Phase II Environmental Site Assessment (ESA)

P.P.M.C Gill Ltd.

Type of Document:
Final

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1965 Sumas Way, Abbotsford, BC – Phase II ESA

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Date submitted:
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Executive Summary

EXP Services Inc. (EXP) was retained by P.P.M.C Gill Ltd. (the "Client") to conduct a Phase II Environmental Site Assessment (ESA) at the property located at 1965 Sumas Way, Abbotsford, BC (herein referred to as the "Site"). Currently, the on-site commercial building has been occupied by a restaurant (Wings).

EXP understands that the Phase II ESA was requested by the Client for due diligence and financing purposes, prior to the purchase of the Site.

The objective of the Phase II ESA was to determine presence or absence of any sub-surface (soil, groundwater, and vapour) contamination targeting updated list of three off-site and one on-site Areas of Potential Environmental Concern (APECs) and associated Potential Contaminants of Concern (PCOCs) which were identified in Levelton's 2013 Stage 1 Preliminary Site Investigation report #R613-0319-00, dated March 13, 2013, for the Site. The APEC list was updated by EXP during this investigation.

The Phase II ESA report has been prepared in general accordance with the guidelines of Canadian Standards Association (CSA), Canadian Mortgage and Housing Corporation (CMHC) and requirements of BC Contaminated Sites Regulation (CSR). EXP understands that the report is not intended for review by the BC Ministry of Environment and Climate Change Strategy (MOECCS) and the project Approved Professional (AP) to obtain a "release" or Approval in Principle (AiP) or Certificate of Compliance (CoC), if required for the Site.

Historical Site Development

According to Levelton's 2013 Stage 1 PSI report, prior to the early 1950s, the Site was occupied by a residential dwelling within its eastern portion. Associated with former residential dwelling at the Site, Levelton suspected the presence of a heating oil underground storage tank (UST) at the Site. Circa 1974, the Site was vacant. Circa 1983, the Site was occupied by storage containers and parked vehicles. The Site was developed with the existing building circa 1988 and was occupied by Smittys Family Restaurant until 2000. Since about 2008, the on-site building has been occupied by Wings Restaurant.

Updated List of On-site and Off-site APECs

Levelton's 2013 Stage 1 PSI report indicated that there were no on-site APECs with potential to cause subsurface contamination at the Site. However, as listed below, the report identified an off-site APEC #1 associated with an operating Shell gas station, immediately north of the Site. Furthermore, EXP has considered the off-site Petro-Canada gas station and Great Canadian Oil Change operations, located upgradient and northeast and east of the Site, as two additional off-site APECs #2 and #3. In addition, on-site suspected deposition of imported fill of unknown quality was considered an on-site APEC #4. The upgraded list of on-site and off-site APECs and associated PCOCs are listed in a table below.

APEC #	Description	PCOCs in Soil & Groundwater	PCOCs in Vapour
APEC #1 (Off-site)	An active Shell gas station at 1989 Sumas Way, located immediately north of the Site.	Fuel VOCs (including BTEX, MTBE, and VPH), LEPH/HEPH, PAHs, and lead.	Fuel related VOCv and VPHv
APEC #2 (Off-site)	An active Petro-Canada gas station at 1990 Sumas Way, located upgradient and northeast of the site.	Fuel VOCs (including BTEX, MTBE, and VPH), LEPH/HEPH, PAHs, and lead.	Fuel related VOCv and VPHv
APEC #3 (Off-site)	An existing Great Canadian Oil Change facility at 1970 Sumas Way, located upgradient and east of the site.	Fuel VOCs (including BTEX, MTBE, and VPH), LEPH/HEPH, PAHs, and metals	VOCv and VPHv

APEC #	Description	PCOCs in Soil & Groundwater	PCOCs in Vapour
APEC #4 (On-site)	Deposition of suspect quality imported fill at the site during its development in the past.	*VOCs (including BTEX, MTBE, and VPH), LEPH/HEPH, PAHs, and metals	*VOCv and VPHv

BTEX = Benzene, Toluene, Ethylbenzene and Xylenes in soil and groundwater.
VPH = Volatile Petroleum Hydrocarbons in soil and groundwater.
VPHv = Volatile Petroleum Hydrocarbons in vapour.
VOCs = Volatile Organic Compound in soil and groundwater.
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LEPH/HEPH = Light/Heavy Extractable Petroleum Hydrocarbons in soil and groundwater.
PAHs = Polycyclic Aromatic Hydrocarbons in soil and groundwater.
MTBE — Methyl Tertiary Butyl Ether in soil and groundwater
*VOCs – VOCs parameters will be tested based on the field screening of fill soil samples.

Applicable Regulatory Standards

At the time of preparation of this report, the Site was zoned as Community Commercial Zone (C-3). The current land-use at the Site grade is commercial. The future anticipated land use at the Site will be commercial as the Client wants to continue to use the Site as a restaurant. Therefore, stringent BC CSR Commercial Land (CL) standards would apply at the Site as set out in Schedule 3.1. For groundwater, stringent of the CSR Drinking Water (DW) use and Freshwater Aquatic Life (AWf) standards are determined to apply at the Site. For vapour, the CSR CL vapour standards would apply for the Site current configuration.

Phase II ESA Methodology

EXP methodology for the Phase II ESA included drilling of two deep boreholes (24-BH1 and 24-BH2), and one shallow borehole (24-BH3). Both the deep boreholes were converted as monitoring wells (24-MW1 and 24-MW3) targeting the identified off-site APECs 1 to 3. Soil samples from the newly advanced three boreholes and groundwater samples from two newly installed monitoring wells were tested for identified PCOCs and their analytical results were compared with the BC CSR standards applicable at the Site for its current and anticipated future land use.

Hydrogeology

Based on the information collected during EXP's Phase II ESA at the Site, a shallow confined aquifer with groundwater potentiometric heads varying from 3 m bgs (near the Site elevated eastern boundary) to 2.5 m bgs (near the Site low-lying western boundary) were measured on June 4, 2024. Groundwater is present within the native layer of sand which is confined between overlying layer of brown silt and underlying silt and sandy till. A southwesterly groundwater flow was inferred at the Site based on the Site and regional topography.

Conclusions

Based on the information collected during the Phase II ESA, EXP concludes the following:

1. Currently, native soils within the Site meet the CSR Commercial Land (CL) standards for all investigated PCOCs associated with on-site and off-site APECs # 1 to 3.
2. Similarly, suspected fill soil within the Site met the CSR CL standards and/or regional background concentrations for the investigated metals.
3. Concentrations of all tested PCOCs in groundwater at two on-site monitoring wells met the CSR AWf and DW standards suggesting that currently potential migration of PCOCs from off-site APECs 1 to 3 is negligible causing any significant groundwater contamination at the Site.
4. During EXP's Phase II ESA, no detectable concentrations of volatile parameters were identified in any of the analyzed soil and groundwater samples. Furthermore, the measured non-detect vapour reading in the

installed vapor probe (24-VP1) suggested that there was no migration of suspected vapour plume from the adjoining off-site APEC #1. As such, a soil vapour assessment was not considered at the Site due to low potential for the presence of a vapour plume at the Site.

Recommendations

EXP recommends the following:

1. Based on the Phase II ESA findings and conclusions, EXP doesn't consider a further subsurface (soil, groundwater, and vapour) investigation at the Site due to identified on-site and off-site APECs #1 to 4.
2. If any additional or suspect (potentially contaminated) materials or hidden source(s) of contamination are encountered at the Site during the future redevelopment or excavations at the Site, a qualified environmental consultant should be retained to review, characterize, and manage such materials and/or to investigate the source (s).
3. EXP should be retained to re-evaluate its conclusions and recommendations if the applicable regulations and/or on-site conditions change.
4. According to the BC Groundwater Protection Regulation (effective November 2005) under the BC Water Sustainability Act, any water wells that have not been used for more than 5 years, should be deactivated, or decommissioned since such water wells pose a preferential pathway for contaminant migration to the underlying aquifer(s).
5. Due to age of the on-site buildings (constructed in 1988), hazardous building materials such as asbestos containing materials (ACMs), lead-based paints and fluorescent lighting fixtures likely having PCBs containing ballasts are suspected to be present within the on-site building. Therefore, prior to any renovation or demolition of the on-site building, a hazardous building survey is recommended to ascertain the presence or absence of any ACMs or lead-based paints or PCB containing ballasts within the buildings. ACMs, lead-based paints, and PCB containing ballasts must be handled and managed in accordance with WorkSafeBC Occupational Health and Safety Regulation and disposed of in accordance with the BC Hazardous Waste Regulation.

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1 Introduction

EXP Services Inc. (EXP) was retained by P.P.M.C Gill Ltd. (the "Client") to conduct a Phase II Environmental Site Assessment (ESA) at the property located at 1965 Sumas Way, Abbotsford, BC (herein referred to as the "Site"). Currently, the on-site commercial building has been occupied by a restaurant (Wings).

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The Phase II ESA report has been prepared in general accordance with the guidelines of Canadian Standards Association (CSA), Canadian Mortgage and Housing Corporation (CMHC) and requirements of BC Contaminated Sites Regulation (CSR). EXP understands that the report is not intended for review by the BC Ministry of Environment and Climate Change Strategy (MOECCS) and the project Approved Professional (AP) to obtain a "release" or Approval in Principle (AiP) or Certificate of Compliance (CoC), if required for the Site.

2 Site Description

The commercial zoned Site is comprised of a legal lot #B with a civic #1965 Sumas Way and is located on west side of Sumas Way near its intersection with Marshall Road in Abbotsford, BC. The commercial building at the Site is currently occupied by a Wings Restaurant. A Site Plan (Figure 2) showing the Site current configuration is attached with this report.

The civic address and associated legal description for the Site are listed in a table below:

Table 1: Site Information	
Env. Site ID	None
Civic Addresses	1965 Sumas Way, Abbotsford, BC
Legal Address	Lot B Section 14, Township 16, Part SW1/4, NWD Plan 78151
PID	011-423-027
Latitude/Longitude	49° 2'13.47"N, 122°16'6.98"W (Approximate centroid of the Site)
Site Area	1615.76 m2
Current Zoning	Community Commercial Zone (C-3)

* Source – Google Earth™

2.1 Proposed Site Development

According to the Client, if he buys the Site, he has no plan to alter the existing land use at the Site.

2.2 Regulatory Framework

In British Columbia the following provincial Act and regulations address the contaminated sites:

- Environmental Management Act (EMA), [SBC 2003], Chapter 53 assented to October 23, 2003.
- Contaminated Sites Regulation (CSR) Reg. 375/96 [includes amendments up to B.C. Reg. 133/2022, March 1, 2023]. British Columbia Ministry of Environment and Climate Change Strategy.

- Hazardous Waste Regulation (HWR) (BC Reg. 63/88 O.C. 268/88, including amendments up to BC Regulation 64/2021, March 11, 2021).

3 Scope of Work

The scope of work for the Phase II ESA, as per EXP's Proposal (999-24006323-PP), consists of the following:

- Review of previous report completed for the Site by others;
- Redefine the previously identified list of APECs and PCOCs as per current conditions at the Site and surrounding properties;
- Prepare drilling and sampling plans to investigate the identified on-site and off-site APECs;
- Prepare a project-specific health and safety plan;
- Complete a BC One Call, prior to conducting the field work;
- Retain a utility locator to mark the underground utility and suspected presence of heating oil UST at the Site, prior to the drilling;
- Retain a drilling company to advance three (3) boreholes with a Sonic rig and complete two (2) deep boreholes as groundwater monitoring wells;
- Install a vapour probe, nested with the monitoring well, located close to adjoining Shell gas station;
- Log the encountered soil stratigraphy at the borehole locations;
- Collect and field screen soil samples using a gas detector (sensitive to VOCs) to select soil samples for laboratory analysis;
- Submit soil samples (including appropriate number of field duplicates) to a Canadian Association of Accredited Laboratories (CALA) accredited laboratory for analyses of the PCOCs (VOCs including BTEX/VPHs, LEPHs/HEPHs/PAHs, and metals;
- Develop two newly installed monitoring wells using dedicated disposable bailers on the same day of their installation;
- Collect groundwater samples after 24 hours of well development using dedicated bailers and submit the samples to a CALA-certified laboratory for analyses of PCOCs (VOCs including BTEX/VPHw/VHw, LEPHw/EPHw/PAHs, and dissolved metals).
- Conduct horizontal survey for borehole and monitoring well locations;
- Tabulate the soil and groundwater analytical results and compare to the BC CSR standards applicable at the Site;
- Estimate vapour concentrations by modeling from the detectable concentrations of volatile parameters in soil and groundwater, if required; and
- Prepare a Phase II ESA report including EXP conclusions and recommendations.

4 Site Current Information

4.1 Current Title and Legal Plan

EXP retained West Coast Title Search (WCTS) to provide current legal plan and current land tittle document for the Site. Copy of the legal plan and current title document are attached in Appendix B. According to the current land title document, the Site has been registered for Ventech Capital Corporation, (Inc.# 336048) since December 2007.

4.2 Current Environmental Site Registry Search

A current on-line search of the BC Online Site Registry was conducted on May 29, 2024. The search was conducted for listed properties within a 500m radius of the Site. The Site address did not appear in the search record. However, seven (7) listed property were identified within a 500m radius of the Site. The following table provides details of the listed properties and their proximity and potential risk to the Site. A copy of the Site Registry document is included in Appendix B.

Table 2: Listed Properties in Environmental Site Registry

Site ID	Listed Property Address	Distance from Site	Location with Respect to Inferred Groundwater Flow Direction	Environmental Risk to the Site
3993	34416 MARSHAL ROAD AND 34455 DELAIR ROAD, ABBOTSFORD	Adjacent to the southwest of the Site	Down-gradient	Low
5349	1990 SUMAS WAY, ABBOTSFORD	Approx. 50 m, Northeast	Up-gradient	Moderate to high
5771	2010 SUMAS WAY, ABBOTSFORD	Approx. 90 m, North	Cross-gradient	Low
7363	15 - 2047 SUMAS WAY, ABBOTSFORD	Approx. 130 m, Northwest	Cross-gradient	Low
10330	1733 RIVERSIDE DRIVE, ABBOTSFORD	Approx. 430 m, Southwest	Down-gradient	Low
13795	1799 RIVERSIDE ROAD, ABBOTSFORD	Approx. 350 m, Southwest	Down-gradient	Low
25698	34314 MARSHALL ROAD, ABBOTSFORD	Approx. 400 m, West	Cross-gradient	Low

4.3 Site and Surrounding Area Current Observations

On June 3, 2024, an EXP representative conducted a Site visit to assess the current conditions at the Site. Mr. Matteo Siniscalchi, B.Tech., conducted the current Site and surrounding area reconnaissance. In general, the environmental management and housekeeping practices at the Site were noted as part of this assessment to determine any additional on-site and off-site sources of potential environmental contamination at the Site since the Stage 1 PSI completed by Levelton at the Site in 2013. The Site and the adjoining properties were observed from the Site and/or publicly accessible areas. Selected photographs taken during the Site and surrounding area visit are included in Appendix A. Observations and the Site current conditions are discussed in the following sections.

Subject Site

- The Site, consisting of an irregular shaped parcel, was located at the west side of Sumas Way in Abbotsford, BC.
- The Site was accessible from Sumas Way which bounds the Site to the east.

- The Site slopes down from the northern corner to the southern corner by about 2m.
- Occupied by a Wings Restaurant, the on-site building was located within the northern portion of the Site. The building has an underground parking with at-grade access from the building's west side.
- The Site area surrounding the Site building to the south, southeast and southwest was asphalt-paved for outdoor parking.
- The adjoining property (1989 Sumas Way) to the northwest was occupied by an active Shell gas station. The property further to the northwest (1999 Sumas Way) was occupied by an active Chevron gas station.
- An active Petro Canada gas station and a Great Canadian oil change/carwash facility was noted northeast and east (across Sumas Way) and upgradient of the Site.
- The adjoining property to the west and southwest was vacant land covered with grass/bushes.
- The adjoining property to the south was occupied by an office building.

