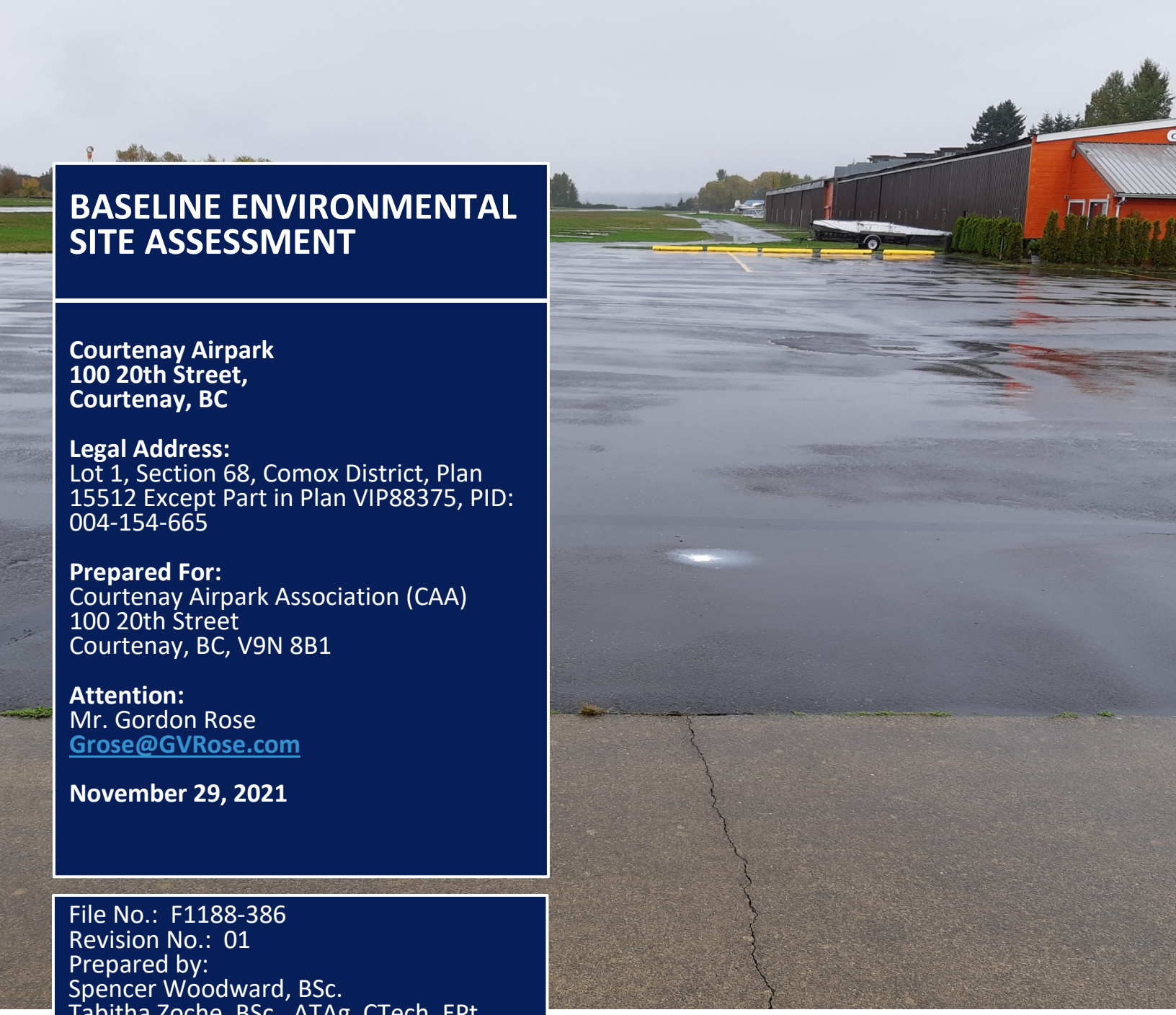

BASELINE ENVIRONMENTAL SITE ASSESSMENT

Courtenay Airpark
100 20th Street,
Courtenay, BC

Legal Address:
Lot 1, Section 68, Comox District, Plan 15512 Except Part in Plan VIP88375, PID: 004-154-665

Prepared For:
Courtenay Airpark Association (CAA)
100 20th Street
Courtenay, BC, V9N 8B1

Attention:
Mr. Gordon Rose
Grose@GVRose.com

November 29, 2021

File No.: F1188-386
Revision No.: 01
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Lewkowich Engineering Associates Ltd.

EXECUTIVE SUMMARY

The following is a brief synopsis of the property, assessment methods, and findings presented in the Report. The reader must read the Report in its entirety; the reader shall not rely solely on the information provided in this summary.

The subject property, 100 20th Street, Courtenay, BC, from this point forward referred to as the "Property" or "Site", is located on the east coast of Vancouver Island within the jurisdictional boundaries of the City of Courtenay. At the time of LEA's site visit, the Property was developed as an airpark, with hangars, storage buildings and airplanes on site.

The Courtenay Airpark Association (CAA) is a private airpark utilized for the housing and use of private aircraft. In association with these activities, a fueling station containing underground bulk storage of aeronautic fuel is present along the northwestern portion of the site, having been installed and updated in 2005. The identified underground bulk fuel storage tank (UST) on site is considered an Area of Potential Environmental Concern (APEC) for the Site, and as per the terms of the CAA lease, requires regular monitoring to mitigate potential environmental release. Two monitoring wells were completed in proximity to the USTs during installation, however, an additional five boreholes were advanced to allow for additional assessment of soils, groundwater and soil vapour in the vicinity of the identified APEC.

At the time of the assessment, it was determined that the groundwater across the site heavily impacted by tidal influence, which limited the assessment of water in some of the wells. The Baseline ESA identified non-detectable levels of all the assessed hydrocarbon parameters within the soils and groundwater sampled from site. As no detectable levels of hydrocarbons were found, additional sampling of soil vapour and groundwater were not conducted at this time. It is our opinion that the assessed soils and groundwater are not impacted by the presence of the USTs at this time. As per the terms of CAA's lease, regular monitoring of groundwater and soil vapour to assess the status of the USTs is recommended in the future.

List of Abbreviations and Acronyms Used in the Report

Abbreviation	Title	Abbreviation	Title
ESA	Environmental Site Assessment	PCOC	Potential Contaminants of Concern
CSA	Canadian Standards Association	AST	Aboveground Storage Tank
APEC	Area of Environmental Concern	UST	Underground Storage Tank
MOE	BC Ministry of Environment	VOC	Volatile Organic Compounds
LEA	Lewkowich Engineering Associates Ltd.	PID	Parcel Identifier
PAH	Petroleum Hydrocarbon	BSG	Below Surface Grade
BTEX	Benzene, Toluene, Ethylbenzene, Xylene	LEPH	Light Extractable Petroleum Hydrocarbons
HEPH	Heavy Extractable Petroleum Hydrocarbons	MTBE	Methyl Tert-Butyl Ether
CSR	Contaminated Sites Regulation	RPD	Relative Percent Difference
VPH	Volatile Petroleum Hydrocarbons	ppm	Parts Per Million
TD	Thermal Desorption		

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1.0 INTRODUCTION

Lewkowich Engineering Associates Ltd. (LEA) was retained by The Courtenay Airpark Association (CAA), to conduct a Baseline Environmental Site Assessment (ESA) on the property located at 100 20th Street, Courtenay, British Columbia (the "Property" or "Site"). LEA understands that this report is required on terms of the lease renewal of the site for continued use as an airpark.

1.1 Purpose

This work was completed to satisfy terms of the lease agreement between the CAA and the City of Courtenay regarding the airpark property. Included in these terms is the completion of a baseline investigation (this report) to assess current site conditions, along with continual monitoring of soil vapour and groundwater on a continual five-year basis until the end of the lease. This report includes the assessment of soil, soil vapour and groundwater media for the presence of various petroleum hydrocarbon parameters associated with aeronautic fuel, as well as the installation of monitoring wells for soil vapour and groundwater parameters during future monitoring events.

1.2 Reporting Standards

This report was conducted in general accordance with investigative and reporting guidelines outlined by the Environmental Management Act, Contaminated Sites Regulation[1] (CSR), including Sections 1, 49, 58, and 59 of the Regulation, and LEA's standard field methodology.

1.3 Scope of Work

The Scope of Work for the investigation included:

- A visual reconnaissance of the underground storage tank area of the site;
- Development of a sampling plan to investigate the identified Area of Potential Environmental Concern;
- Create a site-specific Health and Safety Plan;
- Conduct a BC-One call to identify potential underground utilities;
- Perform a locate scan using Ground Penetrating Radar scan to determine the location of underground hazards;

[1] British Columbia Ministry of Environment and Climate Change Strategy. Environmental Management Act, Contaminated Sites Regulation BC Reg. 375/96 (including amendments up to March 11, 2021).

- The advancement of five environmental boreholes near the perimeter of the proposed development area, with the completion of four boreholes into groundwater monitoring wells and five of the boreholes into soil vapour monitoring wells;
- The collection of fourteen soil samples from the boreholes, plus two duplicate samples for a total of sixteen samples. Samples were submitted to an accredited external laboratory for chemical analysis of selected parameters;
- The collection of two groundwater samples from the monitoring wells, as well as four additional samples from the newly installed monitoring wells, dependent on conditions at the time of sampling. The samples are to submitted to the laboratory for chemical analysis of selected parameters;
- Data analysis and comparison to applicable B.C. Contaminated Sites Standards for the various media parameters.

1.4 Limitations

This investigation is described as a Baseline Environmental Site Assessment (ESA), as its purpose is to assess current site conditions to be compared to future monitoring events. The scope of this investigation is limited to the area surrounding the underground bulk fuel storage area containing aeronautical fuel utilized by the airpark patrons, located in the northeastern portion of the airpark. The scope of work for this investigation is defined by the lease agreement terms laid out by the City of Courtenay, which have been included in Appendix A.

During this investigation, it was found that groundwater onsite was heavily impacted by tidal influences, due to the proximity of the site to the estuary. As such, initial groundwater monitoring was limited to the two deeper wells previously installed onsite. Future sampling events should aim to assess site conditions at high-tide times to ensure an adequate water column will be present within the well.

2.0 REGULATORY SECTION

The following factors were considered relevant to the selection of applicable standards for the site:

- The site is zoned as public area, and is bordered to the north and east by park properties.
- The properties adjacent to the west are currently zoned commercial, and the terminus end of the Courtenay River, where it meets the Strait of Georgia lies to the south;

The following subsections outline soil and groundwater regulatory standards for the site.

2.1 Soil Standards

The property is currently zoned "PA-1 & PA-2" for "public use and assembly", with the site currently being utilized for the private use and storage of small aircraft. The area surrounding the site is primarily utilized for a public pathway and park, with some residential and commercial properties within close proximity. Based on the current and reasonable potential future land use, as outlined in section. 12 of the CSR, analyzed parameters were compared to Urban Park (PL), Low-Density Residential (RL_{LD}) and Commercial (CL) standards including:

- Matrix Numerical Soil Standards for the mandatory site-specific factors: human intake of contaminated soil; and, toxicity to soil invertebrates and plants (CSR Schedule 3.1, Part 1);
- Matrix Numerical Soil Standards for the site-specific factors: groundwater flow to surface water used by freshwater aquatic life and drinking water, groundwater flow to surface water used by freshwater aquatic life and drinking water (CSR Schedule 3.1 Part 1); and
- Generic Numerical Soil Standards (CSR Schedule 3.1) to protect human health (Part 2) and ecological health (Part 3).

2.2 Groundwater Standards

Four aspects of the site in relation to surface water and groundwater are important for determining potentially applicable standards.

- Firstly, the site is located directly adjacent to the freshwater of Courtenay River that lies to the northeast of the site. The river also experiences tidal influence due to its proximity to the Georgia Strait. In this case, the aquatic life (AW) (freshwater (FW) and marine (MW)) standards apply because groundwater exceeding aquatic life standards may migrate to within 500 m of these surface water bodies;
- Secondly, the ENV groundwater database well search and other information indicates no water supply wells are located within 500 m of the subject site. However, drinking water (DW) standards apply because no further assessment of groundwater flow direction has been done;
- Thirdly, ENV considers DW standards to be applicable at the site in relation to future groundwater use.
- Fourthly, irrigation water use does not occur on or near the site and livestock watering use does not occur. Since no irrigation or livestock water wells or surface water intakes are located within 100 m upgradient and 500 m downgradient of the edge of a stable contaminant plume, irrigation and livestock watering use does not apply.

3.0 SUMMARY OF SITE CONDITIONS

3.1 Site History

The site has been historically developed as an airpark since the 1960's. Based on anecdotal records, the underground bulk fuel tanks were installed by Coast Fuel Contracting Ltd in 2005, with monitoring activities including regular dip tests to assess fuel quantities within the tanks. At the time of LEA attending the site, the airpark was developed with multiple hangars, an office, runway, and a fueling station. The following table summarizes the site information.

Table 3.1.1 – Summary of Site Information

Information	Description
Civic Address	100 20th Street, Courtenay, British Columbia
Legal Description	Lot 1, Section 68, Comox District, Plan 15512 Except Part in Plan VIP88375 Lot 1, Section 66, Comox District, Plan 14942, Except Any Portion of the Bed of the Courtenay River Lot A, Sections 66 and 67, Comox District, Plan 14521, Except Any Portion of the Bed of the Courtenay River
Current Land Use	Airpark
Zoning	PA-1: Public Use and Assembly One PA-2: Public Use and Assembly Two
Parcel ID (PID)	004-154-665 000-892-419 000-892-068
Area	11.00 hectare
Geographical Coordinates	49° 40' 46.29" N, 124° 58' 51.35" W (NAD83, approx. centre of Site)
Subsurface Conditions	Gravely sand, overlying silty sands, overlying coarse gravels
Precipitation	Annual precipitation: 1455.8 mm, ranging from 29.9 mm in July to 248.5 mm in November
Topography	Gentle downward slope to the northeast
Groundwater	Shallow groundwater; aquifer No. 951 (sand-and-gravel aquifer), and aquifer No. 411 (fractured bedrock aquifer) mapped beneath site
Floodplain	The property lies within the mapped floodplain of the Courtenay River
Surface Flow	Inferred to be from southwest to northeast, towards the Courtenay River
Nearest Surface Water Receptor	Runoff flows to stormwater drain on site. Nearest mapped surface water receptor is the Courtenay River, a fish-bearing freshwater receptor situated approximately 55 metres to the northeast of the investigation boundary.
Water Wells	Two monitoring wells on site within the investigation boundary, at the northeast and southwest ends of the USTs. None on adjacent properties within 0.5 km radius of investigation boundary.

3.2 Surrounding Land Uses

The surrounding land uses at the time of the site investigation are noted in the table below.

Table 3.2.1 – Summary of Surrounding Land Uses

Direction from Site	Location	Description
Northwest	510 Courtenay Riverway Heritage Walk	Courtenay Marina Park
	111-119 20th Street	Residential properties
Northeast	2095 Comox Road	Undeveloped property
	N/A	Courtenay River
Southwest	Cliffe Avenue	Commercial properties
	Mansfield Drive	Residential, Commercial, Gas Station
Southeast	Rotary Skypark	Municipal Park
	Courtenay Riverway Heritage Walk	Municipal Walkway

4.0 RECORDS REVIEW

4.1 Identified Areas of Potential Environmental Concern

No previous environmental reports were made available for review. However, as per the terms of the CAA's lease agreement with the City of Courtenay, a baseline investigation and continued monitoring is recommended for the following APEC onsite:

Table 4.1.1 – Areas of Potential Environmental Concern and Potential Contaminants of Concern

APEC No.	Description	PCOCs
APEC 1	Fuel Area (UST & Pumps)	VOC, VPH, LEPH, HEPH, EPH, BTEX

APEC 1: Underground bulk fuel storage tanks containing aeronautic fuel for the private and recreational use of aircraft, were identified within the northwestern portion of the site. The area contains a divided, double-walled fibreglass underground storage tank containing two types of aviation fuel (AV-Gas and Marine Gas). Two fueling pumps associated with the tanks were observed adjacent to the tanks to the north. Records indicate that the tanks were installed in 2005.

5.0 INVESTIGATION METHODOLOGY

5.1 Drilling and Soil Sampling

Utility locates were completed by Kelly's 1st Call Locating using a Ground Penetrating Radar scanner and Electromagnetic survey on October 5, 2021. On October 8, 2021, five boreholes (BH21-01 to BH21-05) were advanced to a maximum depth of 4.55 mbg using a B29 truck mounted mobile drill utilizing solid stem augers

operated by TerraTech Drilling Inc. (TerraTech) of Parksville, B.C. All five boreholes were completed with soil vapour monitoring wells, while four boreholes were completed as groundwater monitoring wells.

Soil samples were collected from intervals for 0.5 to 1.0 m increment along the auger flight and placed into in laboratory prepared glass jars and/or vials, which were labelled and stored in an ice-filled cooler. Each sample collected was field screened for combustible headspace vapour levels (HSVLs) using an RAE Systems Inc. ppbRAE 3000™ photoionization detector prior to storage and selection for analysis. The soil cuttings from each borehole were stored in barrels on site. All soil samples collected during the site investigation were classified according to soil type, structure and colour. To prevent cross-contamination, nitrile gloves were disposed after each sample was collected. The samples and completed chain of custody documentation were subsequently transported to Bureau Veritas Laboratories (BVL) for selective chemical analyses.

The four groundwater monitoring wells were installed using 50 mm diameter, 0.010-inch slot polyvinyl chloride pipe. All monitoring wells were fitted with slip caps at the bottom and j-plugs at the top. The annulus around each monitoring well was backfilled with sand and bentonite, with soil vapour probes installed approximately 0.4 to 0.8 m above the top of the screen, with a bentonite seal separating the two. The wells were completed with steel flush mount road boxes. One borehole was completed as soil vapour monitoring well, adjacent to the previously installed northeastern most groundwater monitoring well. Boreholes advanced within the vicinity of the UST were backfilled with sand and bentonite clay. Specific monitoring well construction details are provided in the borehole logs in Appendix E. Borehole and monitoring well locations are shown in Figure 2 and Figure 3.

5.2 Groundwater Monitoring

During installation of the USTs, two groundwater monitoring wells were installed, one along the northeastern side of the tank and one along the southwestern side of the tank. Four additional water monitoring wells were installed during the subsurface investigation on October 8, 2021. All wells were assessed and purged for the following parameters, with monitoring records included in Table 5.

- depth to groundwater with an oil-water interface probe;
- purged three times the well volume to remove any stagnant groundwater within the wells using a Peristaltic pump; and
- Collection of groundwater samples from viable wells for laboratory analysis of selected parameters.

6.0 QUALITY ASSURANCE AND QUALITY CONTROL

A quality assurance and quality control (QA/QC) program was followed to ensure that the sampling and analytical data were interpretable, meaningful, and reproducible. Two stages of QA/QC were completed, with one stage completed by the laboratory and the other as part of field procedures performed by LEA.

6.1.1 Field

Sampling activities conducted by LEA were completed in accordance with LEA's Technical Field Procedures and BC ENV's Field Sampling Manual by trained LEA personnel. Field activities were documented in field notes and results were recorded on standard field forms.

Reusable field equipment involved in the sampling and monitoring of soil was decontaminated between sampling locations in accordance with LEA's Technical Field Procedures. Samples are not directly contacted by hand; to help prevent cross-contamination, a new pair of clean nitrile gloves were used for the collection of each sample.

Soil samples were placed in laboratory-supplied containers suitable for the analytes. Following collection, soil samples were stored in an ice-filled cooler in the field and when being transported to Bureau Veritas Laboratories (BVL) in Burnaby, BC. A completed chain of custody report form accompanied the sample submission to the laboratory.

As part of LEA's QA/QC program, field duplicates of soil samples were collected. A field duplicate sample is a second sample collected simultaneously from the same location as the original sample and stored in a separate sample container. Duplicate samples were collected and analyzed at a rate of approximately one per ten samples. Samples suspected to have the highest contaminant concentrations based on visual observations and headspace vapour concentrations are generally selected for duplicate analysis. The sample is given a different sample name to prevent the laboratory from being aware of its similar origin. Field duplicates are collected to assess any field sampling inconsistencies and to provide an independent check on internal laboratory QA/QC.

The relative percent difference (RPD) values between results for the parent sample and the duplicate sample are calculated to determine the precision of the results. RPD is defined as the absolute value of the difference of the duplicate results divided by the average of the duplicate results, expressed as a percentage. The precision of analytical results is influenced by how close the results are to the laboratory reportable detection limit (RDL). Analytical error increases near the RDL, therefore the RPD calculation was not performed unless the concentrations of both samples were greater than 5 times the RDL. RPD calculations are provided in Appendix C.

The calculated RPD values were compared to alert limits to evaluate the sample result variability. The alert limits for specific analytes are based on LEA's Technical Guidance, and industry accepted standards and are consistent with guidance provided by BC ENV.

6.1.2 Laboratory

Analyses were performed by BVL, a laboratory accredited by the Canadian Association for Laboratory Accreditation. BVL regularly includes analyses of control standards samples, certified reference material standards, duplicates, instrument blanks, method blanks, method spikes, replicates, and surrogates as part of their QA/QC program and confirms that its QA/QC results are within acceptable limits before releasing results to LEA.

7.0 BASELINE ASSESSMENT RESULTS

The analytical results of the Baseline Investigation activities are summarized in the below sections.

7.1 Soil

7.1.1 Observations

Soil samples collected from within the investigation area were screened in the field due to the nature of the potential contaminants of concern. Screened results varied from 0.363 parts per million (ppm), to 28.58 ppm, indicating a low probability of petroleum hydrocarbons within the collected samples.

Subsurface soils encountered generally consisted of gravely sands, underlain by silty sands, underlain by coarse gravels. Bedrock was not encountered in this investigation. The soil observations are presented on the borehole logs provided in Appendix E.

7.1.2 Analytical Results

16 soil samples, including two blind field duplicates, were collected on October 8, 2021 and analyzed for Light & Heavy Extractable Petroleum Hydrocarbons (LEPH/HEPH), Poly-Aromatic Hydrocarbons (PAH), Volatile Organic Compounds (VOC) and Volatile Petroleum Hydrocarbons (VPH). All samples analyzed returned concentrations below the laboratory reportable detection limit, indicating no impacts from the analyzed parameters were detected within the soils surrounding the UST. All concentrations were found to meet CSR standards for PL, RL_{LD}, and CL. The analytical results are provided in Table 1 and Table 2. Copies of the 2021 laboratory COA reports are provided in Appendix D.

7.2 Groundwater

7.2.1 Observations

Groundwater was monitored within all water wells, with a minimum of two purging events occurring prior to sampling. Groundwater was observed to be present in all purging and sampling events within the pre-existing water monitoring wells (MW-1 and MW-2), with evidence of tidal influence impacting the water column within these wells. The newly installed monitoring wells (MW21-1, MW21-2, MW21-4 and MW21-5) were observed to be heavily impacted by tidal influences within the water column. This was determined through the presence of groundwater during the purging events on October 12th and October 14th, 2021.

Due to the insufficient amount of groundwater present in MW21-1 through MW21-5, these wells were not sampled during the sampling event on October 14th, 2021. However, groundwater samples were collected from MW-1 and MW-2 and analyzed for the chosen parameters.

7.2.2 Analytical Results

Two groundwater samples were collected on October 14, 2021 and analyzed for LEPH, HEPH, PAH, VPH, and VOC. All samples analyzed, with the exception of trace concentrations of toluene, returned concentrations below the laboratory reportable detection limit, indicating no impacts from the analyzed parameters were detected within the groundwater surrounding the UST. All concentrations were found to meet CSR standards for DW, AW_{FW}, AW_{MW}. The analytical results are provided in Table 3 and Table 4. Copies of the 2021 laboratory COA reports are provided in Appendix D.

