total Copper (Cu) | 2023/11/22 | 96 | 75 - 125 | 110 | 75 - 125 | <0.50 | mg/kg | 2.1 | 30 | 105 | 70 - 130 |
| B207904 | Total Iron (Fe) | 2023/11/22 | NC | 75 - 125 | 109 | 75 - 125 | <100 | mg/kg | | | 100 | 70 - 130 |
| B207904 | Total Lead (Pb) | 2023/11/22 | 98 | 75 - 125 | 107 | 75 - 125 | <0.10 | mg/kg | 3.3 | 40 | 108 | 70 - 130 |
| B207904 | Total Lithium (Li) | 2023/11/22 | 99 | 75 - 125 | 100 | 75 - 125 | <0.50 | mg/kg | 0.39 | 30 | 106 | 70 - 130 |
| B207904 | Total Magnesium (Mg) | 2023/11/22 | NC | 75 - 125 | 111 | 75 - 125 | <100 | mg/kg | | | 106 | 70 - 130 |
| B207904 | Total Manganese (Mn) | 2023/11/22 | NC | 75 - 125 | 110 | 75 - 125 | <0.20 | mg/kg | 2.4 | 30 | 107 | 70 - 130 |
| B207904 | Total Mercury (Hg) | 2023/11/22 | 102 | 75 - 125 | 110 | 75 - 125 | <0.050 | mg/kg | | | 90 | 70 - 130 |
| B207904 | Total Molybdenum (Mo) | 2023/11/22 | 96 | 75 - 125 | 103 | 75 - 125 | <0.10 | mg/kg | 8.6 | 40 | 102 | 70 - 130 |
| B207904 | Total Nickel (Ni) | 2023/11/22 | 101 | 75 - 125 | 114 | 75 - 125 | <0.50 | mg/kg | 3.1 | 30 | 111 | 70 - 130 |
| B207904 | Total Phosphorus (P) | 2023/11/22 | 89 | 75 - 125 | 105 | 75 - 125 | <10 | mg/kg | | | 95 | 70 - 130 |
| B207904 | Total Potassium (K) | 2023/11/22 | 116 | 75 - 125 | 113 | 75 - 125 | <100 | mg/kg | | | 92 | 70 - 130 |
| B207904 | Total Selenium (Se) | 2023/11/22 | 104 | 75 - 125 | 110 | 75 - 125 | <0.50 | mg/kg | 6.6 | 30 | | |
| B207904 | Total Silver (Ag) | 2023/11/22 | 95 | 75 - 125 | 102 | 75 - 125 | <0.050 | mg/kg | 4.6 | 40 | 152 (2) | 70 - 130 |
| B207904 | Total Sodium (Na) | 2023/11/22 | 107 | 75 - 125 | 112 | 75 - 125 | <100 | mg/kg | | | 100 | 70 - 130 |
| B207904 | Total Strontium (Sr) | 2023/11/22 | 106 | 75 - 125 | 110 | 75 - 125 | <0.10 | mg/kg | 3.1 | 40 | 107 | 70 - 130 |
| B207904 | Total Thallium (Tl) | 2023/11/22 | 94 | 75 - 125 | 103 | 75 - 125 | <0.050 | mg/kg | | | 88 | 70 - 130 |
| B207904 | Total Tin (Sn) | 2023/11/22 | 100 | 75 - 125 | 108 | 75 - 125 | <0.10 | mg/kg | 10 | 40 | 98 | 70 - 130 |
| B207904 | Total Titanium (Ti) | 2023/11/22 | NC | 75 - 125 | 109 | 75 - 125 | <1.0 | mg/kg | | | | |
| B207904 | Total Tungsten (W) | 2023/11/22 | 85 | 75 - 125 | 110 | 75 - 125 | <0.50 | mg/kg | | | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394778

Report Date: 2023/12/14

QUALITY ASSURANCE REPORT(CONT'D)

ATKINSREALIS CANADA INC.

Client Project #: 694890

Site Location: BRADNER NORTH

Sampler Initials: MAH

| QC Batch | Parameter | Date | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|----------|------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|-------------|-----------|
| | | | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits | % Recovery | QC Limits |
| B207904 | Total Uranium (U) | 2023/11/22 | 102 | 75 - 125 | 110 | 75 - 125 | <0.050 | mg/kg | 6.1 | 30 | 108 | 70 - 130 |
| B207904 | Total Vanadium (V) | 2023/11/22 | 95 | 75 - 125 | 111 | 75 - 125 | <1.0 | mg/kg | 2.0 | 30 | 104 | 70 - 130 |
| B207904 | Total Zinc (Zn) | 2023/11/22 | 95 | 75 - 125 | 109 | 75 - 125 | <1.0 | mg/kg | 2.7 | 30 | 105 | 70 - 130 |
| B207904 | Total Zirconium (Zr) | 2023/11/22 | 92 | 75 - 125 | 107 | 75 - 125 | <0.50 | mg/kg | | | | |
| B207905 | Soluble (2:1) pH | 2023/11/22 | | | 100 | 97 - 103 | | | 0.35 | N/A | | |
| B216760 | Moisture | 2023/11/30 | | | | | <0.30 | % | 0.78 | 20 | | |
| B217281 | 1-Methylnaphthalene | 2023/11/30 | 91 | 50 - 140 | 98 | 50 - 140 | <0.050 | mg/kg | NC | 50 | | |
| B217281 | 2-Methylnaphthalene | 2023/11/30 | 87 | 50 - 140 | 94 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Acenaphthene | 2023/11/30 | 92 | 50 - 140 | 96 | 50 - 140 | <0.0050 | mg/kg | NC | 50 | | |
| B217281 | Acenaphthylene | 2023/11/30 | 88 | 50 - 140 | 93 | 50 - 140 | <0.0050 | mg/kg | NC | 50 | | |
| B217281 | Anthracene | 2023/11/30 | 95 | 50 - 140 | 99 | 50 - 140 | <0.0040 | mg/kg | NC | 50 | | |
| B217281 | Benzo(a)anthracene | 2023/11/30 | 86 | 50 - 140 | 96 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Benzo(a)pyrene | 2023/11/30 | 95 | 50 - 140 | 101 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Benzo(b&j)fluoranthene | 2023/11/30 | 89 | 50 - 140 | 98 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Benzo(b)fluoranthene | 2023/11/30 | 94 | 50 - 140 | 103 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Benzo(g,h,i)perylene | 2023/11/30 | 88 | 50 - 140 | 100 | 50 - 140 | <0.050 | mg/kg | NC | 50 | | |
| B217281 | Benzo(k)fluoranthene | 2023/11/30 | 93 | 50 - 140 | 100 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Chrysene | 2023/11/30 | 85 | 50 - 140 | 97 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Dibenz(a,h)anthracene | 2023/11/30 | 92 | 50 - 140 | 101 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Fluoranthene | 2023/11/30 | 96 | 50 - 140 | 100 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Fluorene | 2023/11/30 | 96 | 50 - 140 | 102 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Indeno(1,2,3-cd)pyrene | 2023/11/30 | 91 | 50 - 140 | 101 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Naphthalene | 2023/11/30 | 86 | 50 - 140 | 91 | 50 - 140 | <0.010 | mg/kg | NC | 50 | | |
| B217281 | Phenanthrene | 2023/11/30 | 89 | 50 - 140 | 94 | 50 - 140 | <0.010 | mg/kg | NC | 50 | | |
| B217281 | Pyrene | 2023/11/30 | 94 | 50 - 140 | 98 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Quinoline | 2023/11/30 | 111 | 50 - 140 | 112 | 50 - 140 | <0.050 | mg/kg | NC | 50 | | |
| B231032 | 1-Methylnaphthalene | 2023/12/13 | | | 96 | 50 - 140 | <0.20 | mg/kg | | | | |
| B231032 | 2-Methylnaphthalene | 2023/12/13 | | | 83 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Acenaphthene | 2023/12/13 | | | 90 | 50 - 140 | <0.020 | mg/kg | | | | |
| B231032 | Acenaphthylene | 2023/12/13 | | | 87 | 50 - 140 | <0.020 | mg/kg | | | | |
| B231032 | Anthracene | 2023/12/13 | | | 100 | 50 - 140 | <0.016 | mg/kg | | | | |
| B231032 | Benzo(a)anthracene | 2023/12/13 | | | 94 | 50 - 140 | <0.080 | mg/kg | | | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394778

Report Date: 2023/12/14

QUALITY ASSURANCE REPORT(CONT'D)

ATKINSREALIS CANADA INC.

Client Project #: 694890

Site Location: BRADNER NORTH

Sampler Initials: MAH

| QC Batch | Parameter | Date | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|----------|-------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|-------------|-----------|
| | | | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits | % Recovery | QC Limits |
| B231032 | Benzo(a)pyrene | 2023/12/13 | | | 94 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Benzo(b&j)fluoranthene | 2023/12/13 | | | 94 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Benzo(b)fluoranthene | 2023/12/13 | | | 90 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Benzo(g,h,i)perylene | 2023/12/13 | | | 86 | 50 - 140 | <0.20 | mg/kg | | | | |
| B231032 | Benzo(k)fluoranthene | 2023/12/13 | | | 96 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Chrysene | 2023/12/13 | | | 100 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Dibenz(a,h)anthracene | 2023/12/13 | | | 90 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Fluoranthene | 2023/12/13 | | | 104 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Fluorene | 2023/12/13 | | | 89 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Indeno(1,2,3-cd)pyrene | 2023/12/13 | | | 89 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Naphthalene | 2023/12/13 | | | 86 | 50 - 140 | <0.040 | mg/kg | | | | |
| B231032 | Phenanthrene | 2023/12/13 | | | 89 | 50 - 140 | <0.040 | mg/kg | | | | |
| B231032 | Pyrene | 2023/12/13 | | | 101 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231981 | SG BC-CSR EPH (C10-C19) | 2023/12/13 | | | 98 | 70 - 130 | <100 | mg/kg | | | | |
| B231981 | SG BC-CSR EPH (C19-C32) | 2023/12/13 | | | 93 | 50 - 130 | <100 | mg/kg | | | | |

N/A = Not Applicable

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

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

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

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

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

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

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

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

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

(2) Reference material outside acceptance criteria - re-analysis yields similar results.



CHAIN OF CUSTODY RECORD

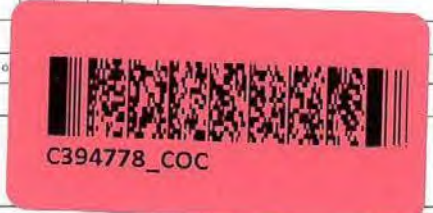
G161051

| | | | | | | | |
|---|--|---|--|---|--|---|--|
| Invoice Information | | Report Information (if differs from invoice) | | Project Information | | Turnaround Time (TAT) Required | |
| Company: <u>Atkins Realis</u> | | Company: <u>AS AT LEAST</u> | | Quotation: <u>Atkins Realis Pricing</u> | | <input type="checkbox"/> 5 - 7 Days Regular (Most analyses) | |
| Contact Name: <u>Sai Rajgopal</u> | | Contact Name: _____ | | P.O. #/AFE#: _____ | | PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS | |
| Address: <u>1800-3777 Kingsway</u> | | Address: _____ | | Project #: <u>694890</u> | | Rush TAT (Surcharges will be applied) | |
| <u>Burnaby BC PC: V5H 3Z7</u> | | PC: _____ | | Site Location: <u>Bradley North</u> | | <input type="checkbox"/> Same Day <input type="checkbox"/> 2 Days | |
| Phone/Fax: <u>604-315-5751</u> | | Phone/Fax: _____ | | Site #: _____ | | <input checked="" type="checkbox"/> 1 Day <input type="checkbox"/> 3-4 Days | |
| Email: <u>Sai.rajgopal@atkinsrealis.com</u> | | Copies: _____ | | Site #: _____ | | Date Required: _____ | |
| Copies: <u>chris.wong@atkinsrealis.com</u> | | Copies: _____ | | Sampled By: <u>MAH</u> | | Rush Confirmation #: _____ | |

| Laboratory Use Only | | | | Analysis Requested | | | | | | | | | | | | | | | Regulatory Criteria | |
|---------------------|----|-----------|------|--------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| YES | NO | Cooler ID | Temp | Depot Reception | | | | | | | | | | | | | | | Regulatory Criteria | |
| | | | | | | | | | | | | | | | | | | | <input checked="" type="checkbox"/> BC CSR <input type="checkbox"/> YK CSR <input type="checkbox"/> CCME <input type="checkbox"/> Drinking Water <input type="checkbox"/> BC Water Quality <input type="checkbox"/> Other | |
| | | | | | | | | | | | | | | | | | | | Special Instructions | |
| | | | | | | | | | | | | | | | | | | | <input checked="" type="checkbox"/> Contact Sai Rajgopal <input checked="" type="checkbox"/> for analytical program | |

Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to Bureau Veritas' standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgement and acceptance of the same.

| Relinquished by: (Signature/ Print) | Date (yyyy/mm/dd) | Time (hh:mm) | Received by: (Signature/ Print) | Date (yyyy/mm/dd) | Time (hh:mm) |
|-------------------------------------|-------------------|--------------|---------------------------------|-------------------|--------------|
| <u>[Signature]</u> | <u>2023/11/21</u> | <u>0630</u> | <u>Alvin Edelman</u> | <u>2023/11/21</u> | <u>0800</u> |





CHAIN OF CUSTODY RECORD

G161051

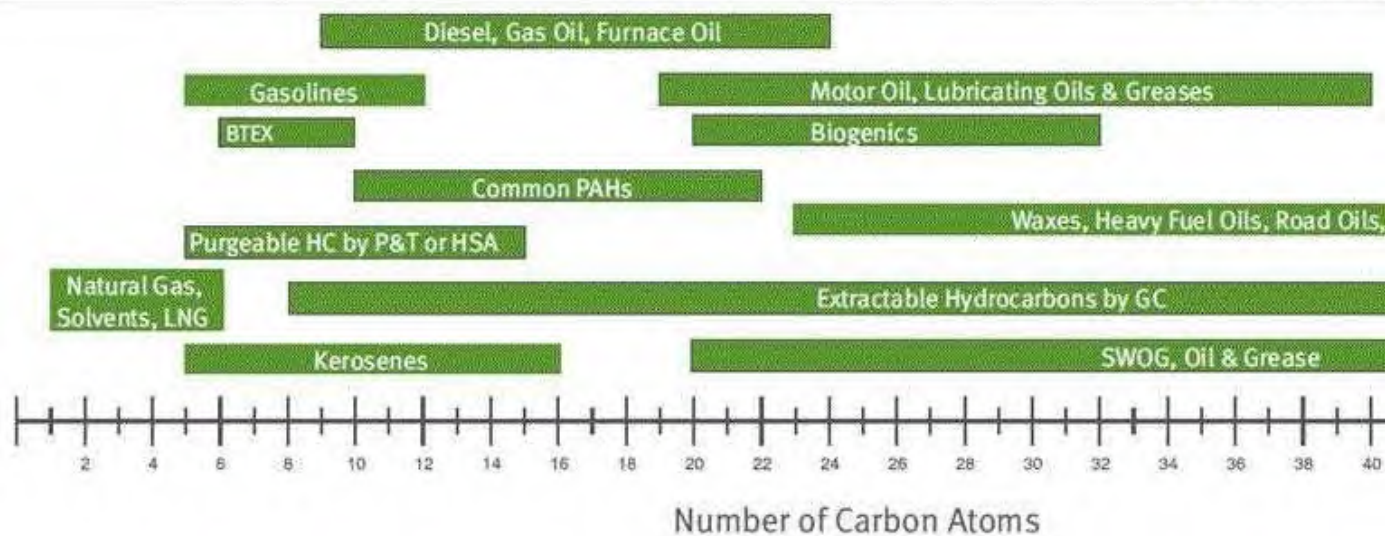
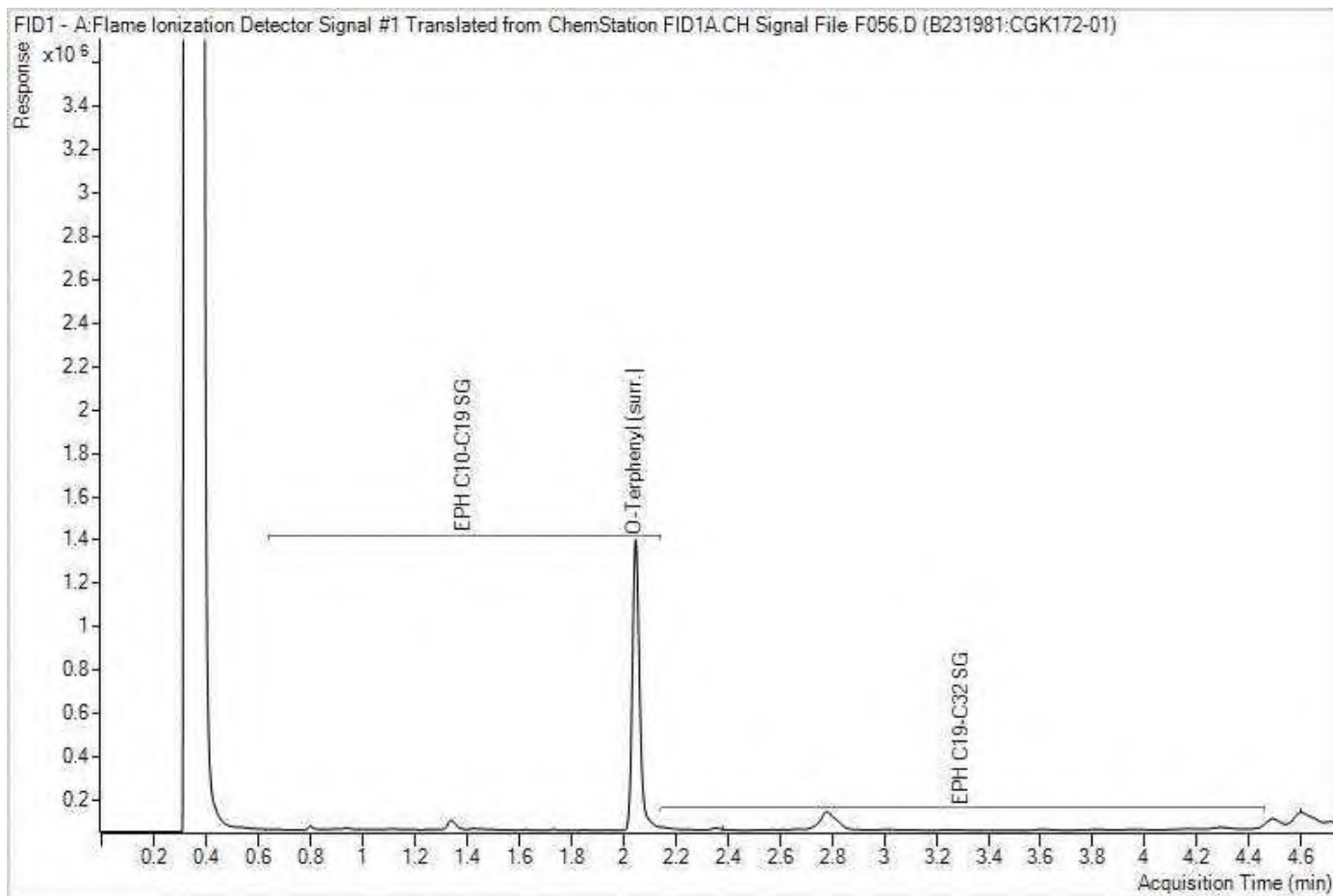
| | | | | | | | |
|---|--|---|--|--|--|---|--|
| Invoice Information | | Report Information (if differs from invoice) | | Project Information | | Turnaround Time (TAT) Required | |
| Company: <u>Atkins/Bechtel</u> | | Company: <u>AS AT LEET</u> | | Quotation: <u>Atkins Bechtel Proj.</u> | | <input type="checkbox"/> 5 - 7 Days Regular (Most Analyses) | |
| Contact Name: <u>Sai Rajagopal</u> | | Contact Name: | | P.O. #/AFE#: | | PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS | |
| Address: <u>1300-3777 Kingsway</u> | | Address: | | Project #: <u>694890</u> | | Rush TAT (Surcharges will be applied) | |
| <u>Burnaby BC PCVJH3ET</u> | | PC: | | Site Location: <u>Bechtel North</u> | | <input type="checkbox"/> Same Day <input type="checkbox"/> 2 Days | |
| Phone/Fax: <u>604-273-5751</u> | | Phone/Fax: | | Site #: | | <input checked="" type="checkbox"/> 1 Day <input type="checkbox"/> 3-4 Days | |
| Email: <u>Sai.rajagopal@atkinsbechtel.com</u> | | Email: | | Sampled By: <u>MAT</u> | | Date Required: _____ | |
| Copies: <u>phoen wing @ atkinsbechtel.com</u> | | Copies: | | | | Rush Confirmation #: _____ | |