5 Previous Investigation Report Review

The Client provided to EXP a copy of following previous environmental investigation report for the Site.

1. *Stage I Preliminary Site Investigation report #R613-0319-00 dated March 13, 2013, at 1965 Sumas Way, Abbotsford,* British Columbia for Ventech Capital Corporation, prepared by Levelton Consultants Ltd.

EXP relied on Levelton's 2013 Stage I PSI for the Site. Relevant review findings of Levelton's 2013 Stage 1 PSI report are discussed in the following sections.

5.1 Historical Site Development

According to Levelton's 2013 Stage 1 PSI report, prior to the early 1950s, the Site was occupied by a residential dwelling within its eastern portion. Associated with former residential dwelling at the Site, Levelton suspected the presence of a heating oil underground storage tank (UST) at the Site. Circa 1974, the Site was vacant. Circa 1983, the Site was occupied by storage containers and parked vehicles. The Site was developed with the existing building circa 1988 and was occupied by Smittys Family Restaurant until 2000. Since about 2008, the on-site building has been occupied by Wings Restaurant.

5.2 Identified APECs and PCOCs

Levelton's 2013 Stage 1 PSI report indicated that there were no on-site Areas of Potential Environmental Concern (APECs) with potential to cause subsurface contamination at the Site. However, as listed below, the Levelton's report identified an off-site APEC #1 associated with an operating Shell gas station, immediately north of the Site. Levelton did not recommend an intrusive subsurface investigation (Phase II ESA) at the Site at that stage.

EXP has considered the currently existing off-site Petro-Canada gas station and Great Canadian oil-change/carwash operations, located upgradient and northeast and east of the Site, as two additional off-site APECs #2 and #3. In addition, on-site suspected deposition of imported fill of unknown quality was considered an on-site APEC #4. The upgraded list of on-site and off-site APECs and associated Potential Contaminants of Concern (PCOCs) are listed in a table below.

Table 3: Updated List of On-site and Off-site APECs

APEC #	Description	PCOCs in Soil & Groundwater	PCOCs in Vapour
APEC #1 (Off-site)	An active Shell gas station at 1989 Sumas Way, located immediately north of the Site.	Fuel VOCs (including BTEX, MTBE, and VPH), LEPH/HEPH, PAHs, and lead.	Fuel related VOCv and VPHv

Table 3: Updated List of On-site and Off-site APECs			
APEC #	**Description**	**PCOCs in Soil & Groundwater**	**PCOCs in Vapour**
APEC #2 (Off-site)	An active Petro-Canada gas station at 1990 Sumas Way, located upgradient and northeast of the site.	Fuel VOCs (including BTEX, MTBE, and VPH), LEPH/HEPH, PAHs, and lead.	Fuel related VOCv and VPHv
APEC #3 (Off-site)	An existing Great Canadian Oil Change facility at 1970 Sumas Way, located upgradient and east of the site.	Fuel VOCs (including BTEX, MTBE, and VPH), LEPH/HEPH, PAHs, and metals	VOCv and VPHv
APEC #4 (On-site)	Deposition of suspect quality imported fill at the Site during its development in the past.	*VOCs (including BTEX, MTBE, and VPH), LEPH/HEPH, PAHs, and metals	*VOCv and VPHv

BTEX = Benzene, Toluene, Ethylbenzene and Xylenes in soil and groundwater.
VPH = Volatile Petroleum Hydrocarbons in soil and groundwater.
VPHv = Volatile Petroleum Hydrocarbons in vapour.
VOCs = Volatile Organic Compound in soil and groundwater.
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PAHs = Polycyclic Aromatic Hydrocarbons in soil and groundwater.
MTBE — Methyl Tertiary Butyl Ether in soil and groundwater
*VOCs – VOCs parameters will be tested based on the field screening of fill soil samples.

6 Determination of Applicable Standards

Prior to determining the applicable standards at the Site, EXP collected and reviewed the following required information for the Site.

6.1 Site and Regional Topography

EXP accessed the iMapBC web-map to identify the Site and regional topography. According to the web-map, the Site, and its surrounding area slopes moderately from northeast to southwest charging a nearest surface water body, Marshall Creek, which is located about 275 m from the Site's southwestern boundary. Figure 3, attached with this report, shows the Site and the surrounding area topography.

6.2 Water Well and Aquifer

EXP completed a water well search within a 500 m radius of the Site on BC MOECCS Water Resources Atlas database. According to the Aquifers and Water Wells database, a total of 16 water wells are located within a 500 m radius of the Site.

The above database also indicated that a mapped aquifer with ID number 969 is present underneath the Site area with moderate vulnerability and productivity. Detailed information about the aquifer is listed in the table below.

Table 4: Aquifer Information						
#	**Descriptive Location**	**Aquifer Name**	**Stratigraphic Unit**	**Material Type**	**Year of Mapping**	**Size**
969	Sumas Mountain	969	Sedimentary rk; Kitsilano Formation; Cenozoic Era	Bedrock	2012	21.5 km^2

6.3 Applicable Standards

At the time of preparation of this report, the Site was zoned as Community Commercial Zone (C-3). The current land-use at the Site grade is commercial. The future anticipated land use at the Site will be commercial as the Client wants to continue to use the Site as a restaurant. Therefore, stringent BC CSR Commercial Land (CL) standards would apply at the Site as set out in Schedule 3.1.

If soil contamination with BTEX, PAHs, leachable metals or tetrachloroethylene is identified, the BC Hazardous Waste Regulation (HWR) standards/criteria will apply to characterize the soil as hazardous waste. In determining the soil contamination with metals, their regional background concentration will also be considered as listed in BC MOECCS's Protocol 4.

For groundwater, the stringent of the CSR Drinking Water (DW) use and Freshwater Aquatic Life (AWf) standards would apply. In addition to the above, CSR groundwater standards for EPHw(10-19) and VHw(6-10) apply to all sites irrespective of water uses. Furthermore, none of the CSR Schedule 2 activities listed in CSR Schedule 3.2, notes 43, 44, 46 and 47 have occurred at the Site; therefore, dissolved iron and manganese standards do not apply at the Site. In determining groundwater contamination with dissolved metals, their regional background concentration will also be considered as listed in BC MOECCS's Protocol 9.

For vapour, the CSR CL vapour standards would apply for the Site current configuration.

While applying the above-described soil, groundwater and vapour standards, the various Site-specific factors and nearest receptor and water uses taken into consideration are described in the following Table 5.

Table 5: Applicable Regulatory Standards

CSR Standard	Site-Specific Factor	Applicability	Rationale
Schedule 3.1 Part 1 Commercial Land Uses (CL)	Intake of contaminated soil	Yes	Applicable to all sites
	Groundwater used for drinking water	Yes	No drinking water well is present at the Site. However, a number of water wells are present within 100m upgradient and 500m cross/down gradient of the Site. Furthermore, DW standards are considered applicable at the Site for the protection of underlying mapped aquifer, pending hydrogeological investigation at the Site.
	Toxicity to soil invertebrates and plants	Yes	Applicable to all sites.
	Livestock ingesting soil and fodder	No	The Site surrounding area is not used for agricultural use.
	Major microbial functional impairment	Yes	Applicable to all sites
	Groundwater flow to surface water used by aquatic life – freshwater	Yes	A freshwater surface waterbody, Marshall Creek, is located about 275 m southwest (downgradient) of the Site.
	Groundwater flow to surface water used by aquatic life – marine	No	No marine aquatic receptor is present within 500 m from the Site.
	Groundwater used for livestock watering and irrigation	No	No livestock water well appear to be present within 100 m upgradient and 500 m downgradient of the Site.

Table 5: Applicable Regulatory Standards			
CSR Standard	**Site-Specific Factor**	**Applicability**	**Rationale**
	Groundwater used for irrigation	No	No irrigation water well appears to be present within 100 m upgradient and 500 m downgradient of the Site.
Schedule 3.1 Part 2 and 3	Commercial Land Uses (CL)	Yes	Current and future zoning and land use of the Site.
CSR Schedule 3.2	Aquatic Life – Freshwater (AW_f)	Yes	A freshwater surface waterbody, Marshall Creek, is located about 275 m southwest (downgradient) of the Site.
	Aquatic Life – Marine (AW_m)	No	No marine aquatic receptor is present within 500 m from the Site.
	Livestock (LW)	No	No livestock water well appear to be present within 100 m upgradient and 500 m downgradient of the Site.
	Irrigation (IW)	No	No irrigation water well appears to be present within 100 m upgradient and 500 m downgradient of the Site.
	Drinking Water (DW)	Yes	No drinking water well is present at the Site. However, a number of water wells are present within 100m upgradient and 500m cross/down gradient of the Site. Furthermore, DW standards are considered applicable at the Site for the protection of underlying mapped aquifer, pending hydrogeological investigation at the Site.
CSR Schedule 3.3	Commercial Land Use (CL)	Yes	Current and future zoning and land use of the Site.
CSR Schedule 3.4	Sensitive and typical freshwater and marine and estuarine sediments	No	No sediments are present on or adjacent to the Site.

7 Quality Assurance and Quality Control Plans

EXP included a Quality Control/Quality Assurance (QA/QC) component while preparing a sampling plan to provide a reliability to the field data collected from the Site. The following sections briefly describe the field, laboratory, and analytical data QA/QC components.

7.1 Field QA/QC

Good working condition of the field equipment was maintained. All equipment were calibrated prior to their use. Equipment was cleaned in the field between each sampling location. All tools were cleaned between samples. New powder-free nitrile gloves were used for each sample collected. All sample containers were provided by the laboratory which were pre-cleaned and sterilized and were appropriate for the parameters analyzed. All sample containers were labelled with EXP name, their respective sampling location identification, date, and project reference number. Samples were kept cool by storing and transporting them in a laboratory-supplied cooler containing ice packs. Field duplicates were collected during the investigation program to check for field related bias. A chain-of-custody protocol was followed while delivering the samples to the project laboratory. Blind duplicates were tested

to check for laboratory bias. All aspects of EXP's field work were performed in general conformance with the BC MOECCS's guidelines. Standard measures were employed to prevent VOC losses.

7.2 Laboratory QA/QC

CARO employs methods which are conducted according to procedures accepted by BC MOECCS and are conducted in accordance with recognized professional standards using accepted testing methodology and quality control protocols. In general, Caro manages the pre-and-post extraction holding times of the samples through their Laboratory Information Management System, which allows tracking of expiration times. CARO's analysts are aware of expiration times and monitor workloads accordingly. If a sample is analyzed past holding time, the result is qualified on the report. Post extraction holding times vary according to the analytical test method and CARO follows the procedures outlined in these methods.

ALS routinely analyses laboratory replicates, standard reference materials and method blanks as part of its internal QA/QC program. CARO also determines matrix spike recoveries (only for water samples) and surrogate spike recoveries (soil and water samples for volatiles and polycyclic aromatic hydrocarbons). Analytical results are compared to internal data quality objectives and results not meeting their internal QA/QC criteria are flagged. The laboratory results are reviewed by the laboratory chief project chemist and results are released when the data meets the internal data quality objectives of Caro.

CARO follows a system for evaluating the potential for systematic bias during the sample preparation and analysis. CARO's procedures are in place to remove any potential biases; these include anonymous sample IDs, as well as matrix spikes designed; to monitor effectiveness of the preparation. Furthermore, confirmation of procedure is obtained through laboratory duplicates. As a final process, sample preparation and analysis are performed by different analysts to check for technician bias.

7.3 Analytical Data QA/QC

The analytical program conducted by the laboratory included the analytical test group-specific QA/QC measures to evaluate the accuracy and precision of the analytical results and the efficiency of analyte recovery during solute extraction procedures. The QA/QC program consisted of the preparation and analysis of laboratory duplicate samples to assess precision and sample homogeneity, method blanks to assess analytical bias, spiked blanks, and QC standards to evaluate analyte recovery, matrix spikes to evaluate matrix interferences and surrogate compound recoveries to evaluate extraction efficiency. The laboratory QA/QC results are presented in the Quality Assurance Report provided in the Certificates of Analysis prepared by the laboratory. The QA/QC results are reported as percent recoveries for matrix spikes, spike blanks and QC standards, relative percent difference for laboratory duplicates and analyte concentrations for method blanks.

The Relative Percent Difference (RPDs) was calculated to compare the differences between a sample and its duplicate. RPD quantifies the reproducibility or precision of the data. RPD is calculated by taking the absolute value of the difference between the sample and the duplicate, dividing it by the average of the sample and duplicate, and then multiplied by 100 to obtain a percentage.

$$RPD = \frac{|\text{Sample Concentration} - \text{Duplicate Concentration}|}{\left(\frac{\text{Sample Concentration} + \text{Duplicate Concentration}}{2}\right)} * 100\%$$

BC Environmental Laboratory Manual (2020) (BC ELM) recommends that further review is conducted for RPD values greater than 35% in soil or 20% in groundwater. If the concentration of the analyte is less than five (5) times the method detection limit, or if the analyte is a metal in soil, then an RPD greater than 35% may be reasonable. Furthermore, due to sensitivities of the RPD formula to small data, elevated RPD values may be discounted where sample and duplicate concentrations were less than five (5) times the laboratory detection limit. If the RPD is greater

than 50% in soil or groundwater, it is generally necessary to determine the cause and how it affects the findings of the investigation. However, for the current study, and consistent with standard industry practice, the variability triggering further action was raised to 30% in groundwater samples and 50% in soil samples. For soil-vapour, though a recommendation is not provided by BC ELM, further review is conducted where RPD values exceed 100%.

EXP analyzed a minimum of one (1) duplicate for every ten (10) analyzed soil and groundwater samples. Results of the field QA/QC for soil and groundwater samples collected during this investigation are discussed in Section 11.

8 Field Methodology and Observations

8.1 Field Work Schedule

The schedule of fieldwork completed at the Site is listed in the table below:

Table 6: Fieldwork Schedule

Date	Scope of Work
3 June 2024	Locate underground utilities at the Site.
3 June 2024	Drill three boreholes (24-BH1 to 24-BH3) and convert two deep boreholes as monitoring wells 24-MW1 and 24-MW2.
3 June 2024	Develop both the newly installed monitoring wells 24-MW1 and 24-MW2.
3 June 2024	Complete horizontal surveys of borehole and monitoring well locations.
4 June 2024	Collect groundwater samples at monitoring wells 24-MW1 and 24-MW2 and measure vapor readings in apor probe (24-VP1) tubing.

8.2 Health and Safety Plan

Prior to initiating the field activities, a Site-Specific Health and Safety plan was prepared in accordance with EXP internal Health and Safety program as well as required by WorkSafe BC. The Health and Safety plan was implemented at the Site prior to the commencement of field activity on each day at the Site.

8.3 Underground Utility Locate

Prior to the commencement of subsurface drilling operation, EXP made a BC One-Call to notify and obtain information about the underground utilities present within and in the vicinity of the Site. All obtained information and documents were provided to Accurate Locates Limited (Accurate) of Abbotsford, BC, which was retained by EXP to physically mark all underground utilities at the Site as well as near the proposed borehole locations. Accurate completed the utility locate operation at the Site on June 3, 2024, by using electromagnetic and ground-penetrating radar (GPR) technologies. A utility locate report provided by Accurate is included in Appendix B.

8.4 Drilling and Sampling Rationale

Targeting the identified three off-site and one-on-site APECs, on June 3, 2024, a total of three (3) boreholes (24-BH1 to 24-BH3) were drilled at the Site to depths ranging from 1.5 mbgs to 12 mbgs under the full-time supervision of EXP field staff. Drilling was completed using a truck-mounted Sonic drill rig, operated and provided by Blue Max Drilling Inc. Deep boreholes 24-BH1 and 24-BH2 were advanced approximately 6.1 to 12.2m mbgs, respectively. Borehole 24-BH3 was advanced to a shallow depth of 1.5 mbgs targeting the fill soil. Both the deep boreholes were converted as monitoring wells 24-MW1 and 24-MW2.