7.3 Soil Vapour

7.3.1 Observations

Soil vapour monitoring wells were installed within each borehole advanced during the October 8, 2021 investigation. Soil vapour field screening results were obtained using the ppbRAE 3000™ photoionization detector with values observed to be between 0.363 parts per million (ppm), to 28.58 ppm. These results indicate a low probability of petroleum hydrocarbon vapours present within the soil vapour matrix. Based on these readings and the analytical concentrations detected within the soil and groundwater, it was determined that soil vapour assessment was not necessary at this time.

8.0 BASELINE ASSESSMENT SUMMARY AND CONCLUSIONS

8.1 Soil

On October 8, 2021, LEA advanced five boreholes (BH21-1 through BH21-5) within the vicinity of the underground bulk fuel storage tank. Surficial soils were analyzed for LEPH, HEPH, PAH, VOC, BTEX, and VPH. Laboratory results of all samples analyzed returned concentrations below the laboratory reportable detection limits, therefore all analyzed samples met the applicable BC CSR Standards for PL, CL and RL_{LD} land-uses.

Based on these results, no petroleum hydrocarbon contamination has been identified in the soils of this investigation.

8.2 Groundwater

Six groundwater monitoring wells are present onsite: two pre-existing monitoring wells (MW-1 and MW-2) installed during UST installation; and four monitoring wells (MW21-1, MW21-2, MW21-4 and MW21-5) installed during the October 8, 2021 subsurface investigation. Groundwater levels were observed to be greatly impacted by the tidal patterns within the water column. As such, two wells (MW-1 and MW-2) were sampled during the October 14th, 2021 monitoring event. All samples analyzed returned concentrations below laboratory reportable detection limits, with the exception of trace concentrations of toluene. All analyzed samples met the applicable BC CSR Standards for DW, AW_{FW} and AW_{MW} uses.

Based on these results, no petroleum hydrocarbon impacts were identified within the groundwater surrounding the investigation area. Future investigations should take in account of tidal patterns to ensure adequate water volume is present in the wells for sufficient sample recovery.

8.3 Soil Vapour

Based on field screening results of vapours present within the collected soil samples, along with concentrations of analyzed parameters within the soil and groundwater samples, it was determined that soil vapour investigation was not required at this time. Monitoring wells have been installed and are functional for future monitoring events. Future investigation should take in account tidal patterns and potential water accumulation within the top meter of soil which may impact sample integrity.

9.0 REPORT USE AND LIMITATIONS

In preparing this report Lewkowich Engineering Associates Ltd. (LEA Environmental Health & Safety) reviewed historical records, conducted interviews with certain private and public officials, and conducted an onsite visual inspection of the property. We examined and relied upon documents referenced in the report and have relied on oral statements made by certain individuals but we have not conducted an independent examination of the facts contained in referenced materials and statements. LEA Environmental Health & Safety assumes the genuineness of the documents and that the information provided in documents or statements is true and accurate.

Lewkowich Engineering Associates (LEA) has prepared this report in a professional manner, using that level of skill and care normally exercised for similar projects under similar conditions by reputable and competent consultants and in accordance with our normal terms and conditions. LEA shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time the report was prepared.

We also note that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

Conclusions and recommendations were made within the operative constraints of the scope, budget, and schedule for this project. We believe the conclusions stated herein to be factual, but no guarantee is made or implied.

LEA has conducted surface and subsurface exploration and testing at this Site related only to contamination by probable hazardous substances from known site uses. No interpolation of conditions between or away from the boreholes has been made or implied.

10.0 CLOSURE

Lewkowich Engineering Associates certifies that the individuals signing this statement have demonstrable relevant experience and are familiar with the work carried out on the site. This report was prepared in accordance with criteria established in the CSA Standard Z769-00 (R2013) and BC Ministry of Environment Contaminated Sites Regulation and related Guidance Documents.

Lewkowich Engineering Associates Ltd. appreciates the opportunity to be of service on this project. If you have any comments, or additional requirements at this time, please contact us at your convenience.

Respectfully Submitted,
Lewkowich Engineering Associates Ltd.

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TABLES

PROJECT: Baseline Investigation Report - 100 20th Street, Courtenay, BC
FILE: F1188-386
DATE: November 16, 2021

Table 1 - Petroleum Hydrocarbons (Soils)

BV Labs ID		AHX278	AHX279	AHX280	AHX281	AHX282	B.C. CSR Standard		
Sampling Date		2021-10-08	2021-10-08	2021-10-08	2021-10-08	2021-10-08		Residential	
Sample ID		BH21-1-1-2	BH21-1-2-2.5	BH21-1-2.5-3	BH21-2-1-1.5	BH21-2-1.5-2.25	**Urban Park (PL)**	**Low Density (RLLD)**	**Commercial (CL)**
Calculated Parameters	**Units**						mg/kg	mg/kg	mg/kg
Low Molecular Weight PAH`s	mg/kg	<0.050	<0.11	<0.050	<0.050	<0.050	NS	NS	NS
High Molecular Weight PAH`s	mg/kg	<0.050	<0.11	<0.050	<0.050	<0.050	NS	NS	NS
Total PAH	mg/kg	<0.050	<0.11	<0.050	<0.050	<0.050	NS	NS	NS
Polycyclic Aromatics	mg/kg								
Quinoline	mg/kg	<0.050	<0.11	<0.050	<0.050	<0.050	4.5	2.5	10
Naphthalene	mg/kg	<0.010	<0.021	<0.010	<0.010	<0.010	0.6	0.6	20
1-Methylnaphthalene	mg/kg	<0.050	<0.11	<0.050	<0.050	<0.050	500	250	1000
2-Methylnaphthalene	mg/kg	<0.020	<0.042	<0.020	<0.020	<0.020	100	60	950
Acenaphthylene	mg/kg	<0.0050	<0.011	<0.0050	<0.0050	<0.0050	NS	NS	NS
Acenaphthene	mg/kg	<0.0050	<0.011	<0.0050	<0.0050	<0.0050	2000	950	15000
Fluorene	mg/kg	<0.020	<0.042	<0.020	<0.020	<0.020	1000	600	9500
Phenanthrene	mg/kg	<0.010	<0.021	<0.010	0.012	<0.010	5	5	50
Anthracene	mg/kg	<0.0040	<0.0084	<0.0040	<0.0040	<0.0040	2.5	2.5	30
Fluoranthene	mg/kg	<0.020	<0.042	<0.020	<0.020	<0.020	50	50	200
Pyrene	mg/kg	<0.020	<0.042	<0.020	<0.020	<0.020	10	10	100
Benzo(a)anthracene	mg/kg	<0.020	<0.042	<0.020	<0.020	<0.020	1	1	10
Chrysene	mg/kg	<0.020	<0.042	<0.020	<0.020	<0.020	400	200	4500
Benzo(b&j)fluoranthene	mg/kg	<0.020	<0.042	<0.020	<0.020	<0.020	1	1	10
Benzo(b)fluoranthene	mg/kg	<0.020	<0.042	<0.020	<0.020	<0.020	NS	NS	NS
Benzo(k)fluoranthene	mg/kg	<0.020	<0.042	<0.020	<0.020	<0.020	1	1	10
Benzo(a)pyrene	mg/kg	<0.020	<0.042	<0.020	<0.020	<0.020	10	5	30
Indeno(1,2,3-cd)pyrene	mg/kg	<0.020	<0.042	<0.020	<0.020	<0.020	1	1	10
Dibenz(a,h)anthracene	mg/kg	<0.020	<0.042	<0.020	<0.020	<0.020	1	1	10
Benzo(g,h,i)perylene	mg/kg	<0.050	<0.11	<0.050	<0.050	<0.050	NS	NS	NS
Calculated Parameters	mg/kg								
LEPH (C10-C19 less PAH)	mg/kg	<100	<100	<100	<100	<100	1000	1000	2000
HEPH (C19-C32 less PAH)	mg/kg	<100	100	<100	<100	<100	1000	1000	5000
Hydrocarbons	mg/kg								
EPH (C10-C19)	mg/kg	<100	<100	<100	<100	<100	1000	1000	2000
EPH (C19-C32)	mg/kg	<100	100	<100	<100	<100	1000	1000	5000

Exceeds Applicable Standards
Meets Applicable Standards
NS = No Standard

PROJECT: Baseline Investigation Report - 100 20th Street, Courtenay, BC
FILE: F1188-386
DATE: November 16, 2021

Table 1 - Petroleum Hydrocarbons (Soils)

BV Labs ID		AHX283	AHX284	AHX285	AHX292	AHX286	B.C. CSR Standard		
Sampling Date		2021-10-08	2021-10-08	2021-10-08	2021-10-08	2021-10-08		Residential	
Sample ID		BH21-2-2.25-3.2	BH21-3-1-1.8	BH21-3-1.8-2.25	DUP1	BH21-3-2.25-3	**Urban Park (PL)**	**Low Density (RLLD)**	**Commercial (CL)**
Calculated Parameters	**Units**						mg/kg	mg/kg	mg/kg
Low Molecular Weight PAH`s	mg/kg	<0.050	<0.050	<0.085	<0.10	<0.050	NS	NS	NS
High Molecular Weight PAH`s	mg/kg	<0.050	<0.050	<0.085	<0.10	<0.050	NS	NS	NS
Total PAH	mg/kg	<0.050	<0.050	<0.085	<0.10	<0.050	NS	NS	NS
Polycyclic Aromatics	mg/kg								
Quinoline	mg/kg	<0.050	<0.050	<0.085	<0.10	<0.050	4.5	2.5	10
Naphthalene	mg/kg	<0.010	<0.010	<0.017	<0.020	<0.010	0.6	0.6	20
1-Methylnaphthalene	mg/kg	<0.050	<0.050	<0.085	<0.10	<0.050	500	250	1000
2-Methylnaphthalene	mg/kg	<0.020	<0.020	<0.034	<0.040	<0.020	100	60	950
Acenaphthylene	mg/kg	<0.0050	<0.0050	<0.0085	<0.010	<0.0050	NS	NS	NS
Acenaphthene	mg/kg	<0.0050	<0.0050	<0.0085	<0.010	<0.0050	2000	950	15000
Fluorene	mg/kg	<0.020	<0.020	<0.034	<0.040	<0.020	1000	600	9500
Phenanthrene	mg/kg	<0.010	0.031	<0.017	<0.020	0.016	5	5	50
Anthracene	mg/kg	<0.0040	<0.0040	<0.0068	<0.0080	<0.0040	2.5	2.5	30
Fluoranthene	mg/kg	<0.020	<0.020	<0.034	<0.040	<0.020	50	50	200
Pyrene	mg/kg	<0.020	<0.020	<0.034	<0.040	<0.020	10	10	100
Benzo(a)anthracene	mg/kg	<0.020	<0.020	<0.034	<0.040	<0.020	1	1	10
Chrysene	mg/kg	<0.020	<0.020	<0.034	<0.040	<0.020	400	200	4500
Benzo(b&j)fluoranthene	mg/kg	<0.020	<0.020	<0.034	<0.040	<0.020	1	1	10
Benzo(b)fluoranthene	mg/kg	<0.020	<0.020	<0.034	<0.040	<0.020	NS	NS	NS
Benzo(k)fluoranthene	mg/kg	<0.020	<0.020	<0.034	<0.040	<0.020	1	1	10
Benzo(a)pyrene	mg/kg	<0.020	<0.020	<0.034	<0.040	<0.020	10	5	30
Indeno(1,2,3-cd)pyrene	mg/kg	<0.020	<0.020	<0.034	<0.040	<0.020	1	1	10
Dibenz(a,h)anthracene	mg/kg	<0.020	<0.020	<0.034	<0.040	<0.020	1	1	10
Benzo(g,h,i)perylene	mg/kg	<0.050	<0.050	<0.085	<0.10	<0.050	NS	NS	NS
Calculated Parameters	mg/kg								
LEPH (C10-C19 less PAH)	mg/kg	<100	<100	<100	<100	<100	1000	1000	2000
HEPH (C19-C32 less PAH)	mg/kg	<100	170	<100	100	<100	1000	1000	5000
Hydrocarbons	mg/kg								
EPH (C10-C19)	mg/kg	<100	<100	<100	<100	<100	1000	1000	2000
EPH (C19-C32)	mg/kg	<100	170	<100	100	<100	1000	1000	5000

Exceeds Applicable Standards
Meets Applicable Standards
NS = No Standard

PROJECT: Baseline Investigation Report - 100 20th Street, Courtenay, BC
FILE: F1188-386
DATE: November 16, 2021

Table 1 - Petroleum Hydrocarbons (Soils)

BV Labs ID		AHX287	AHX288	AHX289	AHX290	AHX291	B.C. CSR Standard		
Sampling Date		2021-10-08	2021-10-08	2021-10-08	2021-10-08	2021-10-08		Residential	
Sample ID		BH21-4-1-2	BH21-4-2-3	BH21-4-3-4	BH21-5-1-2	BH21-5-2-3	**Urban Park (PL)**	**Low Density (RLLD)**	**Commercial (CL)**
Calculated Parameters	**Units**						mg/kg	mg/kg	mg/kg
Low Molecular Weight PAH`s	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	NS	NS	NS
High Molecular Weight PAH`s	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	NS	NS	NS
Total PAH	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	NS	NS	NS
Polycyclic Aromatics	mg/kg								
Quinoline	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	4.5	2.5	10
Naphthalene	mg/kg	<0.010	<0.010	<0.010	<0.010	<0.010	0.6	0.6	20
1-Methylnaphthalene	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	500	250	1000
2-Methylnaphthalene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	100	60	950
Acenaphthylene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NS	NS	NS
Acenaphthene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	2000	950	15000
Fluorene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	1000	600	9500
Phenanthrene	mg/kg	<0.010	0.011	<0.010	0.013	0.01	5	5	50
Anthracene	mg/kg	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	2.5	2.5	30
Fluoranthene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	50	50	200
Pyrene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	10	10	100
Benzo(a)anthracene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	1	1	10
Chrysene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	400	200	4500
Benzo(b&j)fluoranthene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	1	1	10
Benzo(b)fluoranthene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	NS	NS	NS
Benzo(k)fluoranthene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	1	1	10
Benzo(a)pyrene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	10	5	30
Indeno(1,2,3-cd)pyrene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	1	1	10
Dibenz(a,h)anthracene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	1	1	10
Benzo(g,h,i)perylene	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	NS	NS	NS
Calculated Parameters	mg/kg								
LEPH (C10-C19 less PAH)	mg/kg	<100	<100	<100	<100	<100	1000	1000	2000
HEPH (C19-C32 less PAH)	mg/kg	<100	<100	<100	<100	<100	1000	1000	5000
Hydrocarbons	mg/kg								
EPH (C10-C19)	mg/kg	<100	<100	<100	<100	<100	1000	1000	2000
EPH (C19-C32)	mg/kg	<100	<100	<100	<100	<100	1000	1000	5000

Exceeds Applicable Standards
Meets Applicable Standards
NS = No Standard

Table 1 - Petroleum Hydrocarbons (Soils)

BV Labs ID		AHX293	B.C. CSR Standard		
Sampling Date		2021-10-08		Residential	
Sample ID		DUP2	**Urban Park (PL)**	**Low Density (RLLD)**	**Commercial (CL)**
Calculated Parameters	**Units**		mg/kg	mg/kg	mg/kg
Low Molecular Weight PAH`s	mg/kg	<0.050	NS	NS	NS
High Molecular Weight PAH`s	mg/kg	<0.050	NS	NS	NS
Total PAH	mg/kg	<0.050	NS	NS	NS
Polycyclic Aromatics	mg/kg				
Quinoline	mg/kg	<0.050	4.5	2.5	10
Naphthalene	mg/kg	<0.010	0.6	0.6	20
1-Methylnaphthalene	mg/kg	<0.050	500	250	1000
2-Methylnaphthalene	mg/kg	<0.020	100	60	950
Acenaphthylene	mg/kg	<0.0050	NS	NS	NS
Acenaphthene	mg/kg	<0.0050	2000	950	15000
Fluorene	mg/kg	<0.020	1000	600	9500
Phenanthrene	mg/kg	0.011	5	5	50
Anthracene	mg/kg	<0.0040	2.5	2.5	30
Fluoranthene	mg/kg	<0.020	50	50	200
Pyrene	mg/kg	<0.020	10	10	100
Benzo(a)anthracene	mg/kg	<0.020	1	1	10
Chrysene	mg/kg	<0.020	400	200	4500
Benzo(b&j)fluoranthene	mg/kg	<0.020	1	1	10
Benzo(b)fluoranthene	mg/kg	<0.020	NS	NS	NS
Benzo(k)fluoranthene	mg/kg	<0.020	1	1	10
Benzo(a)pyrene	mg/kg	<0.020	10	5	30
Indeno(1,2,3-cd)pyrene	mg/kg	<0.020	1	1	10
Dibenz(a,h)anthracene	mg/kg	<0.020	1	1	10
Benzo(g,h,i)perylene	mg/kg	<0.050	NS	NS	NS
Calculated Parameters	mg/kg				
LEPH (C10-C19 less PAH)	mg/kg	<100	1000	1000	2000
HEPH (C19-C32 less PAH)	mg/kg	<100	1000	1000	5000
Hydrocarbons	mg/kg				
EPH (C10-C19)	mg/kg	<100	1000	1000	2000
EPH (C19-C32)	mg/kg	<100	1000	1000	5000

Exceeds Applicable Standards
Meets Applicable Standards
NS = No Standard

Table 2 - Volatile Organic Compounds (Soils)

BV Labs ID		AHX278	AHX279	AHX280	B.C. CSR Standard		
Sampling Date		2021-10-08	2021-10-08	2021-10-08		Residential	
Sample ID		BH21-1-1-2	BH21-1-2-2.5	BH21-1-2.5-3	**Urban Park (PL)**	**Low Density (RLLD)**	**Commercial (CL)**
Calculated Parameters	**Units**				mg/kg	mg/kg	mg/kg
VPH (VH6 to 10 - BTEX)	mg/kg	<10	<25	<10	200	200	200
Volatiles							
VH C6-C10	mg/kg	<10	<25	<10	NS	NS	NS
1,1,1,2-tetrachloroethane	mg/kg	<0.020	<0.050	<0.020	550	250	1500
1,1,1-trichloroethane	mg/kg	<0.020	<0.050	<0.020	5	5	50
1,1,2,2-tetrachloroethane	mg/kg	<0.020	<0.050	<0.020	70	35	150
1,1,2-trichloroethane	mg/kg	<0.020	<0.050	<0.020	5	5	50
1,1-dichloroethane	mg/kg	<0.025	<0.063	<0.025	5	5	50
1,1-dichloroethylene	mg/kg	<0.025	<0.063	<0.025	5	5	50
1,2-dichlorobenzene	mg/kg	<0.020	<0.050	<0.020	1	1	10
1,2-dichloroethane	mg/kg	<0.020	<0.050	<0.020	5	5	50
1,2-dichloropropane	mg/kg	<0.020	<0.050	<0.020	5	5	50
1,3-dichlorobenzene	mg/kg	<0.020	<0.050	<0.020	1	1	10
1,4-dichlorobenzene	mg/kg	<0.020	<0.050	<0.020	1	1	10
Benzene	mg/kg	<0.0050	<0.013	<0.0050	0.035	0.035	0.035
Bromobenzene	mg/kg	<0.20	<0.50	<0.20	250	150	2000
Bromodichloromethane	mg/kg	<0.050	<0.13	<0.050	200	100	550
Bromoform	mg/kg	<0.050	<0.13	<0.050	650	300	4000
Bromomethane	mg/kg	<0.30	<0.75	<0.30	45	20	300
Carbon tetrachloride	mg/kg	<0.020	<0.050	<0.020	5	5	50
Chlorobenzene	mg/kg	<0.020	<0.050	<0.020	1	1	10
Chlorodibromomethane	mg/kg	<0.050	<0.13	<0.050	NS	NS	NS
Chloroethane	mg/kg	<0.10	<0.25	<0.10	NS	NS	NS
Chloroform	mg/kg	<0.020	<0.050	<0.020	5	5	50
Chloromethane	mg/kg	<0.050	<0.13	<0.050	NS	NS	NS
cis-1,2-dichloroethlyene	mg/kg	<0.030	<0.075	<0.030	5	5	50
cis-1,3-dichloropropene	mg/kg	<0.020	<0.050	<0.020	5	5	50
Dichloromethane	mg/kg	<0.080	<0.20	<0.080	5	5	50
Ethylbenzene	mg/kg	<0.010	<0.025	<0.010	15	15	15
Methyl-tert-butylether (MTBE)	mg/kg	<0.10	<0.25	<0.10	8000	4000	20000
Styrene	mg/kg	<0.030	<0.075	<0.030	5	5	50
Tetrachloroethylene	mg/kg	<0.010	<0.025	<0.010	2.5	2.5	2.5
Toluene	mg/kg	<0.050	<0.13	<0.050	0.5	0.5	0.5
trans-1,2-dichloroethylene	mg/kg	<0.030	<0.075	<0.030	5	5	50
trans-1,3-dichloropropene	mg/kg	<0.020	<0.050	<0.020	5	5	50
Trichloroethylene	mg/kg	<0.0090	<0.023	<0.0090	0.3	0.3	0.3
Trichlorofluoromethane	mg/kg	<0.20	<0.50	<0.20	9000	4500	70000
Vinyl chloride	mg/kg	<0.040	<0.10	<0.040	2	0.95	45
m & p-Xylene	mg/kg	<0.040	<0.10	<0.040	NS	NS	NS
o-Xylene	mg/kg	<0.040	<0.10	<0.040	NS	NS	NS
Xylenes (Total)	mg/kg	<0.040	<0.10	<0.040	6.5	6.5	6.5

Exceeds Applicable Standards
Meets Applicable Standards
NS = No Standard

Table 2 - Volatile Organic Compounds (Soils)

BV Labs ID		AHX281	AHX282	AHX283	B.C. CSR Standard		
Sampling Date		2021-10-08	2021-10-08	2021-10-08		Residential	
Sample ID		BH21-2-1-1.5	BH21-2-1.5-2.25	BH21-2-2.25-3.2	**Urban Park (PL)**	**Low Density (RLLD)**	**Commercial (CL)**
Calculated Parameters	**Units**				mg/kg	mg/kg	mg/kg
VPH (VH6 to 10 - BTEX)	mg/kg	<10	<10	<10	200	200	200
Volatiles							
VH C6-C10	mg/kg	<10	<10	<10	NS	NS	NS
1,1,1,2-tetrachloroethane	mg/kg	<0.020	<0.020	<0.020	550	250	1500
1,1,1-trichloroethane	mg/kg	<0.020	<0.020	<0.020	5	5	50
1,1,2,2-tetrachloroethane	mg/kg	<0.020	<0.020	<0.020	70	35	150
1,1,2-trichloroethane	mg/kg	<0.020	<0.020	<0.020	5	5	50
1,1-dichloroethane	mg/kg	<0.025	<0.025	<0.025	5	5	50
1,1-dichloroethylene	mg/kg	<0.025	<0.025	<0.025	5	5	50
1,2-dichlorobenzene	mg/kg	<0.020	<0.020	<0.020	1	1	10
1,2-dichloroethane	mg/kg	<0.020	<0.020	<0.020	5	5	50
1,2-dichloropropane	mg/kg	<0.020	<0.020	<0.020	5	5	50
1,3-dichlorobenzene	mg/kg	<0.020	<0.020	<0.020	1	1	10
1,4-dichlorobenzene	mg/kg	<0.020	<0.020	<0.020	1	1	10
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.035	0.035	0.035
Bromobenzene	mg/kg	<0.20	<0.20	<0.20	250	150	2000
Bromodichloromethane	mg/kg	<0.050	<0.050	<0.050	200	100	550
Bromoform	mg/kg	<0.050	<0.050	<0.050	650	300	4000
Bromomethane	mg/kg	<0.30	<0.30	<0.30	45	20	300
Carbon tetrachloride	mg/kg	<0.020	<0.020	<0.020	5	5	50
Chlorobenzene	mg/kg	<0.020	<0.020	<0.020	1	1	10
Chlorodibromomethane	mg/kg	<0.050	<0.050	<0.050	NS	NS	NS
Chloroethane	mg/kg	<0.10	<0.10	<0.10	NS	NS	NS
Chloroform	mg/kg	<0.020	<0.020	<0.020	5	5	50
Chloromethane	mg/kg	<0.050	<0.050	<0.050	NS	NS	NS
cis-1,2-dichloroethlyene	mg/kg	<0.030	<0.030	<0.030	5	5	50
cis-1,3-dichloropropene	mg/kg	<0.020	<0.020	<0.020	5	5	50
Dichloromethane	mg/kg	<0.080	<0.080	<0.080	5	5	50
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	15	15	15
Methyl-tert-butylether (MTBE)	mg/kg	<0.10	<0.10	<0.10	8000	4000	20000
Styrene	mg/kg	<0.030	<0.030	<0.030	5	5	50
Tetrachloroethylene	mg/kg	<0.010	<0.010	<0.010	2.5	2.5	2.5
Toluene	mg/kg	<0.050	<0.050	<0.050	0.5	0.5	0.5
trans-1,2-dichloroethylene	mg/kg	<0.030	<0.030	<0.030	5	5	50
trans-1,3-dichloropropene	mg/kg	<0.020	<0.020	<0.020	5	5	50
Trichloroethylene	mg/kg	<0.0090	<0.0090	<0.0090	0.3	0.3	0.3
Trichlorofluoromethane	mg/kg	<0.20	<0.20	<0.20	9000	4500	70000
Vinyl chloride	mg/kg	<0.040	<0.040	<0.040	2	0.95	45
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	NS	NS	NS
o-Xylene	mg/kg	<0.040	<0.040	<0.040	NS	NS	NS
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	6.5	6.5	6.5