| Laboratory Use Only | | | | Analysis Requested | | | | | | | | | | | | Regulatory Criteria | | | | | | | |
|-----------------------|-------------|---------------|------|---------------------------|----------------------|--------|-----------------|-------------------------------------|---|--|---|---|----------------------------------|-------------------------------------|-------------------------------------|--|---|-----------------------------------|------------------------------|-------------------------------------|----------------------------------|--|--|
| YES | NO | Cooler ID | Temp | Depot Reception | | | | | | | | | | | | Regulatory Criteria | | | | | | | |
| | | | | | | | | | | | | | | | | <input checked="" type="checkbox"/> BC CSR <input type="checkbox"/> YK CSR <input type="checkbox"/> CCME <input type="checkbox"/> Drinking Water <input type="checkbox"/> BC Water Quality <input type="checkbox"/> Other | | | | | | | |
| Seal Present | Seal Intact | Cooling Media | Temp | | | | | | | | | | | | | Special Instructions | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| Seal Present | Seal Intact | Cooling Media | Temp | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| Seal Present | Seal Intact | Cooling Media | Temp | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| Sample Identification | | | | Date Sampled (yyyy/mm/dd) | Time Sampled (hh:mm) | Matrix | # of Containers | Analysis Requested | | | | | | | | | | | | Regulatory Criteria | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | BH23-109-01 | 23/11/20 | 1535 | Soil | 3 | | | <input type="checkbox"/> MTBE | <input type="checkbox"/> VOC / BTEX / VPH | <input type="checkbox"/> VOC / BTEX / F1 | <input checked="" type="checkbox"/> PAH | <input checked="" type="checkbox"/> EPH | <input type="checkbox"/> F2 - FA | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Sulphate | <input type="checkbox"/> COO | <input type="checkbox"/> Alkalinity | <input type="checkbox"/> Ammonia | <input checked="" type="checkbox"/> BC CSR | |
| 2 | BH23-109-02 | 23/11/20 | 1540 | Soil | 3 | | | <input type="checkbox"/> BTEX / VPH | <input type="checkbox"/> VOC / BTEX / VPH | <input type="checkbox"/> VOC / BTEX / F1 | <input checked="" type="checkbox"/> PAH | <input checked="" type="checkbox"/> EPH | <input type="checkbox"/> F2 - FA | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Sulphate | <input type="checkbox"/> COO | <input type="checkbox"/> Alkalinity | <input type="checkbox"/> Ammonia | <input type="checkbox"/> YK CSR | |
| 3 | BH23-109-03 | 23/11/20 | 1545 | Soil | 3 | | | <input type="checkbox"/> BTEX / VPH | <input type="checkbox"/> VOC / BTEX / VPH | <input type="checkbox"/> VOC / BTEX / F1 | <input checked="" type="checkbox"/> PAH | <input checked="" type="checkbox"/> EPH | <input type="checkbox"/> F2 - FA | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Sulphate | <input type="checkbox"/> COO | <input type="checkbox"/> Alkalinity | <input type="checkbox"/> Ammonia | <input type="checkbox"/> CCME | |
| 4 | BH23-109-04 | 23/11/20 | 1550 | Soil | 5 | | | <input type="checkbox"/> BTEX / VPH | <input type="checkbox"/> VOC / BTEX / VPH | <input type="checkbox"/> VOC / BTEX / F1 | <input checked="" type="checkbox"/> PAH | <input checked="" type="checkbox"/> EPH | <input type="checkbox"/> F2 - FA | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Sulphate | <input type="checkbox"/> COO | <input type="checkbox"/> Alkalinity | <input type="checkbox"/> Ammonia | <input type="checkbox"/> Drinking Water | |
| 5 | | | | | | | | <input type="checkbox"/> BTEX / VPH | <input type="checkbox"/> VOC / BTEX / VPH | <input type="checkbox"/> VOC / BTEX / F1 | <input type="checkbox"/> PAH | <input type="checkbox"/> EPH | <input type="checkbox"/> F2 - FA | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Sulphate | <input type="checkbox"/> COO | <input type="checkbox"/> Alkalinity | <input type="checkbox"/> Ammonia | <input type="checkbox"/> BC Water Quality | |
| 6 | | | | | | | | <input type="checkbox"/> BTEX / VPH | <input type="checkbox"/> VOC / BTEX / VPH | <input type="checkbox"/> VOC / BTEX / F1 | <input type="checkbox"/> PAH | <input type="checkbox"/> EPH | <input type="checkbox"/> F2 - FA | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Sulphate | <input type="checkbox"/> COO | <input type="checkbox"/> Alkalinity | <input type="checkbox"/> Ammonia | <input type="checkbox"/> Other | |
| 7 | | | | | | | | <input type="checkbox"/> BTEX / VPH | <input type="checkbox"/> VOC / BTEX / VPH | <input type="checkbox"/> VOC / BTEX / F1 | <input type="checkbox"/> PAH | <input type="checkbox"/> EPH | <input type="checkbox"/> F2 - FA | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Sulphate | <input type="checkbox"/> COO | <input type="checkbox"/> Alkalinity | <input type="checkbox"/> Ammonia | | |
| 8 | | | | | | | | <input type="checkbox"/> BTEX / VPH | <input type="checkbox"/> VOC / BTEX / VPH | <input type="checkbox"/> VOC / BTEX / F1 | <input type="checkbox"/> PAH | <input type="checkbox"/> EPH | <input type="checkbox"/> F2 - FA | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Sulphate | <input type="checkbox"/> COO | <input type="checkbox"/> Alkalinity | <input type="checkbox"/> Ammonia | | |
| 9 | | | | | | | | <input type="checkbox"/> BTEX / VPH | <input type="checkbox"/> VOC / BTEX / VPH | <input type="checkbox"/> VOC / BTEX / F1 | <input type="checkbox"/> PAH | <input type="checkbox"/> EPH | <input type="checkbox"/> F2 - FA | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Sulphate | <input type="checkbox"/> COO | <input type="checkbox"/> Alkalinity | <input type="checkbox"/> Ammonia | | |
| 10 | | | | | | | | <input type="checkbox"/> BTEX / VPH | <input type="checkbox"/> VOC / BTEX / VPH | <input type="checkbox"/> VOC / BTEX / F1 | <input type="checkbox"/> PAH | <input type="checkbox"/> EPH | <input type="checkbox"/> F2 - FA | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Sulphate | <input type="checkbox"/> COO | <input type="checkbox"/> Alkalinity | <input type="checkbox"/> Ammonia | | |

Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to Bureau Veritas' standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgement and acceptance of our terms which are available for viewing at www.bvlab.ca/terms

| | | | | | | |
|-------------------------------------|--------------------|---------------|---------------------------------|--------------------|---------------|----------|
| Relinquished by: (Signature/ Print) | Date (yyyy/mm/dd): | Time (hh:mm): | Received by: (Signature/ Print) | Date (yyyy/mm/dd): | Time (hh:mm): | BV Job # |
| | 23/11/20 | 0630 | | | | |

EPH in Soil by SG GC/FID Chromatogram



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



Your P.O. #: 694890
 Your Project #: 694890
 Site Location: BRADNER NORTH
 Your C.O.C. #: G161049

Attention: Sai Rajajayavel

ATKINSREALIS CANADA INC.
 BURNABY, ENVIRONMENT DIVISION
 1300-3777 Kingsway Avenue
 BURNABY, BC
 CANADA V5H 3Z7

Report Date: 2023/12/14
 Report #: R3441002
 Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C394781

Received: 2023/11/21, 08:00

Sample Matrix: Soil
 # Samples Received: 8

| Analyses | Quantity | Date | Date | Laboratory Method | Analytical Method |
|---|----------|------------|------------|----------------------------------|----------------------|
| | | Extracted | Analyzed | | |
| Chromium III (Calc'd) (1) | 1 | 2023/11/24 | 2023/11/27 | | Auto Calc |
| Hexavalent Chromium (1, 2) | 1 | 2023/11/27 | 2023/11/27 | AB SOP-00063 | SM 24 3500-Cr B m |
| Elements by ICPMS (total) (3) | 7 | 2023/11/22 | 2023/11/22 | BBY7SOP-00004 / BBY7SOP-00001 | EPA 6020b R2 m |
| Moisture | 2 | 2023/11/21 | 2023/11/22 | BBY8SOP-00017 | BCMOE BCLM Dec2000 m |
| Moisture | 1 | 2023/11/21 | 2023/12/13 | BBY8SOP-00017 | BCMOE BCLM Dec2000 m |
| Moisture | 1 | 2023/11/29 | 2023/11/30 | BBY8SOP-00017 | BCMOE BCLM Dec2000 m |
| Non Routine/Non Validated Matrix Tested (4) | 1 | N/A | 2023/12/12 | | |
| PAH in Soil by GC/MS (SIM) | 2 | 2023/11/21 | 2023/11/22 | BBY8SOP-00022 | BCMOE BCLM Jul2017m |
| PAH in Soil by GC/MS (SIM) | 1 | 2023/11/21 | 2023/12/13 | BBY8SOP-00022 | BCMOE BCLM Jul2017m |
| PAH in Soil by GC/MS (SIM) | 1 | 2023/11/29 | 2023/11/30 | BBY8SOP-00022 | BCMOE BCLM Jul2017m |
| Total PAH and B(a)P Calculation (5) | 2 | N/A | 2023/11/22 | BBY WI-00033 | Auto Calc |
| Total PAH and B(a)P Calculation (5) | 1 | N/A | 2023/11/30 | BBY WI-00033 | Auto Calc |
| Total PAH and B(a)P Calculation (5) | 1 | N/A | 2023/12/14 | BBY WI-00033 | Auto Calc |
| pH (2:1 DI Water Extract) | 7 | 2023/11/22 | 2023/11/22 | BBY6SOP-00028 | BCMOE BCLM Mar2005 m |
| EPH in Soil by SG GC/FID | 1 | 2023/11/21 | 2023/12/13 | BBY8SOP-00029 | BCMOE BCLM Dec2016 m |

Remarks:

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

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

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



Your P.O. #: 694890
Your Project #: 694890
Site Location: BRADNER NORTH
Your C.O.C. #: G161049

Attention: Sai Rajajayavel

ATKINSREALIS CANADA INC.
BURNABY, ENVIRONMENT DIVISION
1300-3777 Kingsway Avenue
BURNABY, BC
CANADA V5H 3Z7

Report Date: 2023/12/14
Report #: R3441002
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C394781

Received: 2023/11/21, 08:00

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

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

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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

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

- (1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
- (2) Some soil samples may react with the Cr(VI) spike reducing it to Cr(III). These samples are highly unlikely to contain native hexavalent chromium. Thus a failed spike recovery does not invalidate a negative result on the native sample.
- (3) The sample is prepared per the BC MOE Lab Manual "Strong Acid Leachable Metals (SALM) in Soil - Prescriptive", Revision Nov 6, 2015.
- (4) Sample(s) analyzed using methodologies that have not been subjected to Bureau Veritas' standard validation process for the submitted matrix and is not an accredited method. Analysis performed with client consent, however results should be viewed with discretion.
- (5) Total PAHs in Soil include: Quinoline, Naphthalene, 1-Methylnaphthalene, 2-Methylnaphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Acridine, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b&j)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, and Benzo(g,h,i)perylene.

Total PAHs in Sediment include (B.C. Reg. 116/2018, Schedule 3.4): Naphthalene, 2-Methylnaphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(a)pyrene, and Dibenz(a,h)anthracene.

Encryption Key

Debbie Nordbruket
Key Account Specialist
14 Dec 2023 15:44:24

Please direct all questions regarding this Certificate of Analysis to:

Debbie Nordbruket, Key Account Specialist
Email: Debra.NORDBRUGET@bureauveritas.com
Phone# (250)385-6112

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



BUREAU
VERITAS

Bureau Veritas Job #: C394781
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Your P.O. #: 694890
Sampler Initials: MAH

RESULTS OF CHEMICAL ANALYSES OF SOIL

| | | | | | | |
|----------------------------------|--------------|---------------------|------------|-----------------|--|-----------------|
| Bureau Veritas ID | | CEZ965 | | | CGJ941 | |
| Sampling Date | | 2023/11/20 10:05 | | | 2023/11/20 10:00 | |
| COC Number | | G161049 | | | G161049 | |
| | UNITS | BH23-105-03 | RDL | QC Batch | BH23-105-01 WITH SG CLEANUP | QC Batch |
| Calculated Parameters | | | | | | |
| Chromium III | mg/kg | 77 | 0.50 | B211576 | | |
| Elements | | | | | | |
| Hex. Chromium (Cr 6+) | mg/kg | <0.080 | 0.080 | B213610 | | |
| MISCELLANEOUS | | | | | | |
| Sample Matrix | N/A | | | | SG ON PAH | ONSITE |
| RDL = Reportable Detection Limit | | | | | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394781
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Your P.O. #: 694890
Sampler Initials: MAH

PHYSICAL TESTING (SOIL)

| | | | | | | | | | |
|--|--------------|---------------------|---------------------|-----------------|---------------------|-----------------|--|------------|-----------------|
| Bureau Veritas ID | | CEZ963 | CEZ965 | | CEZ968 | | CGJ941 | | |
| Sampling Date | | 2023/11/20 10:00 | 2023/11/20 10:05 | | 2023/11/20 11:15 | | 2023/11/20 10:00 | | |
| COC Number | | G161049 | G161049 | | G161049 | | G161049 | | |
| | UNITS | BH23-105-01 | BH23-105-03 | QC Batch | BH23-106-01 | QC Batch | BH23-105-01 WITH SG CLEANUP | RDL | QC Batch |
| Physical Properties | | | | | | | | | |
| Moisture | % | 37 | 38 | B207343 | 78 | B216760 | 37 (1) | 0.30 | B207343 |
| RDL = Reportable Detection Limit (1) From CEZ963-01 | | | | | | | | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394781
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Your P.O. #: 694890
Sampler Initials: MAH

TOTAL PETROLEUM HYDROCARBONS (SOIL)

| | | | | |
|----------------------------------|--------------|--|------------|-----------------|
| Bureau Veritas ID | | CGJ941 | | |
| Sampling Date | | 2023/11/20 10:00 | | |
| COC Number | | G161049 | | |
| | UNITS | BH23-105-01 WITH SG CLEANUP | RDL | QC Batch |
| Hydrocarbons | | | | |
| SG BC-CSR EPH (C10-C19) | mg/kg | <100 | 100 | B231981 |
| SG BC-CSR EPH (C19-C32) | mg/kg | <100 | 100 | B231981 |
| Surrogate Recovery (%) | | | | |
| SG O-TERPHENYL (sur.) | % | 71 | | B231981 |
| RDL = Reportable Detection Limit | | | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394781
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Your P.O. #: 694890
Sampler Initials: MAH

CSR/CCME METALS IN SOIL WITH HG (SOIL)

| Bureau Veritas ID | | CEZ963 | CEZ964 | CEZ965 | CEZ967 | CEZ968 | CEZ971 | | |
|-------------------|-------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----|----------|
| Sampling Date | | 2023/11/20 10:00 | 2023/11/20 10:00 | 2023/11/20 10:05 | 2023/11/20 10:15 | 2023/11/20 11:15 | 2023/11/20 11:25 | | |
| COC Number | | G161049 | G161049 | G161049 | G161049 | G161049 | G161049 | | |
| | UNITS | BH23-105-01 | BH23-105-02 | BH23-105-03 | BH23-105-05 | BH23-106-01 | BH23-106-04 | RDL | QC Batch |

| Physical Properties | | | | | | | | | |
|-----------------------|-------|--------|--------|-------|--------|-------|---------|-------|---------|
| Soluble (2:1) pH | pH | 3.82 | 3.71 | 5.00 | 6.69 | 4.69 | 6.58 | N/A | B208189 |
| Total Metals by ICPMS | | | | | | | | | |
| Total Aluminum (Al) | mg/kg | 10300 | 7650 | 34900 | 23400 | 20300 | 18800 | 100 | B208149 |
| Total Antimony (Sb) | mg/kg | 0.85 | 0.80 | 0.33 | 0.39 | 0.76 | 0.35 | 0.10 | B208149 |
| Total Arsenic (As) | mg/kg | 9.44 | 8.17 | 6.65 | 7.81 | 3.72 | 6.46 | 0.20 | B208149 |
| Total Barium (Ba) | mg/kg | 56.6 | 58.2 | 92.0 | 129 | 94.9 | 106 | 0.10 | B208149 |
| Total Beryllium (Be) | mg/kg | <0.20 | <0.20 | 0.58 | 0.49 | 0.91 | 0.40 | 0.20 | B208149 |
| Total Bismuth (Bi) | mg/kg | 0.27 | 0.24 | 0.12 | <0.10 | 0.20 | <0.10 | 0.10 | B208149 |
| Total Boron (B) | mg/kg | 2.8 | 2.7 | 2.7 | 3.2 | 2.1 | 1.8 | 1.0 | B208149 |
| Total Cadmium (Cd) | mg/kg | 0.153 | 0.152 | 0.223 | 0.121 | 0.263 | 0.073 | 0.050 | B208149 |
| Total Calcium (Ca) | mg/kg | 2400 | 2670 | 1560 | 5590 | 1620 | 3600 | 100 | B208149 |
| Total Chromium (Cr) | mg/kg | 27.2 | 20.8 | 77.2 | 53.7 | 30.6 | 51.3 | 0.50 | B208149 |
| Total Cobalt (Co) | mg/kg | 3.88 | 3.04 | 15.0 | 16.3 | 5.61 | 10.9 | 0.10 | B208149 |
| Total Copper (Cu) | mg/kg | 23.7 | 27.2 | 20.7 | 40.1 | 18.4 | 25.9 | 0.50 | B208149 |
| Total Iron (Fe) | mg/kg | 19700 | 15300 | 36100 | 34000 | 13600 | 27900 | 100 | B208149 |
| Total Lead (Pb) | mg/kg | 90.0 | 101 | 6.99 | 5.37 | 26.2 | 3.84 | 0.10 | B208149 |
| Total Lithium (Li) | mg/kg | 6.56 | 4.93 | 22.0 | 16.8 | 10.9 | 12.7 | 0.50 | B208149 |
| Total Magnesium (Mg) | mg/kg | 2080 | 1520 | 5590 | 10100 | 2730 | 6780 | 100 | B208149 |
| Total Manganese (Mn) | mg/kg | 162 | 117 | 568 | 660 | 229 | 514 | 0.20 | B208149 |
| Total Mercury (Hg) | mg/kg | 0.235 | 0.253 | 0.123 | 0.063 | 0.170 | 0.053 | 0.050 | B208149 |
| Total Molybdenum (Mo) | mg/kg | 0.99 | 0.88 | 1.31 | 0.68 | 1.09 | 1.30 | 0.10 | B208149 |
| Total Nickel (Ni) | mg/kg | 14.1 | 11.8 | 44.5 | 48.8 | 18.7 | 33.5 | 0.50 | B208149 |
| Total Phosphorus (P) | mg/kg | 633 | 633 | 996 | 597 | 929 | 445 | 10 | B208149 |
| Total Potassium (K) | mg/kg | 439 | 407 | 730 | 1420 | 410 | 738 (1) | 100 | B208149 |
| Total Selenium (Se) | mg/kg | <0.50 | <0.50 | 0.64 | <0.50 | 1.13 | <0.50 | 0.50 | B208149 |
| Total Silver (Ag) | mg/kg | 0.127 | 0.115 | 0.245 | <0.050 | 0.250 | <0.050 | 0.050 | B208149 |
| Total Sodium (Na) | mg/kg | <100 | <100 | 112 | 266 | <100 | 171 | 100 | B208149 |
| Total Strontium (Sr) | mg/kg | 24.3 | 28.0 | 13.2 | 49.3 | 18.1 | 36.4 | 0.10 | B208149 |
| Total Thallium (Tl) | mg/kg | <0.050 | <0.050 | 0.103 | 0.102 | 0.061 | 0.080 | 0.050 | B208149 |

RDL = Reportable Detection Limit

N/A = Not Applicable

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



BUREAU
VERITAS

Bureau Veritas Job #: C394781
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Your P.O. #: 694890
Sampler Initials: MAH