The approximate locations of the newly installed monitoring wells are presented on Figure 6 attached with this report. Selected photographs captured during borehole drilling and well installation are included in Appendix A. Borehole logs showing a detailed description of identified soil lithology and well construction are attached in Appendix C.

During the Phase II ESA, EXP followed the following drilling and sampling rationale while investigating the identified off-site and on-site APECs.

Table 7: Drilling and Sampling Rationale

APEC #	APEC Description	Drilling & Sampling Rationale
APEC #1 (off-site)	An active Shell gas station at 1989 Sumas Way, located immediately north of the site.	▪ Advance/install an on-site borehole/monitoring wells (24-BH/MW/VP1) at the Site western corner and down gradient of APEC #1. Test soil samples at water depth and groundwater for PCOCs related to this APEC. ▪ Measure vapour reading in the installed vapor probe 24-VP1.
APECs #2 (off-site)	An active Petro-Canada gas station at 1990 Sumas Way, located upgradient and northeast of the site.	▪ Advance/install an on-site borehole/monitoring wells (24-BH/MW2) near the Site mid-eastern boundary and down gradient of APEC #2. Test soil samples at water depth and groundwater for PCOCs related to this APEC #2.
APEC # 3 (off-site)	An existing Great Canadian Oil Change facility at 1970 Sumas Way, located upgradient and east of the site.	▪ Advance/install an on-site borehole/monitoring wells (24-BH/MW2) near the Site mid-eastern boundary and down gradient of APEC #3. Test soil samples at water depth and groundwater for PCOCs related to this APEC #3.
APEC #4 (on-site)	Deposition of suspect quality imported fill at the site during its development in the past.	▪ Advance three on-site boreholes (24-BH1 to 24-BH3) and test fill soil sample at each borehole locations for metals. Test VOCs parameters if significant vapor readings are noted during the field screening of the fill soil samples

8.5 Soil Sampling and Analysis

During the borehole drilling, completed at the Site on June 3, 2024, representative soil samples were collected from the Sonic core drilling.

Dedicated powder-free nitrile gloves (i.e., one pair per sample) were used during the sampling and handling. Soil samples were collected following BC MOECCS Technical Guidance for Contaminated Sites 1 - Site Characterization and Confirmation Testing (TG1).

EXP field staff continuously monitored the soil retrieved from the boreholes to log the stratigraphy, to record the depths of the soil samples and total depths of the boreholes, and to record visual or olfactory observations of any potential impacts. Field observations are summarized on the borehole logs provided in Appendix C.

The soil samples identified for possible laboratory analysis were collected and placed directly into laboratory-supplied glass jars and vials. Samples to be analyzed for VPHs and VOCs were collected using a disposable soil Terracore® sampler and placed into vials containing methanol as a preservative. The jars and vials were sealed with Teflon-lined lids to minimize headspace and reduce the potential for induced volatilization during storage/transport prior to analysis.

The soil samples were also placed in sealed laboratory-supplied plastic zip-loc bags and allowed to reach ambient temperature prior to field screening using a vapour combustion analyzer (Mini RAE 3000 - PID). The field screening measurements were made by inserting the instrument's probe into the plastic bag while mixing the sample inside the bag to ensure the volatilization of the soil gases. These 'headspace' readings provide a real-time indication of the relative concentration of organic vapours encountered in the subsurface soil and are used to aid in the assessment

of the vertical and horizontal extent of potential impacts and the selection of soil samples for analysis. Headspace readings of these organic vapours are measured in parts per million (ppm_v).

All soil samples were stored in a cooler containing icepacks and transported to CARO Analytical Services (CARO), a CALA-accredited laboratory located in Burnaby, BC. A Chain-of-Custody protocol was used while submitting the sample to CARO. During the drilling program, a total of nine (9) soil samples (including 2 field duplicates) were collected and submitted to CARO for analysis. Only seven (7) samples were selected for analysis as listed in Table 8. The sample analysis section was based on field measured head-space VOCs concentrations, olfactory observations, observed staining, soil stratigraphic layer and location of the soil samples with respect to the water table or identified saturated zone and potential sources of contamination.

Table 8: Soil Sample Analysis

Soil Sample ID	Borehole Location	Sample Depth (mbgs)	Headspace Vapour Readings (ppm_v)	Soil Type	Analysis
24-BH1@2.5'	24-BH1	0.76	ND	Silty Sand	Metals
24-BH1@15'	24-BH1	4.6	ND	Sand	LEPHs/HEPHs/PAHs and Metals, fuel VOCs including VPHs/BTEX/MTBE
DUP-1 (F. Dup. of 24-BH1@15')	24-BH1	4.6	ND	Sand	LEPHs/HEPHs/PAHs and Metals, fuel VOCs including VPHs/BTEX/MTBE
24-BH2@2.5'	24-BH2	0.76	ND	Silty Sand	Metals
24-BH2@20'	24-BH2	6.1	ND	Sand	LEPHs/HEPHs/PAHs and Metals, fuel VOCs including VPHs/BTEX/MTBE
24-BH3@2.5'	24-BH3	0.76	ND	Silty Sand	Metals
DUP-2 (F. Dup. of 24-BH3@2.5')	24-BH4	0.76	ND	Silty Sand	Metals

Notes: ND – No detect; ppmv – parts per million by volume; F. Dup.- Field duplicate.
BTEX = Benzene, Toluene, Ethylbenzene and Xylenes in soil.
VPHs = Volatile Petroleum Hydrocarbons in soil.
VOCs = Volatile Organic Compound in soil.
LEPHs/HEPHs = Light/Heavy Extractable Petroleum Hydrocarbons in soil.
PAHs = Polycyclic Aromatic Hydrocarbons in soil.

8.6 Monitoring Well Installation

As indicated before, deep boreholes (24-BH1 and 24-BH2) were converted into monitoring wells as 24-MW1 and 24-MW2. The well construction was in general accordance with the BC MOECCS guidelines to facilitate the collection of groundwater samples.

Each monitoring well was consisted of an appropriate length 50 mm diameter, Schedule 40, PVC screen and solid pipes. For monitoring well 24-MW1, the screen length ranged from 3.0 mbgs to 6 mbgs and from 4.5 mbgs to 7.5 mbgs for monitoring well 24-MW2.

Each well pipe was sealed at the base with a PVC end cap or cone and a J-plug at the top. The annular space around the well screen was backfilled with silica sand to approximately 0.15 metres above the top of the screen. The sand pack was extended above the screen to allow for compaction of the sand pack and expansion of the overlying well seal. Bentonite was backfilled from the top of the screen sand pack to approximately 0.45 metres below ground

surface. Each monitoring well was completed with filter sand pack and a concrete embedded flush-mounted well cover at the grade. For the construction of each monitoring well, refer to borehole logs provided in Appendix C.

8.7 Monitoring Well Development

On June 3, 2024, the day of well installation, EXP field staff developed the newly installed monitoring wells 24-MW1 and 24-MW2 using dedicated, disposable bailers to ensure that any potential residual materials from the drilling have been removed and to ensure that representative groundwater from the surrounding formation is infiltrating in the well screen. While developing, about five well casing volumes of groundwater was removed from each well.

8.8 Monitoring Well Purging and Water Depths Measurement

Groundwater monitoring and sampling activities were conducted on June 4, 2024. Prior to sampling, both the newly installed monitoring wells were investigated for well VOCs readings, using a Mini-Ray 3000 PID gas detector. Subsequently, the static water depths in the monitoring wells were measured using a water meter. Both the monitoring wells were purged using dedicated bailers until various field-measured parameters (temperature, conductivity, pH) in the groundwater were observed to be stabilized (consecutive readings within 5%). The stabilized field parameters were measured using a Hanna™ pH/conductivity meter and are listed in a table below.

Table 9: Groundwater Field Measurements (June 4, 2024)

Monitoring Well ID	Field Measured Physical Parameters			Well VOC Readings (ppmv)	Groundwater Depth (Below Top of Casing) (m)	Well Depth (Below Top of Casing) (m)
	pH	Temperature (°C)	Conductivity (ms/cm)			
24-MW1	6.87	14.8	1654	ND	2.49	6.20
24-MW2	10.50	15.5	568	ND	3.08	7.62

Notes: ND – No detect; ppmv – parts per million by volume; mS/cm – Mili siemens per centimeter; m – metres.

8.9 Groundwater Sampling and Analysis

On June 4, 2024, following groundwater purging, once the groundwater was fully recharged, and after the confirmation that the measured parameters were demonstrably stable (i.e., within 5% variation), three groundwater samples (including one field duplicate) were collected from the two newly installed monitoring wells. Groundwater sampling was completed using 2” dedicated disposable bailers. Groundwater samples for VOCs analysis were collected using dedicated bailers having a VOC sampling tip.

Groundwater samples were placed directly into the laboratory supplied bottles and/or vials and placed in a cooler containing ice pack. The VOC vials were inverted prior to being placed in a cooler to ensure that no headspace was present in the samples. All groundwater samples were submitted to CARO in Burnaby to analyze for identified PCOCs as described in a table below.

Table 10: Groundwater Samples Analysis

Sample ID	Monitoring Well ID	Analyzed PCOCs
24-MW1	24-MW1	EPHw (10-19), LEPHw, PAHs, fuel VOCs including VPHw/BTEX/MTBE, and Dissolved Metals
DUP-A (F. Dup. of 24-MW1)	24-MW1	EPHw (10-19), LEPHw, PAHs, fuel VOCs including VPHw/BTEX/MTBE, and Dissolved Metals

24-MW2	24-MW2	EPHw (10-19), LEPHw, PAHs, Fuel VOCs including VPHw/BTEX/MTBE, and Dissolved Metals

Notes: BTEX = Benzene, Toluene, Ethylbenzene and Xylenes in groundwater.
VPHw = Volatile Petroleum Hydrocarbons in water.
VOCs = Volatile Organic Compound in groundwater.
LEPHw = Light/Heavy Extractable Petroleum Hydrocarbons in water;
EPHw = Extractable Petroleum Hydrocarbons in water
PAHs = Polycyclic Aromatic Hydrocarbons in water.
F. Dup.- Field duplicate.

8.10 Groundwater Flow Direction

On June 4, 2024, EXP field staff completed a horizontal survey for the newly installed two monitoring wells and a shallow borehole. As part of the horizontal survey, using a wheel measuring tape, the horizontal co-ordinates of the newly installed borehole/monitoring wells were measured with respect to the existing building corners.

To determine groundwater flow direction at the Site, a minimum of three monitoring wells are required. As such, a groundwater elevation survey was not completed to determine groundwater flow direction. However, based on the Site and regional topography, a southwesterly groundwater flow was inferred at the Site.

8.11 Management of Drill Cuttings

Soil core cuttings produced from the borehole drilling and purged groundwater were stored in two 45-gallon steel drums; one containing soil drill cuttings and other containing purged groundwater. The drums are located near the western corner of the Site.

9 Field Observations and Findings

The following sections discuss the field observations and findings of the Phase II ESA.

9.1 Findings of Vapour Monitoring

Odorous soils were not observed during the drilling operation. As indicated in Table 8 of this report, headspace vapour readings, measured using a MiniRAE-3000 PID unit, were non-detect in all collected soil samples. Similarly, as recorded in Table 10 of this report, VOC readings measured with the MiniRAE-3000 PID unit at the newly installed monitoring well pipes were non-detect in both the monitoring wells. The above findings were consistent with analytical results for VOC parameters for soil and groundwater samples.

9.2 Soil Lithology

A general soil lithology at the Site, which dip from the Site's northern corner to the southern corner by about 2m, is typically comprised of following units of fill and native soil based on the newly advanced boreholes at the Site. For detailed description of soil lithology at each borehole location advanced by EXP, refer to the borehole logs attached in Appendix C.

Unit 1 – Within the entire uncovered Site area, about 0.3 m thick layer of grey sand and gravel is present under the asphalt paving.

Unit 2 – Underlying the above fill layer, a native layer of dark brown, organic silty sand is present which extends from about 0.3 m to 1.0 m bgs. This layer appears to be a former exposed surface at the Site.

Unit 3 – Underlying the above native layer, a native layer of dense brown silt is present which extends from about 1.0 m to 2.5 m bgs.

Unit 4 – Underlying the above native silt layer, a water bearing layer of grey/brown sand is present which extends from about 2.5 m to 6.0 m bgs within the Site low-lying western area and from about 4.5 m to 7.0 m bgs within the Site elevated eastern area.

Unit 5 – Underlying the above water bearing sandy layer, about 1m thick layer of brown silt, followed by a very dense layer of sandy glacial till with embedded fine gravel, is present and extends to maximum investigated depth of about 12 mbgs. The glacial till layer has negligible moisture contents.

9.3 Hydrogeology

Based on the information collected during EXP's Phase II ESA at the Site, a shallow confined aquifer with groundwater potentiometric heads varying from 3 m bgs (near the Site elevated eastern boundary) to 2.5 m bgs (near the Site low-lying western boundary) were measured on June 4, 2024. Groundwater is present within the native layer of sand which is confined between overlying layer of brown silt and underlying silt and sandy till. A southwesterly groundwater flow was inferred at the Site based on the Site and regional topography.

10 Analytical Results and Interpretation

The comparison of soil and groundwater analytical results with the applicable CSR standards is included in Analytical Data Tables 1 to 8 attached to this report. Soil and groundwater analytical data is also shown in Figures 7 and 8, respectively. Laboratory Certificates for soil and groundwater analytical results are included in Appendices D and E, respectively.

10.1 Soil Analytical Results

Off-site APEC #1 – Targeting off-site APEC #1, a borehole 24-BH1 was advanced within the western corner of the Site and downgradient of off-site APEC #1. A soil sample at the top of water bearing sandy soil was collected and tested for fuel related VOCs (including BTEX, MTBE, and VPHs), LEPHs, HEPHs, PAHs and metals.

The concentrations of all tested parameters in the soil sample were less than the laboratory detection limits and thus met the CSR CL standards applicable at the Site. Furthermore, the concentrations of metals in the soil sample were less than the CSR CL standards applicable at the Site.

The above findings suggested that, as of June 3, 2024, there was negligible migration of PCOCs from off-site APEC #1 causing any significant subsurface soil contaminations within the Site.

Off-site APECs # 2 & 3 – Targeting off-site APECs # 2 & 3, a borehole 24-BH2 was advanced near the mid-eastern Site boundary to target off-site APECs # 2 & 3. A soil sample at the top of water bearing sandy soil was collected and tested for fuel related VOCs (including BTEX, MTBE, and VPHs), LEPHs, HEPHs, PAHs and metals.

The concentrations of all tested parameters in the soil sample were less than the laboratory detection limits and thus met the CSR CL standards applicable at the Site. Furthermore, the concentrations of metals in the soil sample were less than the CSR CL standards applicable at the Site.

The above findings suggested that, as of June 3, 2024, there was negligible migration of PCOCs from two off-site APECs # 2 & 3 causing any significant subsurface soil contaminations within the Site.

On-site APEC #4 – Targeting on-site APEC #4 (suspected imported fill soil), three fill soil samples, about 0.76m bgs, were tested for metals at 24-BH1, 24-BH2 and 24-BH3. Based on visual and olfactory observations and non-detect vapour readings in all fill soil samples, the samples were not tested for petroleum hydrocarbon (PHC) related PCOCs.

Measured concentrations of all metal parameters were either less than the reported detection limits or met the CSR CL standards applicable at the Site. Concentrations of arsenic (10.2 ug/L) in a duplicate fill soil sample at 24-BH3 and that of nickel (74.5 ug/L) at 24-BH2 slightly exceeded the CSR CL standards. A slight exceedance of arsenic in the fill soil sample at 23-BH3 appears to be due to localized background impact at 24-BH3 and is considered compliant as arsenic concentrations were less than CSR CL standard in other two fill soil samples. The non-compliant nickel concentration in the fill soil sample at 24-BH2 was less than the regional (Lower Mainland) background concentration of 75 ug/g and therefore was considered as compliant.