Table 2 - Volatile Organic Compounds (Soils)

BV Labs ID		AHX284	AHX285	AHX286	B.C. CSR Standard		
Sampling Date		2021-10-08	2021-10-08	2021-10-08		Residential	
Sample ID		BH21-3-1-1.8	BH21-3-1.8-2.25	BH21-3-2.25-3	**Urban Park (PL)**	**Low Density (RLLD)**	**Commercial (CL)**
Calculated Parameters	**Units**				mg/kg	mg/kg	mg/kg
VPH (VH6 to 10 - BTEX)	mg/kg	<10	<25	<10	200	200	200
Volatiles							
VH C6-C10	mg/kg	<10	<25	<10	NS	NS	NS
1,1,1,2-tetrachloroethane	mg/kg	<0.020	<0.050	<0.020	550	250	1500
1,1,1-trichloroethane	mg/kg	<0.020	<0.050	<0.020	5	5	50
1,1,2,2-tetrachloroethane	mg/kg	<0.020	<0.050	<0.020	70	35	150
1,1,2-trichloroethane	mg/kg	<0.020	<0.050	<0.020	5	5	50
1,1-dichloroethane	mg/kg	<0.025	<0.063	<0.025	5	5	50
1,1-dichloroethylene	mg/kg	<0.025	<0.063	<0.025	5	5	50
1,2-dichlorobenzene	mg/kg	<0.020	<0.050	<0.020	1	1	10
1,2-dichloroethane	mg/kg	<0.020	<0.050	<0.020	5	5	50
1,2-dichloropropane	mg/kg	<0.020	<0.050	<0.020	5	5	50
1,3-dichlorobenzene	mg/kg	<0.020	<0.050	<0.020	1	1	10
1,4-dichlorobenzene	mg/kg	<0.020	<0.050	<0.020	1	1	10
Benzene	mg/kg	<0.0050	<0.013	<0.0050	0.035	0.035	0.035
Bromobenzene	mg/kg	<0.20	<0.50	<0.20	250	150	2000
Bromodichloromethane	mg/kg	<0.050	<0.13	<0.050	200	100	550
Bromoform	mg/kg	<0.050	<0.13	<0.050	650	300	4000
Bromomethane	mg/kg	<0.30	<0.75	<0.30	45	20	300
Carbon tetrachloride	mg/kg	<0.020	<0.050	<0.020	5	5	50
Chlorobenzene	mg/kg	<0.020	<0.050	<0.020	1	1	10
Chlorodibromomethane	mg/kg	<0.050	<0.13	<0.050	NS	NS	NS
Chloroethane	mg/kg	<0.10	<0.25	<0.10	NS	NS	NS
Chloroform	mg/kg	<0.020	<0.050	<0.020	5	5	50
Chloromethane	mg/kg	<0.050	<0.13	<0.050	NS	NS	NS
cis-1,2-dichloroethlyene	mg/kg	<0.030	<0.075	<0.030	5	5	50
cis-1,3-dichloropropene	mg/kg	<0.020	<0.050	<0.020	5	5	50
Dichloromethane	mg/kg	<0.080	<0.20	<0.080	5	5	50
Ethylbenzene	mg/kg	<0.010	<0.025	<0.010	15	15	15
Methyl-tert-butylether (MTBE)	mg/kg	<0.10	<0.25	<0.10	8000	4000	20000
Styrene	mg/kg	<0.030	<0.075	<0.030	5	5	50
Tetrachloroethylene	mg/kg	<0.010	<0.025	<0.010	2.5	2.5	2.5
Toluene	mg/kg	<0.050	<0.13	<0.050	0.5	0.5	0.5
trans-1,2-dichloroethylene	mg/kg	<0.030	<0.075	<0.030	5	5	50
trans-1,3-dichloropropene	mg/kg	<0.020	<0.050	<0.020	5	5	50
Trichloroethylene	mg/kg	<0.0090	<0.023	<0.0090	0.3	0.3	0.3
Trichlorofluoromethane	mg/kg	<0.20	<0.50	<0.20	9000	4500	70000
Vinyl chloride	mg/kg	<0.040	<0.10	<0.040	2	0.95	45
m & p-Xylene	mg/kg	<0.040	<0.10	<0.040	NS	NS	NS
o-Xylene	mg/kg	<0.040	<0.10	<0.040	NS	NS	NS
Xylenes (Total)	mg/kg	<0.040	<0.10	<0.040	6.5	6.5	6.5

Table 2 - Volatile Organic Compounds (Soils)

BV Labs ID		AHX287	AHX288	AHX289	B.C. CSR Standard		
Sampling Date		2021-10-08	2021-10-08	2021-10-08		Residential	
Sample ID		BH21-4-1-2	BH21-4-2-3	BH21-4-3-4	**Urban Park (PL)**	**Low Density (RLLD)**	**Commercial (CL)**
Calculated Parameters	**Units**				mg/kg	mg/kg	mg/kg
VPH (VH6 to 10 - BTEX)	mg/kg	<10	<10	<10	200	200	200
Volatiles							
VH C6-C10	mg/kg	<10	<10	<10	NS	NS	NS
1,1,1,2-tetrachloroethane	mg/kg	<0.020	<0.020	<0.020	550	250	1500
1,1,1-trichloroethane	mg/kg	<0.020	<0.020	<0.020	5	5	50
1,1,2,2-tetrachloroethane	mg/kg	<0.020	<0.020	<0.020	70	35	150
1,1,2-trichloroethane	mg/kg	<0.020	<0.020	<0.020	5	5	50
1,1-dichloroethane	mg/kg	<0.025	<0.025	<0.025	5	5	50
1,1-dichloroethylene	mg/kg	<0.025	<0.025	<0.025	5	5	50
1,2-dichlorobenzene	mg/kg	<0.020	<0.020	<0.020	1	1	10
1,2-dichloroethane	mg/kg	<0.020	<0.020	<0.020	5	5	50
1,2-dichloropropane	mg/kg	<0.020	<0.020	<0.020	5	5	50
1,3-dichlorobenzene	mg/kg	<0.020	<0.020	<0.020	1	1	10
1,4-dichlorobenzene	mg/kg	<0.020	<0.020	<0.020	1	1	10
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.035	0.035	0.035
Bromobenzene	mg/kg	<0.20	<0.20	<0.20	250	150	2000
Bromodichloromethane	mg/kg	<0.050	<0.050	<0.050	200	100	550
Bromoform	mg/kg	<0.050	<0.050	<0.050	650	300	4000
Bromomethane	mg/kg	<0.30	<0.30	<0.30	45	20	300
Carbon tetrachloride	mg/kg	<0.020	<0.020	<0.020	5	5	50
Chlorobenzene	mg/kg	<0.020	<0.020	<0.020	1	1	10
Chlorodibromomethane	mg/kg	<0.050	<0.050	<0.050	NS	NS	NS
Chloroethane	mg/kg	<0.10	<0.10	<0.10	NS	NS	NS
Chloroform	mg/kg	<0.020	<0.020	<0.020	5	5	50
Chloromethane	mg/kg	<0.050	<0.050	<0.050	NS	NS	NS
cis-1,2-dichloroethlyene	mg/kg	<0.030	<0.030	<0.030	5	5	50
cis-1,3-dichloropropene	mg/kg	<0.020	<0.020	<0.020	5	5	50
Dichloromethane	mg/kg	<0.080	<0.080	<0.080	5	5	50
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	15	15	15
Methyl-tert-butylether (MTBE)	mg/kg	<0.10	<0.10	<0.10	8000	4000	20000
Styrene	mg/kg	<0.030	<0.030	<0.030	5	5	50
Tetrachloroethylene	mg/kg	<0.010	<0.010	<0.010	2.5	2.5	2.5
Toluene	mg/kg	<0.050	<0.050	<0.050	0.5	0.5	0.5
trans-1,2-dichloroethylene	mg/kg	<0.030	<0.030	<0.030	5	5	50
trans-1,3-dichloropropene	mg/kg	<0.020	<0.020	<0.020	5	5	50
Trichloroethylene	mg/kg	<0.0090	<0.0090	<0.0090	0.3	0.3	0.3
Trichlorofluoromethane	mg/kg	<0.20	<0.20	<0.20	9000	4500	70000
Vinyl chloride	mg/kg	<0.040	<0.040	<0.040	2	0.95	45
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	NS	NS	NS
o-Xylene	mg/kg	<0.040	<0.040	<0.040	NS	NS	NS
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	6.5	6.5	6.5

Table 2 - Volatile Organic Compounds (Soils)

BV Labs ID		AHX290	AHX291	AHX292	B.C. CSR Standard		
Sampling Date		2021-10-08	2021-10-08	2021-10-08		Residential	
Sample ID		BH21-5-1-2	BH21-5-2-3	DUP1	**Urban Park (PL)**	**Low Density (RLLD)**	**Commercial (CL)**
Calculated Parameters	**Units**				mg/kg	mg/kg	mg/kg
VPH (VH6 to 10 - BTEX)	mg/kg	<10	<10	<26	200	200	200
Volatiles							
VH C6-C10	mg/kg	<10	<10	<26	NS	NS	NS
1,1,1,2-tetrachloroethane	mg/kg	<0.020	<0.020	<0.052	550	250	1500
1,1,1-trichloroethane	mg/kg	<0.020	<0.020	<0.052	5	5	50
1,1,2,2-tetrachloroethane	mg/kg	<0.020	<0.020	<0.052	70	35	150
1,1,2-trichloroethane	mg/kg	<0.020	<0.020	<0.052	5	5	50
1,1-dichloroethane	mg/kg	<0.025	<0.025	<0.065	5	5	50
1,1-dichloroethylene	mg/kg	<0.025	<0.025	<0.065	5	5	50
1,2-dichlorobenzene	mg/kg	<0.020	<0.020	<0.052	1	1	10
1,2-dichloroethane	mg/kg	<0.020	<0.020	<0.052	5	5	50
1,2-dichloropropane	mg/kg	<0.020	<0.020	<0.052	5	5	50
1,3-dichlorobenzene	mg/kg	<0.020	<0.020	<0.052	1	1	10
1,4-dichlorobenzene	mg/kg	<0.020	<0.020	<0.052	1	1	10
Benzene	mg/kg	<0.0050	<0.0050	<0.013	0.035	0.035	0.035
Bromobenzene	mg/kg	<0.20	<0.20	<0.52	250	150	2000
Bromodichloromethane	mg/kg	<0.050	<0.050	<0.13	200	100	550
Bromoform	mg/kg	<0.050	<0.050	<0.13	650	300	4000
Bromomethane	mg/kg	<0.30	<0.30	<0.78	45	20	300
Carbon tetrachloride	mg/kg	<0.020	<0.020	<0.052	5	5	50
Chlorobenzene	mg/kg	<0.020	<0.020	<0.052	1	1	10
Chlorodibromomethane	mg/kg	<0.050	<0.050	<0.13	NS	NS	NS
Chloroethane	mg/kg	<0.10	<0.10	<0.26	NS	NS	NS
Chloroform	mg/kg	<0.020	<0.020	<0.052	5	5	50
Chloromethane	mg/kg	<0.050	<0.050	<0.13	NS	NS	NS
cis-1,2-dichloroethlyene	mg/kg	<0.030	<0.030	<0.078	5	5	50
cis-1,3-dichloropropene	mg/kg	<0.020	<0.020	<0.052	5	5	50
Dichloromethane	mg/kg	<0.080	<0.080	<0.21	5	5	50
Ethylbenzene	mg/kg	<0.010	<0.010	<0.026	15	15	15
Methyl-tert-butylether (MTBE)	mg/kg	<0.10	<0.10	<0.26	8000	4000	20000
Styrene	mg/kg	<0.030	<0.030	<0.078	5	5	50
Tetrachloroethylene	mg/kg	<0.010	<0.010	<0.026	2.5	2.5	2.5
Toluene	mg/kg	<0.050	<0.050	<0.13	0.5	0.5	0.5
trans-1,2-dichloroethylene	mg/kg	<0.030	<0.030	<0.078	5	5	50
trans-1,3-dichloropropene	mg/kg	<0.020	<0.020	<0.052	5	5	50
Trichloroethylene	mg/kg	<0.0090	<0.0090	<0.023	0.3	0.3	0.3
Trichlorofluoromethane	mg/kg	<0.20	<0.20	<0.52	9000	4500	70000
Vinyl chloride	mg/kg	<0.040	<0.040	<0.10	2	0.95	45
m & p-Xylene	mg/kg	<0.040	<0.040	<0.10	NS	NS	NS
o-Xylene	mg/kg	<0.040	<0.040	<0.10	NS	NS	NS
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.10	6.5	6.5	6.5

Table 2 - Volatile Organic Compounds (Soils)

BV Labs ID		AHX293	B.C. CSR Standard		
Sampling Date		2021-10-08		Residential	
Sample ID		DUP2	**Urban Park (PL)**	**Low Density (RLLD)**	**Commercial (CL)**
Calculated Parameters	**Units**		mg/kg	mg/kg	mg/kg
VPH (VH6 to 10 - BTEX)	mg/kg	<10	200	200	200
Volatiles					
VH C6-C10	mg/kg	<10	NS	NS	NS
1,1,1,2-tetrachloroethane	mg/kg	<0.020	550	250	1500
1,1,1-trichloroethane	mg/kg	<0.020	5	5	50
1,1,2,2-tetrachloroethane	mg/kg	<0.020	70	35	150
1,1,2-trichloroethane	mg/kg	<0.020	5	5	50
1,1-dichloroethane	mg/kg	<0.025	5	5	50
1,1-dichloroethylene	mg/kg	<0.025	5	5	50
1,2-dichlorobenzene	mg/kg	<0.020	1	1	10
1,2-dichloroethane	mg/kg	<0.020	5	5	50
1,2-dichloropropane	mg/kg	<0.020	5	5	50
1,3-dichlorobenzene	mg/kg	<0.020	1	1	10
1,4-dichlorobenzene	mg/kg	<0.020	1	1	10
Benzene	mg/kg	<0.0050	0.035	0.035	0.035
Bromobenzene	mg/kg	<0.20	250	150	2000
Bromodichloromethane	mg/kg	<0.050	200	100	550
Bromoform	mg/kg	<0.050	650	300	4000
Bromomethane	mg/kg	<0.30	45	20	300
Carbon tetrachloride	mg/kg	<0.020	5	5	50
Chlorobenzene	mg/kg	<0.020	1	1	10
Chlorodibromomethane	mg/kg	<0.050	NS	NS	NS
Chloroethane	mg/kg	<0.10	NS	NS	NS
Chloroform	mg/kg	<0.020	5	5	50
Chloromethane	mg/kg	<0.050	NS	NS	NS
cis-1,2-dichloroethlyene	mg/kg	<0.030	5	5	50
cis-1,3-dichloropropene	mg/kg	<0.020	5	5	50
Dichloromethane	mg/kg	<0.080	5	5	50
Ethylbenzene	mg/kg	<0.010	15	15	15
Methyl-tert-butylether (MTBE)	mg/kg	<0.10	8000	4000	20000
Styrene	mg/kg	<0.030	5	5	50
Tetrachloroethylene	mg/kg	<0.010	2.5	2.5	2.5
Toluene	mg/kg	<0.050	0.5	0.5	0.5
trans-1,2-dichloroethylene	mg/kg	<0.030	5	5	50
trans-1,3-dichloropropene	mg/kg	<0.020	5	5	50
Trichloroethylene	mg/kg	<0.0090	0.3	0.3	0.3
Trichlorofluoromethane	mg/kg	<0.20	9000	4500	70000
Vinyl chloride	mg/kg	<0.040	2	0.95	45
m & p-Xylene	mg/kg	<0.040	NS	NS	NS
o-Xylene	mg/kg	<0.040	NS	NS	NS
Xylenes (Total)	mg/kg	<0.040	6.5	6.5	6.5

Table 3 - Petroleum Hydrocarbons (Groundwater)

BV Labs ID		AIF214	AIF215		B.C. CSR Standards:	
Sampling Date		14-Oct-21	14-Oct-21			
Sample ID		MW-1	MW-2	**Most Stringent**	**Aquatic Life (AW)**	**Drinking Water (DW)**
Calculated Parameters	**Units**			ug/L	ug/L	ug/L
Low Molecular Weight PAH`s	ug/L	<0.10	<0.10	NS	NS	NS
High Molecular Weight PAH`s	ug/L	<0.050	<0.050	NS	NS	NS
Total PAH	ug/L	<0.10	<0.10	NS	NS	NS
Polycyclic Aromatics						
Quinoline	ug/L	<0.020	<0.020	0.05	34	0.05
Naphthalene	ug/L	<0.10	<0.10	10	10	80
1-Methylnaphthalene	ug/L	<0.050	<0.050	5.5	NS	5.5
2-Methylnaphthalene	ug/L	<0.10	<0.10	15	NS	15
Acenaphthylene	ug/L	<0.050	<0.050	NS	NS	NS
Acenaphthene	ug/L	<0.050	<0.050	60	60	250
Fluorene	ug/L	<0.050	<0.050	120	120	150
Phenanthrene	ug/L	<0.050	<0.050	3	3	NS
Anthracene	ug/L	<0.010	<0.010	1	1	1000
Acridine	ug/L	<0.050	<0.050	0.5	0.5	NS
Fluoranthene	ug/L	<0.020	<0.020	2	2	150
Pyrene	ug/L	<0.020	<0.020	0.2	0.2	100
Benz(a)anthracene	ug/L	<0.010	<0.010	0.07	1	0.07
Chrysene	ug/L	<0.020	<0.020	1	1	7
Benzo(b&j)fluoranthene	ug/L	<0.030	<0.030	0.07	NS	0.07
Benzo(k)fluoranthene	ug/L	<0.050	<0.050	NS	NS	NS
Benzo(a)pyrene	ug/L	<0.0050	<0.0050	NS	0.1	0.01
Indeno(1,2,3-cd)pyrene	ug/L	<0.050	<0.050	NS	NS	NS
Dibenz(a,h)anthracene	ug/L	<0.0030	<0.0030	0.01	NS	0.01
Benzo(g,h,i)perylene	ug/L	<0.050	<0.050	NS	NS	NS
Calculated Parameters						
LEPH (C10-C19 less PAH)	mg/L	<0.20	<0.20	500	500	NS
HEPH (C19-C32 less PAH)	mg/L	<0.20	<0.20	NS	NS	NS
Ext. Pet. Hydrocarbon						
EPH (C10-C19)	mg/L	<0.20	<0.20	5000	5000	5000
EPH (C19-C32)	mg/L	<0.20	<0.20	NS	NS	NS

Exceeds Applicable Standards
Meets Applicable Standards
NS = No Standard

Table 4 - Volatile Organic Compounds (Groundwater)

BV Labs ID		AIF214	AIF215		B.C. CSR Standards:	
Sampling Date		14-Oct-21	14-Oct-21			
Sample ID		MW-1	MW-2	**Most Stringent**	**Aquatic Life (AW)**	**Drinking Water (DW)**
Volatiles	**Units**			ug/L	ug/L	ug/L
VPH (VH6 to 10 - BTEX)	ug/L	<300	<300	1500	1500	NS
Volatiles						
VH C6-C10	ug/L	<300	<300	15000	15000	15000
1,1,1,2-tetrachloroethane	ug/L	<0.50	<0.50	6	NS	6
1,1,1-trichloroethane	ug/L	<0.50	<0.50	8000	NS	8000
1,1,2,2-tetrachloroethane	ug/L	<0.50	<0.50	0.8	NS	0.8
1,1,2-trichloroethane	ug/L	<2.0	<2.0	3	NS	3
1,1-dichloroethane	ug/L	<0.50	<0.50	30	NS	30
1,1-dichloroethene	ug/L	<0.50	<0.50	NS	NS	NS
1,2-dichlorobenzene	ug/L	<0.50	<0.50	200	7*, 420**	200
1,2-dichloroethane	ug/L	<0.50	<0.50	5	1000	5
1,2-dichloropropane	ug/L	<0.50	<0.50	4.5	NS	4.5
1,3,5-trimethylbenzene	ug/L	<0.50	<0.50	40	NS	40
1,3-dichlorobenzene	ug/L	<0.50	<0.50	1500	1500	NS
1,3-dichloropropane	ug/L	<0.50	<0.50	80	NS	80
1,4-dichlorobenzene	ug/L	<0.50	<0.50	260	260	NS
Benzene	ug/L	<0.40	<0.40	5	400*, 1000**	5
Bromobenzene	ug/L	<2.0	<2.0	30	NS	30
Bromodichloromethane	ug/L	<1.0	<1.0	100	NS	100
Bromoform	ug/L	<1.0	<1.0	100	NS	100
Bromomethane	ug/L	<1.0	<1.0	5.5	NS	5.5
Carbon tetrachloride	ug/L	<0.50	<0.50	2	130	2
Chlorobenzene	ug/L	<0.50	<0.50	80	13*, 250	80
Chlorodibromomethane	ug/L	<1.0	<1.0	NS	NS	NS
Chloroethane	ug/L	<1.0	<1.0	NS	NS	NS
Chloroform	ug/L	<1.0	<1.0	20	20	100
Chloromethane	ug/L	<1.0	<1.0	NS	NS	NS
cis-1,2-dichloroethene	ug/L	<1.0	<1.0	8	NS	8
cis-1,3-dichloropropene	ug/L	<1.0	<1.0	1.5	NS	1.5
Dibromomethane	ug/L	<0.90	<0.90	NS	NS	NS
Dichlorodifluoromethane	ug/L	<2.0	<2.0	800	NS	800
Dichloromethane	ug/L	<2.0	<2.0	50	980	50
Ethylbenzene	ug/L	<0.40	<0.40	140	2000*, 2500**	140
Methyl-tert-butylether (MTBE)	ug/L	<4.0	<4.0	95	34000*,4400**	95
Styrene	ug/L	<0.50	<0.50	720	720	800
Tetrachloroethene	ug/L	<0.50	<0.50	30	1100	30
Toluene	ug/L	0.88	1.7	60	5* , 2000**	60
trans-1,2-dichloroethene	ug/L	<1.0	<1.0	NS	NS	NS
trans-1,3-dichloropropene	ug/L	<1.0	<1.0	1.5	NS	1.5
Trichloroethene	ug/L	<0.50	<0.50	5	200	5
Trichlorofluoromethane	ug/L	<4.0	<4.0	1000	NS	1000
Vinyl chloride	ug/L	<0.50	<0.50	2	NS	2
m & p-Xylene	ug/L	<0.40	<0.40	90	300	90
o-Xylene	ug/L	<0.40	<0.40	NS	NS	NS
Xylenes (Total)	ug/L	<0.40	<0.40	90	300	90

Exceeds Applicable Standards
Meets Applicable Standards
NS = No Standard

Table 5 - Groundwater Elevations

Well ID	Installation Date	Sampled Depth to Groundwater (m)			Well Depth (m)	Screened Interval (m)
		2021-10-08	2021-10-12	2021-10-14		
MW-1	INA	2.85	3.25	3.12	3.88	INA
MW-2	INA	3.24	3.08	3.18	3.65	INA
BH21-1	2021-10-08	NA	2.69	NG	2.89	1.5 - 3.0
BH21-2	2021-10-08	NA	2.78	NG	3.10	1.5 - 3.0
BH21-4	2021-10-08	NA	2.43	NG	3.15	1.8 - 3.3
BH21-5	2021-10-08	NA	2.70	NG	3.05	1.8 - 3.3

NG - No groundwater encountered NA - Not Assessed

INA - Installation Information Not Available

ND = Not Detected
NS = No Standard
Exceedances **Bolded Underscored**

FIGURES

TITLE
Site Location - Courtenay Airpark

CIVIC ADDRESS
100 - 20th Street, Courtenay, BC

LEGAL ADDRESS
Lot 1, Section 68, Comox District, Plan 15512 Except Part in Plan VIP88375

PARCEL IDENTIFIER NUMBER
004-154-665

PROJECT NUMBER
F1188-386

FIGURE 1

SCALE 1:3755
DATE 2021-11-16
DRAWN BY TZ
CHECKED BY CH

LEGEND:

Site Boundary

Lewkowich Engineering Associates Ltd.