CSR/CCME METALS IN SOIL WITH HG (SOIL)

| Bureau Veritas ID | | CEZ963 | CEZ964 | CEZ965 | CEZ967 | CEZ968 | CEZ971 | | |
|----------------------|-------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------|----------|
| Sampling Date | | 2023/11/20 10:00 | 2023/11/20 10:00 | 2023/11/20 10:05 | 2023/11/20 10:15 | 2023/11/20 11:15 | 2023/11/20 11:25 | | |
| COC Number | | G161049 | G161049 | G161049 | G161049 | G161049 | G161049 | | |
| | UNITS | BH23-105-01 | BH23-105-02 | BH23-105-03 | BH23-105-05 | BH23-106-01 | BH23-106-04 | RDL | QC Batch |
| Total Tin (Sn) | mg/kg | 0.88 | 0.88 | 0.61 | 0.45 | 0.64 | 0.32 | 0.10 | B208149 |
| Total Titanium (Ti) | mg/kg | 579 | 486 | 1210 | 1200 | 332 | 1030 | 1.0 | B208149 |
| Total Tungsten (W) | mg/kg | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | B208149 |
| Total Uranium (U) | mg/kg | 0.373 | 0.299 | 0.803 | 0.609 | 1.04 | 0.754 | 0.050 | B208149 |
| Total Vanadium (V) | mg/kg | 44.3 | 33.6 | 75.2 | 80.4 | 29.8 | 70.2 | 1.0 | B208149 |
| Total Zinc (Zn) | mg/kg | 47.0 | 42.3 | 86.1 | 68.9 | 28.8 | 43.6 | 1.0 | B208149 |
| Total Zirconium (Zr) | mg/kg | 2.38 | 1.89 | 4.33 | 9.51 | 1.35 | 7.58 | 0.50 | B208149 |

RDL = Reportable Detection Limit



BUREAU
VERITAS

Bureau Veritas Job #: C394781
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Your P.O. #: 694890
Sampler Initials: MAH

CSR/CCME METALS IN SOIL WITH HG (SOIL)

| Bureau Veritas ID | | CEZ971 | | | CEZ972 | | |
|--|-------|------------------------|-------|----------|---------------------|-------|----------|
| Sampling Date | | 2023/11/20 11:25 | | | 2023/11/20 11:30 | | |
| COC Number | | G161049 | | | G161049 | | |
| | UNITS | BH23-106-04 Lab-Dup | RDL | QC Batch | BH23-106-05 | RDL | QC Batch |
| Physical Properties | | | | | | | |
| Soluble (2:1) pH | pH | | | | 7.05 | N/A | B208189 |
| Total Metals by ICPMS | | | | | | | |
| Total Aluminum (Al) | mg/kg | 18300 | 100 | B208149 | 18500 | 100 | B208149 |
| Total Antimony (Sb) | mg/kg | 0.36 | 0.10 | B208149 | 0.49 | 0.10 | B208149 |
| Total Arsenic (As) | mg/kg | 6.36 | 0.20 | B208149 | 8.74 | 0.20 | B208149 |
| Total Barium (Ba) | mg/kg | 104 | 0.10 | B208149 | 99.8 | 0.10 | B208149 |
| Total Beryllium (Be) | mg/kg | 0.38 | 0.20 | B208149 | 0.42 | 0.20 | B208149 |
| Total Bismuth (Bi) | mg/kg | <0.10 | 0.10 | B208149 | <0.10 | 0.10 | B208149 |
| Total Boron (B) | mg/kg | 1.9 | 1.0 | B208149 | 5.3 | 1.0 | B208149 |
| Total Cadmium (Cd) | mg/kg | 0.072 | 0.050 | B208149 | 0.158 | 0.050 | B208149 |
| Total Calcium (Ca) | mg/kg | 3540 | 100 | B208149 | 5870 | 100 | B208149 |
| Total Chromium (Cr) | mg/kg | 49.9 | 0.50 | B208149 | 50.7 | 0.50 | B208149 |
| Total Cobalt (Co) | mg/kg | 10.7 | 0.10 | B208149 | 13.6 | 0.10 | B208149 |
| Total Copper (Cu) | mg/kg | 25.5 | 0.50 | B208149 | 39.1 | 0.50 | B208149 |
| Total Iron (Fe) | mg/kg | 27200 | 100 | B208149 | 32200 | 100 | B208149 |
| Total Lead (Pb) | mg/kg | 3.76 | 0.10 | B208149 | 4.58 | 0.10 | B208149 |
| Total Lithium (Li) | mg/kg | 12.7 | 0.50 | B208149 | 14.5 | 0.50 | B208149 |
| Total Magnesium (Mg) | mg/kg | 6630 | 100 | B208149 | 9000 | 100 | B208149 |
| Total Manganese (Mn) | mg/kg | 490 | 0.20 | B208149 | 524 | 0.20 | B208149 |
| Total Mercury (Hg) | mg/kg | <0.050 | 0.050 | B208149 | 0.076 | 0.050 | B208149 |
| Total Molybdenum (Mo) | mg/kg | 1.29 | 0.10 | B208149 | 1.05 | 0.10 | B208149 |
| Total Nickel (Ni) | mg/kg | 32.7 | 0.50 | B208149 | 44.2 | 0.50 | B208149 |
| Total Phosphorus (P) | mg/kg | 442 | 10 | B208149 | 668 | 10 | B208149 |
| Total Potassium (K) | mg/kg | 724 | 100 | B208149 | 1510 | 100 | B208149 |
| Total Selenium (Se) | mg/kg | <0.50 | 0.50 | B208149 | <0.50 | 0.50 | B208149 |
| Total Silver (Ag) | mg/kg | <0.050 | 0.050 | B208149 | 0.082 | 0.050 | B208149 |
| Total Sodium (Na) | mg/kg | 158 | 100 | B208149 | 366 | 100 | B208149 |
| Total Strontium (Sr) | mg/kg | 35.4 | 0.10 | B208149 | 44.7 | 0.10 | B208149 |
| Total Thallium (Tl) | mg/kg | 0.079 | 0.050 | B208149 | 0.110 | 0.050 | B208149 |
| RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate N/A = Not Applicable | | | | | | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394781
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Your P.O. #: 694890
Sampler Initials: MAH

CSR/CCME METALS IN SOIL WITH HG (SOIL)

| Bureau Veritas ID | | CEZ971 | | | CEZ972 | | |
|--|-------|------------------------|-------|----------|---------------------|-------|----------|
| Sampling Date | | 2023/11/20 11:25 | | | 2023/11/20 11:30 | | |
| COC Number | | G161049 | | | G161049 | | |
| | UNITS | BH23-106-04 Lab-Dup | RDL | QC Batch | BH23-106-05 | RDL | QC Batch |
| Total Tin (Sn) | mg/kg | 0.36 | 0.10 | B208149 | 0.43 | 0.10 | B208149 |
| Total Titanium (Ti) | mg/kg | 1010 | 1.0 | B208149 | 1130 | 1.0 | B208149 |
| Total Tungsten (W) | mg/kg | <0.50 | 0.50 | B208149 | <0.50 | 0.50 | B208149 |
| Total Uranium (U) | mg/kg | 0.738 | 0.050 | B208149 | 0.508 | 0.050 | B208149 |
| Total Vanadium (V) | mg/kg | 68.4 | 1.0 | B208149 | 78.7 | 1.0 | B208149 |
| Total Zinc (Zn) | mg/kg | 42.1 | 1.0 | B208149 | 64.0 | 1.0 | B208149 |
| Total Zirconium (Zr) | mg/kg | 7.25 | 0.50 | B208149 | 8.61 | 0.50 | B208149 |
| RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate | | | | | | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394781
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Your P.O. #: 694890
Sampler Initials: MAH

CSR PAH IN SOIL BY GC-MS (SOIL)

| | | | | | | | | |
|--------------------------|--------------|---------------------|---------------------|------------|-----------------|---------------------|------------|-----------------|
| Bureau Veritas ID | | CEZ963 | CEZ965 | | | CEZ968 | | |
| Sampling Date | | 2023/11/20 10:00 | 2023/11/20 10:05 | | | 2023/11/20 11:15 | | |
| COC Number | | G161049 | G161049 | | | G161049 | | |
| | UNITS | BH23-105-01 | BH23-105-03 | RDL | QC Batch | BH23-106-01 | RDL | QC Batch |

| | | | | | | | | |
|------------------------------|-------|------|--------|-------|---------|-------|------|---------|
| Calculated Parameters | | | | | | | | |
| Low Molecular Weight PAH`s | mg/kg | 0.17 | <0.050 | 0.050 | B206893 | <0.21 | 0.21 | B216546 |
| High Molecular Weight PAH`s | mg/kg | 1.7 | <0.050 | 0.050 | B206893 | <0.21 | 0.21 | B216546 |
| Total PAH | mg/kg | 1.8 | <0.050 | 0.050 | B206893 | 0.23 | 0.21 | B216546 |

| | | | | | | | | |
|-----------------------------|-------|---------|---------|--------|---------|------------|-------|---------|
| Polycyclic Aromatics | | | | | | | | |
| Quinoline | mg/kg | <0.050 | <0.050 | 0.050 | B207674 | <0.21 (1) | 0.21 | B217281 |
| Naphthalene | mg/kg | <0.010 | <0.010 | 0.010 | B207674 | <0.041 (1) | 0.041 | B217281 |
| 1-Methylnaphthalene | mg/kg | <0.050 | <0.050 | 0.050 | B207674 | <0.21 (1) | 0.21 | B217281 |
| 2-Methylnaphthalene | mg/kg | <0.020 | <0.020 | 0.020 | B207674 | <0.082 (1) | 0.082 | B217281 |
| Acenaphthylene | mg/kg | <0.0050 | <0.0050 | 0.0050 | B207674 | <0.021 (1) | 0.021 | B217281 |
| Acenaphthene | mg/kg | 0.0058 | <0.0050 | 0.0050 | B207674 | <0.021 (1) | 0.021 | B217281 |
| Fluorene | mg/kg | <0.020 | <0.020 | 0.020 | B207674 | <0.082 (1) | 0.082 | B217281 |
| Phenanthrene | mg/kg | 0.16 | <0.010 | 0.010 | B207674 | 0.049 (1) | 0.041 | B217281 |
| Anthracene | mg/kg | <0.0040 | <0.0040 | 0.0040 | B207674 | <0.016 (1) | 0.016 | B217281 |
| Fluoranthene | mg/kg | 0.39 | <0.020 | 0.020 | B207674 | 0.089 (1) | 0.082 | B217281 |
| Pyrene | mg/kg | 0.33 | <0.020 | 0.020 | B207674 | 0.089 (1) | 0.082 | B217281 |
| Benzo(a)anthracene | mg/kg | 0.093 | <0.020 | 0.020 | B207674 | <0.082 (1) | 0.082 | B217281 |
| Chrysene | mg/kg | 0.24 | <0.020 | 0.020 | B207674 | <0.082 (1) | 0.082 | B217281 |
| Benzo(b&j)fluoranthene | mg/kg | 0.24 | <0.020 | 0.020 | B207674 | <0.082 (1) | 0.082 | B217281 |
| Benzo(b)fluoranthene | mg/kg | 0.15 | <0.020 | 0.020 | B207674 | <0.082 (1) | 0.082 | B217281 |
| Benzo(k)fluoranthene | mg/kg | 0.089 | <0.020 | 0.020 | B207674 | <0.082 (1) | 0.082 | B217281 |
| Benzo(a)pyrene | mg/kg | 0.12 | <0.020 | 0.020 | B207674 | <0.082 (1) | 0.082 | B217281 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.088 | <0.020 | 0.020 | B207674 | <0.082 (1) | 0.082 | B217281 |
| Dibenz(a,h)anthracene | mg/kg | <0.020 | <0.020 | 0.020 | B207674 | <0.082 (1) | 0.082 | B217281 |
| Benzo(g,h,i)perylene | mg/kg | 0.086 | <0.050 | 0.050 | B207674 | <0.21 (1) | 0.21 | B217281 |

| | | | | | | | | |
|-------------------------------|---|----|----|--|---------|----|--|---------|
| Surrogate Recovery (%) | | | | | | | | |
| D10-ANTHRACENE (sur.) | % | 89 | 90 | | B207674 | 92 | | B217281 |
| D8-ACENAPHTHYLENE (sur.) | % | 71 | 74 | | B207674 | 90 | | B217281 |
| D8-NAPHTHALENE (sur.) | % | 74 | 75 | | B207674 | 90 | | B217281 |
| TERPHENYL-D14 (sur.) | % | 92 | 90 | | B207674 | 96 | | B217281 |

RDL = Reportable Detection Limit

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



BUREAU
VERITAS

Bureau Veritas Job #: C394781
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Your P.O. #: 694890
Sampler Initials: MAH

CSR PAH IN SOIL BY GC-MS (SOIL)

| | | | | |
|----------------------------------|--------------|--|------------|-----------------|
| Bureau Veritas ID | | CGJ941 | | |
| Sampling Date | | 2023/11/20 10:00 | | |
| COC Number | | G161049 | | |
| | UNITS | BH23-105-01 WITH SG CLEANUP | RDL | QC Batch |
| Calculated Parameters | | | | |
| Low Molecular Weight PAH`s | mg/kg | <0.20 | 0.20 | B230600 |
| High Molecular Weight PAH`s | mg/kg | 1.6 | 0.20 | B230600 |
| Total PAH | mg/kg | 1.7 | 0.20 | B230600 |
| Polycyclic Aromatics | | | | |
| Naphthalene | mg/kg | <0.040 | 0.040 | B231032 |
| 1-Methylnaphthalene | mg/kg | <0.20 | 0.20 | B231032 |
| 2-Methylnaphthalene | mg/kg | <0.080 | 0.080 | B231032 |
| Acenaphthylene | mg/kg | <0.020 | 0.020 | B231032 |
| Acenaphthene | mg/kg | <0.020 | 0.020 | B231032 |
| Fluorene | mg/kg | <0.080 | 0.080 | B231032 |
| Phenanthrene | mg/kg | 0.16 | 0.040 | B231032 |
| Anthracene | mg/kg | <0.016 | 0.016 | B231032 |
| Fluoranthene | mg/kg | 0.37 | 0.080 | B231032 |
| Pyrene | mg/kg | 0.33 | 0.080 | B231032 |
| Benzo(a)anthracene | mg/kg | 0.10 | 0.080 | B231032 |
| Chrysene | mg/kg | 0.26 | 0.080 | B231032 |
| Benzo(b&j)fluoranthene | mg/kg | 0.27 | 0.080 | B231032 |
| Benzo(b)fluoranthene | mg/kg | 0.18 | 0.080 | B231032 |
| Benzo(k)fluoranthene | mg/kg | 0.087 | 0.080 | B231032 |
| Benzo(a)pyrene | mg/kg | 0.14 | 0.080 | B231032 |
| Indeno(1,2,3-cd)pyrene | mg/kg | <0.080 | 0.080 | B231032 |
| Dibenz(a,h)anthracene | mg/kg | <0.080 | 0.080 | B231032 |
| Benzo(g,h,i)perylene | mg/kg | <0.20 | 0.20 | B231032 |
| Surrogate Recovery (%) | | | | |
| D10-ANTHRACENE (sur.) | % | 100 | | B231032 |
| D8-ACENAPHTHYLENE (sur.) | % | 72 | | B231032 |
| D8-NAPHTHALENE (sur.) | % | 77 | | B231032 |
| TERPHENYL-D14 (sur.) | % | 91 | | B231032 |
| RDL = Reportable Detection Limit | | | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394781
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Your P.O. #: 694890
Sampler Initials: MAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

| | |
|-----------|-------|
| Package 1 | 6.7°C |
|-----------|-------|

Version #2: Report reissued to include results for Hexavalent and Trivalent Chromium on sample BH23-105-03 (CEZ965) as per client request received 2023/11/24.

Version #3: Report reissued to include results for CSR PAH in Soil on sample BH23-106-01 as per client request received 2023/11/29.

Version #4: Report reissued to include results for TEH and CSR PAH's with Silica Gel Cleanup on sample BH23-105-01 (original sample CEZ963, re-logged for reporting purposes as BH23-105-01 WITH SG CLEANUP / CGJ941) as per client request received 2023/12/11.

Sample CGJ941 [BH23-105-01 WITH SG CLEANUP] : Silica Gel Cleanup performed on original PAH/TEH sample extract CEZ963-01 as requested by client. See BBY PDF-00149 for more details.

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C394781

Report Date: 2023/12/14

QUALITY ASSURANCE REPORT

ATKINSREALIS CANADA INC.

Client Project #: 694890

Site Location: BRADNER NORTH

Your P.O. #: 694890

Sampler Initials: MAH

| QC Batch | Parameter | Date | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|----------|--------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|-------------|-----------|
| | | | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits | % Recovery | QC Limits |
| B207674 | D10-ANTHRACENE (sur.) | 2023/11/21 | 98 | 50 - 140 | 95 | 50 - 140 | 107 | % | | | | |
| B207674 | D8-ACENAPHTHYLENE (sur.) | 2023/11/21 | 73 | 50 - 140 | 73 | 50 - 140 | 81 | % | | | | |
| B207674 | D8-NAPHTHALENE (sur.) | 2023/11/21 | 70 | 50 - 140 | 68 | 50 - 140 | 76 | % | | | | |
| B207674 | TERPHENYL-D14 (sur.) | 2023/11/21 | 102 | 50 - 140 | 99 | 50 - 140 | 111 | % | | | | |
| B217281 | D10-ANTHRACENE (sur.) | 2023/11/29 | 90 | 50 - 140 | 94 | 50 - 140 | 103 | % | | | | |
| B217281 | D8-ACENAPHTHYLENE (sur.) | 2023/11/29 | 85 | 50 - 140 | 89 | 50 - 140 | 95 | % | | | | |
| B217281 | D8-NAPHTHALENE (sur.) | 2023/11/29 | 81 | 50 - 140 | 80 | 50 - 140 | 85 | % | | | | |
| B217281 | TERPHENYL-D14 (sur.) | 2023/11/29 | 93 | 50 - 140 | 96 | 50 - 140 | 105 | % | | | | |
| B231032 | D10-ANTHRACENE (sur.) | 2023/12/13 | | | 109 | 50 - 140 | 107 | % | | | | |
| B231032 | D8-ACENAPHTHYLENE (sur.) | 2023/12/13 | | | 80 | 50 - 140 | 79 | % | | | | |
| B231032 | D8-NAPHTHALENE (sur.) | 2023/12/13 | | | 74 | 50 - 140 | 74 | % | | | | |
| B231032 | TERPHENYL-D14 (sur.) | 2023/12/13 | | | 93 | 50 - 140 | 92 | % | | | | |
| B231981 | SG O-TERPHENYL (sur.) | 2023/12/13 | | | 88 | 50 - 130 | 92 | % | | | | |
| B207343 | Moisture | 2023/11/22 | | | | | <0.30 | % | 0.60 | 20 | | |
| B207674 | 1-Methylnaphthalene | 2023/11/22 | 86 | 50 - 140 | 89 | 50 - 140 | <0.050 | mg/kg | NC | 50 | | |
| B207674 | 2-Methylnaphthalene | 2023/11/22 | 75 | 50 - 140 | 78 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Acenaphthene | 2023/11/22 | 79 | 50 - 140 | 81 | 50 - 140 | <0.0050 | mg/kg | NC | 50 | | |
| B207674 | Acenaphthylene | 2023/11/22 | 78 | 50 - 140 | 80 | 50 - 140 | <0.0050 | mg/kg | NC | 50 | | |
| B207674 | Anthracene | 2023/11/22 | 111 | 50 - 140 | 106 | 50 - 140 | <0.0040 | mg/kg | NC | 50 | | |
| B207674 | Benzo(a)anthracene | 2023/11/22 | 90 | 50 - 140 | 91 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Benzo(a)pyrene | 2023/11/22 | 85 | 50 - 140 | 86 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Benzo(b&j)fluoranthene | 2023/11/22 | 89 | 50 - 140 | 92 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Benzo(b)fluoranthene | 2023/11/22 | 81 | 50 - 140 | 86 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Benzo(g,h,i)perylene | 2023/11/22 | 83 | 50 - 140 | 83 | 50 - 140 | <0.050 | mg/kg | NC | 50 | | |
| B207674 | Benzo(k)fluoranthene | 2023/11/22 | 84 | 50 - 140 | 88 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Chrysene | 2023/11/22 | 95 | 50 - 140 | 96 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Dibenz(a,h)anthracene | 2023/11/22 | 84 | 50 - 140 | 84 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Fluoranthene | 2023/11/22 | 114 | 50 - 140 | 102 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Fluorene | 2023/11/22 | 88 | 50 - 140 | 90 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Indeno(1,2,3-cd)pyrene | 2023/11/22 | 88 | 50 - 140 | 87 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Naphthalene | 2023/11/22 | 76 | 50 - 140 | 77 | 50 - 140 | <0.010 | mg/kg | NC | 50 | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394781

Report Date: 2023/12/14

QUALITY ASSURANCE REPORT(CONT'D)

ATKINSREALIS CANADA INC.