Therefore, suspected fill soil within the Site met the CSR CL standards and/or regional background concentrations for the investigated PCOCs.

10.2 Groundwater Analytical Results

Off-site APEC #1 – Targeting off-site APEC #1, a monitoring well 24-MW1 was installed within the western corner of the Site and downgradient of off-site APEC #1. A groundwater sample from 24-MW1 was collected and tested for fuel related VOCs (including BTEX, MTBE, and VPHw, VHw), LEPHw, EPHw (10-19), PAHs and dissolved metals.

The concentrations of all tested PCOCs in the groundwater sample were either less than the laboratory detection limits or met the lowest values of CSR AWf and DW standards applicable at the Site.

The above findings suggested that, as of June 4, 2024, there was negligible migration of PCOCs from off-site APEC #1 causing significant groundwater contamination within the Site.

Off-site APECs # 2 & 3 – Targeting off-site APECs # 2 & 3, a monitoring well 24-MW2 was installed near the mid-eastern Site boundary to target off-site APECs # 2 & 3. A groundwater sample from 24-MW2 was collected and tested for fuel related VOCs (including BTEX, MTBE, and VPHw, VHw), LEPHw, EPHw (10-19), PAHs and dissolved metals.

The concentrations of all tested PCOCs in the groundwater sample were either less than the laboratory detection limits or met the lowest values of CSR AWf and DW standards applicable at the Site.

The above findings suggested that, as of June 4, 2024, there was negligible migration of PCOCs from two off-site APECs # 2 & 3 causing significant subsurface groundwater contamination within the Site.

10.3 Soil-Vapour Assessment

As described in BC MOECCS's Technical Guidance #4 (TG4), a soil vapour assessment is required at all sites where volatile potential contaminants of concern (PCOCv) are suspected to be present or detectable concentrations of gasoline and diesel related PCOCv are identified in soil and groundwater analytical results.

During EXP's Phase II ESA, no detectable concentrations of volatile parameters were identified in any of the analyzed soil and groundwater samples. Furthermore, the measured non-detect vapour reading in the vapor probe (24-VP1) suggested that there was migration of suspected vapour plume from the adjoining off-site APEC #1. As such, a soil vapour assessment was not considered at the Site due to low potential for the presence of a vapour plume at the Site.

11 Result of Quality Assurance and Quality Control Programs

As discussed below, the QA/QC program was implemented, and its objectives were met during the Phase II ESA. As described in Section 7 of this report, QA/QC program was designed in general accordance BC MOECCS's Field Sampling and QA/QC Manual and guidelines and accepted industry standard procedures.

11.1 Field QA/QC

EXP analyzed one (1) field duplicate sample for every ten (10) analyzed soil and groundwater samples as per the QA/QC program. The following field duplicate samples were collected and analyzed for identified PCOCs:

Soil:

A total of 9 soil samples (including two field duplicates) were collected and 7 of them were submitted to CARO for analysis. The parent soil sample and its field duplicate soil sample were selected for analysis as detailed below:

- DUP-1 – Field duplicate of 24-BH1@15', analyzed for LEPHs/HEPHs/PAHs, VOCs including VPHs and metals.
- DUP-2 – Field duplicate of 24-BH3@2.5', analyzed for metals.

Groundwater:

A total of three groundwater samples, including one field duplicate sample, were collected and submitted to CARO for analysis. The parent groundwater sample and its field duplicate sample were selected for analysis as detailed below:

- Dup-A, a field duplicate of 23-MW1, was analyzed for $EPHw_{(10-19)}$, LEPHw, PAHs and VOCs including VPHw, $VHw_{(6-10)}$ and dissolved metals.

Relative Percent Difference (RPD) values for both soil and groundwater samples for the parent and duplicate samples were calculated as shown on the analytical data Tables 1 to 8, included in the report.

Soil Sample RPD

For the parent and field duplicate soil samples, the RPD values for analyzed LEPHs, HEPHs, PAHs, VOCs and VPHs parameters could not be calculated because concentrations of these parameters were below the reported detection limits. However, for metals parameters, the measured RPDs were within a permissible limit of 20%, except for boron, cadmium, and mercury where the RPD values varied from 21% to 29%. However, the analysis of these parameters with higher RPD values was considered acceptable as the RPD values for other metal parameters were within a permissible limit of 20%.

Groundwater Sample RPD

For a parent and a field duplicate groundwater sample, the RPD values for all VOCs, VHw6-10, VPHw, LEPHw, EPHw (10-19), PAHs and a few dissolved metals could not be calculated because the results of one or more of the parameters were less than five times the method detection limits, or the parameters were below the laboratory method detection limits. Similarly, the RPD values for dissolved metals were within a permissible limit of 20%. Only for dissolved tin, the measured RPD value was 30% and was considered acceptable as the RPD values for other dissolved metal parameters were within a permissible limit of 20%.

11.2 Laboratory QA/QC

CARO's laboratory certificates for soil and groundwater analysis included results for laboratory replicates, blanks, and reference samples. The certificates also included results of the laboratory's calibration check. Replicates are analyzed to confirm that the analytical results for the laboratory duplicate sample are within the allowable range of laboratory acceptance, in accordance with the BC MOECCS laboratory manual and procedures. The laboratory runs blanks to determine the laboratory analytical instruments are clean and do not positively bias sample results. Reference samples are analyzed to determine if recoveries are within the range allowed by the BC MOECCS.

EXP reviewed the laboratory QA/QC data provided by CARO in the laboratory certificates. The analytical certificates indicated that the laboratory soil and groundwater replicates, matrix spikes, laboratory blanks and parameter surrogate recoveries were within the control limits and thus passed their internal QC program objectives.

Furthermore, EXP verified the date of sample submission, sample preparation and requested analysis for soil and groundwater samples. No sample analysis was flagged indicating that the sample was analyzed beyond the holding time. There was soil or groundwater sample integrity issue. The samples were extracted and analyzed within the parameter's allowable respective holding times. The sample collection, handling, preservation, storage method and holding times were suitable for minimizing sample losses of volatiles and maintaining sample integrity prior to testing.

Therefore, EXP considered that CARO soil and groundwater analytical results are reliable based on the findings of their internal QA/QC program as well as EXP's QA/QC information (sample integrity and sample extraction/analysis within the respective holding times) included in the laboratory certificates.

12 Conclusions

Based on the information collected during the Phase II ESA, EXP concludes the following:

1. Currently, native soils within the Site meet the CSR Commercial Land (CL) standards for all investigated PCOCs associated with on-site and off-site APECs # 1 to 3.
2. Similarly, suspected fill soil within the Site met the CSR CL standards and/or regional background concentrations for the investigated metals.
3. Concentrations of all tested PCOCs in groundwater at two on-site monitoring wells met the CSR AWf and DW standards suggesting that currently potential migration of PCOCs from off-site APECs 1 to 3 is negligible causing any significant groundwater contamination at the Site.
4. During EXP's Phase II ESA, no detectable concentrations of volatile parameters were identified in any of the analyzed soil and groundwater samples. Furthermore, the measured non-detect vapour reading in the installed vapor probe (24-VP1) suggested that there was no migration of suspected vapour plume from the adjoining off-site APEC #1. As such, a soil vapour assessment was not considered at the Site due to low potential for the presence of a vapour plume at the Site.

13 Recommendations

EXP recommends the following:

1. Based on the Phase II ESA findings and conclusions, EXP doesn't consider a further subsurface (soil, groundwater, and vapour) investigation at the Site due to identified on-site and off-site APECs #1 to 4.
2. If any additional or suspect (potentially contaminated) materials or hidden source(s) of contamination are encountered at the Site during the future redevelopment or excavations at the Site, a qualified environmental consultant should be retained to review, characterize, and manage such materials and/or to investigate the source (s).
3. EXP should be retained to re-evaluate its conclusions and recommendations if the applicable regulations and/or on-site conditions change.
4. According to the BC Groundwater Protection Regulation (effective November 2005) under the BC Water Sustainability Act, any water wells that have not been used for more than 5 years, should be deactivated, or decommissioned since such water wells pose a preferential pathway for contaminant migration to the underlying aquifer(s).
5. Due to age of the on-site buildings (constructed in 1988), hazardous building materials such as asbestos containing materials (ACMs), lead-based paints and fluorescent lighting fixtures likely having PCBs containing ballasts are suspected to be present within the on-site building. Therefore, prior to any renovation or demolition of the on-site building, a hazardous building survey is recommended to ascertain the presence or absence of any ACMs or lead-based paints or PCB containing ballasts within the buildings. ACMs, lead-based paints, and PCB containing ballasts must be handled and managed in accordance with WorkSafeBC Occupational Health and Safety Regulation and disposed of in accordance with the BC Hazardous Waste Regulation.

14 Assessor Statements and Qualifications

In accordance with Part 16, Section 63 of BC Contaminated Sites Regulation (CSR, BC Reg. 375/96 including last amendment 133/2022, March 1, 2023), the investigation participants made the following statements:

1. The Phase II ESA report has been prepared in accordance with the requirements of the EMA, CSR, and BC MOECCS's policies, procedures, and protocols;
2. The person(s) signing this report has (have) demonstrable experience in conducting this type investigations and are familiar with the investigation completed at the Site; and
3. Qualifications and experience of the participants in this investigation are described below.

Mr. Sushil Dogra, P.Eng. competed a senior review and revision of the report. Mr. Dogra has twenty-three years of work experience in the environmental field and has completed numerous projects with complex contamination involving preliminary and detailed site investigations, numeric standards based remedial design and implementation, preparing legal instruments for certification/determination, and has made several submissions to the BC MOECCS. Mr. Dogra has in-depth knowledge and understanding of all applicable provincial and federal legislation, including relevant environmental regulations, policies, protocols, procedures, and guidelines as well as the relevant environmental municipal by-laws. Mr. Dogra is fully versed in all upcoming changes to the relevant environmental regulations, policies, protocols, procedures, and guidelines.

Mr. Matteo Siniscalchi, B.Tech., was involved in conducting the Site drilling, soil and groundwater sampling, data tabulation, preparing figures and relevant sections of the report draft. Mr. Siniscalchi has about 1 year of experience in the environmental consulting industry conducting investigations at contaminated sites.

15 References

EXP reviewed and relied on a following previous investigation report, previously prepared by EXP at the Site.

1. *Stage I Preliminary Site Investigation* report #R613-0319-00, dated March 13, 2013, at 1965 Sumas Way, Abbotsford, British Columbia for Ventech Capital Corporation, prepared by Levelton Consultants Ltd.

The investigation has been completed in general accordance with the following act, regulations and BC MOECCS protocols, technical guidance, policies, and procedures:

- Environmental Management Act (EMA), [SBC 2003], Chapter 53 assented to October 23, 2003).
- Contaminated Sites Regulation (CSR) Reg. 375/96 [includes amendments up to B.C. Reg. 133/2022, March 1, 2023]. British Columbia Ministry of Environment and Climate Change Strategy.
- Hazardous Waste Regulation (HWR) (BC Reg. 63/88 O.C. 268/88, including amendments up to BC Regulation 64/2021, March 11, 2021).
- Ministry of Environment 'Technical Guidance #1: Site Characterization and Confirmation Testing, January 2009.
- Ministry of Environment 'Technical Guidance #4: Vapor Investigation and Remediation', Version 2, effective November 1, 2017.
- Ministry of Environment 'Technical Guidance #8: Groundwater Investigation and Characterization, Version 3, effective January 5, 2021.

16 Interpretation & Use of Study and Report

16.1 Standard of Care

This study and Report have been prepared in accordance with generally accepted engineering consulting practices in this area. No other warranty, expressed or implied, is made. Engineering studies and reports do not include environmental consulting unless specifically stated in the engineering report.

16.2 Complete Report

All documents, records, data and files, whether electronic or otherwise, generated as part of this assignment are a part of the Report which is of a summary nature and is not intended to stand alone without reference to the instructions given to us by the Client, communications between us and the Client, and to any other reports, writings, proposals or documents prepared by us for the Client relative to the specific site described herein, all of which constitute the Report.

IN ORDER TO PROPERLY UNDERSTAND THE SUGGESTIONS, RECOMMENDATIONS AND OPINIONS EXPRESSED HEREIN, REFERENCE MUST BE MADE TO THE WHOLE OF THE REPORT. WE CANNOT BE RESPONSIBLE FOR USE BY ANY PARTY OF PORTIONS OF THE REPORT WITHOUT REFERENCE TO THE WHOLE REPORT.

16.3 Basis of the Report

The Report has been prepared for the specific site, development, building, design or building assessment objectives and purpose that were described to us by the Client. The applicability and reliability of any of the findings, recommendations, suggestions, or opinions expressed in the document are only valid to the extent that there has been no material alteration to or variation from any of the said descriptions provided to us unless we are specifically requested by the Client to review and revise the Report in light of such alteration or variation.

16.4 Use of the Report

The information and opinions expressed in the Report, or any document forming the Report, are for the sole benefit of the Client. NO OTHER PARTY MAY USE OR RELY UPON THE REPORT OR ANY PORTION THEREOF WITHOUT OUR WRITTEN CONSENT. WE WILL CONSENT TO ANY REASONABLE REQUEST BY THE CLIENT TO APPROVE THE USE OF THIS REPORT BY OTHER PARTIES AS “APPROVED USERS”. The contents of the Report remain our copyright property and we authorise only the Client and Approved Users to make copies of the Report only in such quantities as are reasonably necessary for the use of the Report by those parties. The Client and Approved Users may not give, lend, sell, or otherwise make the Report, or any portion thereof, available to any party without our written permission. Any use which a third party makes of the Report, or any portion of the Report, are the sole responsibility of such third parties. We accept no responsibility for damages suffered by any third party resulting from unauthorised use of the Report.

16.5 Interpretation of the Report

1) Nature and Exactness of Descriptions: Classification and identification of soils, rocks, geological units, contaminant materials, building envelopment assessments, and engineering estimates have been based on investigations performed in accordance with the standards set out in Paragraph 1. Classification and identification of these factors are judgmental in nature and even comprehensive sampling and testing programs, implemented with the appropriate equipment by experienced personnel, may fail to locate some conditions. All investigations, or building envelope descriptions, utilizing the standards of Paragraph 1 will involve an inherent risk that some conditions will not be detected and all documents or records summarising such investigations will be based on assumptions of what exists between the actual points sampled. Actual conditions may vary significantly between the points investigated and all persons making use of such

documents or records should be aware of, and accept, this risk. Some conditions are subject to change over time and those making use of the Report should be aware of this possibility and understand that the Report only presents the conditions at the sampled points at the time of sampling. Where special concerns exist, or the Client has special considerations or requirements, the Client should disclose them so that additional or special investigations may be undertaken which would not otherwise be within the scope of investigations made for the purposes of the Report.

2) Reliance on Provided information: The evaluation and conclusions contained in the Report have been prepared on the basis of conditions in evidence at the time of site inspections and on the basis of information provided to us. We have relied in good faith upon representations, information and instructions provided by the Client and others concerning the site. Accordingly, we cannot accept responsibility for any deficiency, misstatement or inaccuracy contained in the report as a result of misstatements, omissions, misrepresentations, or fraudulent acts of persons providing information.

3) To avoid misunderstandings, EXP Services Inc. (EXP) should be retained to work with the other design professionals to explain relevant engineering findings and to review their plans, drawings, and specifications relative to engineering issues pertaining to consulting services provided by EXP. Further, EXP should be retained to provide field reviews during the construction, consistent with building codes guidelines and generally accepted practices. Where applicable, the field services recommended for the project are the minimum necessary to ascertain that the Contractor's work is being carried out in general conformity with EXP's recommendations. Any reduction from the level of services normally recommended will result in EXP providing qualified opinions regarding adequacy of the work.