1900 Boxwood Road,
Nanaimo, BC V9S 5Y2
Phone: (250) 756-0355
Fax: (250) 756-3831

TITLE

Borehole Locations

CIVIC ADDRESS: 100 - 20th Street, Courtenay, BC

LEGAL ADDRESS: Lot 1, Section 68, Comox District, Plan 15512 Except Part in Plan VIP88375

PARCEL IDENTIFIER NUMBER: 004-154-665

PROJECT NUMBER: F1188-386

FIGURE 2

SCALE 1:375

DATE 2021-11-16

DRAWN BY TZ

CHECKED BY CH

Lewkowich Engineering Associates Ltd.

1900 Boxwood Road,
Nanaimo, BC V9S 5Y2
Phone: (250) 756-0355
Fax: (250) 756-3831

LEGEND:

- Borehole Location
- Investigation Area

TITLE
Groundwater Monitoring Well Locations

CIVIC ADDRESS
100 - 20th Street, Courtenay, BC

LEGAL ADDRESS
Lot 1, Section 68, Comox District, Plan 15512 Except Part in Plan VIP88375

PARCEL IDENTIFIER NUMBER
004-154-665

PROJECT NUMBER
F1188-386

FIGURE 3

SCALE 1:375
DATE 2021-11-16
DRAWN BY TZ
CHECKED BY CH

Lewkowich Engineering Associates Ltd.
1900 Boxwood Road,
Nanaimo, BC V9S 5Y2
Phone: (250) 756-0355
Fax: (250) 756-3831

LEGEND:

Groundwater Monitoring Well

Investigation Area

TITLE

Soil Vapour Monitoring Well Locations

CIVIC ADDRESS
100 - 20th Street, Courtenay, BC

LEGAL ADDRESS
Lot 1, Section 68, Comox District, Plan 15512 Except Part in Plan VIP88375

PARCEL IDENTIFIER NUMBER
004-154-665

PROJECT NUMBER
F1188-386

FIGURE

SCALE 1:375

DATE 2021-11-16

DRAWN BY TZ

CHECKED BY CH

Lewkowich Engineering Associates Ltd.

1900 Boxwood Road,
Nanaimo, BC V9S 5Y2
Phone: (250) 756-0355
Fax: (250) 756-3831

LEGEND:

Soil Vapour Monitoring Well

Investigation Area

BV Labs ID	Sampling Date	Sample Location	Sample Depth (m)	Anaytical Parameters (mg/kg)					
				LEPH	HEPH	Benzene	Ethylbenzene	Toluene	Xylenes
AHX278	2021-10-08	BH21-1	1.0-2.0	<100	<100	<0.0050	<0.010	<0.050	<0.040
AHX279	2021-10-08	BH21-1	2.0-2.5	<100	100	<0.013	<0.025	<0.13	<0.10
AHX280	2021-10-08	BH21-1	2.5-3.0	<100	<100	<0.0050	<0.010	<0.050	<0.040
AHX281	2021-10-08	BH21-2	1.0-1.5	<100	<100	<0.0050	<0.010	<0.050	<0.040
AHX282	2021-10-08	BH21-2	1.5-2.25	<100	<100	<0.0050	<0.010	<0.050	<0.040
AHX283	2021-10-08	BH21-2	2.25-3.2	<100	<100	<0.0050	<0.010	<0.050	<0.040
AHX284	2021-10-08	BH21-3	1.0-1.8	<100	170	<0.0050	<0.010	<0.050	<0.040
AHX285	2021-10-08	BH21-3	1.8-2.25	<100	<100	<0.013	<0.025	<0.13	<0.10
AHX292	2021-10-08	DUP1	-	<100	100	<0.0050	<0.010	<0.050	<0.040
AHX286	2021-10-08	BH21-3	2.25-3.0	<100	<100	<0.0050	<0.010	<0.050	<0.040
AHX287	2021-10-08	BH21-4	1.0-2.0	<100	<100	<0.0050	<0.010	<0.050	<0.040
AHX288	2021-10-08	BH21-4	2.0-3.0	<100	<100	<0.0050	<0.010	<0.050	<0.040
AHX289	2021-10-08	BH21-4	3.0-4.0	<100	<100	<0.0050	<0.010	<0.050	<0.040
AHX290	2021-10-08	BH21-5	1.0-2.0	<100	<100	<0.0050	<0.010	<0.050	<0.040
AHX291	2021-10-08	BH21-5	2.0-3.0	<100	<100	<0.013	<0.026	<0.13	<0.10
AHX293	2021-10-08	DUP2	-	<100	<100	<0.0050	<0.010	<0.050	<0.040
BC CSR PL Standards				1000	1000	0.035	15	0.5	6.5
BC CSR RL_{LD} Standards				1000	1000	0.035	15	0.5	6.5
BC CSR CL Standards				2000	5000	0.035	15	0.5	6.5

TITLE: Soil Analytical Results

FIGURE 5

CIVIC ADDRESS: 100 - 20th Street, Courtenay, BC

LEGAL ADDRESS: Lot 1, Section 68, Comox District, Plan 15512 Except Part in Plan VIP88375

PARCEL IDENTIFIER NUMBER: 004-154-665

PROJECT NUMBER: F1188-386

SCALE 1:375

DATE 2021-11-16

DRAWN BY TZ

CHECKED BY CH

Lewkowich Engineering Associates Ltd.

1900 Boxwood Road,
Nanaimo, BC V9S 5Y2
Phone: (250) 756-0355
Fax: (250) 756-3831

LEGEND:

- Borehole Location
- Investigation Area
- Analytical Results Meet Applicable Standards
- Analytical Samples Not Collected
- Analytical Results Do Not Meet Applicable Standards

BV Labs ID	Sampling D	Sample ID	Anaytical Parameters (mg/L)					
			LEPH	HEPH	Benzene	Ethylbenzene	Toluene	Xylenes
AIF214	14-Oct-21	MW-1	<0.20	<0.20	<0.40	<0.40	0.88	<0.40
AIF215	14-Oct-21	MW-2	<0.20	<0.20	<0.40	<0.40	1.7	<0.40
Aquatic Life (AW_{FW})			500	NS	400	2000	5	300
Aquatic Life (AW_{MW})			500	NS	1000	2500	2000	300
Drinking Water (DW)			NS	NS	5	140	60	90

TITLE
Groundwater Analytical Results

CIVIC ADDRESS
100 - 20th Street, Courtenay, BC

LEGAL ADDRESS
Lot 1, Section 68, Comox District, Plan 15512 Except Part in Plan VIP88375

PARCEL IDENTIFIER NUMBER
004-154-665

PROJECT NUMBER
F1188-386

FIGURE 6

SCALE 1:375
DATE 2021-11-16
DRAWN BY TZ
CHECKED BY CH

Lewkowich Engineering Associates Ltd.
1900 Boxwood Road,
Nanaimo, BC V9S 5Y2
Phone: (250) 756-0355
Fax: (250) 756-3831

LEGEND:

- Groundwater Monitoring Well
- Investigation Area
- Analytical Results Meet Applicable Standards
- Analytical Samples Not Collected
- Analytical Results Do Not Meet Applicable Standards

APPENDIX 'A' - SUPPORT DOCUMENTATION

Courtenay Airpark Association
Baseline Environmental Investigation
Request for Quote

June 28th 2021

The Courtenay Airpark Association (CAA) recently renewed its lease of the airpark lands with the City of Courtenay for 20 years with five-year renewal terms. Within the terms of the lease, the CAA is required to conduct an environmental 'Baseline Investigation' of soil, groundwater, and soil vapour in the vicinity of the underground storage tank (UST) that stores aviation fuel. Additional analysis will be required every 5 years.

Two types of aviation fuel are stored in a divided, double-walled fibreglass tank with a brine leak detection system at the north end of the airpark. No environmental testing was conducted when the tank was installed in 2004 to replace older fuel storage tanks. There are two flush-mount monitoring wells installed in the bedding sand surrounding the UST. CAA had the groundwater level measured in December 2020. Groundwater was roughly 1.3 m below ground surface and there was no visual or olfactory evidence of fuel contamination. The minimum scope for the required Baseline Investigation is defined in **Schedule E** of the lease agreement.

The work must be completed within the first year of the lease (i.e., by December 31st, 2021) The CAA requests a quote and proposed scope of work and estimate of cost to conduct the Baseline Investigation. The lease agreement states that the Baseline Investigation must include or incorporate the following, at minimum:

• Auditing of existing leak detection and product inventory systems to determine effectiveness; separate reporting of conclusions and recommendations.

• Inspection and sampling of Existing Monitoring Works. Groundwater and/or soil vapour samples will be obtained and analysed for Light and Heavy Extractable Petroleum Hydrocarbons (L/HEPH), Polycyclic Aromatic Hydrocarbons (PAH), Volatile Organic Compounds (VOC), including Benzene, Toluene, Ethyl Benzene & Xylene (BTEX), Volatile Petroleum Hydrocarbons (VPH), Methyl tert-Butyl Ether (MTBE), and Styrene, and/or VOC for vapour samples.

• Borehole exploration in at least five additional locations around the perimeter of the tank nest, not more than 8 meters distant from the perimeter, to refusal depth or to encountering groundwater. At least three boreholes must be down-gradient of the tank nest.

• Soil sampling at approximate 1-meter intervals in all boreholes. Samples must be analysed for L/HEPH, PAH, VOC including BTEX, VPH, MTBE, and Styrene.

• Groundwater samples must be analysed for L/HEPH, PAH, VOC including BTEX, VPH, MTBE, and Styrene.

• Vapour samples must be analysed for VOC including BTEX.

Minimum work expected:

1. Drill five shallow boreholes not more than 8 m (26 ft) away from the fuel storage tanks.
2. Collect two soil samples from each of the five boreholes for laboratory analysis for the fuel related parameters prescribed in the lease agreement (LEPH, HEPH, PAH, VOC including BTEX, VPH, MTBE and Styrene).
3. Complete 3 of the 5 boreholes as groundwater monitoring wells.
4. Collect groundwater samples for the fuel-related parameters prescribed in the lease agreement's schedule E (LEPH, HEPH, PAH, VOC including BTEX, VPH, MTBE and Styrene).
5. Complete soil vapour probes (SVPs) at three of the borehole locations.
6. Sample SVPs for volatile organic compounds (VOCs, including BTEX). Soil, groundwater, and vapour samples will be sent to an accredited Laboratory for analysis. Ten percent (10%) of samples, or a minimum of one sample, from each media will be collected in duplicate for quality control purposes. The report on the work completed shall include a description of the investigation methodology and QA procedures, analytical results with comparison to the applicable jurisdictional standards, and conclusions and recommendations. The report will be delivered in electronic format (PDF).
7. A site visit is strongly recommended.

Assumptions

All working assumptions regarding the work must be included in the quote .

Schedule E

A copy of Schedule E as found in our lease agreement is included for consideration on the following page.

Imagery
An image of the tank location is included.

Respectfully submitted:

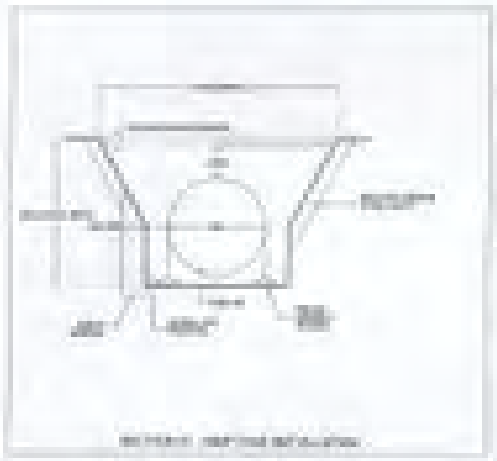
Gordon Rose
Director of Hangars and Parking
Courtenay Airpark Association
GRose@GVRose.com
480 257 5114

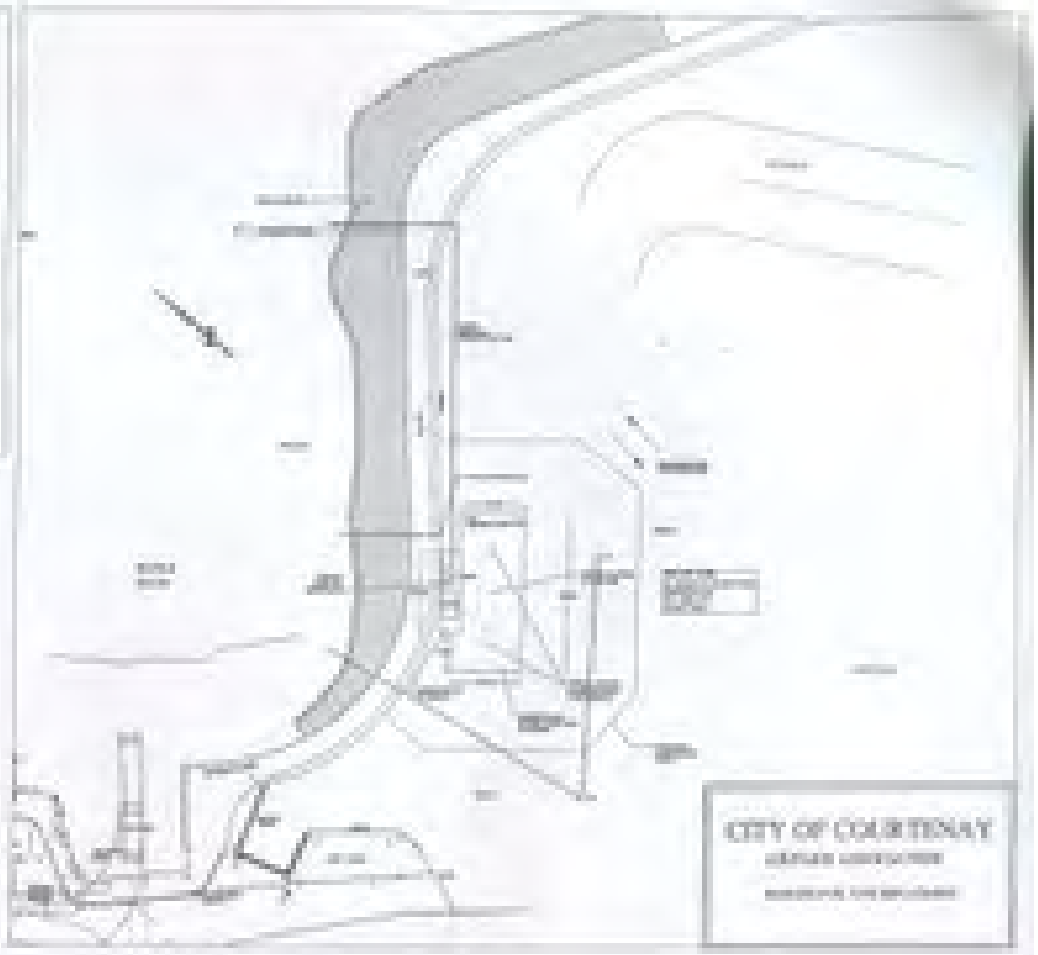
Schedule E

A Baseline Investigation will include all of the following components:

1. Auditing of existing leak detection and product inventory systems to determine effectiveness; separate reporting of conclusions and recommendations.
2. Inspection and sampling of the Existing Monitoring Works. Groundwater and/or soil vapour samples will be obtained and analysed for Light and Heavy Extractable Petroleum Hydrocarbons (L/HEPH), Polycyclic Aromatic Hydrocarbons (PAH), Volatile Organic Compounds (VOC), including Benzene, Toluene, Ethyl Benzene & Xylene (BTEX), Volatile Petroleum Hydrocarbons (VPH), Methyl tert-Butyl Ether (MTBE), and Styrene, and/or VOC for vapour samples.
3. Borehole exploration in at least five additional locations around the perimeter of the tank nest, not more than 8 meters distant from the perimeter, to refusal depth or to encountering groundwater. At least three boreholes must be down-gradient of the tank nest.
4. Soil sampling at approximate 1-meter intervals in all boreholes. Samples must be analysed for L/HEPH, PAH, VOC including BTEX, VPH, MTBE, and Styrene.
5. Groundwater samples must be analysed for L/HEPH, PAH, VOC including BTEX, VPH, MTBE, and Styrene.
6. Vapour samples must be analysed for VOC including BTEX.
7. Field sampling and Laboratory QA procedures must meet industry standard practices.
8. A report describing the investigation methodology, QA procedures, analytical results with comparison to the applicable BC Contaminated Sites Regulations standards, and conclusions and recommendations must be provided to the City.

Fuel Area description




CITY OF COURTENAY

APPENDIX 'B' - SITE PHOTOGRAPHS

PROJECT: Phase I ESA – Courtenay Airpark, Courtenay, BC
FILE: F1188-386
DATE: November 8, 2021

Fueling tanks area viewed to the northeast

Fueling tank area viewed to the northwest

Utility locate scans near the fueling tank area

Utility line location points near the fueling tank area

Utility line locations points near the pump area

Solid stem auger borehole drilling

APPENDIX 'C' – QUALITY CONTROL/QUALITY ASSURANCE

PROJECT: Baseline Investigation Report - 100 20th Street, Courtenay, BC
FILE: F1188-386
DATE: November 16, 2021

RELATIVE PERCENT DIFFERENCE - PETROLEUM HYDROCARBONS (SOIL)

BV Labs ID		Reportable Detection Limit	AHX285	AHX292	Relative Percent Difference (RPD)	Quality Control Limits
Sampling Date			2021-10-08	2021-10-08		
Sample ID			**BH21-3-1.8-2.25**	**DUP1**		
Calculated Parameters	**Units**					
Low Molecular Weight PAH`s	mg/kg	0.10	<0.085	<0.10	NC	50
High Molecular Weight PAH`s	mg/kg	0.10	<0.085	<0.10	NC	50
Total PAH	mg/kg	0.10	<0.085	<0.10	NC	50
Polycyclic Aromatics	mg/kg					
Quinoline	mg/kg	0.10	<0.085	<0.10	NC	50
Naphthalene	mg/kg	0.020	<0.017	<0.020	NC	50
1-Methylnaphthalene	mg/kg	0.10	<0.085	<0.10	NC	50
2-Methylnaphthalene	mg/kg	0.040	<0.034	<0.040	NC	50
Acenaphthylene	mg/kg	0.010	<0.0085	<0.010	NC	50
Acenaphthene	mg/kg	0.010	<0.0085	<0.010	NC	50
Fluorene	mg/kg	0.040	<0.034	<0.040	NC	50
Phenanthrene	mg/kg	0.020	<0.017	<0.020	NC	50
Anthracene	mg/kg	0.0080	<0.0068	<0.0080	NC	50
Fluoranthene	mg/kg	0.040	<0.034	<0.040	NC	50
Pyrene	mg/kg	0.040	<0.034	<0.040	NC	50
Benzo(a)anthracene	mg/kg	0.040	<0.034	<0.040	NC	50
Chrysene	mg/kg	0.040	<0.034	<0.040	NC	50
Benzo(b&j)fluoranthene	mg/kg	0.040	<0.034	<0.040	NC	50
Benzo(b)fluoranthene	mg/kg	0.040	<0.034	<0.040	NC	50
Benzo(k)fluoranthene	mg/kg	0.040	<0.034	<0.040	NC	50
Benzo(a)pyrene	mg/kg	0.040	<0.034	<0.040	NC	50
Indeno(1,2,3-cd)pyrene	mg/kg	0.040	<0.034	<0.040	NC	50
Dibenz(a,h)anthracene	mg/kg	0.040	<0.034	<0.040	NC	50
Benzo(g,h,i)perylene	mg/kg	0.10	<0.085	<0.10	NC	50
Calculated Parameters	mg/kg					
LEPH (C10-C19 less PAH)	mg/kg	100	<100	<100	NC	50
HEPH (C19-C32 less PAH)	mg/kg	100	<100	100	NC	50
Hydrocarbons	mg/kg					
EPH (C10-C19)	mg/kg	100	<100	<100	NC	50
EPH (C19-C32)	mg/kg	100	<100	100	NC	50

Exceeds Applicable Standards
Meets Applicable Standards
NC = Not Calculated
NT = Not Tested

PROJECT: Baseline Investigation Report - 100 20th Street, Courtenay, BC
FILE: F1188-386
DATE: November 16, 2021

BV Labs ID		Reportable Detection Limit	AHX291	AHX293	Relative Percent Difference (RPD)	Quality Control Limits
Sampling Date			2021-10-08	2021-10-08		
Sample ID			**BH21-5-2-3**	**DUP2**		
Calculated Parameters	**Units**					
Low Molecular Weight PAH`s	mg/kg	0.050	<0.050	<0.050	NC	50
High Molecular Weight PAH`s	mg/kg	0.050	<0.050	<0.050	NC	50
Total PAH	mg/kg	0.050	<0.050	<0.050	NC	50
Polycyclic Aromatics	mg/kg					
Quinoline	mg/kg	0.050	<0.050	<0.050	NC	50
Naphthalene	mg/kg	0.010	<0.010	<0.010	NC	50
1-Methylnaphthalene	mg/kg	0.050	<0.050	<0.050	NC	50
2-Methylnaphthalene	mg/kg	0.020	<0.020	<0.020	NC	50
Acenaphthylene	mg/kg	0.0050	<0.0050	<0.0050	NC	50
Acenaphthene	mg/kg	0.0050	<0.0050	<0.0050	NC	50
Fluorene	mg/kg	0.020	<0.020	<0.020	NC	50
Phenanthrene	mg/kg	0.010	0.01	0.011	10%	50
Anthracene	mg/kg	0.0040	<0.0040	<0.0040	NC	50
Fluoranthene	mg/kg	0.020	<0.020	<0.020	NC	50
Pyrene	mg/kg	0.020	<0.020	<0.020	NC	50
Benzo(a)anthracene	mg/kg	0.020	<0.020	<0.020	NC	50
Chrysene	mg/kg	0.020	<0.020	<0.020	NC	50
Benzo(b&j)fluoranthene	mg/kg	0.020	<0.020	<0.020	NC	50
Benzo(b)fluoranthene	mg/kg	0.020	<0.020	<0.020	NC	50
Benzo(k)fluoranthene	mg/kg	0.020	<0.020	<0.020	NC	50
Benzo(a)pyrene	mg/kg	0.020	<0.020	<0.020	NC	50
Indeno(1,2,3-cd)pyrene	mg/kg	0.020	<0.020	<0.020	NC	50
Dibenz(a,h)anthracene	mg/kg	0.020	<0.020	<0.020	NC	50
Benzo(g,h,i)perylene	mg/kg	0.050	<0.050	<0.050	NC	50
Calculated Parameters	mg/kg					
LEPH (C10-C19 less PAH)	mg/kg	100	<100	<100	NC	50
HEPH (C19-C32 less PAH)	mg/kg	100	<100	<100	NC	50
Hydrocarbons	mg/kg					
EPH (C10-C19)	mg/kg	100	<100	<100	NC	50
EPH (C19-C32)	mg/kg	100	<100	<100	NC	50