Client Project #: 694890

Site Location: BRADNER NORTH

Your P.O. #: 694890

Sampler Initials: MAH

| QC Batch | Parameter | Date | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|----------|-----------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|-------------|-----------|
| | | | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits | % Recovery | QC Limits |
| B207674 | Phenanthrene | 2023/11/22 | 97 | 50 - 140 | 93 | 50 - 140 | <0.010 | mg/kg | NC | 50 | | |
| B207674 | Pyrene | 2023/11/22 | 113 | 50 - 140 | 100 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Quinoline | 2023/11/22 | 107 | 50 - 140 | 107 | 50 - 140 | <0.050 | mg/kg | NC | 50 | | |
| B208149 | Total Aluminum (Al) | 2023/11/22 | NC | 75 - 125 | 106 | 75 - 125 | <100 | mg/kg | 2.6 | 40 | 90 | 70 - 130 |
| B208149 | Total Antimony (Sb) | 2023/11/22 | 88 | 75 - 125 | 103 | 75 - 125 | <0.10 | mg/kg | 3.0 | 30 | 100 | 70 - 130 |
| B208149 | Total Arsenic (As) | 2023/11/22 | 101 | 75 - 125 | 104 | 75 - 125 | <0.20 | mg/kg | 1.5 | 30 | 87 | 70 - 130 |
| B208149 | Total Barium (Ba) | 2023/11/22 | 108 | 75 - 125 | 100 | 75 - 125 | <0.10 | mg/kg | 1.9 | 40 | 96 | 70 - 130 |
| B208149 | Total Beryllium (Be) | 2023/11/22 | 105 | 75 - 125 | 106 | 75 - 125 | <0.20 | mg/kg | 4.7 | 30 | 107 | 70 - 130 |
| B208149 | Total Bismuth (Bi) | 2023/11/22 | 97 | 75 - 125 | 101 | 75 - 125 | <0.10 | mg/kg | NC | 30 | | |
| B208149 | Total Boron (B) | 2023/11/22 | 110 | 75 - 125 | 113 | 75 - 125 | <1.0 | mg/kg | 6.2 | 30 | | |
| B208149 | Total Cadmium (Cd) | 2023/11/22 | 103 | 75 - 125 | 103 | 75 - 125 | <0.050 | mg/kg | 0.014 | 30 | 94 | 70 - 130 |
| B208149 | Total Calcium (Ca) | 2023/11/22 | NC | 75 - 125 | 103 | 75 - 125 | <100 | mg/kg | 1.7 | 30 | 94 | 70 - 130 |
| B208149 | Total Chromium (Cr) | 2023/11/22 | 103 | 75 - 125 | 105 | 75 - 125 | <0.50 | mg/kg | 2.9 | 30 | 95 | 70 - 130 |
| B208149 | Total Cobalt (Co) | 2023/11/22 | 97 | 75 - 125 | 101 | 75 - 125 | <0.10 | mg/kg | 1.2 | 30 | 93 | 70 - 130 |
| B208149 | Total Copper (Cu) | 2023/11/22 | 98 | 75 - 125 | 103 | 75 - 125 | <0.50 | mg/kg | 1.6 | 30 | 100 | 70 - 130 |
| B208149 | Total Iron (Fe) | 2023/11/22 | NC | 75 - 125 | 104 | 75 - 125 | <100 | mg/kg | 2.7 | 30 | 94 | 70 - 130 |
| B208149 | Total Lead (Pb) | 2023/11/22 | 99 | 75 - 125 | 102 | 75 - 125 | <0.10 | mg/kg | 2.0 | 40 | 105 | 70 - 130 |
| B208149 | Total Lithium (Li) | 2023/11/22 | 103 | 75 - 125 | 105 | 75 - 125 | <0.50 | mg/kg | 0.10 | 30 | 107 | 70 - 130 |
| B208149 | Total Magnesium (Mg) | 2023/11/22 | NC | 75 - 125 | 111 | 75 - 125 | <100 | mg/kg | 2.3 | 30 | 102 | 70 - 130 |
| B208149 | Total Manganese (Mn) | 2023/11/22 | NC | 75 - 125 | 106 | 75 - 125 | <0.20 | mg/kg | 4.8 | 30 | 99 | 70 - 130 |
| B208149 | Total Mercury (Hg) | 2023/11/22 | 103 | 75 - 125 | 105 | 75 - 125 | <0.050 | mg/kg | 4.9 | 40 | 106 | 70 - 130 |
| B208149 | Total Molybdenum (Mo) | 2023/11/22 | 97 | 75 - 125 | 97 | 75 - 125 | <0.10 | mg/kg | 0.58 | 40 | 95 | 70 - 130 |
| B208149 | Total Nickel (Ni) | 2023/11/22 | 100 | 75 - 125 | 103 | 75 - 125 | <0.50 | mg/kg | 2.5 | 30 | 99 | 70 - 130 |
| B208149 | Total Phosphorus (P) | 2023/11/22 | 89 | 75 - 125 | 99 | 75 - 125 | <10 | mg/kg | 0.57 | 30 | 91 | 70 - 130 |
| B208149 | Total Potassium (K) | 2023/11/22 | 129 (1) | 75 - 125 | 105 | 75 - 125 | <100 | mg/kg | 1.9 | 40 | 88 | 70 - 130 |
| B208149 | Total Selenium (Se) | 2023/11/22 | 104 | 75 - 125 | 105 | 75 - 125 | <0.50 | mg/kg | NC | 30 | | |
| B208149 | Total Silver (Ag) | 2023/11/22 | 91 | 75 - 125 | 90 | 75 - 125 | <0.050 | mg/kg | NC | 40 | 82 | 70 - 130 |
| B208149 | Total Sodium (Na) | 2023/11/22 | 108 | 75 - 125 | 109 | 75 - 125 | <100 | mg/kg | 7.6 | 40 | 91 | 70 - 130 |
| B208149 | Total Strontium (Sr) | 2023/11/22 | 110 | 75 - 125 | 105 | 75 - 125 | <0.10 | mg/kg | 2.9 | 40 | 101 | 70 - 130 |
| B208149 | Total Thallium (Tl) | 2023/11/22 | 95 | 75 - 125 | 98 | 75 - 125 | <0.050 | mg/kg | 1.3 | 30 | 84 | 70 - 130 |
| B208149 | Total Tin (Sn) | 2023/11/22 | 102 | 75 - 125 | 103 | 75 - 125 | <0.10 | mg/kg | 11 | 40 | 87 | 70 - 130 |



BUREAU
VERITAS

Bureau Veritas Job #: C394781

Report Date: 2023/12/14

QUALITY ASSURANCE REPORT(CONT'D)

ATKINSREALIS CANADA INC.

Client Project #: 694890

Site Location: BRADNER NORTH

Your P.O. #: 694890

Sampler Initials: MAH

| QC Batch | Parameter | Date | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|----------|------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|-------------|-----------|
| | | | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits | % Recovery | QC Limits |
| B208149 | Total Titanium (Ti) | 2023/11/22 | NC | 75 - 125 | 104 | 75 - 125 | <1.0 | mg/kg | 2.5 | 40 | | |
| B208149 | Total Tungsten (W) | 2023/11/22 | 81 | 75 - 125 | 105 | 75 - 125 | <0.50 | mg/kg | NC | 40 | | |
| B208149 | Total Uranium (U) | 2023/11/22 | 104 | 75 - 125 | 106 | 75 - 125 | <0.050 | mg/kg | 2.0 | 30 | 99 | 70 - 130 |
| B208149 | Total Vanadium (V) | 2023/11/22 | 102 | 75 - 125 | 103 | 75 - 125 | <1.0 | mg/kg | 2.7 | 30 | 95 | 70 - 130 |
| B208149 | Total Zinc (Zn) | 2023/11/22 | 99 | 75 - 125 | 102 | 75 - 125 | <1.0 | mg/kg | 3.5 | 30 | 99 | 70 - 130 |
| B208149 | Total Zirconium (Zr) | 2023/11/22 | 115 | 75 - 125 | 99 | 75 - 125 | <0.50 | mg/kg | 4.4 | 40 | | |
| B208189 | Soluble (2:1) pH | 2023/11/22 | | | 100 | 97 - 103 | | | 0.93 | N/A | | |
| B213610 | Hex. Chromium (Cr 6+) | 2023/11/27 | 86 | 75 - 125 | 102 | 80 - 120 | <0.080 | mg/kg | NC | 35 | | |
| B216760 | Moisture | 2023/11/30 | | | | | <0.30 | % | 0.78 | 20 | | |
| B217281 | 1-Methylnaphthalene | 2023/11/30 | 91 | 50 - 140 | 98 | 50 - 140 | <0.050 | mg/kg | NC | 50 | | |
| B217281 | 2-Methylnaphthalene | 2023/11/30 | 87 | 50 - 140 | 94 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Acenaphthene | 2023/11/30 | 92 | 50 - 140 | 96 | 50 - 140 | <0.0050 | mg/kg | NC | 50 | | |
| B217281 | Acenaphthylene | 2023/11/30 | 88 | 50 - 140 | 93 | 50 - 140 | <0.0050 | mg/kg | NC | 50 | | |
| B217281 | Anthracene | 2023/11/30 | 95 | 50 - 140 | 99 | 50 - 140 | <0.0040 | mg/kg | NC | 50 | | |
| B217281 | Benzo(a)anthracene | 2023/11/30 | 86 | 50 - 140 | 96 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Benzo(a)pyrene | 2023/11/30 | 95 | 50 - 140 | 101 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Benzo(b&j)fluoranthene | 2023/11/30 | 89 | 50 - 140 | 98 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Benzo(b)fluoranthene | 2023/11/30 | 94 | 50 - 140 | 103 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Benzo(g,h,i)perylene | 2023/11/30 | 88 | 50 - 140 | 100 | 50 - 140 | <0.050 | mg/kg | NC | 50 | | |
| B217281 | Benzo(k)fluoranthene | 2023/11/30 | 93 | 50 - 140 | 100 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Chrysene | 2023/11/30 | 85 | 50 - 140 | 97 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Dibenz(a,h)anthracene | 2023/11/30 | 92 | 50 - 140 | 101 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Fluoranthene | 2023/11/30 | 96 | 50 - 140 | 100 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Fluorene | 2023/11/30 | 96 | 50 - 140 | 102 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Indeno(1,2,3-cd)pyrene | 2023/11/30 | 91 | 50 - 140 | 101 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Naphthalene | 2023/11/30 | 86 | 50 - 140 | 91 | 50 - 140 | <0.010 | mg/kg | NC | 50 | | |
| B217281 | Phenanthrene | 2023/11/30 | 89 | 50 - 140 | 94 | 50 - 140 | <0.010 | mg/kg | NC | 50 | | |
| B217281 | Pyrene | 2023/11/30 | 94 | 50 - 140 | 98 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Quinoline | 2023/11/30 | 111 | 50 - 140 | 112 | 50 - 140 | <0.050 | mg/kg | NC | 50 | | |
| B231032 | 1-Methylnaphthalene | 2023/12/13 | | | 96 | 50 - 140 | <0.20 | mg/kg | | | | |
| B231032 | 2-Methylnaphthalene | 2023/12/13 | | | 83 | 50 - 140 | <0.080 | mg/kg | | | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394781

Report Date: 2023/12/14

QUALITY ASSURANCE REPORT(CONT'D)

ATKINSREALIS CANADA INC.

Client Project #: 694890

Site Location: BRADNER NORTH

Your P.O. #: 694890

Sampler Initials: MAH

| QC Batch | Parameter | Date | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|----------|-------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|-------------|-----------|
| | | | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits | % Recovery | QC Limits |
| B231032 | Acenaphthene | 2023/12/13 | | | 90 | 50 - 140 | <0.020 | mg/kg | | | | |
| B231032 | Acenaphthylene | 2023/12/13 | | | 87 | 50 - 140 | <0.020 | mg/kg | | | | |
| B231032 | Anthracene | 2023/12/13 | | | 100 | 50 - 140 | <0.016 | mg/kg | | | | |
| B231032 | Benzo(a)anthracene | 2023/12/13 | | | 94 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Benzo(a)pyrene | 2023/12/13 | | | 94 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Benzo(b&j)fluoranthene | 2023/12/13 | | | 94 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Benzo(b)fluoranthene | 2023/12/13 | | | 90 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Benzo(g,h,i)perylene | 2023/12/13 | | | 86 | 50 - 140 | <0.20 | mg/kg | | | | |
| B231032 | Benzo(k)fluoranthene | 2023/12/13 | | | 96 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Chrysene | 2023/12/13 | | | 100 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Dibenz(a,h)anthracene | 2023/12/13 | | | 90 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Fluoranthene | 2023/12/13 | | | 104 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Fluorene | 2023/12/13 | | | 89 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Indeno(1,2,3-cd)pyrene | 2023/12/13 | | | 89 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Naphthalene | 2023/12/13 | | | 86 | 50 - 140 | <0.040 | mg/kg | | | | |
| B231032 | Phenanthrene | 2023/12/13 | | | 89 | 50 - 140 | <0.040 | mg/kg | | | | |
| B231032 | Pyrene | 2023/12/13 | | | 101 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231981 | SG BC-CSR EPH (C10-C19) | 2023/12/13 | | | 98 | 70 - 130 | <100 | mg/kg | | | | |
| B231981 | SG BC-CSR EPH (C19-C32) | 2023/12/13 | | | 93 | 50 - 130 | <100 | mg/kg | | | | |

N/A = Not Applicable

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

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

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

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

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

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

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

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

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



CHAIN OF CUSTODY RECORD

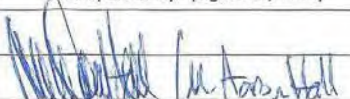
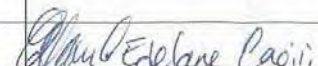
G161049

| | | | | | | | |
|--|--|---|--|---|--|---|--|
| Invoice Information | | Report Information (if differs from invoice) | | Project Information | | Turnaround Time (TAT) Required | |
| Company: <u>Atkins Realis</u> | | Company: <u>AS ATLET</u> | | Quotation: <u>920 Atkins Realis Pricing</u> | | <input type="checkbox"/> 5 - 7 Days Regular (Most analyses) | |
| Contact Name: <u>Sai Rajajayavel</u> | | Contact Name: _____ | | P.O. #/AFE#: _____ | | PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS | |
| Address: <u>1320-277E Kingsway</u> <u>Burnaby BC PC.V5H 3Z7</u> | | Address: _____ | | Project #: <u>694890</u> | | Rush TAT (Surcharges will be applied) | |
| Phone/Fax: <u>604-515-5151</u> | | Phone/Fax: _____ | | Site Location: <u>Brookner North</u> | | <input type="checkbox"/> Same Day <input type="checkbox"/> 2 Days | |
| Email: <u>sai.rajajayavel@atkinsrealis.ca</u> | | Email: _____ | | Site #: _____ | | <input checked="" type="checkbox"/> 1 Day <input type="checkbox"/> 3-4 Days | |
| Copies: <u>china.wang@atkinsrealis.com</u> | | Copies: _____ | | Sampled By: <u>MAH</u> | | Date Required: _____ | |
| Laboratory Use Only | | Analysis Requested | | Regulatory Criteria | | Rush Confirmation #: _____ | |

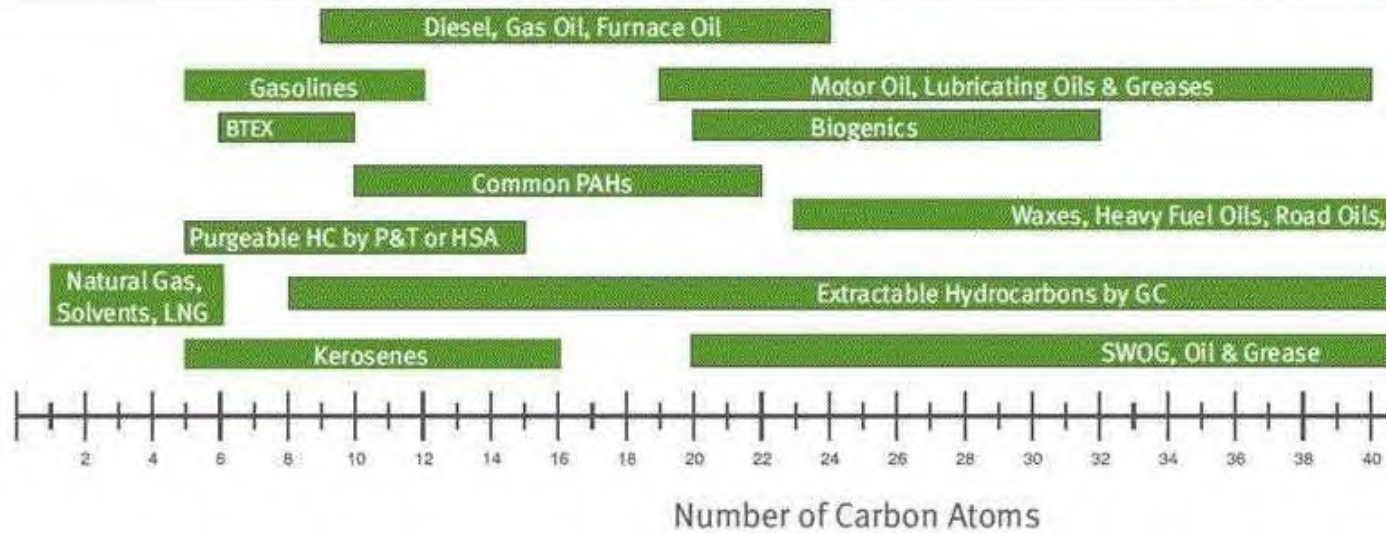
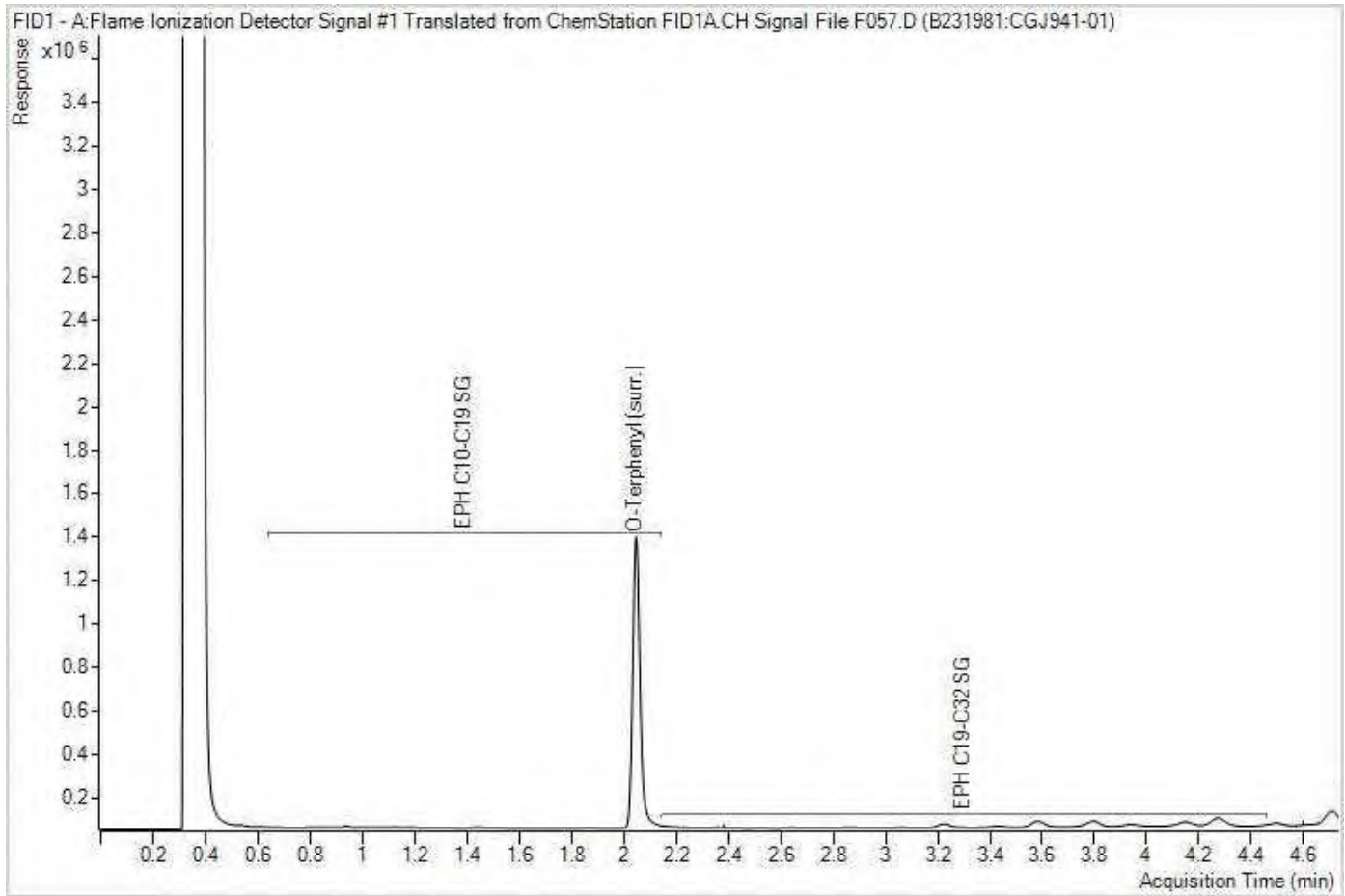
| | | | | | | | | | | | | |
|---------------|-----|----|-----------|------|---|---|---|---|---|--|--|--|
| Seal Present | YES | NO | Cooler ID | Temp | 9 | 7 | 4 | Depot Reception # of Containers <input type="checkbox"/> BTBES / VPH <input type="checkbox"/> BTBES / VPH <input type="checkbox"/> VOC / BTEX / F1 <input type="checkbox"/> VOC / BTEX / VPH <input type="checkbox"/> PAH <input checked="" type="checkbox"/> EPH <input type="checkbox"/> F2 - F4 <input type="checkbox"/> Filtered? <input type="checkbox"/> Filtered? <input type="checkbox"/> Field Preserved? <input type="checkbox"/> Field Preserved? <input type="checkbox"/> Sulphate <input type="checkbox"/> Fluoride <input type="checkbox"/> TDS <input type="checkbox"/> pH <input type="checkbox"/> Nitrite <input type="checkbox"/> Ammonia <u>Security Parameters</u> | <input type="checkbox"/> BC CSR <input type="checkbox"/> YK CSR <input type="checkbox"/> CCME <input type="checkbox"/> Drinking Water <input type="checkbox"/> BC Water Quality <input type="checkbox"/> Other | | | |
| Seal Intact | | | | | | | | | | | | |
| Cooling Media | | | | | | | | | | | | |
| Seal Present | YES | NO | Cooler ID | | | | | | | | | |
| Seal Intact | | | | | | | | | | | | |
| Cooling Media | | | | | | | | | | | | |
| Seal Present | YES | NO | Cooler ID | | | | | | | | | |
| Seal Intact | | | | | | | | | | | | |
| Cooling Media | | | | | | | | | | | | |