16.6 Report Format

When EXP submits both electronic file and hard copies of reports, drawings and other documents and deliverables (EXP's instruments of professional service), the Client agrees that only the signed and sealed hard copy versions shall be considered final and legally binding. The hard copy versions submitted by EXP shall be the original documents for record and working purposes, and, in the event of a dispute or discrepancy, the hard copy versions shall govern over the electronic versions. Furthermore, the Client agrees and waives all future right of dispute that the original hard copy signed version archived by EXP shall be deemed to be the overall original for the Project.

The Client agrees that both electronic file and hard copy versions of EXP's instruments of professional service shall not, under any circumstances, no matter who owns or uses them, be altered by any party except EXP. The Client warrants that EXP's instruments of professional service will be used only and exactly as submitted by EXP.

The Client recognizes and agrees that electronic files submitted by EXP have been prepared and submitted using specific software and hardware systems. EXP makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.

17 Closure

This report was prepared based on the information provided by the Client and EXP's understanding of the project as described in Section 3. The report has been prepared for the exclusive use by our Client, and their designated agents, and may not be used by any other parties without the written consent of EXP. Section 16 of the report describes our "Interpretation & Use of Study and Report". These instructions form an integral part of this report and must be included with any copies of this report.

We trust this report meets your present requirements. Please contact the undersigned if you have any questions or require further assistance.

Sincerely,

EXP Services Inc.

Prepared by:

Matteo Siniscalchi, B. Tech.
Junior Environmental Scientist

Reviewed by:

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
S. K. DOGRA
44204

June 14, 2024

Sushil Dogra, P. Eng.
Sr. Project Manager

E:\VAN\VAN-24006323-A0\60 Execution\62 Reports\Report - Phase II ESA

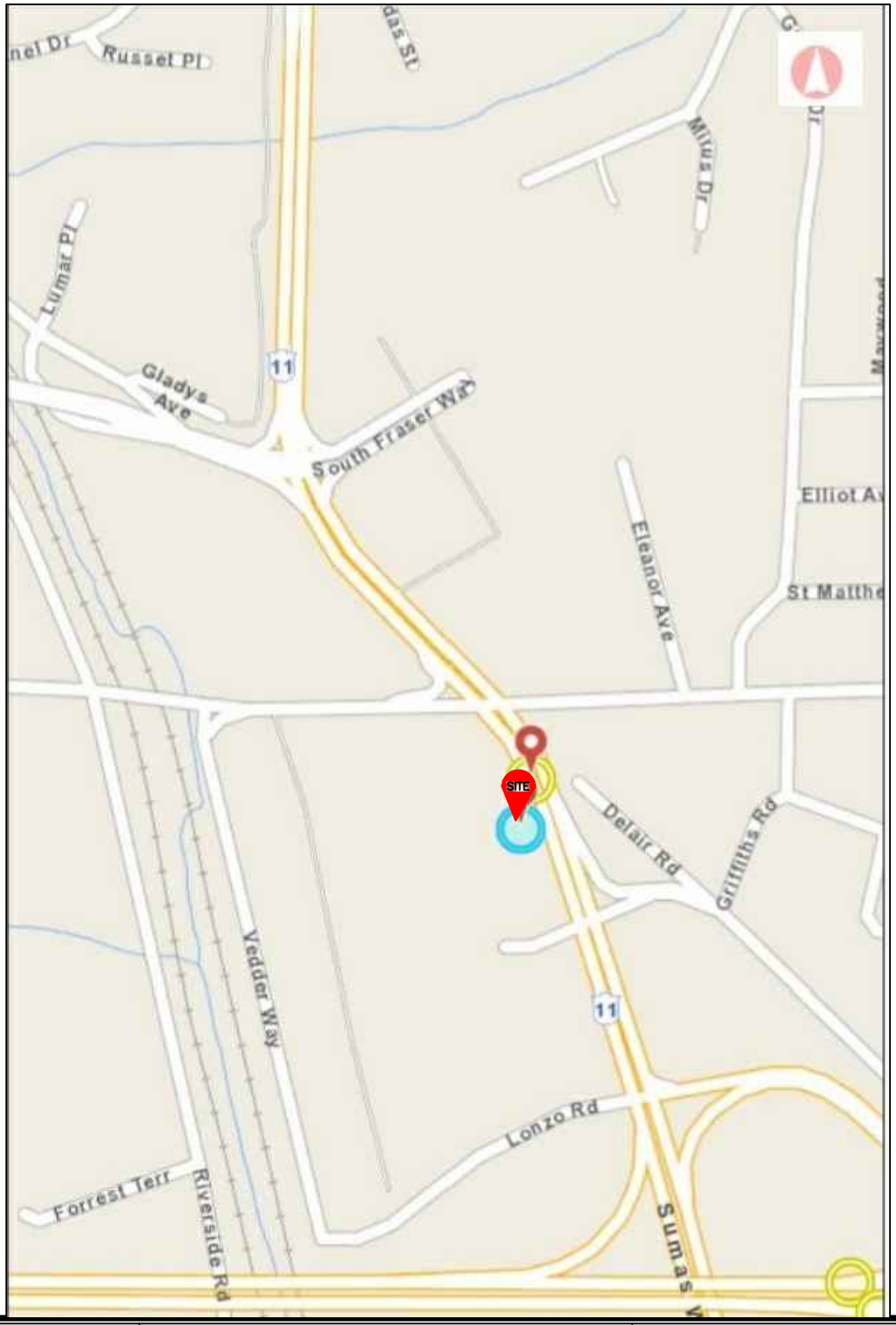
PERMIT TO PRACTICE
EXP SERVICES INC.
RR SIGNATURE:
RR EGBC ID: 29952 DATE: 2024-06-14
PERMIT NUMBER: P1002313
Engineers & Geoscientists
British Columbia (EGBC)

Figures -

LEGEND

SITE – SUBJECT SITE

N
W E
S



CLIENT: P.P.M.C Gill Ltd.				TITLE: LOCATION PLAN		
PROJECT: PHASE II ESA at 1965 Sumas Way, Abbotsford, BC						
PROJECT NO. VAN-24006323-AO	DFTR. MS	DSGN.	CHK. SD	DATE JUNE 2024	SCALE:	DWG NO. FIGURE 1

N
W E
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LEGEND

– SITE BOUNDARIES

– EXISTING BUILDING

SCALE:

REV.	DATE	DESCRIPTION	INT.

EXP Services Inc.
275-3001 Wayburne Drive
Burnaby, British Columbia V5G 4W3
Telephone: 604-874-1245
exp.com

CLIENT:

P.P.M.C Gill Ltd.

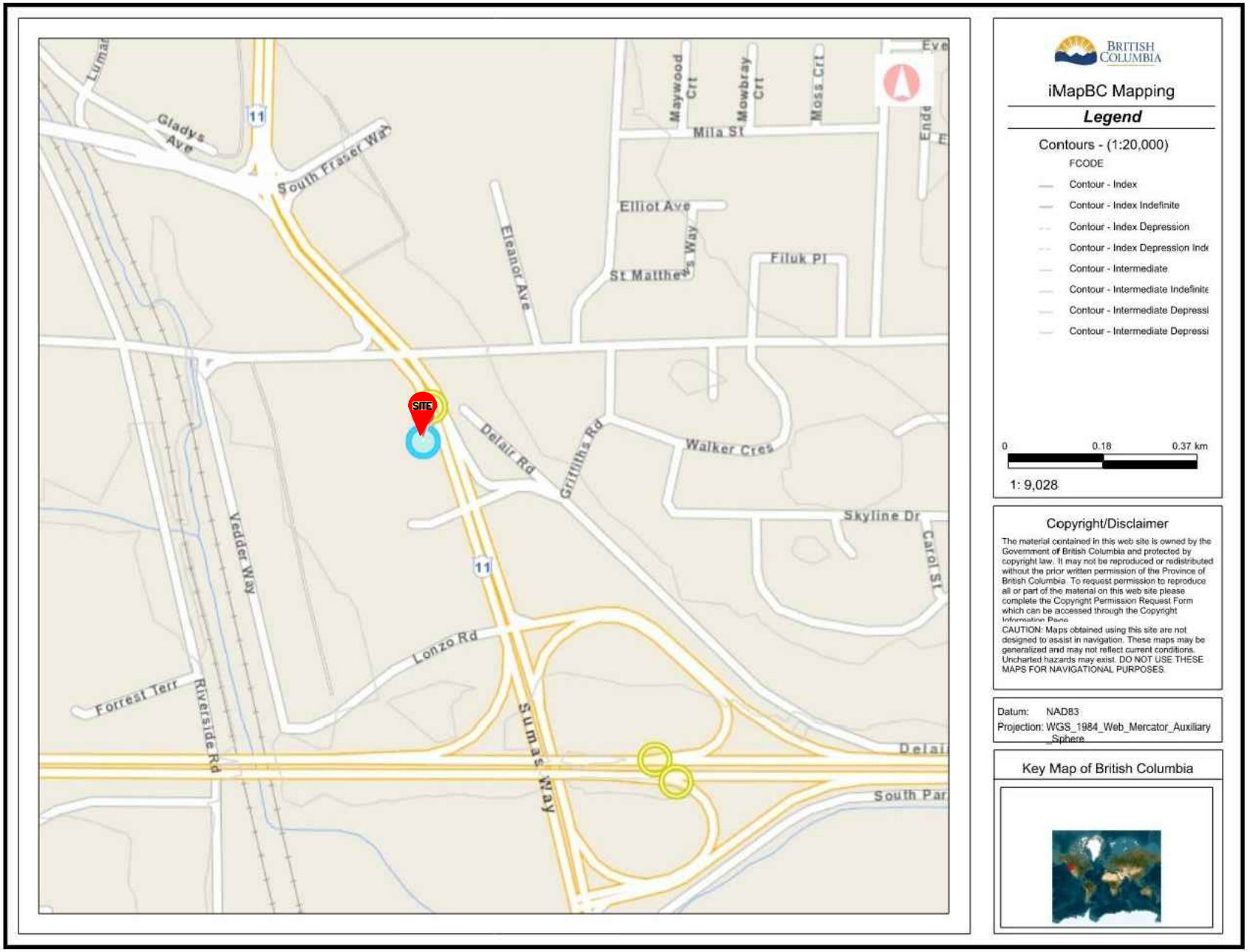
PROJECT:

PHASE II ESA
at
1965 Sumas Way, Abbotsford, BC

TITLE:

Site Plan

APP.		DR.	MS
CH.	SD	DATE	JUNE 2024
FILE NO.	VAN-24006323-AO	DWG. NO.	FIGURE 2



BRITISH COLUMBIA

iMapBC Mapping

Legend

Contours - (1:20,000)

FCODE

- Contour - Index
- Contour - Index Indefinite
- Contour - Index Depression
- Contour - Index Depression Inde
- Contour - Intermediate
- Contour - Intermediate Indefinite
- Contour - Intermediate Depressi
- Contour - Intermediate Depressi

0 0.18 0.37 km

1: 9,028

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Datum: NAD83

Projection: WGS_1984_Web_Mercator_Auxiliary_Sphere

Key Map of British Columbia

N

W E

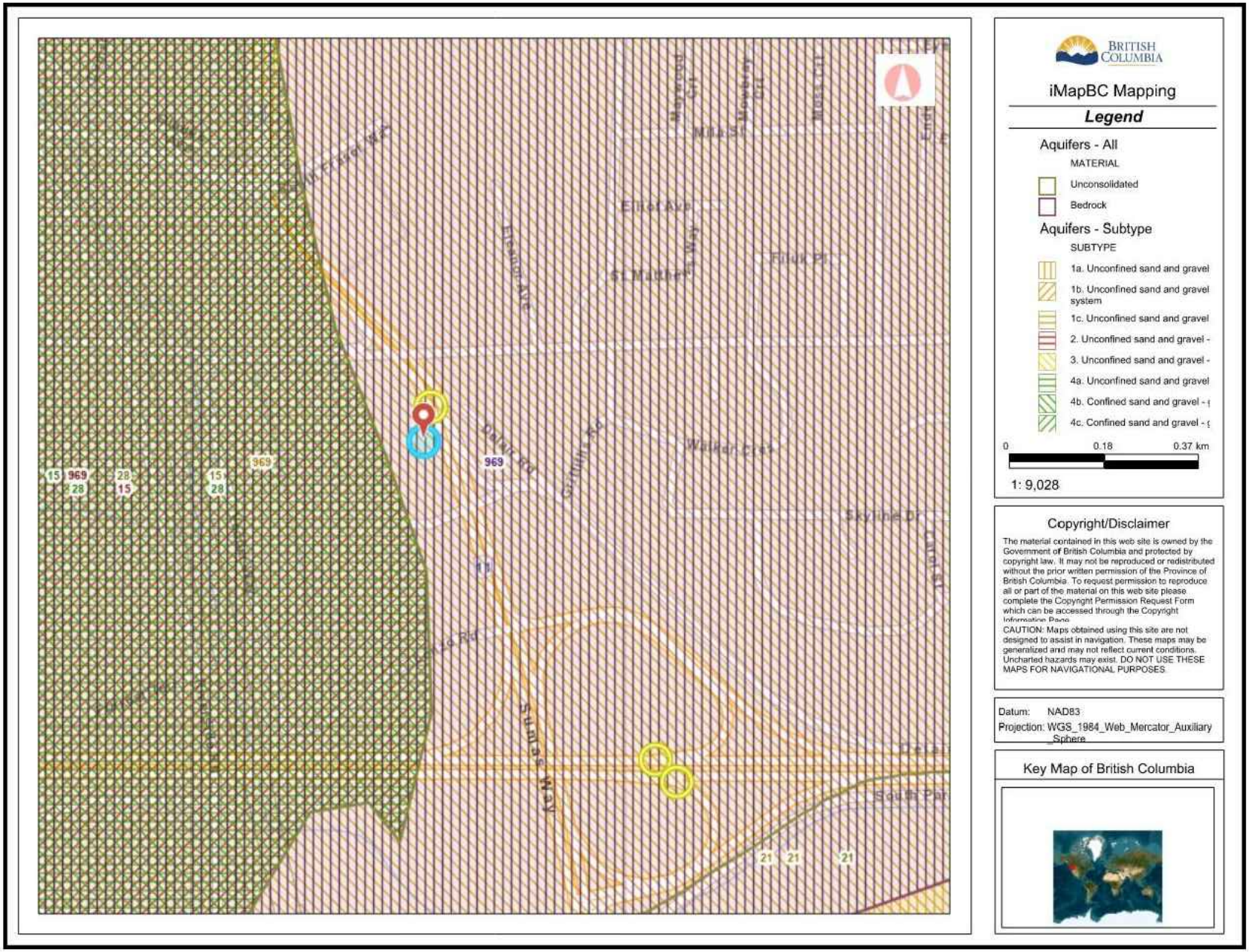
S

LEGEND

SITE – SUBJECT SITE

EXP Services Inc.
275–3001 Wayburne Drive
Burnaby, British Columbia V5G 4W3
Telephone: 604–874–1245
Fax: 604–874–2358
exp.com

CLIENT: P.P.M.C Gill Ltd.				TITLE: TOPOGRAPHY MAP		
PROJECT: PHASE II ESA at 1965 Sumas Way, Abbotsford, BC						
PROJECT NO.: VAN-24006323-AO	DFTR.: MS	DSGN.:	CHK.: SD	DATE: JUNE 2022	SCALE:	DWG NO.: FIGURE 3



BRITISH COLUMBIA

iMapBC Mapping

Legend

Aquifers - All

MATERIAL

- Unconsolidated
- Bedrock

Aquifers - Subtype

SUBTYPE

- 1a. Unconfined sand and gravel
- 1b. Unconfined sand and gravel system
- 1c. Unconfined sand and gravel
- 2. Unconfined sand and gravel -
- 3. Unconfined sand and gravel -
- 4a. Unconfined sand and gravel
- 4b. Confined sand and gravel -
- 4c. Confined sand and gravel -