Exceeds Applicable Standards
Meets Applicable Standards
NC = Not Calculated
NT = Not Tested

PROJECT: Baseline Investigation Report - 100 20th Street, Courtenay, BC
FILE: F1188-386
DATE: November 16, 2021

RELATIVE PERCENT DIFFERENCE - VOLATILE ORGANIC COMPOUNDS (SOIL)

BV Labs ID		Reportable Detection Limit	AHX285	AHX292	Relative Percent Difference (RPD)	Quality Control Limits
Sampling Date			2021-10-08	2021-10-08		
Sample ID			BH21-3-1.8-2.25	**DUP1**		
Calculated Parameters	**Units**					
VPH (VH6 to 10 - BTEX)	mg/kg	25	<25	<26	NC	50
Volatiles						
VH C6-C10	mg/kg	25	<25	<26	NC	50
1,1,1,2-tetrachloroethane	mg/kg	0.052	<0.050	<0.052	NC	50
1,1,1-trichloroethane	mg/kg	0.052	<0.050	<0.052	NC	50
1,1,2,2-tetrachloroethane	mg/kg	0.052	<0.050	<0.052	NC	50
1,1,2-trichloroethane	mg/kg	0.052	<0.050	<0.052	NC	50
1,1-dichloroethane	mg/kg	0.065	<0.063	<0.065	NC	50
1,1-dichloroethylene	mg/kg	0.065	<0.063	<0.065	NC	50
1,2-dichlorobenzene	mg/kg	0.078	<0.050	<0.052	NC	50
1,2-dichloroethane	mg/kg	0.078	<0.050	<0.052	NC	50
1,2-dichloropropane	mg/kg	0.052	<0.050	<0.052	NC	50
1,3-dichlorobenzene	mg/kg	0.052	<0.050	<0.052	NC	50
1,4-dichlorobenzene	mg/kg	0.052	<0.050	<0.052	NC	50
Benzene	mg/kg	0.052	<0.013	<0.013	NC	50
Bromobenzene	mg/kg	0.52	<0.50	<0.52	NC	50
Bromodichloromethane	mg/kg	0.052	<0.13	<0.13	NC	50
Bromoform	mg/kg	0.052	<0.13	<0.13	NC	50
Bromomethane	mg/kg	0.013	<0.75	<0.78	NC	50
Carbon tetrachloride	mg/kg	0.52	<0.050	<0.052	NC	50
Chlorobenzene	mg/kg	0.13	<0.050	<0.052	NC	50
Chlorodibromomethane	mg/kg	0.13	<0.13	<0.13	NC	50
Chloroethane	mg/kg	0.78	<0.25	<0.26	NC	50
Chloroform	mg/kg	0.052	<0.050	<0.052	NC	50
Chloromethane	mg/kg	0.052	<0.13	<0.13	NC	50
cis-1,2-dichloroethlyene	mg/kg	0.13	<0.075	<0.078	NC	50
cis-1,3-dichloropropene	mg/kg	0.26	<0.050	<0.052	NC	50
Dichloromethane	mg/kg	0.052	<0.20	<0.21	NC	50
Ethylbenzene	mg/kg	0.13	<0.025	<0.026	NC	50
Methyl-tert-butylether (MTBE)	mg/kg	0.078	<0.25	<0.26	NC	50
Styrene	mg/kg	0.052	<0.075	<0.078	NC	50
Tetrachloroethylene	mg/kg	0.21	<0.025	<0.026	NC	50
Toluene	mg/kg	0.026	<0.13	<0.13	NC	50
trans-1,2-dichloroethylene	mg/kg	0.52	<0.075	<0.078	NC	50
trans-1,3-dichloropropene	mg/kg	0.52	<0.050	<0.052	NC	50
Trichloroethylene	mg/kg	0.26	<0.023	<0.023	NC	50
Trichlorofluoromethane	mg/kg	0.078	<0.50	<0.52	NC	50
Vinyl chloride	mg/kg	0.026	<0.10	<0.10	NC	50
m & p-Xylene	mg/kg	0.13	<0.10	<0.10	NC	50
o-Xylene	mg/kg	0.078	<0.10	<0.10	NC	50
Xylenes (Total)	mg/kg	0.052	<0.10	<0.10	NC	50

Exceeds Applicable Standards
Meets Applicable Standards
NC = Not Calculated
NT = Not Tested

PROJECT: Baseline Investigation Report - 100 20th Street, Courtenay, BC
FILE: F1188-386
DATE: November 16, 2021

BV Labs ID		Reportable Detection Limit	AHX291	AHX293	Relative Percent Difference (RPD)	Quality Control Limits
Sampling Date			2021-10-08	2021-10-08		
Sample ID			**BH21-5-2-3**	**DUP2**		
Calculated Parameters	**Units**					
VPH (VH6 to 10 - BTEX)	mg/kg	10	<10	<10	NC	50
Volatiles						
VH C6-C10	mg/kg	10	<10	<10	NC	50
1,1,1,2-tetrachloroethane	mg/kg	0.02	<0.020	<0.020	NC	50
1,1,1-trichloroethane	mg/kg	0.02	<0.020	<0.020	NC	50
1,1,2,2-tetrachloroethane	mg/kg	0.02	<0.020	<0.020	NC	50
1,1,2-trichloroethane	mg/kg	0.02	<0.020	<0.020	NC	50
1,1-dichloroethane	mg/kg	0.025	<0.025	<0.025	NC	50
1,1-dichloroethylene	mg/kg	0.025	<0.025	<0.025	NC	50
1,2,3-trichlorobenzene	mg/kg	0.03	<0.020	<0.020	NC	50
1,2,4-trichlorobenzene	mg/kg	0.03	<0.020	<0.020	NC	50
1,2-dibromoethane	mg/kg	0.02	<0.020	<0.020	NC	50
1,2-dichlorobenzene	mg/kg	0.02	<0.020	<0.020	NC	50
1,2-dichloroethane	mg/kg	0.02	<0.020	<0.020	NC	50
1,2-dichloropropane	mg/kg	0.02	<0.0050	<0.0050	NC	50
1,3,5-trimethylbenzene	mg/kg	0.2	<0.20	<0.20	NC	50
1,3-dichlorobenzene	mg/kg	0.02	<0.050	<0.050	NC	50
1,4-dichlorobenzene	mg/kg	0.02	<0.050	<0.050	NC	50
Benzene	mg/kg	0.005	<0.30	<0.30	NC	50
Bromobenzene	mg/kg	0.2	<0.020	<0.020	NC	50
Bromodichloromethane	mg/kg	0.05	<0.020	<0.020	NC	50
Bromoform	mg/kg	0.05	<0.050	<0.050	NC	50
Bromomethane	mg/kg	0.3	<0.10	<0.10	NC	50
Carbon tetrachloride	mg/kg	0.02	<0.020	<0.020	NC	50
Chlorobenzene	mg/kg	0.02	<0.050	<0.050	NC	50
Chlorodibromomethane	mg/kg	0.05	<0.030	<0.030	NC	50
Chloroethane	mg/kg	0.1	<0.020	<0.020	NC	50
Chloroform	mg/kg	0.02	<0.080	<0.080	NC	50
Chloromethane	mg/kg	0.05	<0.010	<0.010	NC	50
cis-1,2-dichloroethlyene	mg/kg	0.03	<0.10	<0.10	NC	50
cis-1,3-dichloropropene	mg/kg	0.02	<0.030	<0.030	NC	50
Dichloromethane	mg/kg	0.08	<0.010	<0.010	NC	50
Ethylbenzene	mg/kg	0.01	<0.050	<0.050	NC	50
Hexachlorobutadiene	mg/kg	0.2	<0.030	<0.030	NC	50
Isopropylbenzene	mg/kg	0.2	<0.020	<0.020	NC	50
Methyl-tert-butylether (MTBE)	mg/kg	0.1	<0.0090	<0.0090	NC	50
Styrene	mg/kg	0.03	<0.20	<0.20	NC	50
Tetrachloroethylene	mg/kg	0.01	<0.040	<0.040	NC	50
Toluene	mg/kg	0.05	<0.040	<0.040	NC	50
trans-1,2-dichloroethylene	mg/kg	0.03	<0.040	<0.040	NC	50
trans-1,3-dichloropropene	mg/kg	0.02	<0.040	<0.040	NC	50

Exceeds Applicable Standards
Meets Applicable Standards
NC = Not Calculated
NT = Not Tested

APPENDIX 'D' - LABORATORY CERTIFICATES OF ANALYSIS

Your Project #: F1188-386
Site Location: COURTENAY AIRPARK, COURTENAY, BC
Your C.O.C. #: 08496624

Attention: Tabitha Zoche

Lewkowich Geotechnical Engineering Ltd
1900 Boxwood Road
Nanaimo, BC
CANADA V9S 5Y2

Report Date: 2021/10/18
Report #: R3085716
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C176892
Received: 2021/10/08, 13:53

Sample Matrix: Soil
Samples Received: 16

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Moisture (1)	16	2021/10/14	2021/10/15	BBY8SOP-00017	BCMOE BCLM Dec2000 m
PAH in Soil by GC/MS (SIM) (1)	16	2021/10/14	2021/10/16	BBY8SOP-00022	BCMOE BCLM Jul2017m
Total PAH and B(a)P Calculation (1, 2)	16	N/A	2021/10/17	BBY WI-00033	Auto Calc
EPH less PAH in Soil By GC/FID (1, 3)	16	N/A	2021/10/17	BBY WI-00033	Auto Calc
EPH in Soil by GC/FID (1)	3	2021/10/14	2021/10/14	BBY8SOP-00029	BCMOE BCLM Dec2016 m
EPH in Soil by GC/FID (1)	13	2021/10/14	2021/10/15	BBY8SOP-00029	BCMOE BCLM Dec2016 m
VOCs, VH, F1, LH in Soil - Field Pres. (1, 4)	16	N/A	2021/10/15	BBY8SOP-00009 / BBY8SOP-00011 / BBY8SOP-00012	BCMOE BCLM Sep 2017m
Volatile HC-BTEX for Soil (1, 5)	16	N/A	2021/10/15	BBY WI-00033	Auto Calc

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

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 Vancouver, 4606 Canada Way , Burnaby, BC, V5G 1K5
(2) Total PAHs in Soil include: Quinoline, Naphthalene, 1-Methylnaphthalene, 2-Methylnaphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene,

Your Project #: F1188-386
Site Location: COURTENAY AIRPARK, COURTENAY, BC
Your C.O.C. #: 08496624

Attention: Tabitha Zoche

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1900 Boxwood Road
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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.
(3) LEPH = EPH (C10 to C19) - (Naphthalene + Phenanthrene)
HEPH = EPH (C19 to C32) - (Benzo(a)anthracene + Benzo(a)pyrene + Benzo(b)fluoranthene + Benzo(k)fluoranthene + Dibenz(a,h)anthracene + Indeno(1,2,3-cd)pyrene + Pyrene)
(4) The extraction date for VOC, BTEX, VH, or F1 samples that are field preserved with methanol equals the date sampled, unless otherwise stated.
(5) VPH = VH - (Benzene + Toluene + Ethylbenzene + m & p-Xylene + o-Xylene + Styrene)

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Customer Solutions, Western Canada Customer Experience Team
Email: customersolutionswest@bureauveritas.com
Phone# (833) 282-5227

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This report has been generated and distributed using a secure automated process.
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

PHYSICAL TESTING (SOIL)

Bureau Veritas ID		AHX278	AHX279	AHX280	AHX281	AHX282	AHX283		
Sampling Date		2021/10/08 09:00	2021/10/08 09:00	2021/10/08 09:00	2021/10/08 10:00	2021/10/08 10:15	2021/10/08 10:15		
COC Number		08496624	08496624	08496624	08496624	08496624	08496624		
	UNITS	BH21-1-1-2	BH21-1-2-2.5	BH21-1-2.5-3	BH21-2-1-1.5	BH21-2-1.5-2.25	BH21-2-2.25-3.2	RDL	QC Batch
Physical Properties									
Moisture	%	15	54	31	26	46	30	0.30	A386682
RDL = Reportable Detection Limit									

Bureau Veritas ID		AHX284	AHX285	AHX286	AHX287	AHX288	AHX289		
Sampling Date		2021/10/08 11:15	2021/10/08 11:15	2021/10/08 11:15	2021/10/08 12:05	2021/10/08 12:15	2021/10/08 12:20		
COC Number		08496624	08496624	08496624	08496624				
	UNITS	BH21-3-1-1.8	BH21-3-1.8-2.25	BH21-3-2.25-3	BH21-4-1-2	BH21-4-2-3	BH21-4-3-4	RDL	QC Batch
Physical Properties									
Moisture	%	14	50	42	9.1	40	17	0.30	A386682
RDL = Reportable Detection Limit									

Bureau Veritas ID		AHX290	AHX291	AHX292	AHX293		
Sampling Date		2021/10/08 13:15	2021/10/08 13:15	2021/10/08 13:15	2021/10/08 13:15		
COC Number							
	UNITS	BH21-5-1-2	BH21-5-2-3	DUP1	DUP2	RDL	QC Batch
Physical Properties							
Moisture	%	27	31	54	33	0.30	A386682
RDL = Reportable Detection Limit							

Bureau Veritas Laboratories Courtenay: 2755B Moray Avenue V9N 8M9, Phone: (250) 338-7786. Toll free: (800) 665-8566

LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		AHX278		AHX279		AHX280	AHX281	AHX282		
Sampling Date		2021/10/08 09:00		2021/10/08 09:00		2021/10/08 09:00	2021/10/08 10:00	2021/10/08 10:15		
COC Number		08496624		08496624		08496624	08496624	08496624		
	UNITS	BH21-1-1-2	RDL	BH21-1-2-2.5	RDL	BH21-1-2.5-3	BH21-2-1-1.5	BH21-2-1.5-2.25	RDL	QC Batch
Calculated Parameters										
Low Molecular Weight PAH`s	mg/kg	<0.050	0.050	<0.11	0.11	<0.050	<0.050	<0.050	0.050	A384912
High Molecular Weight PAH`s	mg/kg	<0.050	0.050	<0.11	0.11	<0.050	<0.050	<0.050	0.050	A384912
Total PAH	mg/kg	<0.050	0.050	<0.11	0.11	<0.050	<0.050	<0.050	0.050	A384912
Polycyclic Aromatics										
Quinoline	mg/kg	<0.050	0.050	<0.11 (1)	0.11	<0.050	<0.050	<0.050	0.050	A387361
Naphthalene	mg/kg	<0.010	0.010	<0.021 (1)	0.021	<0.010	<0.010	<0.010	0.010	A387361
1-Methylnaphthalene	mg/kg	<0.050	0.050	<0.11 (1)	0.11	<0.050	<0.050	<0.050	0.050	A387361
2-Methylnaphthalene	mg/kg	<0.020	0.020	<0.042 (1)	0.042	<0.020	<0.020	<0.020	0.020	A387361
Acenaphthylene	mg/kg	<0.0050	0.0050	<0.011 (1)	0.011	<0.0050	<0.0050	<0.0050	0.0050	A387361
Acenaphthene	mg/kg	<0.0050	0.0050	<0.011 (1)	0.011	<0.0050	<0.0050	<0.0050	0.0050	A387361
Fluorene	mg/kg	<0.020	0.020	<0.042 (1)	0.042	<0.020	<0.020	<0.020	0.020	A387361
Phenanthrene	mg/kg	<0.010	0.010	<0.021 (1)	0.021	<0.010	0.012	<0.010	0.010	A387361
Anthracene	mg/kg	<0.0040	0.0040	<0.0084 (1)	0.0084	<0.0040	<0.0040	<0.0040	0.0040	A387361
Fluoranthene	mg/kg	<0.020	0.020	<0.042 (1)	0.042	<0.020	<0.020	<0.020	0.020	A387361
Pyrene	mg/kg	<0.020	0.020	<0.042 (1)	0.042	<0.020	<0.020	<0.020	0.020	A387361
Benzo(a)anthracene	mg/kg	<0.020	0.020	<0.042 (1)	0.042	<0.020	<0.020	<0.020	0.020	A387361
Chrysene	mg/kg	<0.020	0.020	<0.042 (1)	0.042	<0.020	<0.020	<0.020	0.020	A387361
Benzo(b&j)fluoranthene	mg/kg	<0.020	0.020	<0.042 (1)	0.042	<0.020	<0.020	<0.020	0.020	A387361
Benzo(b)fluoranthene	mg/kg	<0.020	0.020	<0.042 (1)	0.042	<0.020	<0.020	<0.020	0.020	A387361
Benzo(k)fluoranthene	mg/kg	<0.020	0.020	<0.042 (1)	0.042	<0.020	<0.020	<0.020	0.020	A387361
Benzo(a)pyrene	mg/kg	<0.020	0.020	<0.042 (1)	0.042	<0.020	<0.020	<0.020	0.020	A387361
Indeno(1,2,3-cd)pyrene	mg/kg	<0.020	0.020	<0.042 (1)	0.042	<0.020	<0.020	<0.020	0.020	A387361
Dibenz(a,h)anthracene	mg/kg	<0.020	0.020	<0.042 (1)	0.042	<0.020	<0.020	<0.020	0.020	A387361
Benzo(g,h,i)perylene	mg/kg	<0.050	0.050	<0.11 (1)	0.11	<0.050	<0.050	<0.050	0.050	A387361
Calculated Parameters										
LEPH (C10-C19 less PAH)	mg/kg	<100	100	<100	100	<100	<100	<100	100	A384914
HEPH (C19-C32 less PAH)	mg/kg	<100	100	100	100	<100	<100	<100	100	A384914
Hydrocarbons										
EPH (C10-C19)	mg/kg	<100	100	<100	100	<100	<100	<100	100	A387374
EPH (C19-C32)	mg/kg	<100	100	100	100	<100	<100	<100	100	A387374

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

LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		AHX278		AHX279		AHX280	AHX281	AHX282		
Sampling Date		2021/10/08 09:00		2021/10/08 09:00		2021/10/08 09:00	2021/10/08 10:00	2021/10/08 10:15		
COC Number		08496624		08496624		08496624	08496624	08496624		
	UNITS	**BH21-1-1-2**	**RDL**	**BH21-1-2-2.5**	**RDL**	**BH21-1-2.5-3**	**BH21-2-1-1.5**	**BH21-2-1.5-2.25**	**RDL**	**QC Batch**
Surrogate Recovery (%)										
D10-ANTHRACENE (sur.)	%	78		77		79	80	82		A387361
D8-ACENAPHTHYLENE (sur.)	%	78		74		79	81	83		A387361
D8-NAPHTHALENE (sur.)	%	78		79		79	82	83		A387361
TERPHENYL-D14 (sur.)	%	79		78		80	83	82		A387361
O-TERPHENYL (sur.)	%	89		91		88	87	88		A387374
RDL = Reportable Detection Limit										

Bureau Veritas Laboratories Courtenay: 2755B Moray Avenue V9N 8M9, Phone: (250) 338-7786. Toll free: (800) 665-8566

LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		AHX283		AHX284			AHX285		
Sampling Date		2021/10/08 10:15		2021/10/08 11:15			2021/10/08 11:15		
COC Number		08496624		08496624			08496624		
	UNITS	BH21-2-2.25-3.2	QC Batch	BH21-3-1-1.8	RDL	QC Batch	BH21-3-1.8-2.25	RDL	QC Batch
Calculated Parameters									
Low Molecular Weight PAH`s	mg/kg	<0.050	A384912	<0.050	0.050	A384912	<0.085	0.085	A384912
High Molecular Weight PAH`s	mg/kg	<0.050	A384912	<0.050	0.050	A384912	<0.085	0.085	A384912
Total PAH	mg/kg	<0.050	A384912	<0.050	0.050	A384912	<0.085	0.085	A384912
Polycyclic Aromatics									
Quinoline	mg/kg	<0.050	A387361	<0.050	0.050	A387050	<0.085 (1)	0.085	A387361
Naphthalene	mg/kg	<0.010	A387361	<0.010	0.010	A387050	<0.017 (1)	0.017	A387361
1-Methylnaphthalene	mg/kg	<0.050	A387361	<0.050	0.050	A387050	<0.085 (1)	0.085	A387361
2-Methylnaphthalene	mg/kg	<0.020	A387361	<0.020	0.020	A387050	<0.034 (1)	0.034	A387361
Acenaphthylene	mg/kg	<0.0050	A387361	<0.0050	0.0050	A387050	<0.0085 (1)	0.0085	A387361
Acenaphthene	mg/kg	<0.0050	A387361	<0.0050	0.0050	A387050	<0.0085 (1)	0.0085	A387361
Fluorene	mg/kg	<0.020	A387361	<0.020	0.020	A387050	<0.034 (1)	0.034	A387361
Phenanthrene	mg/kg	<0.010	A387361	0.031	0.010	A387050	<0.017 (1)	0.017	A387361
Anthracene	mg/kg	<0.0040	A387361	<0.0040	0.0040	A387050	<0.0068 (1)	0.0068	A387361
Fluoranthene	mg/kg	<0.020	A387361	<0.020	0.020	A387050	<0.034 (1)	0.034	A387361
Pyrene	mg/kg	<0.020	A387361	<0.020	0.020	A387050	<0.034 (1)	0.034	A387361
Benzo(a)anthracene	mg/kg	<0.020	A387361	<0.020	0.020	A387050	<0.034 (1)	0.034	A387361
Chrysene	mg/kg	<0.020	A387361	<0.020	0.020	A387050	<0.034 (1)	0.034	A387361
Benzo(b&j)fluoranthene	mg/kg	<0.020	A387361	<0.020	0.020	A387050	<0.034 (1)	0.034	A387361
Benzo(b)fluoranthene	mg/kg	<0.020	A387361	<0.020	0.020	A387050	<0.034 (1)	0.034	A387361
Benzo(k)fluoranthene	mg/kg	<0.020	A387361	<0.020	0.020	A387050	<0.034 (1)	0.034	A387361
Benzo(a)pyrene	mg/kg	<0.020	A387361	<0.020	0.020	A387050	<0.034 (1)	0.034	A387361
Indeno(1,2,3-cd)pyrene	mg/kg	<0.020	A387361	<0.020	0.020	A387050	<0.034 (1)	0.034	A387361
Dibenz(a,h)anthracene	mg/kg	<0.020	A387361	<0.020	0.020	A387050	<0.034 (1)	0.034	A387361
Benzo(g,h,i)perylene	mg/kg	<0.050	A387361	<0.050	0.050	A387050	<0.085 (1)	0.085	A387361
Calculated Parameters									
LEPH (C10-C19 less PAH)	mg/kg	<100	A384914	<100	100	A384914	<100	100	A384914
HEPH (C19-C32 less PAH)	mg/kg	<100	A384914	170	100	A384914	<100	100	A384914
Hydrocarbons									
EPH (C10-C19)	mg/kg	<100	A387374	<100	100	A387056	<100	100	A387374
EPH (C19-C32)	mg/kg	<100	A387374	170	100	A387056	<100	100	A387374