| Sample Identification | | Date Sampled (yyy/mm/dd) | Time Sampled (hh:mm) | Matrix | # of Containers | Analysis Requested | Regulatory Criteria | Special Instructions |
|-----------------------|-------------|--------------------------|----------------------|--------|-----------------|--------------------|---------------------|---|
| 1 | BH23-105-01 | 2023/11/20 | 1000 | Soil | 3 | | | <input checked="" type="checkbox"/> Contact Sai Rajajayavel <input checked="" type="checkbox"/> for analytical program  C394781_COC |
| 2 | BH23-105-02 | 2023/11/20 | 1000 | Soil | 3 | | | |
| 3 | BH23-105-03 | 2023/11/20 | 1005 | Soil | 3 | | | |
| 4 | BH23-105-04 | 2023/11/20 | 1010 | Soil | 3 | | | |
| 5 | BH23-105-05 | 2023/11/20 | 1015 | Soil | 3 | | | |
| 6 | BH23-106-01 | 2023/11/20 | 1115 | Soil | 3 | | | |
| 7 | BH23-106-02 | 2023/11/20 | 1115 | Soil | 3 | | | |
| 8 | BH23-106-03 | 2023/11/20 | 1120 | Soil | 3 | | | |
| 9 | BH23-106-04 | 2023/11/20 | 1125 | Soil | 3 | | | |
| 10 | BH23-106-05 | 2023/11/20 | 1130 | Soil | 3 | | | |

Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to Bureau Veritas' standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgement and acceptance of our terms which are available for viewing at www.bvlab.ca/terms

| | | | | | | |
|---|-------------------|--------------|--|-------------------|--------------|----------|
| Relinquished by: (Signature/ Print) | Date (yyyy/mm/dd) | Time (hh:mm) | Received by: (Signature/ Print) | Date (yyyy/mm/dd) | Time (hh:mm) | BV Job # |
|  | 2023/11/21 | 0640 |  | 2023/11/21 | 0800 | |

EPH in Soil by SG GC/FID Chromatogram



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



Your Project #: 694890
 Site Location: BRADNER NORTH
 Your C.O.C. #: g161050

Attention: Sai Rajajayavel

ATKINSREALIS CANADA INC.
 BURNABY, ENVIRONMENT DIVISION
 1300-3777 Kingsway Avenue
 BURNABY, BC
 CANADA V5H 3Z7

Report Date: 2023/12/14
 Report #: R3441028
 Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C394799

Received: 2023/11/21, 08:00

Sample Matrix: Soil
 # Samples Received: 10

| Analyses | Quantity | Date | Date | Laboratory Method | Analytical Method |
|---|----------|------------|------------|----------------------------------|----------------------|
| | | Extracted | Analyzed | | |
| Elements by ICPMS (total) (1) | 9 | 2023/11/22 | 2023/11/22 | BBY7SOP-00004 / BBY7SOP-00001 | EPA 6020b R2 m |
| Moisture | 2 | 2023/11/21 | 2023/11/22 | BBY8SOP-00017 | BCMOE BCLM Dec2000 m |
| Moisture | 1 | 2023/11/21 | 2023/12/13 | BBY8SOP-00017 | BCMOE BCLM Dec2000 m |
| Moisture | 1 | 2023/11/29 | 2023/11/30 | BBY8SOP-00017 | BCMOE BCLM Dec2000 m |
| Non Routine/Non Validated Matrix Tested (2) | 1 | N/A | 2023/12/12 | | |
| PAH in Soil by GC/MS (SIM) | 2 | 2023/11/21 | 2023/11/22 | BBY8SOP-00022 | BCMOE BCLM Jul2017m |
| PAH in Soil by GC/MS (SIM) | 1 | 2023/11/21 | 2023/12/13 | BBY8SOP-00022 | BCMOE BCLM Jul2017m |
| PAH in Soil by GC/MS (SIM) | 1 | 2023/11/29 | 2023/11/30 | BBY8SOP-00022 | BCMOE BCLM Jul2017m |
| Total PAH and B(a)P Calculation (3) | 2 | N/A | 2023/11/22 | BBY WI-00033 | Auto Calc |
| Total PAH and B(a)P Calculation (3) | 1 | N/A | 2023/11/30 | BBY WI-00033 | Auto Calc |
| Total PAH and B(a)P Calculation (3) | 1 | N/A | 2023/12/14 | BBY WI-00033 | Auto Calc |
| pH (2:1 DI Water Extract) | 9 | 2023/11/22 | 2023/11/22 | BBY6SOP-00028 | BCMOE BCLM Mar2005 m |
| EPH in Soil by SG GC/FID | 1 | 2023/11/21 | 2023/12/13 | BBY8SOP-00029 | BCMOE BCLM Dec2016 m |

Remarks:

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

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

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

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



Your Project #: 694890
Site Location: BRADNER NORTH
Your C.O.C. #: g161050

Attention: Sai Rajajayavel

ATKINSREALIS CANADA INC.
BURNABY, ENVIRONMENT DIVISION
1300-3777 Kingsway Avenue
BURNABY, BC
CANADA V5H 3Z7

Report Date: 2023/12/14
Report #: R3441028
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C394799

Received: 2023/11/21, 08:00

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

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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

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

(1) The sample is prepared per the BC MOE Lab Manual "Strong Acid Leachable Metals (SALM) in Soil - Prescriptive", Revision Nov 6, 2015.

(2) Sample(s) analyzed using methodologies that have not been subjected to Bureau Veritas' standard validation process for the submitted matrix and is not an accredited method.

Analysis performed with client consent, however results should be viewed with discretion.

(3) Total PAHs in Soil include: Quinoline, Naphthalene, 1-Methylnaphthalene, 2-Methylnaphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Acridine, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b&j)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, and Benzo(g,h,i)perylene.

Total PAHs in Sediment include (B.C. Reg. 116/2018, Schedule 3.4): Naphthalene, 2-Methylnaphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(a)pyrene, and Dibenz(a,h)anthracene.

Encryption Key

Debbie Nordbruket
Key Account Specialist
14 Dec 2023 15:47:25

Please direct all questions regarding this Certificate of Analysis to:

Debbie Nordbruket, Key Account Specialist

Email: Debra.NORDBRUGET@bureauveritas.com

Phone# (250)385-6112

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



BUREAU
VERITAS

Bureau Veritas Job #: C394799
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Sampler Initials: MAH

RESULTS OF CHEMICAL ANALYSES OF SOIL

| | | | |
|--------------------------|--------------|---|-----------------|
| Bureau Veritas ID | | CGK159 | |
| Sampling Date | | 2023/11/20 13:00 | |
| COC Number | | g161050 | |
| | UNITS | BH23-107-01 WITH SG CLEAN UP | QC Batch |
| MISCELLANEOUS | | | |
| Sample Matrix | N/A | SG ON PAH | ONSITE |



BUREAU
VERITAS

Bureau Veritas Job #: C394799
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Sampler Initials: MAH

PHYSICAL TESTING (SOIL)

| | | | | | | | | | |
|--|--------------|---------------------|---------------------|-----------------|---------------------|-----------------|---|------------|-----------------|
| Bureau Veritas ID | | CFA096 | CFA098 | | CFA101 | | CGK159 | | |
| Sampling Date | | 2023/11/20 13:00 | 2023/11/20 13:05 | | 2023/11/20 14:25 | | 2023/11/20 13:00 | | |
| COC Number | | g161050 | g161050 | | g161050 | | g161050 | | |
| | UNITS | BH23-107-01 | BH23-107-03 | QC Batch | BH23-108-01 | QC Batch | BH23-107-01 WITH SG CLEAN UP | RDL | QC Batch |
| Physical Properties | | | | | | | | | |
| Moisture | % | 38 | 29 | B207343 | 60 | B216760 | 38 (1) | 0.30 | B207343 |
| RDL = Reportable Detection Limit (1) From CFA096-01 | | | | | | | | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394799
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Sampler Initials: MAH

TOTAL PETROLEUM HYDROCARBONS (SOIL)

| | | | | |
|----------------------------------|--------------|---|------------|-----------------|
| Bureau Veritas ID | | CGK159 | | |
| Sampling Date | | 2023/11/20 13:00 | | |
| COC Number | | g161050 | | |
| | UNITS | BH23-107-01 WITH SG CLEAN UP | RDL | QC Batch |
| Hydrocarbons | | | | |
| SG BC-CSR EPH (C10-C19) | mg/kg | <100 | 100 | B231981 |
| SG BC-CSR EPH (C19-C32) | mg/kg | <100 | 100 | B231981 |
| Surrogate Recovery (%) | | | | |
| SG O-TERPHENYL (sur.) | % | 71 | | B231981 |
| RDL = Reportable Detection Limit | | | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394799
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Sampler Initials: MAH

CSR/CCME METALS IN SOIL WITH HG (SOIL)

| | | | | | | | | | | |
|--------------------------|--------------|---------------------|---------------------|---------------------|---------------------|------------|-----------------|--------------------------------|------------|-----------------|
| Bureau Veritas ID | | CFA096 | CFA097 | CFA098 | CFA100 | | | CFA100 | | |
| Sampling Date | | 2023/11/20 13:00 | 2023/11/20 13:00 | 2023/11/20 13:05 | 2023/11/20 13:15 | | | 2023/11/20 13:15 | | |
| COC Number | | g161050 | g161050 | g161050 | g161050 | | | g161050 | | |
| | UNITS | BH23-107-01 | BH23-107-02 | BH23-107-03 | BH23-107-05 | RDL | QC Batch | BH23-107-05 Lab-Dup | RDL | QC Batch |

| Physical Properties | | | | | | | | | | |
|------------------------------|-------|-------|-------|-------|-------|-------|---------|-------|-------|---------|
| Soluble (2:1) pH | pH | 4.12 | 4.34 | 4.81 | 6.74 | N/A | B207902 | | | |
| Total Metals by ICPMS | | | | | | | | | | |
| Total Aluminum (Al) | mg/kg | 15800 | 18800 | 29300 | 21600 | 100 | B207896 | 21800 | 100 | B207896 |
| Total Antimony (Sb) | mg/kg | 0.72 | 0.61 | 0.35 | 0.44 | 0.10 | B207896 | 0.42 | 0.10 | B207896 |
| Total Arsenic (As) | mg/kg | 8.44 | 7.71 | 4.52 | 8.06 | 0.20 | B207896 | 7.91 | 0.20 | B207896 |
| Total Barium (Ba) | mg/kg | 59.7 | 66.1 | 95.3 | 123 | 0.10 | B207896 | 123 | 0.10 | B207896 |
| Total Beryllium (Be) | mg/kg | 0.28 | 0.35 | 0.62 | 0.48 | 0.20 | B207896 | 0.48 | 0.20 | B207896 |
| Total Bismuth (Bi) | mg/kg | 0.24 | 0.22 | 0.13 | 0.11 | 0.10 | B207896 | 0.11 | 0.10 | B207896 |
| Total Boron (B) | mg/kg | 4.6 | 3.0 | 2.8 | 3.9 | 1.0 | B207896 | 3.7 | 1.0 | B207896 |
| Total Cadmium (Cd) | mg/kg | 0.188 | 0.223 | 0.320 | 0.168 | 0.050 | B207896 | 0.153 | 0.050 | B207896 |
| Total Calcium (Ca) | mg/kg | 1660 | 1420 | 1420 | 7080 | 100 | B207896 | 6980 | 100 | B207896 |
| Total Chromium (Cr) | mg/kg | 28.3 | 32.5 | 42.7 | 53.8 | 0.50 | B207896 | 53.4 | 0.50 | B207896 |
| Total Cobalt (Co) | mg/kg | 6.43 | 8.76 | 12.5 | 16.0 | 0.10 | B207896 | 15.9 | 0.10 | B207896 |
| Total Copper (Cu) | mg/kg | 19.3 | 17.3 | 17.0 | 45.7 | 0.50 | B207896 | 46.0 | 0.50 | B207896 |
| Total Iron (Fe) | mg/kg | 22700 | 26300 | 31000 | 35300 | 100 | B207896 | 34800 | 100 | B207896 |
| Total Lead (Pb) | mg/kg | 46.0 | 31.9 | 8.94 | 5.68 | 0.10 | B207896 | 5.64 | 0.10 | B207896 |
| Total Lithium (Li) | mg/kg | 9.31 | 11.3 | 17.0 | 15.1 | 0.50 | B207896 | 15.2 | 0.50 | B207896 |
| Total Magnesium (Mg) | mg/kg | 2540 | 2810 | 4590 | 11000 | 100 | B207896 | 11200 | 100 | B207896 |
| Total Manganese (Mn) | mg/kg | 501 | 840 | 863 | 684 | 0.20 | B207896 | 663 | 0.20 | B207896 |
| Total Mercury (Hg) | mg/kg | 0.232 | 0.188 | 0.131 | 0.066 | 0.050 | B207896 | 0.064 | 0.050 | B207896 |
| Total Molybdenum (Mo) | mg/kg | 0.72 | 0.70 | 0.79 | 0.48 | 0.10 | B207896 | 0.46 | 0.10 | B207896 |
| Total Nickel (Ni) | mg/kg | 16.5 | 19.7 | 34.0 | 53.4 | 0.50 | B207896 | 52.5 | 0.50 | B207896 |
| Total Phosphorus (P) | mg/kg | 674 | 608 | 670 | 696 | 10 | B207896 | 693 | 10 | B207896 |
| Total Potassium (K) | mg/kg | 385 | 383 | 518 | 1460 | 100 | B207896 | 1460 | 100 | B207896 |
| Total Selenium (Se) | mg/kg | 0.60 | <0.50 | 0.53 | <0.50 | 0.50 | B207896 | <0.50 | 0.50 | B207896 |
| Total Silver (Ag) | mg/kg | 0.146 | 0.153 | 0.178 | 0.055 | 0.050 | B207896 | 0.057 | 0.050 | B207896 |
| Total Sodium (Na) | mg/kg | <100 | <100 | <100 | 456 | 100 | B207896 | 480 | 100 | B207896 |
| Total Strontium (Sr) | mg/kg | 12.6 | 11.2 | 10.9 | 56.5 | 0.10 | B207896 | 56.5 | 0.10 | B207896 |
| Total Thallium (Tl) | mg/kg | 0.087 | 0.091 | 0.121 | 0.114 | 0.050 | B207896 | 0.113 | 0.050 | B207896 |
| Total Tin (Sn) | mg/kg | 0.89 | 0.70 | 0.59 | 0.50 | 0.10 | B207896 | 0.51 | 0.10 | B207896 |

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



BUREAU
VERITAS

Bureau Veritas Job #: C394799
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Sampler Initials: MAH

CSR/CCME METALS IN SOIL WITH HG (SOIL)

| Bureau Veritas ID | | CFA096 | CFA097 | CFA098 | CFA100 | | | CFA100 | | |
|----------------------|-------|---------------------|---------------------|---------------------|---------------------|-------|----------|------------------------|-------|----------|
| Sampling Date | | 2023/11/20 13:00 | 2023/11/20 13:00 | 2023/11/20 13:05 | 2023/11/20 13:15 | | | 2023/11/20 13:15 | | |
| COC Number | | g161050 | g161050 | g161050 | g161050 | | | g161050 | | |
| | UNITS | BH23-107-01 | BH23-107-02 | BH23-107-03 | BH23-107-05 | RDL | QC Batch | BH23-107-05 Lab-Dup | RDL | QC Batch |
| Total Titanium (Ti) | mg/kg | 628 | 717 | 1130 | 1250 | 1.0 | B207896 | 1220 | 1.0 | B207896 |
| Total Tungsten (W) | mg/kg | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | B207896 | <0.50 | 0.50 | B207896 |
| Total Uranium (U) | mg/kg | 0.412 | 0.427 | 0.654 | 0.443 | 0.050 | B207896 | 0.445 | 0.050 | B207896 |
| Total Vanadium (V) | mg/kg | 47.2 | 55.2 | 62.1 | 79.8 | 1.0 | B207896 | 79.6 | 1.0 | B207896 |
| Total Zinc (Zn) | mg/kg | 46.5 | 56.7 | 84.4 | 79.4 | 1.0 | B207896 | 78.8 | 1.0 | B207896 |
| Total Zirconium (Zr) | mg/kg | 2.12 | 1.79 | 6.22 | 9.47 | 0.50 | B207896 | 9.70 | 0.50 | B207896 |

RDL = Reportable Detection Limit

Lab-Dup = Laboratory Initiated Duplicate



BUREAU
VERITAS

Bureau Veritas Job #: C394799
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Sampler Initials: MAH