0 0.18 0.37 km

1: 9,028

Datum: NAD83

Projection: WGS_1984_Web_Mercator_Auxiliary_Sphere

Key Map of British Columbia

N

W E

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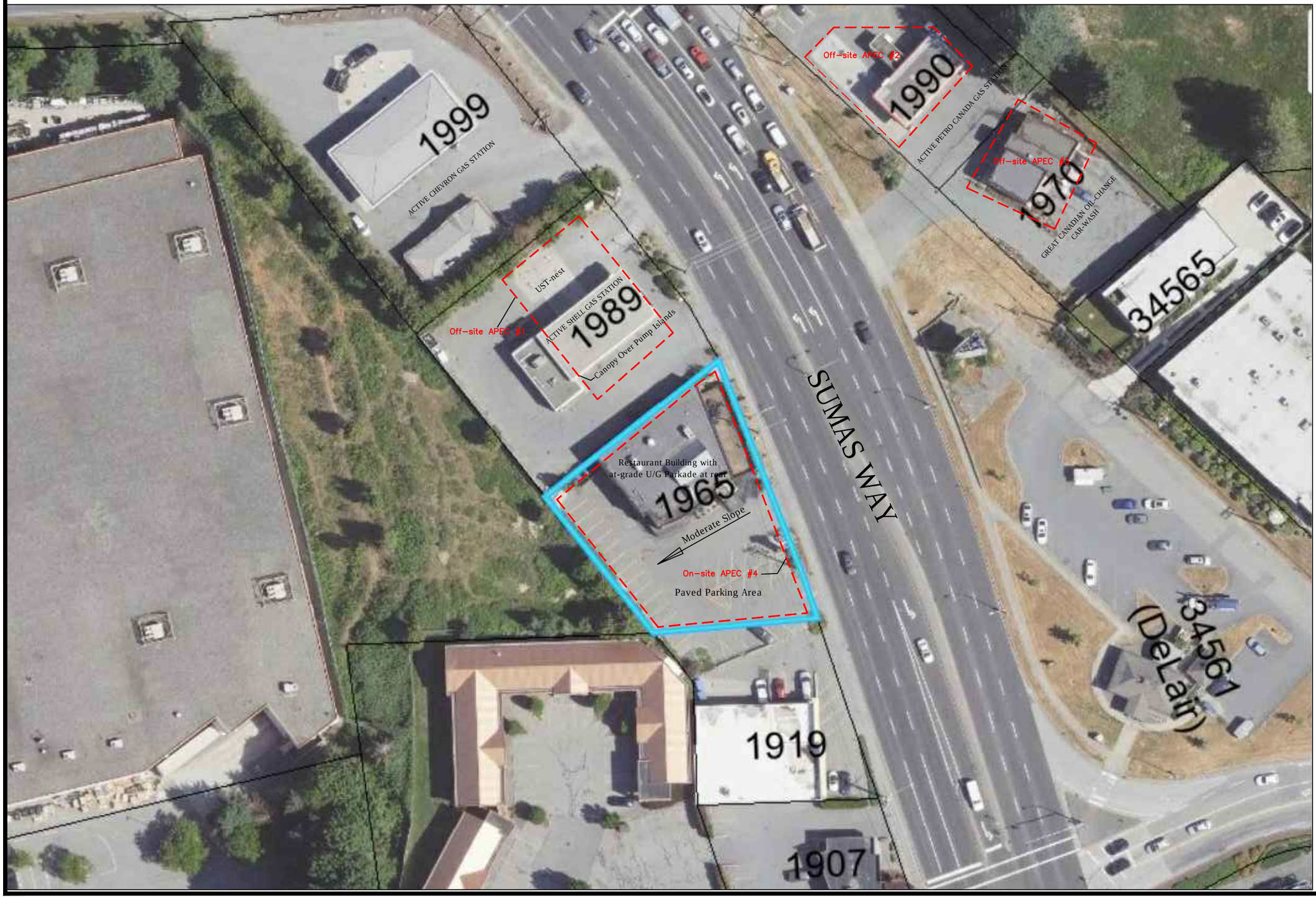
LEGEND

SITE – SUBJECT SITE

EXP Services Inc.
275–3001 Wayburne Drive
Burnaby, British Columbia V5G 4W3
Telephone: 604–874–1245
Fax: 604–874–2358
exp.com

CLIENT: P.P.M.C Gill Ltd.				TITLE: AQUIFER MAP		
PROJECT: PHASE II ESA at 1965 Sumas Way, Abbotsford, BC						
PROJECT NO. VAN-24006323-AO	DFTR. MS	DSGN.	CHK. SD	DATE JUNE 2022	SCALE:	DWG NO. FIGURE 4



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LEGEND

- SITE BOUNDARIES
- EXISTING BUILDING
- AREA OF POTENTIAL ENV. CONCERN

SCALE:

REV.	DATE	DESCRIPTION	INT.

EXP Services Inc.
275-3001 Wayburne Drive
Burnaby, British Columbia V5G 4W3
Telephone: 604-874-1245
EXP.com

CLIENT:
P.P.M.C Gill Ltd.

PROJECT:
PHASE II ESA
at
1965 Sumas Way, Abbotsford, BC

TITLE:
Site Plan Showing On-Site &
Off-site APECs

APP.		DR.	MS
CH.	SD	DATE	JUNE 2024
FILE NO.	VAN-24006323-AO	DWG. NO.	FIGURE 5

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LEGEND

- SITE BOUNDARIES
- EXISTING BUILDING
- INSTALLED NESTED WELL LOCATION
- INSTALLED WELL LOCATION
- ADVANCED BOREHOLE LOCATION

SCALE:

REV.	DATE	DESCRIPTION	INT.

EXP Services Inc.
275-3001 Wayburne Drive
Burnaby, British Columbia V5G 4W3
Telephone: 604-874-1245
exp.com

CLIENT:
P.P.M.C Gill Ltd.

PROJECT:
PHASE II ESA
at
1965 Sumas Way, Abbotsford, BC

TITLE:
Site Plan Showing Newly Installed
Boreholes/Monitoring Wells

APP.		DR.	MS
CH.	SD	DATE	JUNE 2024
FILE NO.	VAN-24006323-AO	DWG. NO.	FIGURE 6

24-BH1	3-Jun-2024	3-Jun-2024
	0.76m	4.57m
Fuel VOCs & VPHs	n/a	< DL
LEPHs/HEPHs	n/a	< DL
PAHs	n/a	< DL
Metals	< CL	< CL

24-BH3	3-Jun-2024
	0.76m
Fuel VOCs & VPHs	n/a
LEPHs/HEPHs	n/a
PAHs	n/a
Metals	< CL

24-BH2	3-Jun-2024	3-Jun-2024
	0.76m	6.1m
Fuel VOCs & VPHs	n/a	< DL
LEPHs/HEPHs	n/a	< DL
PAHs	n/a	< DL
Metals, except	< CL	< CL
Nickel	< RBC	< CL

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LEGEND

- SITE BOUNDARIES
- EXISTING BUILDING
- INSTALLED NESTED WELL LOCATION
- INSTALLED WELL LOCATION
- ADVANCED BOREHOLE LOCATION
- Sample Meets Standards
- Sample Exceeds Standards
- XXX – Concentration Exceeds Std.
- DL – Detection Limit in Ug/L
- CL – Commercial Land Use
- n/a – Not Analyzed)
- RBC – Regional Background Concentration in Lower Mainland

SCALE:

REV.	DATE	DESCRIPTION	INT.

EXP Services Inc.
275-3001 Wayburne Drive
Burnaby, British Columbia V5G 4W3
Telephone: 604-874-1245
exp.com

CLIENT:
P.P.M.C Gill Ltd.

PROJECT:
PHASE II ESA
at
1965 Sumas Way, Abbotsford, BC

TITLE:
Site Plan Showing Soil Analytical Data

APP.		DR.	MS
CH.	SD	DATE	JUNE 2024
FILE NO.	VAN-24006323-AO	DWG. NO.	FIGURE 7

N
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LEGEND

- SITE BOUNDARIES
- EXISTING BUILDING
- INSTALLED NESTED WELL LOCATION
- INSTALLED WELL LOCATION
- ADVANCED BOREHOLE LOCATION
- Sample Meets Standards
- Sample Exceeds Standards
- DL – Detection Limit in Ug/L
- DW – Drinking Water Standard
- AWf – Aquatic Standard (Freshwater)
- XXX – Concentration Exceeds Std.

SCALE:

REV.	DATE	DESCRIPTION	INT.

EXP Services Inc.
275-3001 Wayburne Drive
Burnaby, British Columbia V5G 4W3
Telephone: 604-874-1245
EXP.com

CLIENT:
P.P.M.C Gill Ltd.

PROJECT:
PHASE II ESA
at
1965 Sumas Way, Abbotsford, BC

TITLE:
Site Plan Showing Groundwater Analytical Data

APP.		DR.	MS
CH.	SD	DATE	JUNE 2024
FILE NO.	VAN-24006323-AO	DWG. NO.	FIGURE 8

Data Tables -

Table 1
Soil Analytical Results - Extractable Petroleum Hydrocarbons (EPHs)
LEPHs and HEPHs
Sheet 1 of 1

Borehole Location			24-BH1	24-BH1	RPD	24-BH2	CSR CL Standards (2)
Sample ID			24-BH1@15'	DUP-1		24-BH2@20'	
Laboratory Sample ID			24F0492-02	24F0492-08		24F0492-05	
Date Sampled (dd-mmm-yyyy)			2024-06-03	6/3/2024		2024-06-03	
Sample Depth (m)			4.6	4.6		6.1	
Parameter	**RDL**	**Units**					
LEPHs	50	µg/g	<50	<50	-	<50	2000
HEPHs	50	µg/g	<50	<50	-	<50	5000
EPHs10-19	50	µg/g	<50	<50	-	<50	NS
EPHs19-32	50	µg/g	<50	<50	-	<50	NS

Notes

CSR	British Columbia Contaminated Sites Regulation (CSR, BC, Reg. 375/96 including amendments up to B.C. Reg. 133/2022, March 1, 2023)
Standards (1)	Schedule 3.1 (Part 1) Matrix Numerical Soil Standards (standards displayed in ug/g unless otherwise specified). Site specific factors includes - Intake of contaminated soil (A), Groundwater used for drinking water (B) Toxicity to soil invertebrates and plants (C), Groundwater flow to surface water used by freshwater aquatic life (D), Groundwater used for irrigation (E), and Groundwater used for livestock water (F).
Standards (2)	Schedule 3.1 (Part 2) Generic Numerical Soil Standards to Protect human Health (standards displayed in ug/g unless otherwise specified)
Standards (3)	Schedule 3.1 (Part 3) Generic Numerical Soil Standards to Protect Ecological Health (standards displayed in ug/g unless otherwise specifie
ug/g	Micrograms per gram
CL	Commercial Land Use
EPHs	Extractable petroleum hydrocarbons
HEPHs	Heavy extractable petroleum hydrocarbons in soil
LEPHs	Light extractable petroleum hydrocarbons in soil
NS	No standard
RDL	Reported detection limit
RPD	Relative percent difference
<	Less than detection limit
m	Metres
-	Not analyzed or RPD not calculated
Result	Analytical result exceeds applicable CSR CL standards
BOLD	Detectable volatile concentration

Table 2
Soil Results - Polycyclic Aromatic Hydrocarbons (PAHs)
Sheet 1 of 1

Borehole Location			24-BH1	24-BH1	RPD	24-BH2	CSR CL Standards (1, 2 & 3)
Sample ID			24-BH1@15'	DUP-1		24-BH2@20'	
Laboratory Sample ID			24F0492-02	24F0492-08		24F0492-05	
Date Sampled (dd-mmm-yy)			2024-06-03	2024-06-03		2024-06-03	
Sample Depth (m)			4.6	4.6		6.1	
Parameter	**RDL**	**Units**					
Acenaphthene	0.05	µg/g	<0.050	<0.050	-	<0.050	15000
Acenaphthylene	0.05	µg/g	<0.050	<0.050	-	<0.050	NS
Acridine	0.05	µg/g	<0.050	<0.050	-	<0.050	NS
Anthracene	0.05	µg/g	<0.050	<0.050	-	<0.050	30 (C)
Benz(a)anthracene	0.05	µg/g	<0.050	<0.050	-	<0.050	10
Benzo(a)pyrene	0.05	µg/g	<0.050	<0.050	-	<0.050	30 (A)
Benzo(b+j)fluoranthenes	0.05	µg/g	<0.050	<0.050	-	<0.050	10
Benzo(b+j+k)fluoranthene	0.05	µg/g	<0.050	<0.050	-	<0.050	NS
Benzo(g,h,i)perylene	0.05	µg/g	<0.050	<0.050	-	<0.050	NS
Benzo(k)fluoranthene	0.05	µg/g	<0.050	<0.050	-	<0.050	10
Chrysene	0.05	µg/g	<0.050	<0.050	-	<0.050	4500
Dibenz(a,h)anthracene	0.05	µg/g	<0.050	<0.050	-	<0.050	10
7,12-Dimethylbenz(a)anthracene	0.02	µg/g	< 0.02	< 0.02		< 0.02	0.025
Fluoranthene	0.05	µg/g	<0.050	<0.050	-	<0.050	200 (C)
Fluorene	0.05	µg/g	<0.050	<0.050	-	<0.050	9500
Indeno(1,2,3-c,d)pyrene	0.05	µg/g	<0.050	<0.050	-	<0.050	10
1-Methylnaphthalene	0.05	µg/g	<0.050	<0.050	-	<0.050	1000
2-Methylnaphthalene	0.05	µg/g	<0.050	<0.050	-	<0.050	950
Naphthalene	0.05	µg/g	<0.050	<0.050	-	<0.050	20 (B)
4-Nitropyrene	0.05	µg/g	<0.050	<0.050	-	<0.050	25
Phenanthrene	0.05	µg/g	<0.050	<0.050	-	<0.050	50
Pyrene	0.05	µg/g	<0.050	<0.050	-	<0.050	100
Quinoline	0.05	µg/g	<0.050	<0.050	-	<0.050	10

Notes

CSR	British Columbia Contaminated Sites Regulation (CSR, BC, Reg. 375/96 including amendments up to B.C. Reg. 133/2022, March 1, 2023)
Standards (1)	Schedule 3.1 (Part 1) Matrix Numerical Soil Standards (standards displayed in ug/g unless otherwise specified). Site specific factors includes - Intake of contaminated soil (A), Groundwater used for drinking water (B) Toxicity to soil invertebrates and plants (C), Groundwater flow to surface water used by freshwater aquatic life (D), Groundwater used for irrigation (E), and Groundwater used for livestock water (F).
Standards (2)	Schedule 3.1 (Part 2) Generic Numerical Soil Standards to Protect human Health (standards displayed in ug/g unless otherwise specified)
Standards (3)	Schedule 3.1 (Part 3) Generic Numerical Soil Standards to Protect Ecological Health (standards displayed in ug/g unless otherwise specified)
RLLD	Residential Land Use Low Density
CL	Commercial Land Use
NS	No standard
RDL	Reported detection limit
RPD	Relative percent difference
m	Metres
<	Less than detection limit
-	Not analyzed or RPD not calculated
Result	Analytical result exceeds applicable CSR CL standards
BOLD	Detectable volatile concentration