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

LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		AHX283		AHX284			AHX285		
Sampling Date		2021/10/08 10:15		2021/10/08 11:15			2021/10/08 11:15		
COC Number		08496624		08496624			08496624		
	UNITS	BH21-2-2.25-3.2	QC Batch	BH21-3-1-1.8	RDL	QC Batch	BH21-3-1.8-2.25	RDL	QC Batch
Surrogate Recovery (%)									
D10-ANTHRACENE (sur.)	%	80	A387361	89		A387050	79		A387361
D8-ACENAPHTHYLENE (sur.)	%	80	A387361	85		A387050	78		A387361
D8-NAPHTHALENE (sur.)	%	81	A387361	83		A387050	81		A387361
TERPHENYL-D14 (sur.)	%	82	A387361	94		A387050	80		A387361
O-TERPHENYL (sur.)	%	88	A387374	83		A387056	89		A387374
RDL = Reportable Detection Limit									

LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		AHX286		AHX287		AHX288	AHX289		
Sampling Date		2021/10/08 11:15		2021/10/08 12:05		2021/10/08 12:15	2021/10/08 12:20		
COC Number		08496624		08496624					
	UNITS	BH21-3-2.25-3	QC Batch	BH21-4-1-2	QC Batch	BH21-4-2-3	BH21-4-3-4	RDL	QC Batch
Calculated Parameters									
Low Molecular Weight PAH`s	mg/kg	<0.050	A384912	<0.050	A384912	<0.050	<0.050	0.050	A384912
High Molecular Weight PAH`s	mg/kg	<0.050	A384912	<0.050	A384912	<0.050	<0.050	0.050	A384912
Total PAH	mg/kg	<0.050	A384912	<0.050	A384912	<0.050	<0.050	0.050	A384912
Polycyclic Aromatics									
Quinoline	mg/kg	<0.050	A387361	<0.050	A387050	<0.050	<0.050	0.050	A387361
Naphthalene	mg/kg	<0.010	A387361	<0.010	A387050	<0.010	<0.010	0.010	A387361
1-Methylnaphthalene	mg/kg	<0.050	A387361	<0.050	A387050	<0.050	<0.050	0.050	A387361
2-Methylnaphthalene	mg/kg	<0.020	A387361	<0.020	A387050	<0.020	<0.020	0.020	A387361
Acenaphthylene	mg/kg	<0.0050	A387361	<0.0050	A387050	<0.0050	<0.0050	0.0050	A387361
Acenaphthene	mg/kg	<0.0050	A387361	<0.0050	A387050	<0.0050	<0.0050	0.0050	A387361
Fluorene	mg/kg	<0.020	A387361	<0.020	A387050	<0.020	<0.020	0.020	A387361
Phenanthrene	mg/kg	0.016	A387361	<0.010	A387050	0.011	<0.010	0.010	A387361
Anthracene	mg/kg	<0.0040	A387361	<0.0040	A387050	<0.0040	<0.0040	0.0040	A387361
Fluoranthene	mg/kg	<0.020	A387361	<0.020	A387050	<0.020	<0.020	0.020	A387361
Pyrene	mg/kg	<0.020	A387361	<0.020	A387050	<0.020	<0.020	0.020	A387361
Benzo(a)anthracene	mg/kg	<0.020	A387361	<0.020	A387050	<0.020	<0.020	0.020	A387361
Chrysene	mg/kg	<0.020	A387361	<0.020	A387050	<0.020	<0.020	0.020	A387361
Benzo(b&j)fluoranthene	mg/kg	<0.020	A387361	<0.020	A387050	<0.020	<0.020	0.020	A387361
Benzo(b)fluoranthene	mg/kg	<0.020	A387361	<0.020	A387050	<0.020	<0.020	0.020	A387361
Benzo(k)fluoranthene	mg/kg	<0.020	A387361	<0.020	A387050	<0.020	<0.020	0.020	A387361
Benzo(a)pyrene	mg/kg	<0.020	A387361	<0.020	A387050	<0.020	<0.020	0.020	A387361
Indeno(1,2,3-cd)pyrene	mg/kg	<0.020	A387361	<0.020	A387050	<0.020	<0.020	0.020	A387361
Dibenz(a,h)anthracene	mg/kg	<0.020	A387361	<0.020	A387050	<0.020	<0.020	0.020	A387361
Benzo(g,h,i)perylene	mg/kg	<0.050	A387361	<0.050	A387050	<0.050	<0.050	0.050	A387361
Calculated Parameters									
LEPH (C10-C19 less PAH)	mg/kg	<100	A384914	<100	A384914	<100	<100	100	A384914
HEPH (C19-C32 less PAH)	mg/kg	<100	A384914	<100	A384914	<100	<100	100	A384914
Hydrocarbons									
EPH (C10-C19)	mg/kg	<100	A387374	<100	A387056	<100	<100	100	A387374
EPH (C19-C32)	mg/kg	<100	A387374	<100	A387056	<100	<100	100	A387374
Surrogate Recovery (%)									
D10-ANTHRACENE (sur.)	%	82	A387361	85	A387050	82	78		A387361

RDL = Reportable Detection Limit

LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		AHX286		AHX287		AHX288	AHX289		
Sampling Date		2021/10/08 11:15		2021/10/08 12:05		2021/10/08 12:15	2021/10/08 12:20		
COC Number		08496624		08496624					
	UNITS	BH21-3-2.25-3	QC Batch	BH21-4-1-2	QC Batch	BH21-4-2-3	BH21-4-3-4	RDL	QC Batch
D8-ACENAPHTHYLENE (sur.)	%	82	A387361	85	A387050	81	77		A387361
D8-NAPHTHALENE (sur.)	%	84	A387361	83	A387050	84	78		A387361
TERPHENYL-D14 (sur.)	%	84	A387361	93	A387050	84	79		A387361
O-TERPHENYL (sur.)	%	90	A387374	81	A387056	88	89		A387374
RDL = Reportable Detection Limit									

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LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		AHX290		AHX291		AHX292		AHX293		
Sampling Date		2021/10/08 13:15		2021/10/08 13:15		2021/10/08 13:15		2021/10/08 13:15		
COC Number										
	UNITS	BH21-5-1-2	QC Batch	BH21-5-2-3	RDL	DUP1	RDL	DUP2	RDL	QC Batch
Calculated Parameters										
Low Molecular Weight PAH`s	mg/kg	<0.050	A384912	<0.050	0.050	<0.10	0.10	<0.050	0.050	A384912
High Molecular Weight PAH`s	mg/kg	<0.050	A384912	<0.050	0.050	<0.10	0.10	<0.050	0.050	A384912
Total PAH	mg/kg	<0.050	A384912	<0.050	0.050	<0.10	0.10	<0.050	0.050	A384912
Polycyclic Aromatics										
Quinoline	mg/kg	<0.050	A387050	<0.050	0.050	<0.10 (1)	0.10	<0.050	0.050	A387361
Naphthalene	mg/kg	<0.010	A387050	<0.010	0.010	<0.020 (1)	0.020	<0.010	0.010	A387361
1-Methylnaphthalene	mg/kg	<0.050	A387050	<0.050	0.050	<0.10 (1)	0.10	<0.050	0.050	A387361
2-Methylnaphthalene	mg/kg	<0.020	A387050	<0.020	0.020	<0.040 (1)	0.040	<0.020	0.020	A387361
Acenaphthylene	mg/kg	<0.0050	A387050	<0.0050	0.0050	<0.010 (1)	0.010	<0.0050	0.0050	A387361
Acenaphthene	mg/kg	<0.0050	A387050	<0.0050	0.0050	<0.010 (1)	0.010	<0.0050	0.0050	A387361
Fluorene	mg/kg	<0.020	A387050	<0.020	0.020	<0.040 (1)	0.040	<0.020	0.020	A387361
Phenanthrene	mg/kg	0.013	A387050	0.010	0.010	<0.020 (1)	0.020	0.011	0.010	A387361
Anthracene	mg/kg	<0.0040	A387050	<0.0040	0.0040	<0.0080 (1)	0.0080	<0.0040	0.0040	A387361
Fluoranthene	mg/kg	<0.020	A387050	<0.020	0.020	<0.040 (1)	0.040	<0.020	0.020	A387361
Pyrene	mg/kg	<0.020	A387050	<0.020	0.020	<0.040 (1)	0.040	<0.020	0.020	A387361
Benzo(a)anthracene	mg/kg	<0.020	A387050	<0.020	0.020	<0.040 (1)	0.040	<0.020	0.020	A387361
Chrysene	mg/kg	<0.020	A387050	<0.020	0.020	<0.040 (1)	0.040	<0.020	0.020	A387361
Benzo(b&j)fluoranthene	mg/kg	<0.020	A387050	<0.020	0.020	<0.040 (1)	0.040	<0.020	0.020	A387361
Benzo(b)fluoranthene	mg/kg	<0.020	A387050	<0.020	0.020	<0.040 (1)	0.040	<0.020	0.020	A387361
Benzo(k)fluoranthene	mg/kg	<0.020	A387050	<0.020	0.020	<0.040 (1)	0.040	<0.020	0.020	A387361
Benzo(a)pyrene	mg/kg	<0.020	A387050	<0.020	0.020	<0.040 (1)	0.040	<0.020	0.020	A387361
Indeno(1,2,3-cd)pyrene	mg/kg	<0.020	A387050	<0.020	0.020	<0.040 (1)	0.040	<0.020	0.020	A387361
Dibenz(a,h)anthracene	mg/kg	<0.020	A387050	<0.020	0.020	<0.040 (1)	0.040	<0.020	0.020	A387361
Benzo(g,h,i)perylene	mg/kg	<0.050	A387050	<0.050	0.050	<0.10 (1)	0.10	<0.050	0.050	A387361
Calculated Parameters										
LEPH (C10-C19 less PAH)	mg/kg	<100	A384914	<100	100	<100	100	<100	100	A384914
HEPH (C19-C32 less PAH)	mg/kg	<100	A384914	<100	100	100	100	<100	100	A384914
Hydrocarbons										
EPH (C10-C19)	mg/kg	<100	A387056	<100	100	<100	100	<100	100	A387374
EPH (C19-C32)	mg/kg	<100	A387056	<100	100	100	100	<100	100	A387374

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

LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		AHX290		AHX291		AHX292		AHX293		
Sampling Date		2021/10/08 13:15		2021/10/08 13:15		2021/10/08 13:15		2021/10/08 13:15		
COC Number										
	UNITS	BH21-5-1-2	QC Batch	BH21-5-2-3	RDL	DUP1	RDL	DUP2	RDL	QC Batch
Surrogate Recovery (%)										
D10-ANTHRACENE (sur.)	%	91	A387050	81		79		82		A387361
D8-ACENAPHTHYLENE (sur.)	%	88	A387050	81		79		83		A387361
D8-NAPHTHALENE (sur.)	%	87	A387050	82		80		84		A387361
TERPHENYL-D14 (sur.)	%	97	A387050	83		81		86		A387361
O-TERPHENYL (sur.)	%	80	A387056	90		92		91		A387374
RDL = Reportable Detection Limit										

CSR VOC + VPH IN SOIL - FIELD PRESERVED (SOIL)

Bureau Veritas ID		AHX278		AHX279		AHX280	AHX281	AHX282		
Sampling Date		2021/10/08 09:00		2021/10/08 09:00		2021/10/08 09:00	2021/10/08 10:00	2021/10/08 10:15		
COC Number		08496624		08496624		08496624	08496624	08496624		
	UNITS	BH21-1-1-2	RDL	BH21-1-2-2.5	RDL	BH21-1-2.5-3	BH21-2-1-1.5	BH21-2-1.5-2.25	RDL	QC Batch
Calculated Parameters										
VPH (VH6 to 10 - BTEX)	mg/kg	<10	10	<25	25	<10	<10	<10	10	A384916
Volatiles										
VH C6-C10	mg/kg	<10	10	<25 (1)	25	<10	<10	<10	10	A387255
1,1,1,2-tetrachloroethane	mg/kg	<0.020	0.020	<0.050 (1)	0.050	<0.020	<0.020	<0.020	0.020	A387255
1,1,1-trichloroethane	mg/kg	<0.020	0.020	<0.050 (1)	0.050	<0.020	<0.020	<0.020	0.020	A387255
1,1,2,2-tetrachloroethane	mg/kg	<0.020	0.020	<0.050 (1)	0.050	<0.020	<0.020	<0.020	0.020	A387255
1,1,2-trichloroethane	mg/kg	<0.020	0.020	<0.050 (1)	0.050	<0.020	<0.020	<0.020	0.020	A387255
1,1-dichloroethane	mg/kg	<0.025	0.025	<0.063 (1)	0.063	<0.025	<0.025	<0.025	0.025	A387255
1,1-dichloroethene	mg/kg	<0.025	0.025	<0.063 (1)	0.063	<0.025	<0.025	<0.025	0.025	A387255
1,2,3-trichlorobenzene	mg/kg	<0.030	0.030	<0.075 (1)	0.075	<0.030	<0.030	<0.030	0.030	A387255
1,2,4-trichlorobenzene	mg/kg	<0.030	0.030	<0.075 (1)	0.075	<0.030	<0.030	<0.030	0.030	A387255
1,2-dibromoethane	mg/kg	<0.020	0.020	<0.050 (1)	0.050	<0.020	<0.020	<0.020	0.020	A387255
1,2-dichlorobenzene	mg/kg	<0.020	0.020	<0.050 (1)	0.050	<0.020	<0.020	<0.020	0.020	A387255
1,2-dichloroethane	mg/kg	<0.020	0.020	<0.050 (1)	0.050	<0.020	<0.020	<0.020	0.020	A387255
1,2-dichloropropane	mg/kg	<0.020	0.020	<0.050 (1)	0.050	<0.020	<0.020	<0.020	0.020	A387255
1,3,5-trimethylbenzene	mg/kg	<0.20	0.20	<0.50 (1)	0.50	<0.20	<0.20	<0.20	0.20	A387255
1,3-dichlorobenzene	mg/kg	<0.020	0.020	<0.050 (1)	0.050	<0.020	<0.020	<0.020	0.020	A387255
1,4-dichlorobenzene	mg/kg	<0.020	0.020	<0.050 (1)	0.050	<0.020	<0.020	<0.020	0.020	A387255
Benzene	mg/kg	<0.0050	0.0050	<0.013 (1)	0.013	<0.0050	<0.0050	<0.0050	0.0050	A387255
Bromobenzene	mg/kg	<0.20	0.20	<0.50 (1)	0.50	<0.20	<0.20	<0.20	0.20	A387255
Bromodichloromethane	mg/kg	<0.050	0.050	<0.13 (1)	0.13	<0.050	<0.050	<0.050	0.050	A387255
Bromoform	mg/kg	<0.050	0.050	<0.13 (1)	0.13	<0.050	<0.050	<0.050	0.050	A387255
Bromomethane	mg/kg	<0.30	0.30	<0.75 (1)	0.75	<0.30	<0.30	<0.30	0.30	A387255
Carbon tetrachloride	mg/kg	<0.020	0.020	<0.050 (1)	0.050	<0.020	<0.020	<0.020	0.020	A387255
Chlorobenzene	mg/kg	<0.020	0.020	<0.050 (1)	0.050	<0.020	<0.020	<0.020	0.020	A387255
Dibromochloromethane	mg/kg	<0.050	0.050	<0.13 (1)	0.13	<0.050	<0.050	<0.050	0.050	A387255
Chloroethane	mg/kg	<0.10	0.10	<0.25 (1)	0.25	<0.10	<0.10	<0.10	0.10	A387255
Chloroform	mg/kg	<0.020	0.020	<0.050 (1)	0.050	<0.020	<0.020	<0.020	0.020	A387255
Chloromethane	mg/kg	<0.050	0.050	<0.13 (1)	0.13	<0.050	<0.050	<0.050	0.050	A387255
cis-1,2-dichloroethene	mg/kg	<0.030	0.030	<0.075 (1)	0.075	<0.030	<0.030	<0.030	0.030	A387255
cis-1,3-dichloropropene	mg/kg	<0.020	0.020	<0.050 (1)	0.050	<0.020	<0.020	<0.020	0.020	A387255

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

CSR VOC + VPH IN SOIL - FIELD PRESERVED (SOIL)

Bureau Veritas ID		AHX278		AHX279		AHX280	AHX281	AHX282		
Sampling Date		2021/10/08 09:00		2021/10/08 09:00		2021/10/08 09:00	2021/10/08 10:00	2021/10/08 10:15		
COC Number		08496624		08496624		08496624	08496624	08496624		
	UNITS	BH21-1-1-2	RDL	BH21-1-2-2.5	RDL	BH21-1-2.5-3	BH21-2-1-1.5	BH21-2-1.5-2.25	RDL	QC Batch
Dichloromethane	mg/kg	<0.080	0.080	<0.20 (1)	0.20	<0.080	<0.080	<0.080	0.080	A387255
Ethylbenzene	mg/kg	<0.010	0.010	<0.025 (1)	0.025	<0.010	<0.010	<0.010	0.010	A387255
Hexachlorobutadiene	mg/kg	<0.20	0.20	<0.50 (1)	0.50	<0.20	<0.20	<0.20	0.20	A387255
Isopropylbenzene	mg/kg	<0.20	0.20	<0.50 (1)	0.50	<0.20	<0.20	<0.20	0.20	A387255
Methyl-tert-butylether (MTBE)	mg/kg	<0.10	0.10	<0.25 (1)	0.25	<0.10	<0.10	<0.10	0.10	A387255
Styrene	mg/kg	<0.030	0.030	<0.075 (1)	0.075	<0.030	<0.030	<0.030	0.030	A387255
Tetrachloroethene	mg/kg	<0.010	0.010	<0.025 (1)	0.025	<0.010	<0.010	<0.010	0.010	A387255
Toluene	mg/kg	<0.050	0.050	<0.13 (1)	0.13	<0.050	<0.050	<0.050	0.050	A387255
trans-1,2-dichloroethene	mg/kg	<0.030	0.030	<0.075 (1)	0.075	<0.030	<0.030	<0.030	0.030	A387255
trans-1,3-dichloropropene	mg/kg	<0.020	0.020	<0.050 (1)	0.050	<0.020	<0.020	<0.020	0.020	A387255
Trichloroethene	mg/kg	<0.0090	0.0090	<0.023 (1)	0.023	<0.0090	<0.0090	<0.0090	0.0090	A387255
Trichlorofluoromethane	mg/kg	<0.20	0.20	<0.50 (1)	0.50	<0.20	<0.20	<0.20	0.20	A387255
Vinyl chloride	mg/kg	<0.040	0.040	<0.10 (1)	0.10	<0.040	<0.040	<0.040	0.040	A387255
m & p-Xylene	mg/kg	<0.040	0.040	<0.10 (1)	0.10	<0.040	<0.040	<0.040	0.040	A387255
o-Xylene	mg/kg	<0.040	0.040	<0.10 (1)	0.10	<0.040	<0.040	<0.040	0.040	A387255
Xylenes (Total)	mg/kg	<0.040	0.040	<0.10	0.10	<0.040	<0.040	<0.040	0.040	A387255
Surrogate Recovery (%)										
1,4-Difluorobenzene (sur.)	%	99		99		98	99	97		A387255
4-Bromofluorobenzene (sur.)	%	88		89		89	88	88		A387255
D10-o-Xylene (sur.)	%	77		82		83	81	79		A387255
D4-1,2-Dichloroethane (sur.)	%	86		86		86	85	89		A387255

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

CSR VOC + VPH IN SOIL - FIELD PRESERVED (SOIL)

Bureau Veritas ID		AHX283	AHX284		AHX285		AHX286		
Sampling Date		2021/10/08 10:15	2021/10/08 11:15		2021/10/08 11:15		2021/10/08 11:15		
COC Number		08496624	08496624		08496624		08496624		
	UNITS	BH21-2-2.25-3.2	BH21-3-1-1.8	RDL	BH21-3-1.8-2.25	RDL	BH21-3-2.25-3	RDL	QC Batch
Calculated Parameters									
VPH (VH6 to 10 - BTEX)	mg/kg	<10	<10	10	<25	25	<10	10	A384916
Volatiles									
VH C6-C10	mg/kg	<10	<10	10	<25 (1)	25	<10	10	A387255
1,1,1,2-tetrachloroethane	mg/kg	<0.020	<0.020	0.020	<0.050 (1)	0.050	<0.020	0.020	A387255
1,1,1-trichloroethane	mg/kg	<0.020	<0.020	0.020	<0.050 (1)	0.050	<0.020	0.020	A387255
1,1,2,2-tetrachloroethane	mg/kg	<0.020	<0.020	0.020	<0.050 (1)	0.050	<0.020	0.020	A387255
1,1,2-trichloroethane	mg/kg	<0.020	<0.020	0.020	<0.050 (1)	0.050	<0.020	0.020	A387255
1,1-dichloroethane	mg/kg	<0.025	<0.025	0.025	<0.063 (1)	0.063	<0.025	0.025	A387255
1,1-dichloroethene	mg/kg	<0.025	<0.025	0.025	<0.063 (1)	0.063	<0.025	0.025	A387255
1,2,3-trichlorobenzene	mg/kg	<0.030	<0.030	0.030	<0.075 (1)	0.075	<0.030	0.030	A387255
1,2,4-trichlorobenzene	mg/kg	<0.030	<0.030	0.030	<0.075 (1)	0.075	<0.030	0.030	A387255
1,2-dibromoethane	mg/kg	<0.020	<0.020	0.020	<0.050 (1)	0.050	<0.020	0.020	A387255
1,2-dichlorobenzene	mg/kg	<0.020	<0.020	0.020	<0.050 (1)	0.050	<0.020	0.020	A387255
1,2-dichloroethane	mg/kg	<0.020	<0.020	0.020	<0.050 (1)	0.050	<0.020	0.020	A387255
1,2-dichloropropane	mg/kg	<0.020	<0.020	0.020	<0.050 (1)	0.050	<0.020	0.020	A387255
1,3,5-trimethylbenzene	mg/kg	<0.20	<0.20	0.20	<0.50 (1)	0.50	<0.20	0.20	A387255
1,3-dichlorobenzene	mg/kg	<0.020	<0.020	0.020	<0.050 (1)	0.050	<0.020	0.020	A387255
1,4-dichlorobenzene	mg/kg	<0.020	<0.020	0.020	<0.050 (1)	0.050	<0.020	0.020	A387255
Benzene	mg/kg	<0.0050	<0.0050	0.0050	<0.013 (1)	0.013	<0.0050	0.0050	A387255
Bromobenzene	mg/kg	<0.20	<0.20	0.20	<0.50 (1)	0.50	<0.20	0.20	A387255
Bromodichloromethane	mg/kg	<0.050	<0.050	0.050	<0.13 (1)	0.13	<0.050	0.050	A387255
Bromoform	mg/kg	<0.050	<0.050	0.050	<0.13 (1)	0.13	<0.050	0.050	A387255
Bromomethane	mg/kg	<0.30	<0.30	0.30	<0.75 (1)	0.75	<0.30	0.30	A387255
Carbon tetrachloride	mg/kg	<0.020	<0.020	0.020	<0.050 (1)	0.050	<0.020	0.020	A387255
Chlorobenzene	mg/kg	<0.020	<0.020	0.020	<0.050 (1)	0.050	<0.020	0.020	A387255
Dibromochloromethane	mg/kg	<0.050	<0.050	0.050	<0.13 (1)	0.13	<0.050	0.050	A387255
Chloroethane	mg/kg	<0.10	<0.10	0.10	<0.25 (1)	0.25	<0.10	0.10	A387255
Chloroform	mg/kg	<0.020	<0.020	0.020	<0.050 (1)	0.050	<0.020	0.020	A387255
Chloromethane	mg/kg	<0.050	<0.050	0.050	<0.13 (1)	0.13	<0.050	0.050	A387255
cis-1,2-dichloroethene	mg/kg	<0.030	<0.030	0.030	<0.075 (1)	0.075	<0.030	0.030	A387255
cis-1,3-dichloropropene	mg/kg	<0.020	<0.020	0.020	<0.050 (1)	0.050	<0.020	0.020	A387255