CSR/CCME METALS IN SOIL WITH HG (SOIL)

| Bureau Veritas ID | | CFA101 | CFA102 | CFA103 | CFA104 | CFA105 | | |
|--|-------|---------------------|---------------------|---------------------|---------------------|---------------------|-------|----------|
| Sampling Date | | 2023/11/20 14:25 | 2023/11/20 14:25 | 2023/11/20 14:30 | 2023/11/20 14:35 | 2023/11/20 14:40 | | |
| COC Number | | g161050 | g161050 | g161050 | g161050 | g161050 | | |
| | UNITS | BH23-108-01 | BH23-108-02 | BH23-108-03 | BH23-108-04 | BH23-108-05 | RDL | QC Batch |
| Physical Properties | | | | | | | | |
| Soluble (2:1) pH | pH | 3.64 | 3.83 | 5.10 | 7.08 | 7.23 | N/A | B208189 |
| Total Metals by ICPMS | | | | | | | | |
| Total Aluminum (Al) | mg/kg | 13000 | 17700 | 31900 | 21800 | 18000 | 100 | B208149 |
| Total Antimony (Sb) | mg/kg | 0.80 | 0.73 | 0.29 | 0.44 | 0.43 | 0.10 | B208149 |
| Total Arsenic (As) | mg/kg | 7.91 | 8.42 | 3.89 | 8.94 | 7.71 | 0.20 | B208149 |
| Total Barium (Ba) | mg/kg | 61.5 | 63.2 | 99.3 | 138 | 100 | 0.10 | B208149 |
| Total Beryllium (Be) | mg/kg | <0.20 | 0.21 | 0.62 | 0.50 | 0.43 | 0.20 | B208149 |
| Total Bismuth (Bi) | mg/kg | 0.28 | 0.28 | 0.12 | <0.10 | <0.10 | 0.10 | B208149 |
| Total Boron (B) | mg/kg | 3.1 | 2.8 | 2.4 | 3.1 | 3.8 | 1.0 | B208149 |
| Total Cadmium (Cd) | mg/kg | 0.110 | 0.137 | 0.179 | 0.131 | 0.112 | 0.050 | B208149 |
| Total Calcium (Ca) | mg/kg | 2080 | 1490 | 1400 | 5430 | 6400 | 100 | B208149 |
| Total Chromium (Cr) | mg/kg | 23.0 | 28.2 | 48.7 | 55.1 | 48.1 | 0.50 | B208149 |
| Total Cobalt (Co) | mg/kg | 3.44 | 4.02 | 10.9 | 17.1 | 14.3 | 0.10 | B208149 |
| Total Copper (Cu) | mg/kg | 17.8 | 16.8 | 22.1 | 44.1 | 38.5 | 0.50 | B208149 |
| Total Iron (Fe) | mg/kg | 15500 | 18900 | 28400 | 35500 | 32000 | 100 | B208149 |
| Total Lead (Pb) | mg/kg | 54.9 | 42.5 | 8.05 | 5.23 | 4.78 | 0.10 | B208149 |
| Total Lithium (Li) | mg/kg | 8.00 | 10.6 | 17.6 | 16.8 | 15.5 | 0.50 | B208149 |
| Total Magnesium (Mg) | mg/kg | 2000 | 2440 | 5210 | 9870 | 9880 | 100 | B208149 |
| Total Manganese (Mn) | mg/kg | 99.6 | 105 | 235 | 869 | 524 | 0.20 | B208149 |
| Total Mercury (Hg) | mg/kg | 0.227 | 0.191 | 0.115 | 0.062 | 0.059 | 0.050 | B208149 |
| Total Molybdenum (Mo) | mg/kg | 0.80 | 0.93 | 0.99 | 1.09 | 0.56 | 0.10 | B208149 |
| Total Nickel (Ni) | mg/kg | 14.6 | 16.9 | 32.2 | 51.3 | 45.1 | 0.50 | B208149 |
| Total Phosphorus (P) | mg/kg | 609 | 577 | 405 | 548 | 647 | 10 | B208149 |
| Total Potassium (K) | mg/kg | 402 | 377 | 562 | 1240 | 1590 | 100 | B208149 |
| Total Selenium (Se) | mg/kg | <0.50 | <0.50 | 0.56 | <0.50 | <0.50 | 0.50 | B208149 |
| Total Silver (Ag) | mg/kg | 0.137 | 0.157 | 0.225 | <0.050 | <0.050 | 0.050 | B208149 |
| Total Sodium (Na) | mg/kg | <100 | <100 | <100 | 324 | 452 | 100 | B208149 |
| Total Strontium (Sr) | mg/kg | 23.0 | 17.4 | 12.0 | 47.1 | 47.5 | 0.10 | B208149 |
| Total Thallium (Tl) | mg/kg | 0.058 | 0.066 | 0.093 | 0.107 | 0.095 | 0.050 | B208149 |
| Total Tin (Sn) | mg/kg | 0.98 | 0.96 | 0.64 | 0.47 | 0.45 | 0.10 | B208149 |
| Total Titanium (Ti) | mg/kg | 643 | 774 | 1230 | 1100 | 1100 | 1.0 | B208149 |
| RDL = Reportable Detection Limit N/A = Not Applicable | | | | | | | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394799
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Sampler Initials: MAH

CSR/CCME METALS IN SOIL WITH HG (SOIL)

| Bureau Veritas ID | | CFA101 | CFA102 | CFA103 | CFA104 | CFA105 | | |
|----------------------------------|-------|---------------------|---------------------|---------------------|---------------------|---------------------|-------|----------|
| Sampling Date | | 2023/11/20 14:25 | 2023/11/20 14:25 | 2023/11/20 14:30 | 2023/11/20 14:35 | 2023/11/20 14:40 | | |
| COC Number | | g161050 | g161050 | g161050 | g161050 | g161050 | | |
| | UNITS | BH23-108-01 | BH23-108-02 | BH23-108-03 | BH23-108-04 | BH23-108-05 | RDL | QC Batch |
| Total Tungsten (W) | mg/kg | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | B208149 |
| Total Uranium (U) | mg/kg | 0.337 | 0.433 | 0.655 | 0.536 | 0.396 | 0.050 | B208149 |
| Total Vanadium (V) | mg/kg | 37.7 | 46.8 | 70.8 | 82.0 | 74.2 | 1.0 | B208149 |
| Total Zinc (Zn) | mg/kg | 32.2 | 40.1 | 69.8 | 64.9 | 68.9 | 1.0 | B208149 |
| Total Zirconium (Zr) | mg/kg | 2.92 | 3.60 | 7.33 | 9.68 | 9.08 | 0.50 | B208149 |
| RDL = Reportable Detection Limit | | | | | | | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394799
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Sampler Initials: MAH

CSR PAH IN SOIL BY GC-MS (SOIL)

| | | | | | | | | |
|--------------------------|--------------|---------------------|---------------------|------------|-----------------|---------------------|------------|-----------------|
| Bureau Veritas ID | | CFA096 | CFA098 | | | CFA101 | | |
| Sampling Date | | 2023/11/20 13:00 | 2023/11/20 13:05 | | | 2023/11/20 14:25 | | |
| COC Number | | g161050 | g161050 | | | g161050 | | |
| | UNITS | BH23-107-01 | BH23-107-03 | RDL | QC Batch | BH23-108-01 | RDL | QC Batch |

| | | | | | | | | |
|------------------------------|-------|-------|--------|-------|---------|-------|------|---------|
| Calculated Parameters | | | | | | | | |
| Low Molecular Weight PAH's | mg/kg | 0.068 | <0.050 | 0.050 | B206893 | <0.11 | 0.11 | B216546 |
| High Molecular Weight PAH's | mg/kg | 0.56 | <0.050 | 0.050 | B206893 | 0.33 | 0.11 | B216546 |
| Total PAH | mg/kg | 0.63 | <0.050 | 0.050 | B206893 | 0.39 | 0.11 | B216546 |

| | | | | | | | | |
|-----------------------------|-------|---------|---------|--------|---------|-------------|--------|---------|
| Polycyclic Aromatics | | | | | | | | |
| Quinoline | mg/kg | <0.050 | <0.050 | 0.050 | B207674 | <0.11 (1) | 0.11 | B217281 |
| Naphthalene | mg/kg | <0.010 | <0.010 | 0.010 | B207674 | <0.022 (1) | 0.022 | B217281 |
| 1-Methylnaphthalene | mg/kg | <0.050 | <0.050 | 0.050 | B207674 | <0.11 (1) | 0.11 | B217281 |
| 2-Methylnaphthalene | mg/kg | <0.020 | <0.020 | 0.020 | B207674 | <0.044 (1) | 0.044 | B217281 |
| Acenaphthylene | mg/kg | <0.0050 | <0.0050 | 0.0050 | B207674 | <0.011 (1) | 0.011 | B217281 |
| Acenaphthene | mg/kg | <0.0050 | <0.0050 | 0.0050 | B207674 | <0.011 (1) | 0.011 | B217281 |
| Fluorene | mg/kg | <0.020 | <0.020 | 0.020 | B207674 | <0.044 (1) | 0.044 | B217281 |
| Phenanthrene | mg/kg | 0.061 | <0.010 | 0.010 | B207674 | 0.052 (1) | 0.022 | B217281 |
| Anthracene | mg/kg | 0.0071 | <0.0040 | 0.0040 | B207674 | <0.0088 (1) | 0.0088 | B217281 |
| Fluoranthene | mg/kg | 0.13 | <0.020 | 0.020 | B207674 | 0.099 (1) | 0.044 | B217281 |
| Pyrene | mg/kg | 0.13 | <0.020 | 0.020 | B207674 | 0.090 (1) | 0.044 | B217281 |
| Benzo(a)anthracene | mg/kg | 0.034 | <0.020 | 0.020 | B207674 | <0.044 (1) | 0.044 | B217281 |
| Chrysene | mg/kg | 0.081 | <0.020 | 0.020 | B207674 | 0.075 (1) | 0.044 | B217281 |
| Benzo(b&j)fluoranthene | mg/kg | 0.081 | <0.020 | 0.020 | B207674 | 0.071 (1) | 0.044 | B217281 |
| Benzo(b)fluoranthene | mg/kg | 0.049 | <0.020 | 0.020 | B207674 | 0.071 (1) | 0.044 | B217281 |
| Benzo(k)fluoranthene | mg/kg | 0.033 | <0.020 | 0.020 | B207674 | <0.044 (1) | 0.044 | B217281 |
| Benzo(a)pyrene | mg/kg | 0.037 | <0.020 | 0.020 | B207674 | <0.044 (1) | 0.044 | B217281 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.036 | <0.020 | 0.020 | B207674 | <0.044 (1) | 0.044 | B217281 |
| Dibenz(a,h)anthracene | mg/kg | <0.020 | <0.020 | 0.020 | B207674 | <0.044 (1) | 0.044 | B217281 |
| Benzo(g,h,i)perylene | mg/kg | <0.050 | <0.050 | 0.050 | B207674 | <0.11 (1) | 0.11 | B217281 |

| | | | | | | | | |
|-------------------------------|---|----|----|--|---------|----|--|---------|
| Surrogate Recovery (%) | | | | | | | | |
| D10-ANTHRACENE (sur.) | % | 87 | 92 | | B207674 | 90 | | B217281 |
| D8-ACENAPHTHYLENE (sur.) | % | 73 | 76 | | B207674 | 89 | | B217281 |
| D8-NAPHTHALENE (sur.) | % | 76 | 78 | | B207674 | 92 | | B217281 |
| TERPHENYL-D14 (sur.) | % | 89 | 94 | | B207674 | 97 | | B217281 |

RDL = Reportable Detection Limit

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



BUREAU
VERITAS

Bureau Veritas Job #: C394799
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Sampler Initials: MAH

CSR PAH IN SOIL BY GC-MS (SOIL)

| | | | | |
|----------------------------------|--------------|---|------------|-----------------|
| Bureau Veritas ID | | CGK159 | | |
| Sampling Date | | 2023/11/20 13:00 | | |
| COC Number | | g161050 | | |
| | UNITS | BH23-107-01 WITH SG CLEAN UP | RDL | QC Batch |
| Calculated Parameters | | | | |
| Low Molecular Weight PAH`s | mg/kg | <0.20 | 0.20 | B230600 |
| High Molecular Weight PAH`s | mg/kg | 0.33 | 0.20 | B230600 |
| Total PAH | mg/kg | 0.38 | 0.20 | B230600 |
| Polycyclic Aromatics | | | | |
| Naphthalene | mg/kg | <0.040 | 0.040 | B231032 |
| 1-Methylnaphthalene | mg/kg | <0.20 | 0.20 | B231032 |
| 2-Methylnaphthalene | mg/kg | <0.080 | 0.080 | B231032 |
| Acenaphthylene | mg/kg | <0.020 | 0.020 | B231032 |
| Acenaphthene | mg/kg | <0.020 | 0.020 | B231032 |
| Fluorene | mg/kg | <0.080 | 0.080 | B231032 |
| Phenanthrene | mg/kg | 0.057 | 0.040 | B231032 |
| Anthracene | mg/kg | <0.016 | 0.016 | B231032 |
| Fluoranthene | mg/kg | 0.13 | 0.080 | B231032 |
| Pyrene | mg/kg | 0.11 | 0.080 | B231032 |
| Benzo(a)anthracene | mg/kg | <0.080 | 0.080 | B231032 |
| Chrysene | mg/kg | 0.083 | 0.080 | B231032 |
| Benzo(b&j)fluoranthene | mg/kg | <0.080 | 0.080 | B231032 |
| Benzo(b)fluoranthene | mg/kg | <0.080 | 0.080 | B231032 |
| Benzo(k)fluoranthene | mg/kg | <0.080 | 0.080 | B231032 |
| Benzo(a)pyrene | mg/kg | <0.080 | 0.080 | B231032 |
| Indeno(1,2,3-cd)pyrene | mg/kg | <0.080 | 0.080 | B231032 |
| Dibenz(a,h)anthracene | mg/kg | <0.080 | 0.080 | B231032 |
| Benzo(g,h,i)perylene | mg/kg | <0.20 | 0.20 | B231032 |
| Surrogate Recovery (%) | | | | |
| D10-ANTHRACENE (sur.) | % | 106 | | B231032 |
| D8-ACENAPHTHYLENE (sur.) | % | 75 | | B231032 |
| D8-NAPHTHALENE (sur.) | % | 79 | | B231032 |
| TERPHENYL-D14 (sur.) | % | 92 | | B231032 |
| RDL = Reportable Detection Limit | | | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394799
Report Date: 2023/12/14

ATKINSREALIS CANADA INC.
Client Project #: 694890
Site Location: BRADNER NORTH
Sampler Initials: MAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

| | |
|-----------|-------|
| Package 1 | 8.0°C |
|-----------|-------|

Version #2: Report reissued to include results for CSR PAH in Soil on sample BH23-108-01 as per client request received 2023/11/29.

Version #3: Report reissued to include results for CSR TEH and PAH's with Silica Gel Cleanup on sample BH23-107-01 (original sample CFA096, re-logged for reporting purposes as BH23-107-01 WITH SG CLEANUP / CGK159) as per client request received 2023/12/11.

Sample CGK159 [BH23-107-01 WITH SG CLEAN UP] : Silica Gel Cleanup performed on original PAH/TEH sample extract CFA096-01 as requested by client. See BBY PDF-00149 for more details., Detection limits raised due to dilution as a result of sample matrix interference. on Semi-Volatiles Batch: b231032

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C394799

Report Date: 2023/12/14

QUALITY ASSURANCE REPORT

ATKINSREALIS CANADA INC.

Client Project #: 694890

Site Location: BRADNER NORTH

Sampler Initials: MAH

| QC Batch | Parameter | Date | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|----------|--------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|-------------|-----------|
| | | | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits | % Recovery | QC Limits |
| B207674 | D10-ANTHRACENE (sur.) | 2023/11/21 | 98 | 50 - 140 | 95 | 50 - 140 | 107 | % | | | | |
| B207674 | D8-ACENAPHTHYLENE (sur.) | 2023/11/21 | 73 | 50 - 140 | 73 | 50 - 140 | 81 | % | | | | |
| B207674 | D8-NAPHTHALENE (sur.) | 2023/11/21 | 70 | 50 - 140 | 68 | 50 - 140 | 76 | % | | | | |
| B207674 | TERPHENYL-D14 (sur.) | 2023/11/21 | 102 | 50 - 140 | 99 | 50 - 140 | 111 | % | | | | |
| B217281 | D10-ANTHRACENE (sur.) | 2023/11/29 | 90 | 50 - 140 | 94 | 50 - 140 | 103 | % | | | | |
| B217281 | D8-ACENAPHTHYLENE (sur.) | 2023/11/29 | 85 | 50 - 140 | 89 | 50 - 140 | 95 | % | | | | |
| B217281 | D8-NAPHTHALENE (sur.) | 2023/11/29 | 81 | 50 - 140 | 80 | 50 - 140 | 85 | % | | | | |
| B217281 | TERPHENYL-D14 (sur.) | 2023/11/29 | 93 | 50 - 140 | 96 | 50 - 140 | 105 | % | | | | |
| B231032 | D10-ANTHRACENE (sur.) | 2023/12/13 | | | 109 | 50 - 140 | 107 | % | | | | |
| B231032 | D8-ACENAPHTHYLENE (sur.) | 2023/12/13 | | | 80 | 50 - 140 | 79 | % | | | | |
| B231032 | D8-NAPHTHALENE (sur.) | 2023/12/13 | | | 74 | 50 - 140 | 74 | % | | | | |
| B231032 | TERPHENYL-D14 (sur.) | 2023/12/13 | | | 93 | 50 - 140 | 92 | % | | | | |
| B231981 | SG O-TERPHENYL (sur.) | 2023/12/13 | | | 88 | 50 - 130 | 92 | % | | | | |
| B207343 | Moisture | 2023/11/22 | | | | | <0.30 | % | 0.60 | 20 | | |
| B207674 | 1-Methylnaphthalene | 2023/11/22 | 86 | 50 - 140 | 89 | 50 - 140 | <0.050 | mg/kg | NC | 50 | | |
| B207674 | 2-Methylnaphthalene | 2023/11/22 | 75 | 50 - 140 | 78 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Acenaphthene | 2023/11/22 | 79 | 50 - 140 | 81 | 50 - 140 | <0.0050 | mg/kg | NC | 50 | | |
| B207674 | Acenaphthylene | 2023/11/22 | 78 | 50 - 140 | 80 | 50 - 140 | <0.0050 | mg/kg | NC | 50 | | |
| B207674 | Anthracene | 2023/11/22 | 111 | 50 - 140 | 106 | 50 - 140 | <0.0040 | mg/kg | NC | 50 | | |
| B207674 | Benzo(a)anthracene | 2023/11/22 | 90 | 50 - 140 | 91 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Benzo(a)pyrene | 2023/11/22 | 85 | 50 - 140 | 86 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Benzo(b&j)fluoranthene | 2023/11/22 | 89 | 50 - 140 | 92 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Benzo(b)fluoranthene | 2023/11/22 | 81 | 50 - 140 | 86 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Benzo(g,h,i)perylene | 2023/11/22 | 83 | 50 - 140 | 83 | 50 - 140 | <0.050 | mg/kg | NC | 50 | | |
| B207674 | Benzo(k)fluoranthene | 2023/11/22 | 84 | 50 - 140 | 88 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Chrysene | 2023/11/22 | 95 | 50 - 140 | 96 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Dibenz(a,h)anthracene | 2023/11/22 | 84 | 50 - 140 | 84 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Fluoranthene | 2023/11/22 | 114 | 50 - 140 | 102 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Fluorene | 2023/11/22 | 88 | 50 - 140 | 90 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Indeno(1,2,3-cd)pyrene | 2023/11/22 | 88 | 50 - 140 | 87 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Naphthalene | 2023/11/22 | 76 | 50 - 140 | 77 | 50 - 140 | <0.010 | mg/kg | NC | 50 | | |
| B207674 | Phenanthrene | 2023/11/22 | 97 | 50 - 140 | 93 | 50 - 140 | <0.010 | mg/kg | NC | 50 | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394799

Report Date: 2023/12/14

QUALITY ASSURANCE REPORT(CONT'D)

ATKINSREALIS CANADA INC.