Table 3
Soil Analytical Results - Volatile Organic Compounds (VOCs)
Sheet 1 of 1

Borehole Location			24-BH1	24-BH1	RPD	24-BH2	CSR CL Standards (1, 2 &3)
Sample ID			24-BH1@15'	DUP-1		24-BH2@20'	
Laboratory Sample ID			24F0492-02	24F0492-08		24F0492-05	
Date Sampled (dd-mmm-yy)			2024-06-03	2024-06-03		2024-06-03	
Sample Depth (m)			4.6	4.6		6.1	
Parameter	**RDL**	**Units**					
VPHs	20	µg/g	<20	<20	-	<20	200
VHs	20	µg/g	<20	<20	-	<20	NS
Benzene	0.03	µg/g	<0.030	<0.030	-	<0.030	0.035 (B), 2.5 (D)
Bromodichloromethane	0.1	µg/g	<0.100	<0.100	-	<0.100	550
Bromoform	0.1	µg/g	<0.100	<0.100	-	<0.100	4000
1,3-Butadiene	0.1	µg/g	<0.100	<0.100	-	<0.100	9.5
Carbon Tetrachloride	0.05	µg/g	<0.050	<0.050	-	<0.050	50
Chlorobenzene	0.05	µg/g	<0.050	<0.050	-	<0.050	10
Chloroethane	-	µg/g	-	-	-	-	NS
Chloroform	0.05	µg/g	<0.050	<0.050	-	<0.050	50
Chloromethane	-	µg/g	-	-	-	-	NS
p-cymene	-	µg/g	-	-	-	-	NS
n-decane	0.2	µg/g	<0.200	<0.200	-	<0.200	NS
Dibromochloromethane	0.1	µg/g	<0.100	<0.100	-	<0.100	400
1,2-Dibromoethane	0.1	µg/g	<0.100	<0.100	-	<0.100	15
1,2-Dichlorobenzene	0.05	µg/g	<0.050	<0.050	-	<0.050	10
1,3-Dichlorobenzene	0.05	µg/g	<0.050	<0.050	-	<0.050	10
1,4-Dichlorobenzene	0.05	µg/g	<0.050	<0.050	-	<0.050	10
1,1-Dichloroethane	0.05	µg/g	<0.050	<0.050	-	<0.050	50
1,2-Dichloroethane	0.05	µg/g	<0.050	<0.050	-	<0.050	50
1,1-Dichloroethylene	0.05	µg/g	<0.050	<0.050	-	<0.050	50
cis-1,2-Dichloroethylene	0.05	µg/g	<0.050	<0.050	-	<0.050	50
trans-1,2-Dichloroethylene	0.05	µg/g	<0.050	<0.050	-	<0.050	50
Dichloromethane	0.1	µg/g	<0.100	<0.100	-	<0.100	50
1,2-Dichloropropane	0.05	µg/g	<0.050	<0.050	-	<0.050	50
1,3-Dichloropropene (cis & trans)	0.05	µg/g	<0.050	<0.050	-	<0.050	50
cis-1,3-Dichloropropylene	-	µg/g	-	-	-	-	NS
trans-1,3-Dichloropropylene	-	µg/g	-	-	-	-	NS
Ethylbenzene	0.05	µg/g	<0.050	<0.050	-	<0.050	15 (B)
n-hexane	0.2	µg/g	<0.200	<0.200	-	<0.200	NS
Isopropylbenzene	0.05	µg/g	<0.050	<0.050	-	<0.050	25000
Methylcyclohexane	0.05	µg/g	<0.050	<0.050	-	<0.050	NS
Methyl t-butyl ether (MTBE)	0.04	µg/g	<0.040	<0.040	-	<0.040	20000
n-propylbenzene	-	µg/g	-	-	-	-	25000
Styrene	0.05	µg/g	<0.050	<0.050	-	<0.050	50
1,1,1,2-Tetrachloroethane	0.05	µg/g	-	-	-	-	1500
1,1,2,2-Tetrachloroethane	-	µg/g	<0.050	<0.050	-	<0.050	150
Tetrachloroethylene	0.05	µg/g	<0.050	<0.050	-	<0.050	2.5
Toluene	0.2	µg/g	<0.200	<0.200	-	<0.200	0.5 (D)
1,1,1-Trichloroethane	0.05	µg/g	<0.050	<0.050	-	<0.050	50
1,1,2-Trichloroethane	0.05	µg/g	<0.050	<0.050	-	<0.050	50
Trichloroethylene	0.04	µg/g	<0.040	<0.040	-	<0.040	0.3
Trichlorofluoromethane	0.1	µg/g	<0.100	<0.100	-	<0.100	70000
1,2,4-Trimethylbenzene	0.1	µg/g	<0.100	<0.100	-	<0.100	NS
1,3,5-Trimethylbenzene	0.1	µg/g	<0.100	<0.100	-	<0.100	2500
Vinyl Chloride	0.1	µg/g	<0.100	<0.100	-	<0.100	45
meta- & para-Xylene	-	µg/g	-	-	-	-	NS
ortho-Xylene	-	µg/g	-	-	-	-	NS
Xylenes	0.1	µg/g	<0.100	<0.100	-	<0.100	6.5 (B)

Notes

CSR	British Columbia Contaminated Sites Regulation (CSR, BC, Reg. 375/96 including amendments up to B.C. Reg. 133/2022, March 1, 2023)
Standards (1)	Schedule 3.1 (Part 1) Matrix Numerical Soil Standards (standards displayed in ug/g unless otherwise specified). Site specific factors includes - Intake of contaminated soil (A), Groundwater used for drinking water (B) Toxicity to soil invertebrates and plants (C), Groundwater flow to surface water used by freshwater aquatic life (D), Groundwater used for irrigation (E), and Groundwater used for livestock water (F).
Standards (2)	Schedule 3.1 (Part 2) Generic Numerical Soil Standards to Protect human Health (standards displayed in ug/g unless otherwise specified)
Standards (3)	Schedule 3.1 (Part 3) Generic Numerical Soil Standards to Protect Ecological Health (standards displayed in ug/g unless otherwise specified)
ug/g	Micrograms per gram
RL_{LD}	Residential Land Use Low Density
CL	Commercial Land Use
VPHs	Volatile Petroleum Hydrocarbons in soil
VHs	Volatile Hydrocarbons in soil
NS	No standard
RDL	Reported detection limit
<	Less than detection limit
m	Metres
*	Detectable concentration is higher than reported detection limit

Analytical result exceeds applicable CSR RL_{LD} standards

Result	Analytical result exceeds applicable CSR CL standards
BOLD	Detectable volatile concentration

Table 4
Soil Analytical Results - Metals
Sheet 1 of 1

Borehole Location			24-BH1	24-BH1	24-BH1	RPD	24-BH2	24-BH2	24-BH3	24-BH3	RPD	CSR CL Standards (1, 2 & 3)	Regional Background Concentration for Lower Mainland
Sample ID			24-BH1@2.5'	24-BH1@15'	DUP-1		24-BH2@2.5'	24-BH2@20'	24-BH2@2.5'	DUP-2			
Laboratory Sample ID			24F0492-01	24F0492-02	24F0492-08		24F0492-04	24F0492-05	24F0492-07	24F0492-09			
Date Sampled (dd-mmm-yy)			3-Jun-2024	3-Jun-2024	3-Jun-2024		3-Jun-2024	3-Jun-2024	3-Jun-2024	3-Jun-2024			
Sample Depth (m)			0.8	4.6	4.6		0.8	6.1	0.8	0.8			
Parameter	**RDL**	**Units**											
pH	0.10	pH units	5.5	6.66	6.67	0%	5.66	7.12	6.08	6.22	2%	NS	-
Aluminum (Al)	40	µg/g	24700	9770	11000	12%	25300	12300	19000	19800	4%	250000	-
Antimony (Sb)	0.1	µg/g	0.5	0.19	0.26	31%	0.46	0.3	0.49	0.47	4%	40	-
Arsenic (As)	0.3	µg/g	7.21	3.62	3.36	7%	9.2	5.48	8.75	**10.2**	15%	10 (B & D)	-
Barium (Ba)	1	µg/g	112	50.7	56.2	10%	181	62.6	115	130	12%	350 (B)	-
Beryllium (Be)	0.1	µg/g	0.74	0.19	0.21	10%	0.54	0.25	0.35	0.38	8%	1 @ pH < 6.5 (D), 4 @ pH < 7 (D), 30@ pH < 7.5 (D), 250@ pH 7.5 - <8.0 (D)	-
Bismuth (Bi)	-	-	-	-	-	-	-	-	-	-	-	NS	-
Boron (B)	2	µg/g	2.5	<2.0	<2.0	-	2	<2.0	3	4	29%	50000	-
Cadmium (Cd)	0.04	µg/g	0.513	0.057	0.065	13%	0.403	0.107	0.25	0.308	21%	1 @ pH < 7 (B & D), 3 @ pH < 7.5 (D), 20 @ ph < 8.0 (D), 50 @pH > 8.0 (D)	-
Calcium (Ca)	-	-	-	-	-	-	-	-	-	-	-	NS	-
Chromium (Cr) *	1	µg/g	73.2*	31.3	34.6	10%	63.6*	39.2	46.1	49.5	7%	60 (B & D) (5); 250 (6)	-
Cobalt (Co)	0.1	µg/g	13.2	5.83	6.62	13%	16.7	9.44	11.7	11.7	0%	25 (B & D)	-
Copper (Cu)	0.4	µg/g	36.3	13.4	15.6	15%	31.9	21	29	28.9	0%	300 (C	-
Iron (Fe)	20	µg/g	33000	16300	18000	10%	38000	22000	28700	29000	1%	150000	-
Lead (Pb)	0.2	µg/g	20.2	1.64	1.95	17%	8.57	2.56	42.5	44.2	4%	120 (A)	-
Lithium (Li)	0.1	µg/g	18.7	6.94	7.89	13%	16.9	7.11	12.7	13.1	3%	450	-
Magnesium (Mg)	-	-	-	-	-	-	-	-	-	-	-	NS	-
Manganese (Mn)	0.4	µg/g	1080	249	273	9%	610	342	524	496	5%	2000 (B)	-
Mercury (Hg)	0.04	µg/g	0.085	<0.040	<0.040	-	0.058	<0.040	0.046	0.057	21%	75 (A)	-
Molybdenum (Mo)	0.1	µg/g	0.93	0.15	0.17	13%	0.93	0.33	1.03	1.06	3%	15 (B)	-
Nickel (Ni)	0.6	µg/g	43	22.2	26.5	18%	**74.8**	31	37.9	39.1	3%	70 (B) at pH < 7.5, 250 (A), 500 (B) at pH > 8.0,	75
Phosphorus (P)	-	-	-	-	-	-	-	-	-	-	-	NS	-
Potassium (K)	-	-	-	-	-	-	-	-	-	-	-	NS	-
Selenium (Se)	0.2	µg/g	0.47	<0.20	<0.20	-	0.41	<0.20	0.28	0.25	11%	1 (B & D)	-
Silver (Ag)	0.1	µg/g	0.24	<0.10	<0.10	-	0.21	<0.10	<0.10	0.1	-	40	-
Sodium (Na)	-	-	-	-	-	-	-	-	-	-	-	NS	-
Strontium (Sr)	0.2	µg/g	53.9	25.4	29.3	14%	45.3	42.8	36.9	38.3	4%	150000	-
Sulfur (S)	-	-	-	-	-	-	-	-	-	-	-	NS	-
Thallium (Tl)	0.1	µg/g	0.11	<0.10	<0.10	-	0.1	<0.10	<0.10	<0.10	-	25	-
Tin (Sn)	0.2	µg/g	1.11	0.21	0.23	9%	0.47	0.3	0.64	0.75	16%	300	-
Titanium (Ti)	-	-	-	-	-	-	-	-	-	-	-	NS	-
Tungsten (W)	0.2	µg/g	<0.20	<0.20	<0.20	-	<0.20	0.24	0.2	0.2	0%	200	-
Uranium (U)	0.05	µg/g	0.817	0.218	0.266	20%	0.605	0.315	0.617	0.671	8%	30 (B)	-
Vanadium (V)	1	µg/g	68.3	41.5	48.3	15%	78.9	58.7	66.1	69.3	5%	100 (B)	-
Zinc (Zn)	2	µg/g	277	28.9	31.6	9%	102	41	81.7	99.7	20%	450 (C)	-
Zirconium (Zr)	-	-	-	-	-	-	-	-	-	-	-	NS	-

Notes

CSR	British Columbia Contaminated Sites Regulation (CSR, BC, Reg. 375/96 including amendments up to B.C. Reg. 133/2022, March 1, 2023)
Standards (1)	Schedule 3.1 (Part 1) Matrix Numerical Soil Standards (standards displayed in ug/g unless otherwise specified). Site specific factors includes - Intake of contaminated soil (A), Groundwater used for drinking water (B) Toxicity to soil invertebrates and plants (C), Groundwater flow to surface water used by freshwater aquatic life (D), Groundwater used for irrigation (E), and Groundwater used for livestock water (F).
Standards (2)	Schedule 3.1 (Part 2) Generic Numerical Soil Standards to Protect human Health (standards displayed in ug/g unless otherwise specified)
Standards (3)	Schedule 3.1 (Part 3) Generic Numerical Soil Standards to Protect Ecological Health (standards displayed in ug/g unless otherwise specified)
µg/g	Micrograms per gram
CL	Commercial Land Use
NS	No standard
-	Parameter not analyzed or RPD not calculated
RDL	Reported detection limit
RPD	Relative percent difference
(4)	Standard is pH dependent
(5)	Chromium standard is for hexavalent
(6)	Total chromium results were used to assess hexavalent chromium results in the absence of speciated chromium data
*	Hexavalent chromium concentration is considered to be less than 60 ug/g and compliant in measured total chromium concentration of 73.2 and 63.6 ug/g.
Result	Analytical result exceeds applicable CSR CL standards
Result	Concentration is less than regional background as listed in Protocol 4 for lowermainland and is considered complaint.