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

CSR VOC + VPH IN SOIL - FIELD PRESERVED (SOIL)

Bureau Veritas ID		AHX283	AHX284		AHX285		AHX286		
Sampling Date		2021/10/08 10:15	2021/10/08 11:15		2021/10/08 11:15		2021/10/08 11:15		
COC Number		08496624	08496624		08496624		08496624		
	UNITS	BH21-2-2.25-3.2	BH21-3-1-1.8	RDL	BH21-3-1.8-2.25	RDL	BH21-3-2.25-3	RDL	QC Batch
Dichloromethane	mg/kg	<0.080	<0.080	0.080	<0.20 (1)	0.20	<0.080	0.080	A387255
Ethylbenzene	mg/kg	<0.010	<0.010	0.010	<0.025 (1)	0.025	<0.010	0.010	A387255
Hexachlorobutadiene	mg/kg	<0.20	<0.20	0.20	<0.50 (1)	0.50	<0.20	0.20	A387255
Isopropylbenzene	mg/kg	<0.20	<0.20	0.20	<0.50 (1)	0.50	<0.20	0.20	A387255
Methyl-tert-butylether (MTBE)	mg/kg	<0.10	<0.10	0.10	<0.25 (1)	0.25	<0.10	0.10	A387255
Styrene	mg/kg	<0.030	<0.030	0.030	<0.075 (1)	0.075	<0.030	0.030	A387255
Tetrachloroethene	mg/kg	<0.010	<0.010	0.010	<0.025 (1)	0.025	<0.010	0.010	A387255
Toluene	mg/kg	<0.050	<0.050	0.050	<0.13 (1)	0.13	<0.050	0.050	A387255
trans-1,2-dichloroethene	mg/kg	<0.030	<0.030	0.030	<0.075 (1)	0.075	<0.030	0.030	A387255
trans-1,3-dichloropropene	mg/kg	<0.020	<0.020	0.020	<0.050 (1)	0.050	<0.020	0.020	A387255
Trichloroethene	mg/kg	<0.0090	<0.0090	0.0090	<0.023 (1)	0.023	<0.0090	0.0090	A387255
Trichlorofluoromethane	mg/kg	<0.20	<0.20	0.20	<0.50 (1)	0.50	<0.20	0.20	A387255
Vinyl chloride	mg/kg	<0.040	<0.040	0.040	<0.10 (1)	0.10	<0.040	0.040	A387255
m & p-Xylene	mg/kg	<0.040	<0.040	0.040	<0.10 (1)	0.10	<0.040	0.040	A387255
o-Xylene	mg/kg	<0.040	<0.040	0.040	<0.10 (1)	0.10	<0.040	0.040	A387255
Xylenes (Total)	mg/kg	<0.040	<0.040	0.040	<0.10	0.10	<0.040	0.040	A387255
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	99	99		98		98		A387255
4-Bromofluorobenzene (sur.)	%	88	89		87		86		A387255
D10-o-Xylene (sur.)	%	78	82		78		77		A387255
D4-1,2-Dichloroethane (sur.)	%	87	85		86		84		A387255

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

CSR VOC + VPH IN SOIL - FIELD PRESERVED (SOIL)

Bureau Veritas ID		AHX287	AHX288	AHX289	AHX290	AHX291		AHX292		
Sampling Date		2021/10/08 12:05	2021/10/08 12:15	2021/10/08 12:20	2021/10/08 13:15	2021/10/08 13:15		2021/10/08 13:15		
COC Number		08496624								
	UNITS	BH21-4-1-2	BH21-4-2-3	BH21-4-3-4	BH21-5-1-2	BH21-5-2-3	RDL	DUP1	RDL	QC Batch
Calculated Parameters										
VPH (VH6 to 10 - BTEX)	mg/kg	<10	<10	<10	<10	<10	10	<26	26	A384916
Volatiles										
VH C6-C10	mg/kg	<10	<10	<10	<10	<10	10	<26 (1)	26	A387255
1,1,1,2-tetrachloroethane	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	<0.052 (1)	0.052	A387255
1,1,1-trichloroethane	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	<0.052 (1)	0.052	A387255
1,1,2,2-tetrachloroethane	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	<0.052 (1)	0.052	A387255
1,1,2-trichloroethane	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	<0.052 (1)	0.052	A387255
1,1-dichloroethane	mg/kg	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	<0.065 (1)	0.065	A387255
1,1-dichloroethene	mg/kg	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	<0.065 (1)	0.065	A387255
1,2,3-trichlorobenzene	mg/kg	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	<0.078 (1)	0.078	A387255
1,2,4-trichlorobenzene	mg/kg	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	<0.078 (1)	0.078	A387255
1,2-dibromoethane	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	<0.052 (1)	0.052	A387255
1,2-dichlorobenzene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	<0.052 (1)	0.052	A387255
1,2-dichloroethane	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	<0.052 (1)	0.052	A387255
1,2-dichloropropane	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	<0.052 (1)	0.052	A387255
1,3,5-trimethylbenzene	mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	<0.52 (1)	0.52	A387255
1,3-dichlorobenzene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	<0.052 (1)	0.052	A387255
1,4-dichlorobenzene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	<0.052 (1)	0.052	A387255
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	<0.013 (1)	0.013	A387255
Bromobenzene	mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	<0.52 (1)	0.52	A387255
Bromodichloromethane	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	<0.13 (1)	0.13	A387255
Bromoform	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	<0.13 (1)	0.13	A387255
Bromomethane	mg/kg	<0.30	<0.30	<0.30	<0.30	<0.30	0.30	<0.78 (1)	0.78	A387255
Carbon tetrachloride	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	<0.052 (1)	0.052	A387255
Chlorobenzene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	<0.052 (1)	0.052	A387255
Dibromochloromethane	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	<0.13 (1)	0.13	A387255
Chloroethane	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	<0.26 (1)	0.26	A387255
Chloroform	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	<0.052 (1)	0.052	A387255
Chloromethane	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	<0.13 (1)	0.13	A387255
cis-1,2-dichloroethene	mg/kg	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	<0.078 (1)	0.078	A387255
cis-1,3-dichloropropene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	<0.052 (1)	0.052	A387255

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

CSR VOC + VPH IN SOIL - FIELD PRESERVED (SOIL)

Bureau Veritas ID		AHX287	AHX288	AHX289	AHX290	AHX291		AHX292		
Sampling Date		2021/10/08 12:05	2021/10/08 12:15	2021/10/08 12:20	2021/10/08 13:15	2021/10/08 13:15		2021/10/08 13:15		
COC Number		08496624								
	UNITS	BH21-4-1-2	BH21-4-2-3	BH21-4-3-4	BH21-5-1-2	BH21-5-2-3	RDL	DUP1	RDL	QC Batch
Dichloromethane	mg/kg	<0.080	<0.080	<0.080	<0.080	<0.080	0.080	<0.21 (1)	0.21	A387255
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	<0.026 (1)	0.026	A387255
Hexachlorobutadiene	mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	<0.52 (1)	0.52	A387255
Isopropylbenzene	mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	<0.52 (1)	0.52	A387255
Methyl-tert-butylether (MTBE)	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	<0.26 (1)	0.26	A387255
Styrene	mg/kg	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	<0.078 (1)	0.078	A387255
Tetrachloroethene	mg/kg	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	<0.026 (1)	0.026	A387255
Toluene	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	<0.13 (1)	0.13	A387255
trans-1,2-dichloroethene	mg/kg	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	<0.078 (1)	0.078	A387255
trans-1,3-dichloropropene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	<0.052 (1)	0.052	A387255
Trichloroethene	mg/kg	<0.0090	<0.0090	<0.0090	<0.0090	<0.0090	0.0090	<0.023 (1)	0.023	A387255
Trichlorofluoromethane	mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	<0.52 (1)	0.52	A387255
Vinyl chloride	mg/kg	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	<0.10 (1)	0.10	A387255
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	<0.10 (1)	0.10	A387255
o-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	<0.10 (1)	0.10	A387255
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	<0.10	0.10	A387255
Surrogate Recovery (%)										
1,4-Difluorobenzene (sur.)	%	99	98	96	98	98		99		A387255
4-Bromofluorobenzene (sur.)	%	87	89	88	88	88		89		A387255
D10-o-Xylene (sur.)	%	82	87	79	88	79		80		A387255
D4-1,2-Dichloroethane (sur.)	%	84	81	86	86	86		87		A387255

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

CSR VOC + VPH IN SOIL - FIELD PRESERVED (SOIL)

Bureau Veritas ID		AHX293		
Sampling Date		2021/10/08 13:15		
COC Number				
	UNITS	DUP2	RDL	QC Batch
Calculated Parameters				
VPH (VH6 to 10 - BTEX)	mg/kg	<10	10	A384916
Volatiles				
VH C6-C10	mg/kg	<10	10	A387255
1,1,1,2-tetrachloroethane	mg/kg	<0.020	0.020	A387255
1,1,1-trichloroethane	mg/kg	<0.020	0.020	A387255
1,1,2,2-tetrachloroethane	mg/kg	<0.020	0.020	A387255
1,1,2-trichloroethane	mg/kg	<0.020	0.020	A387255
1,1-dichloroethane	mg/kg	<0.025	0.025	A387255
1,1-dichloroethene	mg/kg	<0.025	0.025	A387255
1,2,3-trichlorobenzene	mg/kg	<0.030	0.030	A387255
1,2,4-trichlorobenzene	mg/kg	<0.030	0.030	A387255
1,2-dibromoethane	mg/kg	<0.020	0.020	A387255
1,2-dichlorobenzene	mg/kg	<0.020	0.020	A387255
1,2-dichloroethane	mg/kg	<0.020	0.020	A387255
1,2-dichloropropane	mg/kg	<0.020	0.020	A387255
1,3,5-trimethylbenzene	mg/kg	<0.20	0.20	A387255
1,3-dichlorobenzene	mg/kg	<0.020	0.020	A387255
1,4-dichlorobenzene	mg/kg	<0.020	0.020	A387255
Benzene	mg/kg	<0.0050	0.0050	A387255
Bromobenzene	mg/kg	<0.20	0.20	A387255
Bromodichloromethane	mg/kg	<0.050	0.050	A387255
Bromoform	mg/kg	<0.050	0.050	A387255
Bromomethane	mg/kg	<0.30	0.30	A387255
Carbon tetrachloride	mg/kg	<0.020	0.020	A387255
Chlorobenzene	mg/kg	<0.020	0.020	A387255
Dibromochloromethane	mg/kg	<0.050	0.050	A387255
Chloroethane	mg/kg	<0.10	0.10	A387255
Chloroform	mg/kg	<0.020	0.020	A387255
Chloromethane	mg/kg	<0.050	0.050	A387255
cis-1,2-dichloroethene	mg/kg	<0.030	0.030	A387255
cis-1,3-dichloropropene	mg/kg	<0.020	0.020	A387255
Dichloromethane	mg/kg	<0.080	0.080	A387255
RDL = Reportable Detection Limit				

CSR VOC + VPH IN SOIL - FIELD PRESERVED (SOIL)

Bureau Veritas ID		AHX293		
Sampling Date		2021/10/08 13:15		
COC Number				
	UNITS	**DUP2**	**RDL**	**QC Batch**
Ethylbenzene	mg/kg	<0.010	0.010	A387255
Hexachlorobutadiene	mg/kg	<0.20	0.20	A387255
Isopropylbenzene	mg/kg	<0.20	0.20	A387255
Methyl-tert-butylether (MTBE)	mg/kg	<0.10	0.10	A387255
Styrene	mg/kg	<0.030	0.030	A387255
Tetrachloroethene	mg/kg	<0.010	0.010	A387255
Toluene	mg/kg	<0.050	0.050	A387255
trans-1,2-dichloroethene	mg/kg	<0.030	0.030	A387255
trans-1,3-dichloropropene	mg/kg	<0.020	0.020	A387255
Trichloroethene	mg/kg	<0.0090	0.0090	A387255
Trichlorofluoromethane	mg/kg	<0.20	0.20	A387255
Vinyl chloride	mg/kg	<0.040	0.040	A387255
m & p-Xylene	mg/kg	<0.040	0.040	A387255
o-Xylene	mg/kg	<0.040	0.040	A387255
Xylenes (Total)	mg/kg	<0.040	0.040	A387255
Surrogate Recovery (%)				
1,4-Difluorobenzene (sur.)	%	98		A387255
4-Bromofluorobenzene (sur.)	%	87		A387255
D10-o-Xylene (sur.)	%	84		A387255
D4-1,2-Dichloroethane (sur.)	%	83		A387255
RDL = Reportable Detection Limit				

Bureau Veritas Laboratories Courtenay: 2755B Moray Avenue V9N 8M9, Phone: (250) 338-7786. Toll free: (800) 665-8566

GENERAL COMMENTS

Results relate only to the items tested.

Bureau Veritas Laboratories Courtenay: 2755B Moray Avenue V9N 8M9, Phone: (250) 338-7786. Toll free: (800) 665-8566

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A387050	D10-ANTHRACENE (sur.)	2021/10/14			88	50 - 140	87	%		
A387050	D8-ACENAPHTHYLENE (sur.)	2021/10/14			90	50 - 140	89	%		
A387050	D8-NAPHTHALENE (sur.)	2021/10/14			85	50 - 140	86	%		
A387050	TERPHENYL-D14 (sur.)	2021/10/14			91	50 - 140	92	%		
A387056	O-TERPHENYL (sur.)	2021/10/14	79	60 - 140	79	60 - 140	88	%		
A387255	1,4-Difluorobenzene (sur.)	2021/10/15	100	50 - 140	101	50 - 140	97	%		
A387255	4-Bromofluorobenzene (sur.)	2021/10/15	97	50 - 140	101	50 - 140	85	%		
A387255	D10-o-Xylene (sur.)	2021/10/15	93	50 - 140	79	50 - 140	79	%		
A387255	D4-1,2-Dichloroethane (sur.)	2021/10/15	77	50 - 140	81	50 - 140	86	%		
A387361	D10-ANTHRACENE (sur.)	2021/10/16	85	50 - 140	77	50 - 140	81	%		
A387361	D8-ACENAPHTHYLENE (sur.)	2021/10/16	84	50 - 140	77	50 - 140	81	%		
A387361	D8-NAPHTHALENE (sur.)	2021/10/16	83	50 - 140	77	50 - 140	83	%		
A387361	TERPHENYL-D14 (sur.)	2021/10/16	87	50 - 140	80	50 - 140	85	%		
A387374	O-TERPHENYL (sur.)	2021/10/14	93	60 - 140	93	60 - 140	90	%		
A386682	Moisture	2021/10/15					<0.30	%	0.84	20
A387050	1-Methylnaphthalene	2021/10/14			90	50 - 140	<0.050	mg/kg		
A387050	2-Methylnaphthalene	2021/10/14			95	50 - 140	<0.020	mg/kg		
A387050	Acenaphthene	2021/10/14			91	50 - 140	<0.0050	mg/kg		
A387050	Acenaphthylene	2021/10/14			88	50 - 140	<0.0050	mg/kg		
A387050	Anthracene	2021/10/14			82	50 - 140	<0.0040	mg/kg		
A387050	Benzo(a)anthracene	2021/10/14			81	50 - 140	<0.020	mg/kg		
A387050	Benzo(a)pyrene	2021/10/14			88	50 - 140	<0.020	mg/kg		
A387050	Benzo(b&j)fluoranthene	2021/10/14			89	50 - 140	<0.020	mg/kg		
A387050	Benzo(b)fluoranthene	2021/10/14			94	50 - 140	<0.020	mg/kg		
A387050	Benzo(g,h,i)perylene	2021/10/14			91	50 - 140	<0.050	mg/kg		
A387050	Benzo(k)fluoranthene	2021/10/14			84	50 - 140	<0.020	mg/kg		
A387050	Chrysene	2021/10/14			80	50 - 140	<0.020	mg/kg		
A387050	Dibenz(a,h)anthracene	2021/10/14			95	50 - 140	<0.020	mg/kg		
A387050	Fluoranthene	2021/10/14			94	50 - 140	<0.020	mg/kg		
A387050	Fluorene	2021/10/14			89	50 - 140	<0.020	mg/kg		
A387050	Indeno(1,2,3-cd)pyrene	2021/10/14			95	50 - 140	<0.020	mg/kg		
A387050	Naphthalene	2021/10/14			88	50 - 140	<0.010	mg/kg		

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A387050	Phenanthrene	2021/10/14			88	50 - 140	<0.010	mg/kg		
A387050	Pyrene	2021/10/14			89	50 - 140	<0.020	mg/kg		
A387050	Quinoline	2021/10/14			111	50 - 140	<0.050	mg/kg		
A387056	EPH (C10-C19)	2021/10/14	96	60 - 140	99	70 - 130	<100	mg/kg	NC	40
A387056	EPH (C19-C32)	2021/10/14	85	60 - 140	89	70 - 130	<100	mg/kg	NC	40
A387255	1,1,1,2-tetrachloroethane	2021/10/15	85	50 - 140	84	60 - 130	<0.020	mg/kg	NC	50
A387255	1,1,1-trichloroethane	2021/10/15	86	50 - 140	83	60 - 130	<0.020	mg/kg	NC	50
A387255	1,1,2,2-tetrachloroethane	2021/10/15	86	50 - 140	85	60 - 130	<0.020	mg/kg	NC	50
A387255	1,1,2-trichloroethane	2021/10/15	83	50 - 140	83	60 - 130	<0.020	mg/kg	NC	50
A387255	1,1-dichloroethane	2021/10/15	91	50 - 140	89	60 - 130	<0.025	mg/kg	NC	50
A387255	1,1-dichloroethene	2021/10/15	85	50 - 140	83	60 - 130	<0.025	mg/kg	NC	50
A387255	1,2,3-trichlorobenzene	2021/10/15	99	50 - 140	100	60 - 130	<0.030	mg/kg	NC	50
A387255	1,2,4-trichlorobenzene	2021/10/15	94	50 - 140	94	60 - 130	<0.030	mg/kg	NC	50
A387255	1,2-dibromoethane	2021/10/15	93	50 - 140	93	60 - 130	<0.020	mg/kg	NC	50
A387255	1,2-dichlorobenzene	2021/10/15	93	50 - 140	91	60 - 130	<0.020	mg/kg	NC	50
A387255	1,2-dichloroethane	2021/10/15	89	50 - 140	87	60 - 130	<0.020	mg/kg	NC	50
A387255	1,2-dichloropropane	2021/10/15	91	50 - 140	90	60 - 130	<0.020	mg/kg	NC	50
A387255	1,3,5-trimethylbenzene	2021/10/15	94	50 - 140	91	60 - 130	<0.20	mg/kg	NC	50
A387255	1,3-dichlorobenzene	2021/10/15	97	50 - 140	95	60 - 130	<0.020	mg/kg	NC	50
A387255	1,4-dichlorobenzene	2021/10/15	86	50 - 140	86	60 - 130	<0.020	mg/kg	NC	50
A387255	Benzene	2021/10/15	87	50 - 140	86	60 - 130	<0.0050	mg/kg	NC	50
A387255	Bromobenzene	2021/10/15	90	50 - 140	87	60 - 130	<0.20	mg/kg	NC	50
A387255	Bromodichloromethane	2021/10/15	87	50 - 140	86	60 - 130	<0.050	mg/kg	NC	50
A387255	Bromoform	2021/10/15	88	50 - 140	86	60 - 130	<0.050	mg/kg	NC	50
A387255	Bromomethane	2021/10/15	81	50 - 140	80	50 - 140	<0.30	mg/kg	NC	50
A387255	Carbon tetrachloride	2021/10/15	88	50 - 140	85	60 - 130	<0.020	mg/kg	NC	50
A387255	Chlorobenzene	2021/10/15	85	50 - 140	84	60 - 130	<0.020	mg/kg	NC	50
A387255	Chloroethane	2021/10/15	70	50 - 140	71	50 - 140	<0.10	mg/kg	NC	50
A387255	Chloroform	2021/10/15	91	50 - 140	89	60 - 130	<0.020	mg/kg	NC	50
A387255	Chloromethane	2021/10/15	94	50 - 140	94	50 - 140	<0.050	mg/kg	NC	50
A387255	cis-1,2-dichloroethene	2021/10/15	81	50 - 140	81	60 - 130	<0.030	mg/kg	NC	50
A387255	cis-1,3-dichloropropene	2021/10/15	75	50 - 140	73	50 - 140	<0.020	mg/kg	NC	50

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A387255	Dibromochloromethane	2021/10/15	83	50 - 140	83	60 - 130	<0.050	mg/kg	NC	50
A387255	Dichloromethane	2021/10/15	88	50 - 140	86	60 - 130	<0.080	mg/kg	NC	50
A387255	Ethylbenzene	2021/10/15	85	50 - 140	83	60 - 130	<0.010	mg/kg	NC	50
A387255	Hexachlorobutadiene	2021/10/15	87	50 - 140	85	50 - 130	<0.20	mg/kg	NC	50
A387255	Isopropylbenzene	2021/10/15	95	50 - 140	91	60 - 130	<0.20	mg/kg	NC	50
A387255	m & p-Xylene	2021/10/15	97	50 - 140	96	60 - 130	<0.040	mg/kg	NC	50
A387255	Methyl-tert-butylether (MTBE)	2021/10/15	90	50 - 140	88	60 - 130	<0.10	mg/kg	NC	50
A387255	o-Xylene	2021/10/15	99	50 - 140	96	60 - 130	<0.040	mg/kg	NC	50
A387255	Styrene	2021/10/15	82	50 - 140	82	60 - 130	<0.030	mg/kg	NC	50
A387255	Tetrachloroethene	2021/10/15	85	50 - 140	86	60 - 130	<0.010	mg/kg	NC	50
A387255	Toluene	2021/10/15	81	50 - 140	79	60 - 130	<0.050	mg/kg	NC	50
A387255	trans-1,2-dichloroethene	2021/10/15	72	50 - 140	71	60 - 130	<0.030	mg/kg	NC	50
A387255	trans-1,3-dichloropropene	2021/10/15	79	50 - 140	75	50 - 140	<0.020	mg/kg	NC	50
A387255	Trichloroethene	2021/10/15	88	50 - 140	86	60 - 130	<0.0090	mg/kg	NC	50
A387255	Trichlorofluoromethane	2021/10/15	81	50 - 140	90	60 - 130	<0.20	mg/kg	NC	50
A387255	VH C6-C10	2021/10/15			101	70 - 130	<10	mg/kg	NC	50
A387255	Vinyl chloride	2021/10/15	90	50 - 140	87	50 - 140	<0.040	mg/kg	NC	50
A387255	Xylenes (Total)	2021/10/15					<0.040	mg/kg	NC	50
A387361	1-Methylnaphthalene	2021/10/16	89	50 - 140	79	50 - 140	<0.050	mg/kg	NC	50
A387361	2-Methylnaphthalene	2021/10/16	94	50 - 140	83	50 - 140	<0.020	mg/kg	NC	50
A387361	Acenaphthene	2021/10/16	92	50 - 140	82	50 - 140	<0.0050	mg/kg	NC	50
A387361	Acenaphthylene	2021/10/16	86	50 - 140	77	50 - 140	<0.0050	mg/kg	NC	50
A387361	Anthracene	2021/10/16	84	50 - 140	76	50 - 140	<0.0040	mg/kg	NC	50
A387361	Benzo(a)anthracene	2021/10/16	81	50 - 140	73	50 - 140	<0.020	mg/kg	NC	50
A387361	Benzo(a)pyrene	2021/10/16	84	50 - 140	78	50 - 140	<0.020	mg/kg	NC	50
A387361	Benzo(b&j)fluoranthene	2021/10/16	86	50 - 140	83	50 - 140	<0.020	mg/kg	NC	50
A387361	Benzo(b)fluoranthene	2021/10/16	87	50 - 140	82	50 - 140	<0.020	mg/kg	NC	50
A387361	Benzo(g,h,i)perylene	2021/10/16	81	50 - 140	76	50 - 140	<0.050	mg/kg	NC	50
A387361	Benzo(k)fluoranthene	2021/10/16	83	50 - 140	79	50 - 140	<0.020	mg/kg	NC	50
A387361	Chrysene	2021/10/16	81	50 - 140	76	50 - 140	<0.020	mg/kg	NC	50
A387361	Dibenz(a,h)anthracene	2021/10/16	86	50 - 140	77	50 - 140	<0.020	mg/kg	NC	50
A387361	Fluoranthene	2021/10/16	89	50 - 140	81	50 - 140	<0.020	mg/kg	NC	50