Client Project #: 694890

Site Location: BRADNER NORTH

Sampler Initials: MAH

| QC Batch | Parameter | Date | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|----------|-----------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|-------------|-----------|
| | | | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits | % Recovery | QC Limits |
| B207674 | Pyrene | 2023/11/22 | 113 | 50 - 140 | 100 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B207674 | Quinoline | 2023/11/22 | 107 | 50 - 140 | 107 | 50 - 140 | <0.050 | mg/kg | NC | 50 | | |
| B207896 | Total Aluminum (Al) | 2023/11/22 | NC | 75 - 125 | 107 | 75 - 125 | <100 | mg/kg | 1.1 | 40 | 98 | 70 - 130 |
| B207896 | Total Antimony (Sb) | 2023/11/22 | 84 | 75 - 125 | 103 | 75 - 125 | <0.10 | mg/kg | 4.1 | 30 | 112 | 70 - 130 |
| B207896 | Total Arsenic (As) | 2023/11/22 | 99 | 75 - 125 | 104 | 75 - 125 | <0.20 | mg/kg | 1.8 | 30 | 94 | 70 - 130 |
| B207896 | Total Barium (Ba) | 2023/11/22 | 97 | 75 - 125 | 99 | 75 - 125 | <0.10 | mg/kg | 0.35 | 40 | 105 | 70 - 130 |
| B207896 | Total Beryllium (Be) | 2023/11/22 | 99 | 75 - 125 | 111 | 75 - 125 | <0.20 | mg/kg | 0.73 | 30 | 126 | 70 - 130 |
| B207896 | Total Bismuth (Bi) | 2023/11/22 | 96 | 75 - 125 | 101 | 75 - 125 | <0.10 | mg/kg | 0.24 | 30 | | |
| B207896 | Total Boron (B) | 2023/11/22 | 106 | 75 - 125 | 119 | 75 - 125 | <1.0 | mg/kg | 3.4 | 30 | | |
| B207896 | Total Cadmium (Cd) | 2023/11/22 | 99 | 75 - 125 | 105 | 75 - 125 | <0.050 | mg/kg | 9.5 | 30 | 108 | 70 - 130 |
| B207896 | Total Calcium (Ca) | 2023/11/22 | NC | 75 - 125 | 103 | 75 - 125 | <100 | mg/kg | 1.5 | 30 | 102 | 70 - 130 |
| B207896 | Total Chromium (Cr) | 2023/11/22 | 93 | 75 - 125 | 108 | 75 - 125 | <0.50 | mg/kg | 0.77 | 30 | 101 | 70 - 130 |
| B207896 | Total Cobalt (Co) | 2023/11/22 | 91 | 75 - 125 | 101 | 75 - 125 | <0.10 | mg/kg | 1.1 | 30 | 101 | 70 - 130 |
| B207896 | Total Copper (Cu) | 2023/11/22 | 89 | 75 - 125 | 103 | 75 - 125 | <0.50 | mg/kg | 0.53 | 30 | 114 | 70 - 130 |
| B207896 | Total Iron (Fe) | 2023/11/22 | NC | 75 - 125 | 104 | 75 - 125 | <100 | mg/kg | 1.6 | 30 | 103 | 70 - 130 |
| B207896 | Total Lead (Pb) | 2023/11/22 | 95 | 75 - 125 | 101 | 75 - 125 | <0.10 | mg/kg | 0.71 | 40 | 114 | 70 - 130 |
| B207896 | Total Lithium (Li) | 2023/11/22 | 100 | 75 - 125 | 105 | 75 - 125 | <0.50 | mg/kg | 0.80 | 30 | 111 | 70 - 130 |
| B207896 | Total Magnesium (Mg) | 2023/11/22 | NC | 75 - 125 | 112 | 75 - 125 | <100 | mg/kg | 1.9 | 30 | 110 | 70 - 130 |
| B207896 | Total Manganese (Mn) | 2023/11/22 | NC | 75 - 125 | 107 | 75 - 125 | <0.20 | mg/kg | 3.0 | 30 | 108 | 70 - 130 |
| B207896 | Total Mercury (Hg) | 2023/11/22 | 101 | 75 - 125 | 105 | 75 - 125 | <0.050 | mg/kg | 3.7 | 40 | 110 | 70 - 130 |
| B207896 | Total Molybdenum (Mo) | 2023/11/22 | 93 | 75 - 125 | 98 | 75 - 125 | <0.10 | mg/kg | 3.8 | 40 | 112 | 70 - 130 |
| B207896 | Total Nickel (Ni) | 2023/11/22 | 90 | 75 - 125 | 104 | 75 - 125 | <0.50 | mg/kg | 1.8 | 30 | 110 | 70 - 130 |
| B207896 | Total Phosphorus (P) | 2023/11/22 | 84 | 75 - 125 | 100 | 75 - 125 | <10 | mg/kg | 0.41 | 30 | 100 | 70 - 130 |
| B207896 | Total Potassium (K) | 2023/11/22 | 112 | 75 - 125 | 106 | 75 - 125 | <100 | mg/kg | 0.084 | 40 | 90 | 70 - 130 |
| B207896 | Total Selenium (Se) | 2023/11/22 | 102 | 75 - 125 | 106 | 75 - 125 | <0.50 | mg/kg | NC | 30 | | |
| B207896 | Total Silver (Ag) | 2023/11/22 | 93 | 75 - 125 | 99 | 75 - 125 | <0.050 | mg/kg | 2.8 | 40 | 115 | 70 - 130 |
| B207896 | Total Sodium (Na) | 2023/11/22 | 116 | 75 - 125 | 110 | 75 - 125 | <100 | mg/kg | 5.1 | 40 | 98 | 70 - 130 |
| B207896 | Total Strontium (Sr) | 2023/11/22 | 104 | 75 - 125 | 105 | 75 - 125 | <0.10 | mg/kg | 0.095 | 40 | 110 | 70 - 130 |
| B207896 | Total Thallium (Tl) | 2023/11/22 | 92 | 75 - 125 | 97 | 75 - 125 | <0.050 | mg/kg | 1.1 | 30 | 89 | 70 - 130 |
| B207896 | Total Tin (Sn) | 2023/11/22 | 98 | 75 - 125 | 103 | 75 - 125 | <0.10 | mg/kg | 0.48 | 40 | 102 | 70 - 130 |
| B207896 | Total Titanium (Ti) | 2023/11/22 | NC | 75 - 125 | 106 | 75 - 125 | <1.0 | mg/kg | 2.4 | 40 | | |
| B207896 | Total Tungsten (W) | 2023/11/22 | 75 | 75 - 125 | 105 | 75 - 125 | <0.50 | mg/kg | NC | 40 | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394799

Report Date: 2023/12/14

QUALITY ASSURANCE REPORT(CONT'D)

ATKINSREALIS CANADA INC.

Client Project #: 694890

Site Location: BRADNER NORTH

Sampler Initials: MAH

| QC Batch | Parameter | Date | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|----------|-----------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|-------------|-----------|
| | | | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits | % Recovery | QC Limits |
| B207896 | Total Uranium (U) | 2023/11/22 | 101 | 75 - 125 | 106 | 75 - 125 | <0.050 | mg/kg | 0.52 | 30 | 102 | 70 - 130 |
| B207896 | Total Vanadium (V) | 2023/11/22 | 93 | 75 - 125 | 104 | 75 - 125 | <1.0 | mg/kg | 0.33 | 30 | 103 | 70 - 130 |
| B207896 | Total Zinc (Zn) | 2023/11/22 | 88 | 75 - 125 | 103 | 75 - 125 | <1.0 | mg/kg | 0.74 | 30 | 110 | 70 - 130 |
| B207896 | Total Zirconium (Zr) | 2023/11/22 | 114 | 75 - 125 | 101 | 75 - 125 | <0.50 | mg/kg | 2.3 | 40 | | |
| B207902 | Soluble (2:1) pH | 2023/11/22 | | | 100 | 97 - 103 | | | 0.86 | N/A | | |
| B208149 | Total Aluminum (Al) | 2023/11/22 | NC | 75 - 125 | 106 | 75 - 125 | <100 | mg/kg | 2.6 | 40 | 90 | 70 - 130 |
| B208149 | Total Antimony (Sb) | 2023/11/22 | 88 | 75 - 125 | 103 | 75 - 125 | <0.10 | mg/kg | 3.0 | 30 | 100 | 70 - 130 |
| B208149 | Total Arsenic (As) | 2023/11/22 | 101 | 75 - 125 | 104 | 75 - 125 | <0.20 | mg/kg | 1.5 | 30 | 87 | 70 - 130 |
| B208149 | Total Barium (Ba) | 2023/11/22 | 108 | 75 - 125 | 100 | 75 - 125 | <0.10 | mg/kg | 1.9 | 40 | 96 | 70 - 130 |
| B208149 | Total Beryllium (Be) | 2023/11/22 | 105 | 75 - 125 | 106 | 75 - 125 | <0.20 | mg/kg | 4.7 | 30 | 107 | 70 - 130 |
| B208149 | Total Bismuth (Bi) | 2023/11/22 | 97 | 75 - 125 | 101 | 75 - 125 | <0.10 | mg/kg | NC | 30 | | |
| B208149 | Total Boron (B) | 2023/11/22 | 110 | 75 - 125 | 113 | 75 - 125 | <1.0 | mg/kg | 6.2 | 30 | | |
| B208149 | Total Cadmium (Cd) | 2023/11/22 | 103 | 75 - 125 | 103 | 75 - 125 | <0.050 | mg/kg | 0.014 | 30 | 94 | 70 - 130 |
| B208149 | Total Calcium (Ca) | 2023/11/22 | NC | 75 - 125 | 103 | 75 - 125 | <100 | mg/kg | 1.7 | 30 | 94 | 70 - 130 |
| B208149 | Total Chromium (Cr) | 2023/11/22 | 103 | 75 - 125 | 105 | 75 - 125 | <0.50 | mg/kg | 2.9 | 30 | 95 | 70 - 130 |
| B208149 | Total Cobalt (Co) | 2023/11/22 | 97 | 75 - 125 | 101 | 75 - 125 | <0.10 | mg/kg | 1.2 | 30 | 93 | 70 - 130 |
| B208149 | Total Copper (Cu) | 2023/11/22 | 98 | 75 - 125 | 103 | 75 - 125 | <0.50 | mg/kg | 1.6 | 30 | 100 | 70 - 130 |
| B208149 | Total Iron (Fe) | 2023/11/22 | NC | 75 - 125 | 104 | 75 - 125 | <100 | mg/kg | 2.7 | 30 | 94 | 70 - 130 |
| B208149 | Total Lead (Pb) | 2023/11/22 | 99 | 75 - 125 | 102 | 75 - 125 | <0.10 | mg/kg | 2.0 | 40 | 105 | 70 - 130 |
| B208149 | Total Lithium (Li) | 2023/11/22 | 103 | 75 - 125 | 105 | 75 - 125 | <0.50 | mg/kg | 0.10 | 30 | 107 | 70 - 130 |
| B208149 | Total Magnesium (Mg) | 2023/11/22 | NC | 75 - 125 | 111 | 75 - 125 | <100 | mg/kg | 2.3 | 30 | 102 | 70 - 130 |
| B208149 | Total Manganese (Mn) | 2023/11/22 | NC | 75 - 125 | 106 | 75 - 125 | <0.20 | mg/kg | 4.8 | 30 | 99 | 70 - 130 |
| B208149 | Total Mercury (Hg) | 2023/11/22 | 103 | 75 - 125 | 105 | 75 - 125 | <0.050 | mg/kg | 4.9 | 40 | 106 | 70 - 130 |
| B208149 | Total Molybdenum (Mo) | 2023/11/22 | 97 | 75 - 125 | 97 | 75 - 125 | <0.10 | mg/kg | 0.58 | 40 | 95 | 70 - 130 |
| B208149 | Total Nickel (Ni) | 2023/11/22 | 100 | 75 - 125 | 103 | 75 - 125 | <0.50 | mg/kg | 2.5 | 30 | 99 | 70 - 130 |
| B208149 | Total Phosphorus (P) | 2023/11/22 | 89 | 75 - 125 | 99 | 75 - 125 | <10 | mg/kg | 0.57 | 30 | 91 | 70 - 130 |
| B208149 | Total Potassium (K) | 2023/11/22 | 129 (1) | 75 - 125 | 105 | 75 - 125 | <100 | mg/kg | 1.9 | 40 | 88 | 70 - 130 |
| B208149 | Total Selenium (Se) | 2023/11/22 | 104 | 75 - 125 | 105 | 75 - 125 | <0.50 | mg/kg | NC | 30 | | |
| B208149 | Total Silver (Ag) | 2023/11/22 | 91 | 75 - 125 | 90 | 75 - 125 | <0.050 | mg/kg | NC | 40 | 82 | 70 - 130 |
| B208149 | Total Sodium (Na) | 2023/11/22 | 108 | 75 - 125 | 109 | 75 - 125 | <100 | mg/kg | 7.6 | 40 | 91 | 70 - 130 |
| B208149 | Total Strontium (Sr) | 2023/11/22 | 110 | 75 - 125 | 105 | 75 - 125 | <0.10 | mg/kg | 2.9 | 40 | 101 | 70 - 130 |
| B208149 | Total Thallium (Tl) | 2023/11/22 | 95 | 75 - 125 | 98 | 75 - 125 | <0.050 | mg/kg | 1.3 | 30 | 84 | 70 - 130 |



BUREAU
VERITAS

Bureau Veritas Job #: C394799

Report Date: 2023/12/14

QUALITY ASSURANCE REPORT(CONT'D)

ATKINSREALIS CANADA INC.

Client Project #: 694890

Site Location: BRADNER NORTH

Sampler Initials: MAH

| QC Batch | Parameter | Date | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|----------|------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|-------------|-----------|
| | | | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits | % Recovery | QC Limits |
| B208149 | Total Tin (Sn) | 2023/11/22 | 102 | 75 - 125 | 103 | 75 - 125 | <0.10 | mg/kg | 11 | 40 | 87 | 70 - 130 |
| B208149 | Total Titanium (Ti) | 2023/11/22 | NC | 75 - 125 | 104 | 75 - 125 | <1.0 | mg/kg | 2.5 | 40 | | |
| B208149 | Total Tungsten (W) | 2023/11/22 | 81 | 75 - 125 | 105 | 75 - 125 | <0.50 | mg/kg | NC | 40 | | |
| B208149 | Total Uranium (U) | 2023/11/22 | 104 | 75 - 125 | 106 | 75 - 125 | <0.050 | mg/kg | 2.0 | 30 | 99 | 70 - 130 |
| B208149 | Total Vanadium (V) | 2023/11/22 | 102 | 75 - 125 | 103 | 75 - 125 | <1.0 | mg/kg | 2.7 | 30 | 95 | 70 - 130 |
| B208149 | Total Zinc (Zn) | 2023/11/22 | 99 | 75 - 125 | 102 | 75 - 125 | <1.0 | mg/kg | 3.5 | 30 | 99 | 70 - 130 |
| B208149 | Total Zirconium (Zr) | 2023/11/22 | 115 | 75 - 125 | 99 | 75 - 125 | <0.50 | mg/kg | 4.4 | 40 | | |
| B208189 | Soluble (2:1) pH | 2023/11/22 | | | 100 | 97 - 103 | | | 0.93 | N/A | | |
| B216760 | Moisture | 2023/11/30 | | | | | <0.30 | % | 0.78 | 20 | | |
| B217281 | 1-Methylnaphthalene | 2023/11/30 | 91 | 50 - 140 | 98 | 50 - 140 | <0.050 | mg/kg | NC | 50 | | |
| B217281 | 2-Methylnaphthalene | 2023/11/30 | 87 | 50 - 140 | 94 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Acenaphthene | 2023/11/30 | 92 | 50 - 140 | 96 | 50 - 140 | <0.0050 | mg/kg | NC | 50 | | |
| B217281 | Acenaphthylene | 2023/11/30 | 88 | 50 - 140 | 93 | 50 - 140 | <0.0050 | mg/kg | NC | 50 | | |
| B217281 | Anthracene | 2023/11/30 | 95 | 50 - 140 | 99 | 50 - 140 | <0.0040 | mg/kg | NC | 50 | | |
| B217281 | Benzo(a)anthracene | 2023/11/30 | 86 | 50 - 140 | 96 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Benzo(a)pyrene | 2023/11/30 | 95 | 50 - 140 | 101 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Benzo(b&j)fluoranthene | 2023/11/30 | 89 | 50 - 140 | 98 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Benzo(b)fluoranthene | 2023/11/30 | 94 | 50 - 140 | 103 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Benzo(g,h,i)perylene | 2023/11/30 | 88 | 50 - 140 | 100 | 50 - 140 | <0.050 | mg/kg | NC | 50 | | |
| B217281 | Benzo(k)fluoranthene | 2023/11/30 | 93 | 50 - 140 | 100 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Chrysene | 2023/11/30 | 85 | 50 - 140 | 97 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Dibenz(a,h)anthracene | 2023/11/30 | 92 | 50 - 140 | 101 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Fluoranthene | 2023/11/30 | 96 | 50 - 140 | 100 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Fluorene | 2023/11/30 | 96 | 50 - 140 | 102 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Indeno(1,2,3-cd)pyrene | 2023/11/30 | 91 | 50 - 140 | 101 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Naphthalene | 2023/11/30 | 86 | 50 - 140 | 91 | 50 - 140 | <0.010 | mg/kg | NC | 50 | | |
| B217281 | Phenanthrene | 2023/11/30 | 89 | 50 - 140 | 94 | 50 - 140 | <0.010 | mg/kg | NC | 50 | | |
| B217281 | Pyrene | 2023/11/30 | 94 | 50 - 140 | 98 | 50 - 140 | <0.020 | mg/kg | NC | 50 | | |
| B217281 | Quinoline | 2023/11/30 | 111 | 50 - 140 | 112 | 50 - 140 | <0.050 | mg/kg | NC | 50 | | |
| B231032 | 1-Methylnaphthalene | 2023/12/13 | | | 96 | 50 - 140 | <0.20 | mg/kg | | | | |
| B231032 | 2-Methylnaphthalene | 2023/12/13 | | | 83 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Acenaphthene | 2023/12/13 | | | 90 | 50 - 140 | <0.020 | mg/kg | | | | |



BUREAU
VERITAS

Bureau Veritas Job #: C394799

Report Date: 2023/12/14

QUALITY ASSURANCE REPORT(CONT'D)

ATKINSREALIS CANADA INC.

Client Project #: 694890

Site Location: BRADNER NORTH

Sampler Initials: MAH

| QC Batch | Parameter | Date | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|----------|-------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|-------------|-----------|
| | | | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits | % Recovery | QC Limits |
| B231032 | Acenaphthylene | 2023/12/13 | | | 87 | 50 - 140 | <0.020 | mg/kg | | | | |
| B231032 | Anthracene | 2023/12/13 | | | 100 | 50 - 140 | <0.016 | mg/kg | | | | |
| B231032 | Benzo(a)anthracene | 2023/12/13 | | | 94 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Benzo(a)pyrene | 2023/12/13 | | | 94 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Benzo(b&j)fluoranthene | 2023/12/13 | | | 94 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Benzo(b)fluoranthene | 2023/12/13 | | | 90 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Benzo(g,h,i)perylene | 2023/12/13 | | | 86 | 50 - 140 | <0.20 | mg/kg | | | | |
| B231032 | Benzo(k)fluoranthene | 2023/12/13 | | | 96 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Chrysene | 2023/12/13 | | | 100 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Dibenz(a,h)anthracene | 2023/12/13 | | | 90 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Fluoranthene | 2023/12/13 | | | 104 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Fluorene | 2023/12/13 | | | 89 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Indeno(1,2,3-cd)pyrene | 2023/12/13 | | | 89 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231032 | Naphthalene | 2023/12/13 | | | 86 | 50 - 140 | <0.040 | mg/kg | | | | |
| B231032 | Phenanthrene | 2023/12/13 | | | 89 | 50 - 140 | <0.040 | mg/kg | | | | |
| B231032 | Pyrene | 2023/12/13 | | | 101 | 50 - 140 | <0.080 | mg/kg | | | | |
| B231981 | SG BC-CSR EPH (C10-C19) | 2023/12/13 | | | 98 | 70 - 130 | <100 | mg/kg | | | | |
| B231981 | SG BC-CSR EPH (C19-C32) | 2023/12/13 | | | 93 | 50 - 130 | <100 | mg/kg | | | | |

N/A = Not Applicable

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

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

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

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

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

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

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

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

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



CHAIN OF CUSTODY RECORD

| | | | | | | | |
|---|--|---|--|---|--|---|--|
| Invoice Information | | Report Information (if differs from invoice) | | Project Information | | Turnaround Time (TAT) Required | |
| Company: <u>Atkins Realis</u> | | Company: <u>As At Left</u> | | Quotation: <u>Atkins Realis Pricing</u> | | <input type="checkbox"/> 5 - 7 Days Regular (Most analyses) | |
| Contact Name: <u>Sai Rajjagopal</u> | | Contact Name: | | P.O. #/AFE#: | | PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS | |
| Address: <u>1300-3777 Kingway</u> | | Address: | | Project #: <u>694890</u> | | Rush TAT (Surcharges will be applied) | |
| <u>Burnaby BC PC: V5H 3Z7</u> | | PC: | | Site Location: <u>Bradnes North</u> | | <input type="checkbox"/> Same Day <input type="checkbox"/> 2 Days | |
| Phone/Fax: <u>604-575-5751</u> | | Phone/Fax: | | Site #: | | <input checked="" type="checkbox"/> 1 Day <input type="checkbox"/> 3-4 Days | |
| Email: <u>sai.rajjagopal@atkinsrealis.com</u> | | Email: | | Site #: | | Date Required: _____ | |
| Copies: <u>edna.wing@atkinsrealis.com</u> | | Copies: | | Sampled By: <u>MHT</u> | | Rush Confirmation #: _____ | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|---------------------------------------|---|-------------------------------|----------------------------------|-----------------------------------|--------------------------------------|--|--|-------------------------------------|------------------------------|--|---|------------------------------|------------------------------------|------------------------------|--|------------------------------|------------------------------------|------------------------------------|---------------------------------------|--|---|------------------------------------|---|-------------------------------------|--|--|------------------------------------|---|----------------------------------|--|--|
| Laboratory Use Only | | | | Analysis Requested | | | | | | | | | | | | Regulatory Criteria | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seal Present | YES | NO | Cooler ID | <table border="0"> <tr> <td><input type="checkbox"/> BTEX / VPH</td> <td><input type="checkbox"/> VOC / BTEX / VPH</td> <td><input type="checkbox"/> MTBE</td> <td><input type="checkbox"/> F2 - F4</td> <td><input type="checkbox"/> Sulphate</td> </tr> <tr> <td><input type="checkbox"/> Seal Intact</td> <td><input type="checkbox"/> VOC / BTEX / F1</td> <td><input type="checkbox"/> LEPH / HEPH / PAH</td> <td><input type="checkbox"/> Preserved?</td> <td><input type="checkbox"/> COD</td> </tr> <tr> <td><input type="checkbox"/> Cooling Media</td> <td><input checked="" type="checkbox"/> PAH</td> <td><input type="checkbox"/> TEH</td> <td><input type="checkbox"/> Filtered?</td> <td><input type="checkbox"/> TDS</td> </tr> <tr> <td></td> <td><input type="checkbox"/> EPH</td> <td><input type="checkbox"/> Filtered?</td> <td><input type="checkbox"/> Filtered?</td> <td><input type="checkbox"/> Conductivity</td> </tr> <tr> <td></td> <td><input type="checkbox"/> Dissolved Metals</td> <td><input type="checkbox"/> Filtered?</td> <td><input type="checkbox"/> Field Preserved?</td> <td><input type="checkbox"/> Alkalinity</td> </tr> <tr> <td></td> <td><input type="checkbox"/> Dissolved Mercury</td> <td><input type="checkbox"/> Filtered?</td> <td><input type="checkbox"/> Field Preserved?</td> <td><input type="checkbox"/> Nitrate</td> </tr> </table> | | | | | | | | | | | | <input type="checkbox"/> BTEX / VPH | <input type="checkbox"/> VOC / BTEX / VPH | <input type="checkbox"/> MTBE | <input type="checkbox"/> F2 - F4 | <input type="checkbox"/> Sulphate | <input type="checkbox"/> Seal Intact | <input type="checkbox"/> VOC / BTEX / F1 | <input type="checkbox"/> LEPH / HEPH / PAH | <input type="checkbox"/> Preserved? | <input type="checkbox"/> COD | <input type="checkbox"/> Cooling Media | <input checked="" type="checkbox"/> PAH | <input type="checkbox"/> TEH | <input type="checkbox"/> Filtered? | <input type="checkbox"/> TDS | | <input type="checkbox"/> EPH | <input type="checkbox"/> Filtered? | <input type="checkbox"/> Filtered? | <input type="checkbox"/> Conductivity | | <input type="checkbox"/> Dissolved Metals | <input type="checkbox"/> Filtered? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Alkalinity | | <input type="checkbox"/> Dissolved Mercury | <input type="checkbox"/> Filtered? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Nitrate | <input checked="" type="checkbox"/> BC CSR <input type="checkbox"/> YK CSR <input type="checkbox"/> CCME <input type="checkbox"/> Drinking Water <input type="checkbox"/> BC Water Quality <input type="checkbox"/> Other | |
| <input type="checkbox"/> BTEX / VPH | <input type="checkbox"/> VOC / BTEX / VPH | <input type="checkbox"/> MTBE | <input type="checkbox"/> F2 - F4 | | | | | | | | | | | | | <input type="checkbox"/> Sulphate | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> Seal Intact | <input type="checkbox"/> VOC / BTEX / F1 | <input type="checkbox"/> LEPH / HEPH / PAH | <input type="checkbox"/> Preserved? | | | | | | | | | | | | | <input type="checkbox"/> COD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> Cooling Media | <input checked="" type="checkbox"/> PAH | <input type="checkbox"/> TEH | <input type="checkbox"/> Filtered? | | | | | | | | | | | | | <input type="checkbox"/> TDS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <input type="checkbox"/> EPH | <input type="checkbox"/> Filtered? | <input type="checkbox"/> Filtered? | | | | | | | | | | | | | <input type="checkbox"/> Conductivity | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <input type="checkbox"/> Dissolved Metals | <input type="checkbox"/> Filtered? | <input type="checkbox"/> Field Preserved? | | | | | | | | | | | | | <input type="checkbox"/> Alkalinity | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <input type="checkbox"/> Dissolved Mercury | <input type="checkbox"/> Filtered? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Nitrate | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seal Present | YES | NO | Cooler ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seal Intact | | | Temp | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cooling Media | | | Temp | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seal Present | | | Temp | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seal Intact | | | Temp | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Sample Identification | | Date Sampled (yyyy/mm/dd) | Time Sampled (hh:mm) | Matrix | # of Containers | Analysis Requested | | | | | | | | | | | | Regulatory Criteria | | Special Instructions |
|-----------------------|-------------|---------------------------|----------------------|--------|-----------------|--------------------|--|--|--|--|--|--|--|--|--|--|--|---------------------|--|---|
| 1 | BH23-107-01 | 2023/11/20 | 1300 | Soil | 3 | | | | | | | | | | | | | | <input checked="" type="checkbox"/> BC CSR | Contact Sai Rajjagopal for analytical program |
| 2 | BH23-107-02 | 2023/11/20 | 1300 | Soil | 3 | | | | | | | | | | | | | | <input type="checkbox"/> YK CSR | |
| 3 | BH23-107-03 | 2023/11/20 | 1305 | Soil | 3 | | | | | | | | | | | | | | <input type="checkbox"/> CCME | |
| 4 | BH23-107-04 | 2023/11/20 | 1310 | Soil | 3 | | | | | | | | | | | | | | <input type="checkbox"/> Drinking Water | |
| 5 | BH23-107-05 | 2023/11/20 | 1315 | Soil | 3 | | | | | | | | | | | | | | <input type="checkbox"/> BC Water Quality | |
| 6 | BH23-108-01 | 2023/11/20 | 1425 | Soil | 3 | | | | | | | | | | | | | | <input type="checkbox"/> Other | |
| 7 | BH23-108-02 | 2023/11/20 | 1425 | Soil | 3 | | | | | | | | | | | | | | | |
| 8 | BH23-108-03 | 2023/11/20 | 1430 | Soil | 3 | | | | | | | | | | | | | | | |
| 9 | BH23-108-04 | 2023/11/20 | 1435 | Soil | 5 | | | | | | | | | | | | | | | |
| 10 | BH23-108-05 | 2023/11/20 | 1440 | Soil | 3 | | | | | | | | | | | | | | | |

Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to Bureau Veritas' standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgement and acceptance of our

| | | | | | |
|-------------------------------------|-------------------|--------------|---------------------------------|-------------------|--------------|
| Relinquished by: (Signature/ Print) | Date (yyyy/mm/dd) | Time (hh:mm) | Received by: (Signature/ Print) | Date (yyyy/mm/dd) | Time (hh:mm) |
| <u>M. Aaron Hall</u> | 2023/11/21 | 0625 | <u>David Edlane Cozli</u> | 2023/11/21 | 0800 |





Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5 Toll Free (833) 282-5227
 Victoria: 851 Viewfield Road, Unit 1, Victoria, BC V9A 4V2 Toll Free (833) 282-5227
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CHAIN OF CUSTODY RECORD

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Page 1 of 1

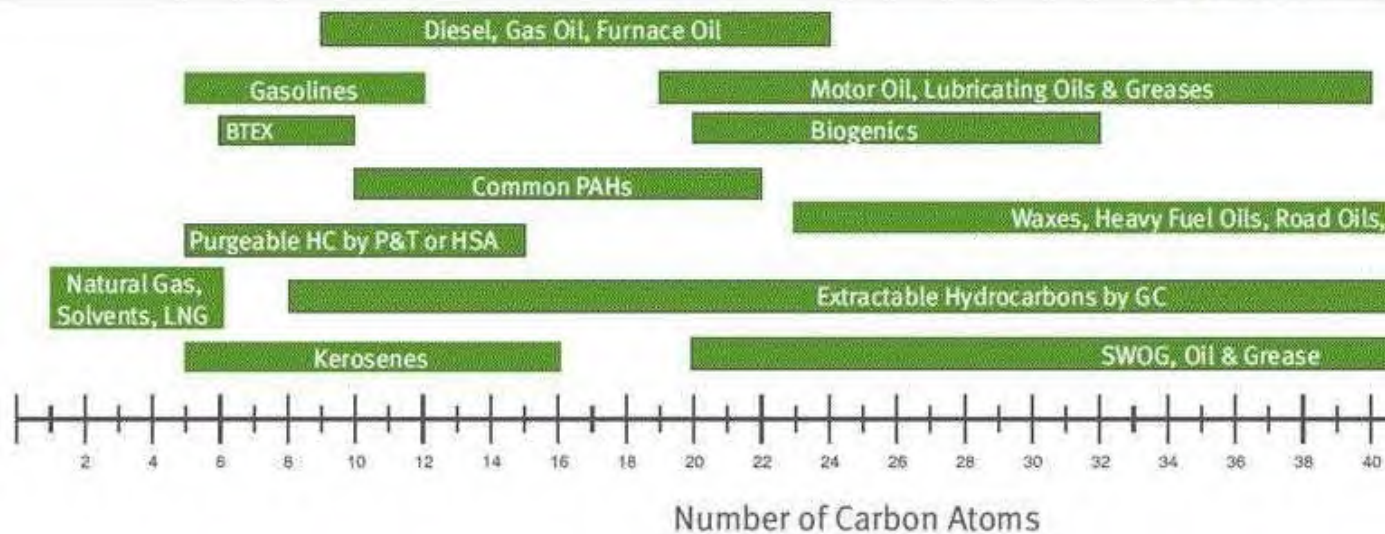
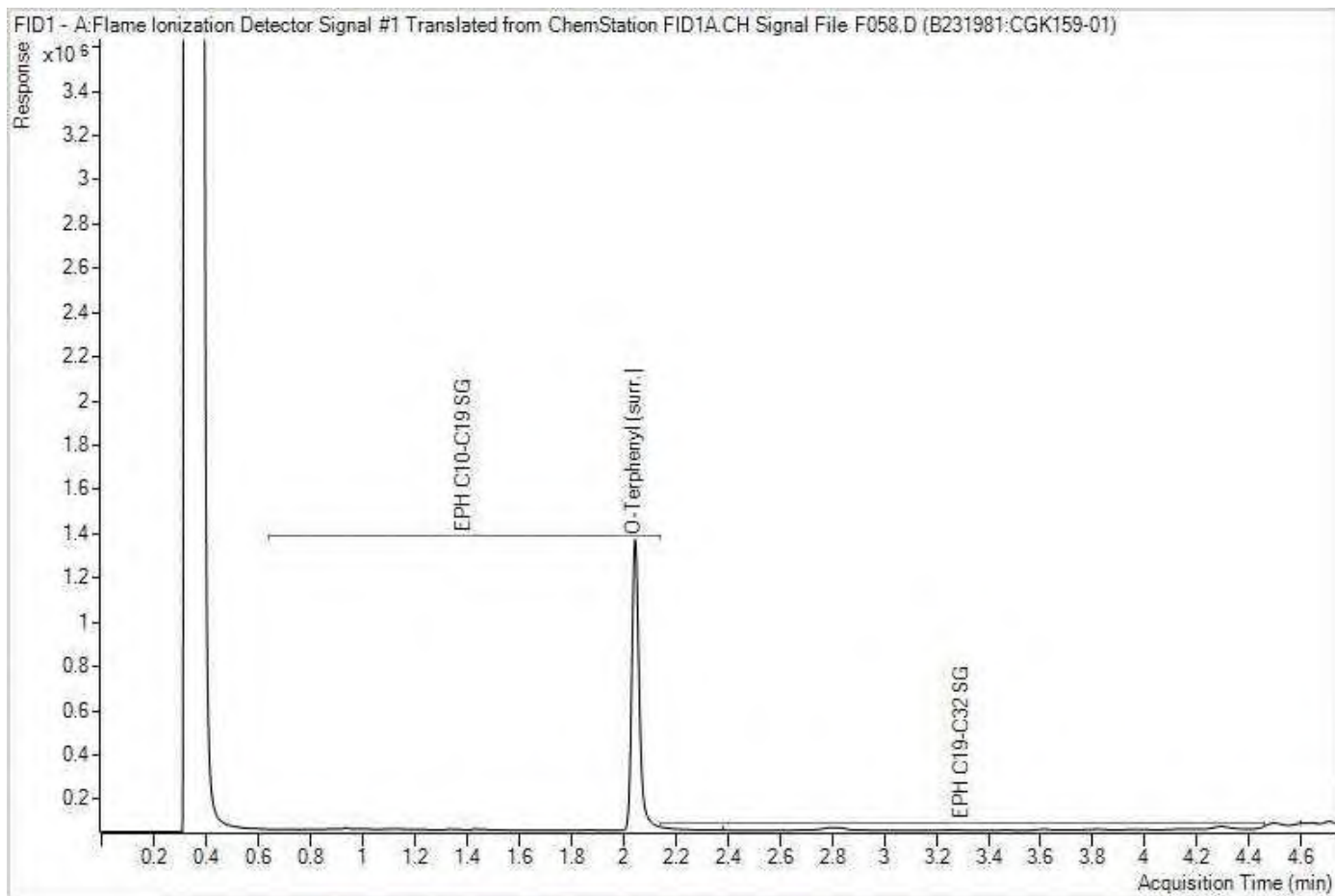
| Invoice Information | Report Information (if differs from invoice) | Project Information | Turnaround Time (TAT) Required |
|--|--|---|---|
| Company: <u>Atkins Realis</u> | Company: <u>AS AT LEFT</u> | Quotation: <u>Atkins Realis Pricing</u> | <input type="checkbox"/> 5-7 Days Regular (Most analyses) |
| Contact Name: <u>Sai Rajayavel</u> | Contact Name: | P.O. #/AFE#: | PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS |
| Address: <u>1500-3777 Kingsway</u> | Address: | Project #: <u>694890</u> | Rush TAT (Surcharges will be applied) |
| Phone/Fax: <u>604-575-9751</u> | Phone/Fax: | Site Location: <u>Produce North</u> | <input type="checkbox"/> Same Day <input type="checkbox"/> 2 Days |
| Email: <u>sai.rajayavel@atkinsrealis.com</u> | Email: | Site #: | <input checked="" type="checkbox"/> 1 Day <input type="checkbox"/> 3-4 Days |
| Copies: <u>edwin.wong@atkinsrealis.com</u> | Copies: | Sampled By: <u>MAT</u> | Date Required: |
| | | | Rush Confirmation #: |

| Laboratory Use Only | | | | Analysis Requested | | | | | | | | | | | | | Regulatory Criteria | | | | | | | | | | | | |
|-----------------------|-------------|------------|------|---------------------------|----------------------|--------|-----------------|-------------------------------------|---|--|---|--|----------------------------------|-------------------------------------|-------------------------------------|---|---|-----------------------------------|------------------------------|-------------------------------------|----------------------------------|-----------------------------------|------------------------------|------------------------------|---------------------------------------|----------------------------------|----------------------------|-----------------------|---------------------------------------|
| YES | NO | Cooler ID | Temp | Depot Reception | | | | | | | | | | | | | BC CSR | Other | | | | | | | | | | | |
| Seal Present | | | | | | | | | | | | | | | | | <input checked="" type="checkbox"/> | | | | | | | | | | | | |
| Seal Intact | | | | | | | | | | | | | | | | | <input type="checkbox"/> | | | | | | | | | | | | |
| Cooling Media | | | | | | | | | | | | | | | | | <input type="checkbox"/> | | | | | | | | | | | | |
| YES | NO | Cooler ID | Temp | | | | | | | | | | | | | | <input type="checkbox"/> | | | | | | | | | | | | |
| Seal Present | | | | | | | | | | | | | | | | | <input type="checkbox"/> | | | | | | | | | | | | |
| Seal Intact | | | | | | | | | | | | | | | | | <input type="checkbox"/> | | | | | | | | | | | | |
| Cooling Media | | | | | | | | | | | | | | | | | <input type="checkbox"/> | | | | | | | | | | | | |
| YES | NO | Cooler ID | Temp | | | | | | | | | | | | | | <input type="checkbox"/> | | | | | | | | | | | | |
| Seal Present | | | | | | | | | | | | | | | | | <input type="checkbox"/> | | | | | | | | | | | | |
| Seal Intact | | | | | | | | | | | | | | | | | <input type="checkbox"/> | | | | | | | | | | | | |
| Cooling Media | | | | | | | | | | | | | | | | | <input type="checkbox"/> | | | | | | | | | | | | |
| Sample Identification | | | | Date Sampled (yyyy/mm/dd) | Time Sampled (hh:mm) | Matrix | # of Containers | <input type="checkbox"/> BTEX / VPH | <input type="checkbox"/> VOC / BTEX / VPH | <input type="checkbox"/> VOC / BTEX / F1 | <input checked="" type="checkbox"/> PAH | <input checked="" type="checkbox"/> LEPH | <input type="checkbox"/> F2 - F4 | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Field Preserved? | <input type="checkbox"/> Sulphate | <input type="checkbox"/> COD | <input type="checkbox"/> Alkalinity | <input type="checkbox"/> Ammonia | <input type="checkbox"/> Fluoride | <input type="checkbox"/> TDS | <input type="checkbox"/> BOD | <input type="checkbox"/> Conductivity | <input type="checkbox"/> Nitrate | <i>Salinity Parameters</i> | HOLD - DO NOT ANALYZE | Special Instructions |
| 1 | BH23-107-01 | 2023/11/20 | 1300 | Soil | 3 | | | | | X | X | | | | | | | | | | | | | | | | | X | Submit Sai Rajayavel Remedial Program |
| 2 | BH23-107-02 | 2023/11/20 | 1500 | Soil | 3 | | | | | | | | | | | | | | | | | | | | | | | X | |
| 3 | BH23-107-03 | 2023/11/20 | 1305 | Soil | 3 | | | | | X | | | | | | | | | | | | | | | | | | X | |
| 4 | BH23-107-04 | 2023/11/20 | 1310 | Soil | 3 | | | | | | | | | | | | | | | | | | | | | | | X | |
| 5 | BH23-107-05 | 2023/11/20 | 1315 | Soil | 3 | | | | | | | | | | | | | | | | | | | | | | | X | |
| 6 | BH23-108-01 | 2023/11/20 | 1425 | Soil | 3 | | | | | | | | | | | | | | | | | | | | | | | X | |
| 7 | BH23-108-02 | 2023/11/20 | 1425 | Soil | 3 | | | | | | | | | | | | | | | | | | | | | | | X | |
| 8 | BH23-108-03 | 2023/11/20 | 1430 | Soil | 3 | | | | | | | | | | | | | | | | | | | | | | | X | |
| 9 | BH23-108-04 | 2023/11/20 | 1435 | Soil | 3 | | | | | | | | | | | | | | | | | | | | | | | X | |
| 10 | BH23-108-05 | 2023/11/20 | 1440 | Soil | 3 | | | | | | | | | | | | | | | | | | | | | | | X | |

Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to Bureau Veritas' standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgement and acceptance of our terms which are available for viewing at www.bvlab.ca/terms

| Relinquished by: (Signature/ Print) | Date (yyyy/mm/dd): | Time (hh:mm): | Received by: (Signature/ Print) | Date (yyyy/mm/dd): | Time (hh:mm): | BV Job # |
|-------------------------------------|--------------------|---------------|---------------------------------|--------------------|---------------|----------|
| <i>[Signature]</i> M. Anton Hill | 2023/11/21 | 0625 | | | | |

EPH in Soil by SG GC/FID Chromatogram



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



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