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A387361	Fluorene	2021/10/16	90	50 - 140	79	50 - 140	<0.020	mg/kg	NC	50
A387361	Indeno(1,2,3-cd)pyrene	2021/10/16	82	50 - 140	76	50 - 140	<0.020	mg/kg	NC	50
A387361	Naphthalene	2021/10/16	88	50 - 140	79	50 - 140	<0.010	mg/kg	NC	50
A387361	Phenanthrene	2021/10/16	86	50 - 140	77	50 - 140	<0.010	mg/kg	34	50
A387361	Pyrene	2021/10/16	89	50 - 140	81	50 - 140	<0.020	mg/kg	NC	50
A387361	Quinoline	2021/10/16	113	50 - 140	114	50 - 140	<0.050	mg/kg	NC	50
A387374	EPH (C10-C19)	2021/10/15	89	60 - 140	96	70 - 130	<100	mg/kg	NC	40
A387374	EPH (C19-C32)	2021/10/15	96	60 - 140	93	70 - 130	<100	mg/kg	NC	40

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

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

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

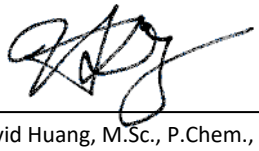
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

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

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

VALIDATION SIGNATURE PAGE

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



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

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

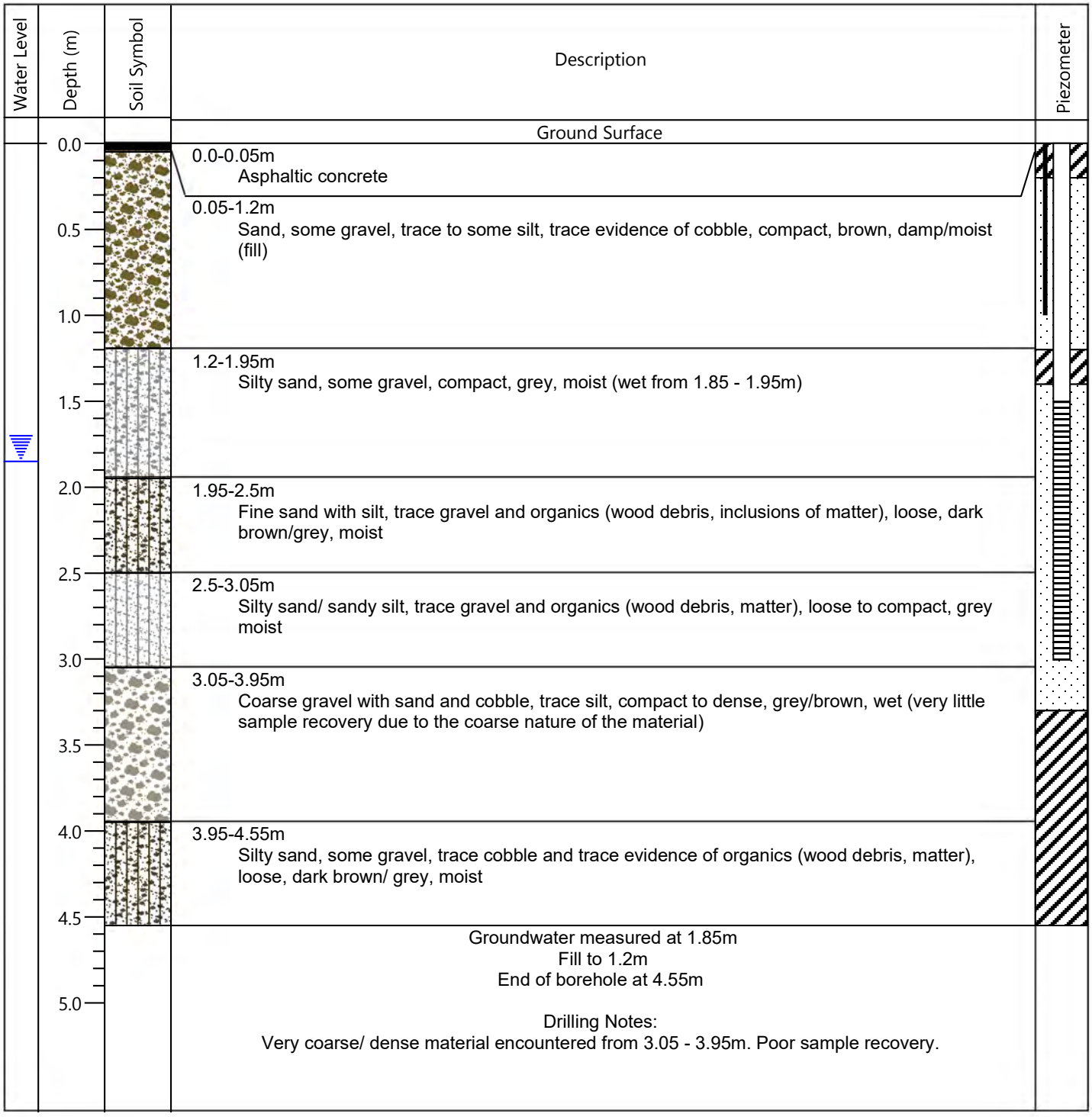
Bureau Veritas Laboratories Courtenay: 2755B Moray Avenue V9N 8M9, Phone: (250) 338-7786. Toll free: (800) 665-8566

APPENDIX ‘E’ – BOREHOLE LOGS

Lewkowich Engineering Associates Ltd.

BOREHOLE LOG

File Number: F1188-386 BH21-01
Client: Courtenay Airpark Association (CAA)
Project: Baseline Investigation
Location: 100 - 20th Street, Courtenay, BC



Logged By: Paul Simmons
Reviewed By: Tabitha Zoche
Digging Method: Drill Rig - F550 Mobile Drill Rig

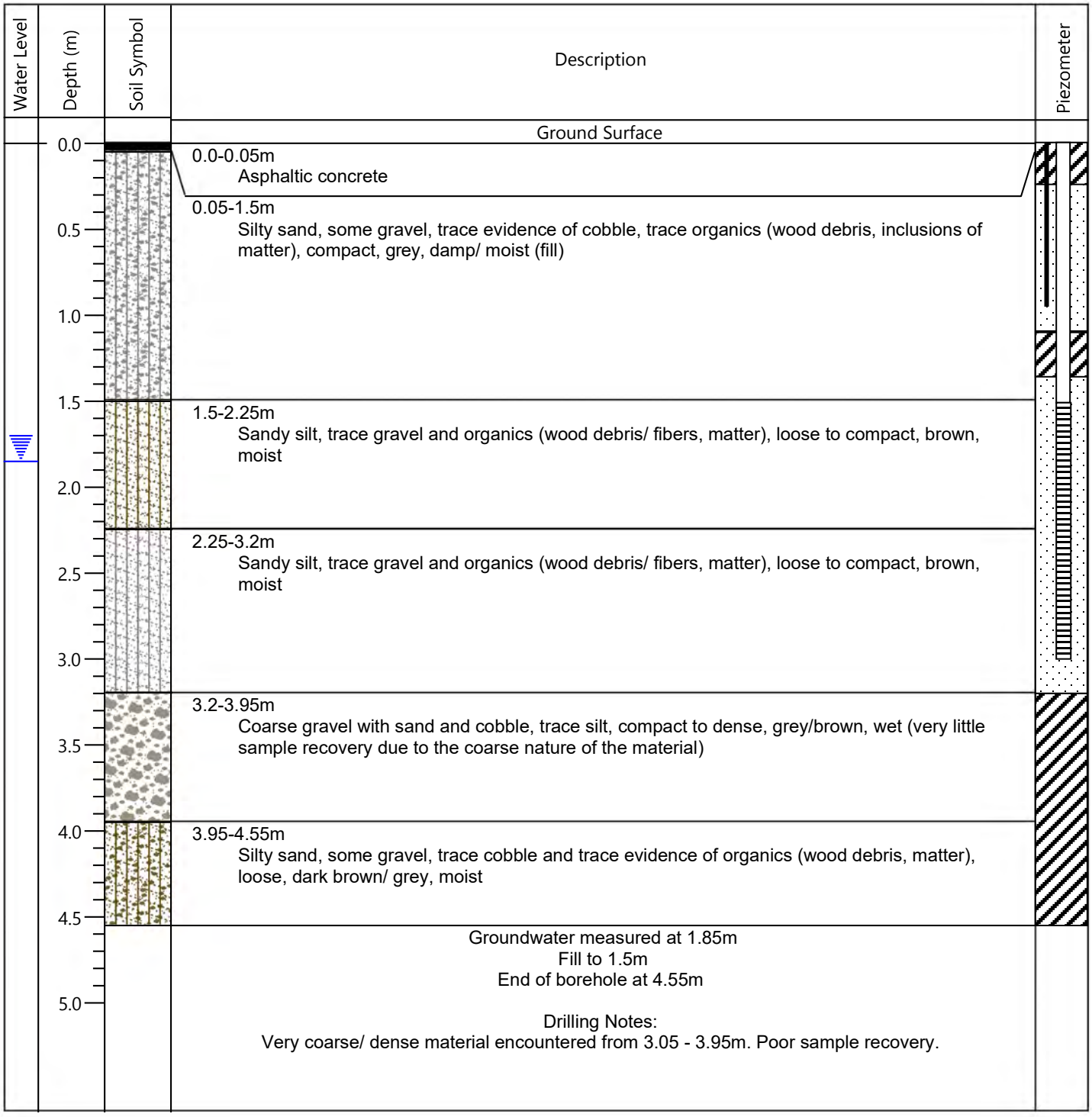
Date: October 8, 2021
Page 1 of 1

1900 Boxwood Road
Nanaimo, BC, V9S 5Y2
Phone: 250-756-0355
Fax: 250-756-3831
Email: geotech@lewkowich.com

Lewkowich Engineering Associates Ltd.

BOREHOLE LOG

File Number: F1188-386 BH21-02
Client: Courtenay Airpark Association (CAA)
Project: Baseline Investigation
Location: 100 - 20th Street, Courtenay, BC



Logged By: Paul Simmons Date: October 8, 2021
Reviewed By: Tabitha Zoche Page 1 of 1
Digging Method: Drill Rig - F550 Mobile Drill Rig

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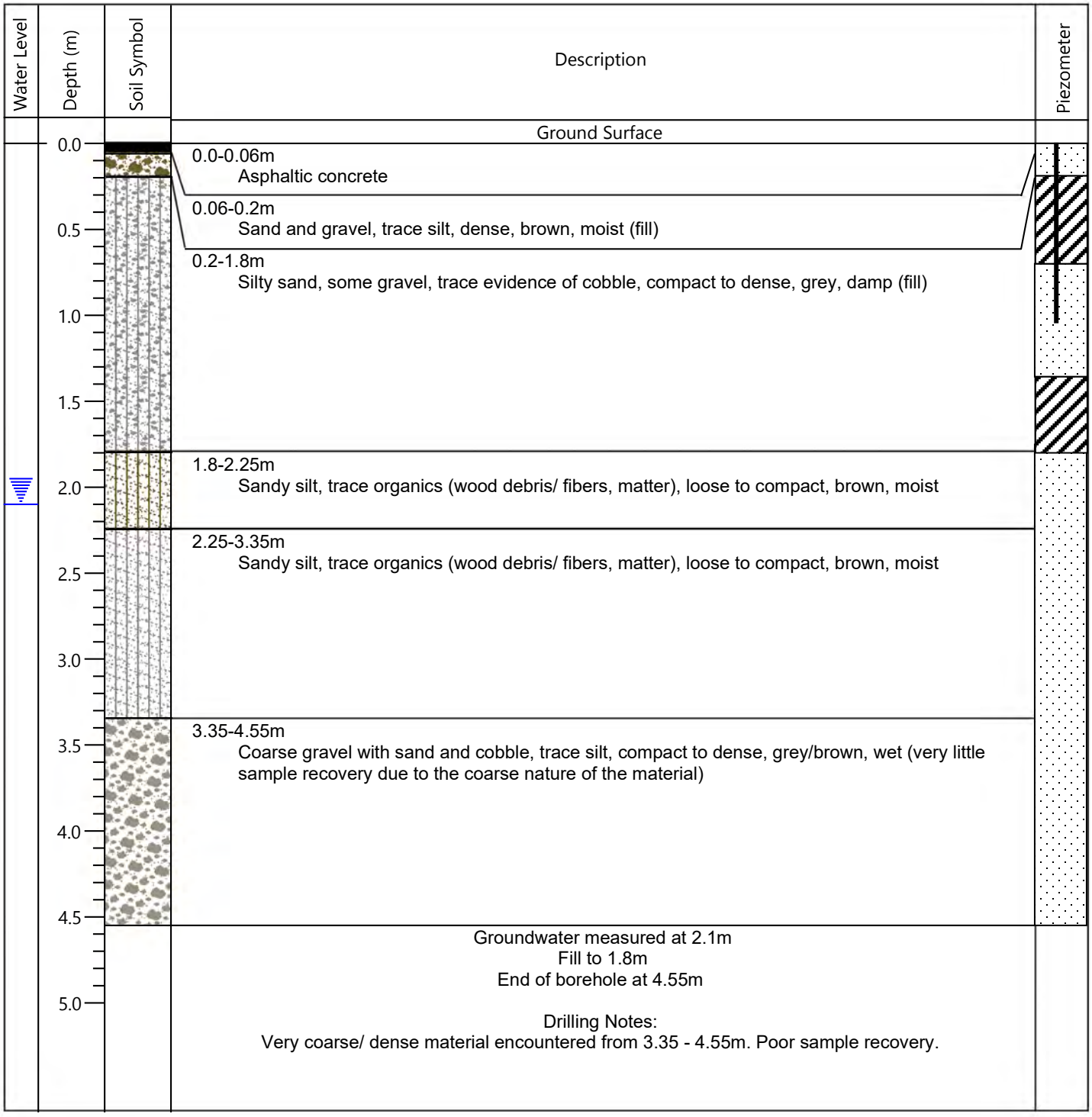
Lewkowich Engineering Associates Ltd.

BOREHOLE LOG

File Number: F1188-386 BH21-03
Client: Courtenay Airpark Association (CAA)
Project: Baseline Investigation
Location: 100 - 20th Street, Courtenay, BC



Logged By: Paul Simmons
Reviewed By: Tabitha Zoche
Digging Method: Drill Rig - F550 Mobile Drill Rig

Date: October 8, 2021
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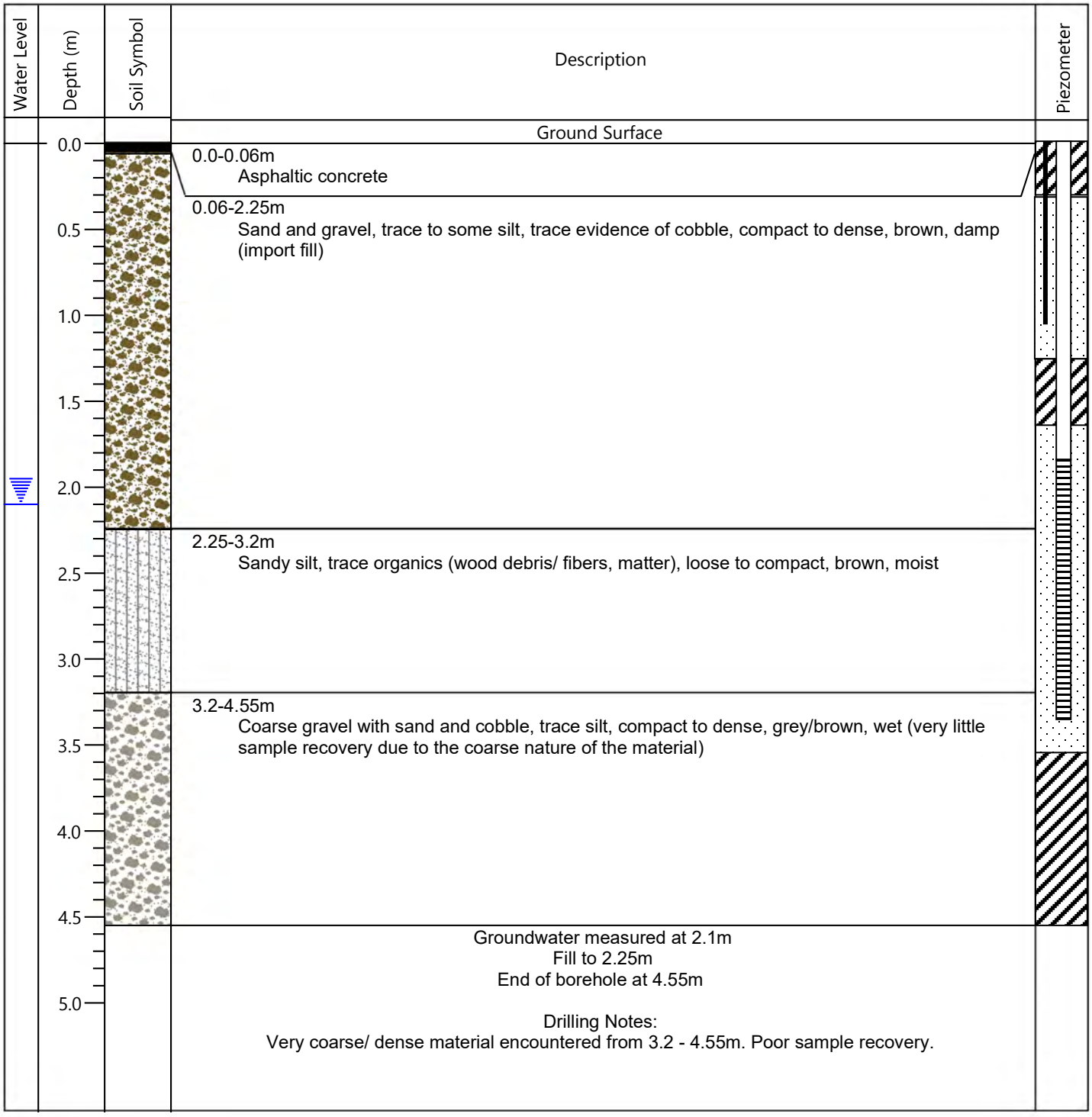
BOREHOLE LOG

File Number: F1188-386 BH21-04
Client: Courtenay Airpark Association (CAA)
Project: Baseline Investigation
Location: 100 - 20th Street, Courtenay, BC



Logged By: Paul Simmons
Reviewed By: Tabitha Zoche
Digging Method: Drill Rig - F550 Mobile Drill Rig

Date: October 8, 2021
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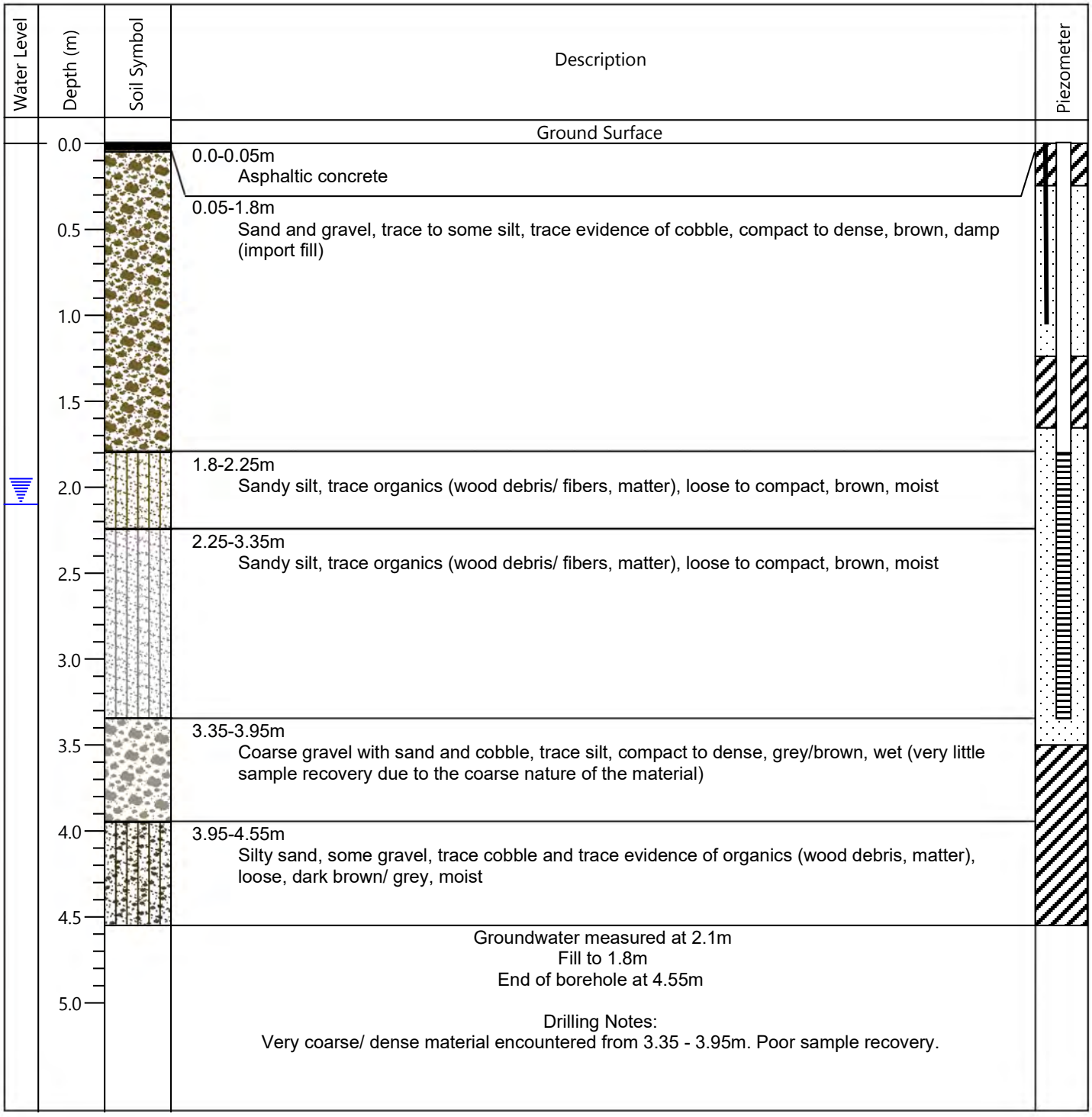
BOREHOLE LOG

File Number: F1188-386 BH21-05
Client: Courtenay Airpark Association (CAA)
Project: Baseline Investigation
Location: 100 - 20th Street, Courtenay, BC



Logged By: Paul Simmons
Reviewed By: Tabitha Zoche
Digging Method: Drill Rig - F550 Mobile Drill Rig

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