Table 5
Groundwater Analytical Results - Extractable Petroleum Hydrocarbons (EPHw)
LEPHw, and EPHw (10-19)
Sheet 1 of 1

Well ID			**24-MW1**	**24-MW1**	**RPD**	**24-MW2**	**CSR AW_F Standards**	**CSR DW Standards**
Sample ID			**24-MW1**	**DUP-A**		**24-MW2**		
Laboratory Sample ID			**24F0474-01**	**24F0474-03**		**24F0474-032**		
Date Sampled (dd-mmm-yyyy)			**4-Jun-24**	**4-Jun-24**		**4-Jun-24**		
Parameter	**RDL**	**Units**						
LEPHw	250	µg/L	<250	<250	-	<250	500	NS
HEPHw	250	µg/L	<250	<250	-	<250	NS	NS
EPHw(10-19)	250	µg/L	<250	<250	-	<250	5000	5000
EPHw(19-32)	250	µg/L	<250	<250	-	<250	NS	NS

Notes

CSR	British Columbia Contaminated Sites Regulation (CSR, BC, Reg. 375/96 including amendments up to B.C. Reg. 133/2022, March 1, 2023)
Standards	Schedule 3.2 Generic Numerical Water Standards (displayed in µg/L unless otherwise specified)
µg/L	Micrograms per litre
NS	No standard
RDL	Reported detection limit
AW_F	Aquatic Life Water Use (Freshwater)
DW	Drinking Water Use
EPHw	Extractable petroleum hydrocarbons in water
HEPHw	Heavy extractable petroleum hydrocarbons in water
LEPHw	Light extractable petroleum hydrocarbons in water
Result	Analytical result exceeds CSR AW_F standards
Result	Analytical result exceeds CSR DW standards
Result	Analytical result exceeds CSR AW_F and DW standards

Table 6
Groundwater Analytical Results - Polycyclic Aromatic Hydrocarbons (PAHs)
Sheet 1 of 1

Well ID			**24-MW1**	**24-MW1**	**RPD**	**24-MW2**	**CSR AW_F Standards**	**CSR DW Standards**
Sample ID			**24-MW1**	**DUP-A**		**24-MW2**		
Laboratory Sample ID			**24F0474-01**	**24F0474-03**		**24F0474-032**		
Date Sampled (dd-mmm-yyyy)			**4-Jun-24**	**4-Jun-24**		**4-Jun-24**		
Parameter	**RDL**	**Units**						
Acenaphthene	0.05	µg/L	<0.050	<0.050	-	<0.050	60	250
Acenaphthylene	0.2	µg/L	<0.200	<0.200	-	<0.200	NS	NS
Acridine	0.05	µg/L	<0.050	<0.050	-	<0.050	0.5	NS
Anthracene	0.01	µg/L	<0.010	<0.010	-	<0.010	1	1000
Benz(a)anthracene	0.01	µg/L	<0.010	<0.010	-	<0.010	1	0.07
Benzo(a)pyrene	0.01	µg/L	<0.010	<0.010	-	<0.010	0.1	0.01
Benzo(b+j)fluoranthenes	0.05	µg/L	<0.050	<0.050	-	<0.050	NS	0.07
Benzo(b+j+k)fluoranthene	0.05	µg/L	<0.050	<0.050	-	<0.050	NS	NS
Benzo(g,h,i)perylene	0.05	µg/L	<0.050	<0.050	-	<0.050	NS	NS
Benzo(k)fluoranthene	0.1	µg/L	<0.100	<0.100	-	<0.100	NS	NS
Chrysene	0.05	µg/L	<0.050	<0.050	-	<0.050	1	7
Dibenz(a,h)anthracene	0.01	µg/L	<0.010	<0.010	-	<0.010	NS	0.01
7,12-Dimethylbenz(a)anthracene	0.02	µg/L	<0.020	<0.020	-	<0.020	NS	0.02
Fluoranthene	0.03	µg/L	<0.030	<0.030	-	<0.030	2	150
Fluorene	0.05	µg/L	<0.050	<0.050	-	<0.050	120	150
Indeno(1,2,3-c,d)pyrene	0.05	µg/L	<0.050	<0.050	-	<0.050	NS	NS
1-Methylnaphthalene	0.1	µg/L	<0.100	<0.100	-	<0.100	NS	5.5
2-Methylnaphthalene	0.1	µg/L	<0.100	<0.100	-	<0.100	NS	15
Naphthalene	0.2	µg/L	<0.200	<0.200	-	<0.200	10	80
4-Nitropyrene	0.05	µg/L	<0.050	<0.050	-	<0.050	NS	0.15
Phenanthrene	0.1	µg/L	<0.100	<0.100	-	<0.100	3	NS
Pyrene	0.02	µg/L	<0.020	<0.020	-	<0.020	0.2	100
Quinoline	0.05	µg/L	<0.050	<0.050	-	<0.050	34	0.05

Notes

CSR	British Columbia Contaminated Sites Regulation (CSR, BC, Reg. 375/96 including amendments up to B.C. Reg. 133/2022, March 1, 2023)
Standards	Schedule 3.2 Generic Numerical Water Standards (displayed in µg/L unless otherwise specified)
µg/L	Micrograms per litre
NS	No standard
RDL	Reported detection limit
AW_F	Aquatic Life Water Use (Freshwater)
DW	Drinking Water Use
*	Reported detection limit is higher than the CSR DW Standards
Result	Analytical result exceeds CSR AW_F standards
Result	Analytical result exceeds CSR DW standards
Result	Analytical result exceeds CSR AW_F and DW standards
BOLD	Detectable concentration of volatile parameter

Table 7
Groundwater Analytical Results - Volatile Organic Compounds (VOCs)
Sheet 1 of 1

Well ID			**24-MW1**	**24-MW1**	**RPD**	**24-MW2**	**CSR AW_F Standards**	**CSR DW Standards**
Sample ID			**24-MW1**	**DUP-A**		**24-MW2**		
Laboratory Sample ID			**24F0474-01**	**24F0474-03**		**24F0474-032**		
Date Sampled (dd-mmm-yyyy)			**4-Jun-24**	**4-Jun-24**		**4-Jun-24**		
Parameter	**RDL**	**Units**						
VPHw	100	µg/L	<100	<100	-	<100	1500	NS
VHw(6-10)	100	µg/L	<100	<100	-	<100	15000	15000
Benzene	0.5	µg/L	<0.5	<0.5	-	<0.5	400	5
Bromodichloromethane	1	µg/L	<1.0	<1.0	-	<1.0	NS	100
Bromoform	1	µg/L	<1.0	<1.0	-	<1.0	NS	100
1-3, Butadiene	1	µg/L	<1.0	<1.0	-	<1.0	NS	1
Carbon Tetrachloride	0.5	µg/L	<0.5	<0.5	-	<0.5	130	2
Chlorobenzene	1	µg/L	<1.0	<1.0	-	<1.0	13	80
Chloroethane	2	µg/L	<2.0	<2.0	-	<2.0	NS	NS
Chloroform	1	µg/L	<1.0	<1.0	-	1.2	20	100
Chloromethane	-	-	-	-	-	-	NS	NS
Cymene, p-	-	-	-	-	-	-	NS	NS
Decane, n-	2	µg/L	<2.0	<2.0	-	<2.0	NS	NS
Dibromochloromethane	1	µg/L	<1.0	<1.0	-	<1.0	NS	100
1,2-Dibromoethane	0.3	µg/L	<0.3	<0.3	-	<0.3	NS	0.5
1,2-Dichlorobenzene	0.5	µg/L	<0.5	<0.5	-	<0.5	7	200
1,3-Dichlorobenzene	1	µg/L	<1.0	<1.0	-	<1.0	1500	NS
1,4-Dichlorobenzene	1	µg/L	<1.0	<1.0	-	<1.0	260	5
1,1-Dichloroethane	1	µg/L	<1.0	<1.0	-	<1.0	NS	30
1,2-Dichloroethane	1	µg/L	<1.0	<1.0	-	<1.0	1000	5
1,1-Dichloroethylene	1	µg/L	<1.0	<1.0	-	<1.0	NS	14
cis-1,2-Dichloroethylene	1	µg/L	<1.0	<1.0	-	<1.0	NS	8
trans-1,2-Dichloroethylene	1	µg/L	<1.0	<1.0	-	<1.0	NS	80
Dichloromethane	3	µg/L	<3.0	<3.0	-	<3.0	980	50
1,2-Dichloropropane	1	µg/L	<1.0	<1.0	-	<1.0	NS	4.5
cis-1,3-Dichloropropylene	-	-	-	-	-	-	NS	NS
trans-1,3-Dichloropropylene	-	-	-	-	-	-	NS	NS
Ethylbenzene	1	µg/L	<1.0	<1.0	-	<1.0	2000	140
Hexane, n-	2	µg/L	<2.0	<2.0	-	<2.0	NS	NS
Isopropylbenzene	1	µg/L	<1.0	<1.0	-	<1.0	NS	400
Methylcyclohexane	1	µg/L	<1.0	<1.0	-	<1.0	NS	NS
Methyl t-butyl ether (MTBE)	1	µg/L	<1.0	<1.0	-	<1.0	34000	95
Propylbenzene, n-	-	-	-	-	-	-	NS	400
Styrene	1	µg/L	<1.0	<1.0	-	<1.0	720	800
1,1,1,2-Tetrachloroethane	-	-	-	-	-	-	NS	6
1,1,2,2-Tetrachloroethane	0.5	µg/L	<0.5	<0.5	-	<0.5	NS	0.8
Tetrachloroethylene	1	µg/L	<1.0	<1.0	-	<1.0	1100	30
Toluene	1	µg/L	<1.0	<1.0	-	<1.0	5	60
1,1,1-Trichloroethane	1	µg/L	<1.0	<1.0	-	<1.0	NS	8000
1,1,2-Trichloroethane	1	µg/L	<1.0	<1.0	-	<1.0	NS	3
Trichloroethylene	1	µg/L	<1.0	<1.0	-	<1.0	200	5
Trichlorofluoromethane	1	µg/L	<1.0	<1.0	-	<1.0	NS	1000
1,2,4-Trimethylbenzene	1	µg/L	<1.0	<1.0	-	<1.0	NS	NS
1,3,5-Trimethylbenzene	1	µg/L	<1.0	<1.0	-	<1.0	NS	40
Vinyl Chloride	1	µg/L	<1.0	<1.0	-	<1.0	NS	2
meta- & para-Xylene	-	-	-	-	-	-	NS	NS
ortho-Xylene	-	-	-	-	-	-	NS	NS
Xylenes	2	µg/L	<2.0	<2.0	-	<2.0	300	90

Notes

CSR	British Columbia Contaminated Sites Regulation (CSR, BC, Reg. 375/96 including amendments up to B.C. Reg. 133/2022, March 1, 2023)
Standards	Schedule 3.2 Generic Numerical Water Standards (displayed in µg/L unless otherwise specified)
µg/L	Micrograms per litre
NS	No standard
RDL	Reported detection limit
AW_F	Aquatic Life Water Use (Freshwater)
DW	Drinking Water Use
VPHw	Volatile petroleum hydrocarbons in water
VHw	Volatile hydrocarbons in water
Result	Analytical result exceeds CSR AW_F standards
Result	Analytical result exceeds CSR DW standards
Result	Analytical result exceeds CSR AW_F and DW standards
BOLD	Detectable concentration of volatile parameter

Table 8
Groundwater Analytical Results - Dissolved Metals
Sheet 1 of 1

		Well ID	**24-MW1**	**24-MW1**		**24-MW2**		
		Sample ID	**24-MW1**	**DUP-A**		**24-MW2**		
		Laboratory Sample ID	**24F0474-01**	**24F0474-03**	**RPD**	**24F0474-032**	**CSR AW$_F$ Standards**	**CSR DW Standards**
		Date Sampled (dd-mmm-yyyy)	**4-Jun-24**	**4-Jun-24**		**4-Jun-24**		
Parameter	**RDL**	**Units**						
Hardness	600	mg/L	289	297	3%	75.4	NS	NS
Aluminum (Al)	1.0	µg/L	<5.0	<5.0	-	353	NS	9500
Antimony (Sb)	0.10	µg/L	<0.20	<0.20	-	1.17	90	6
Arsenic (As)	0.10	µg/L	<0.50	<0.50	-	5.44	50	10
Barium (Ba)	0.10	µg/L	59.4	63	6%	9.7	10000	1000
Beryllium (Be)	0.100	µg/L	<0.10	<0.10		<0.10	1.5	8
Bismuth (Bi)	0.050	µg/L	-	-	-	-	NS	NS
Boron (B)	10	µg/L	<50.0	<50.0	-	<50.0	12000	5000
Cadmium (Cd)	0.0050	µg/L	0.06	0.063	5%	<0.040	3.5 @ H 150- 210 and 4 @ H > 210	5
Calcium (Ca)	50	µg/L	75900	78400	-	28300	NS	NS
Cesium (Cs)	0.010	µg/L	-	-	-	-	NS	NS
Chromium (Cr)	0.50	µg/L	<0.50	<0.50	-	28.1	90 (2), 10 (3)	6000 (2), 50 (3)
Cobalt (Co)	0.10	µg/L	0.97	0.97	0%	0.35	40	20 (5)
Copper (Cu)	0.20	µg/L	<0.40	0.79	-	27.1	60 @ H 120 and 80 @ H 150 to 200	1500
Iron (Fe)	10	µg/L	<10	<10	-	697	NS	NA (6)
Lead (Pb)	0.050	µg/L	<0.20	<0.20		0.31	40 - 160 (1)	10
Lithium (Li)	1.0	µg/L	4.37	4.43	1%	1.64	NS	8
Magnesium (Mg)	5.0	µg/L	24100	24600	2%	1130	NS	NS
Manganese (Mn)	0.10	µg/L	212	213	0%	17.4	NS	NA (6)
Mercury (Hg)	0.0050	µg/L	<0.010	<0.010	-	<0.010	0.25	1
Molybdenum (Mo)	0.050	µg/L	0.39	0.36	8%	62.7	10000	250
Nickel (Ni)	0.50	µg/L	4.61	4.53	-	2.97	250 - 1500 (1)	80
Phosphorus (P)	50	µg/L	-	-	-	-	NS	NS
Potassium (K)	50	µg/L	-	-	-	-	NS	NS
Rubidium (Rb)	0.20	µg/L	-	-	-	-	NS	NS
Selenium (Se)	0.050	µg/L	<0.50	<0.50	-	0.75	20	10
Silicon (Si)	50	µg/L	-	-	-	-	NS	NS
Silver (Ag)	0.010	µg/L	<0.050	<0.050		<0.050	0.5 - 15 (1)	20
Sodium (Na)	50	µg/L	46000	47000	2%	74400	NS	NS
Strontium (Sr)	0.20	µg/L	495	513	4%	119	NS	2500
Sulfur (S)	500	µg/L	-	-	-	-	NS	NS
Tellurium (Te)	0.20	µg/L	-	-	-	-	NS	NS
Thallium (Tl)	0.010	µg/L	<0.020	<0.020	-	<0.020	3	NS
Thorium (Th)	0.10	µg/L	-	-	-	-	NS	NS
Tin (Sn)	0.10	µg/L	0.27	0.2	30%	<0.20	NS	2500
Titanium (Ti)	0.30	µg/L	<5.0	<5.0	-	8.3	1000	NS
Tungsten (W)	0.10	µg/L	<1.0	<1.0	-	<1.0	NS	3
Uranium (U)	0.010	µg/L	0.435	0.427	2%	0.15	85	20
Vanadium (V)	0.50	µg/L	<5.0	<5.0	-	7.6	NS	20
Zinc (Zn)	1.0	µg/L	<4.0	<4.0	-	7.9	75 - 2400 (1)	3000
Zirconium (Zr)	0.20	µg/L	-	-	-	-	NS	NS

Notes

CSR	British Columbia Contaminated Sites Regulation (CSR, BC, Reg. 375/96 including amendments up to B.C. Reg. 133/2022, March 1, 2023)
Standards	Schedule 3.2 Generic Numerical Water Standards (displayed in µg/L unless otherwise specified)
µg/L	Micrograms per litre
mg/L	Milligrams per litre
NS	No standard
NA	Not Applicable
RDL	Reported detection limit
AW$_F$	Aquatic Life Water Use (Freshwater)
DW	Drinking Water Use
(1)	Standard is hardness dependent
(2)	Standard is for chromium trivalent
(3)	Standard is for chromium hexavalent
(4)	Subregional background concentration as per BC MOECCS Protocol 9
(5)	The interim cobalt value of 20 ug/L per BCMOECCS Protocol 9 note 2 on page 9.
(6)	Iron and manganese standards do not apply to the Site as per notes 43 and 43 of CSR Schedule 3.2
Result	Analytical result exceeds CSR AWF standards
Result	Analytical result exceeds CSR DW standards
Result	Analytical result exceeds CSR AW$_F$ and DW standards

Appendix A –
Site Photographs

Photograph No. 1
Looking Northwest – Shows the subject site occupied by a Wings restaurant. Also visible is Sumas Way adjoining the site to the east (June 03, 2024).

Photograph No. 2
Looking Northeast – Shows a rear view of on-site building with at-grade parkade (June 03, 2024).

Photograph No. 3

Looking Northeast – Shows an inside view of at-grade parkade below the building (June 03, 2024).

Photograph No. 4

Looking Southwest – Shows an operating Shell gas station (APEC #1) adjoining the site to the northwest (June 03, 2024).

Photograph No. 5

Looking Northeast – Shows an operating Petro-Canada gas station (off-site APEC #2) and a Great Canadian oil-change/carwash facility (off-site APEC #3), both located un-gradient to the subject site (June 03, 2024).

Photograph No. 6

Looking North – Shows an underground utility locate operation completed at the site on June 3, 2024, prior to drilling.

Photograph No. 7

Looking Southwest – Shows a drilling operation at 24-BH/MW/VP1 with a Sonic rig at the western corner of the site (June 3, 2024).

Photograph No. 8

Shows a soil core at 24-BH/MW/VP1 from grade to 10ft below the grade (June 3, 2024).

Photograph No. 9
Looking Southeast – Shows a drilling operation at 24-BH/MW2 with a Sonic rig near the mid-eastern boundary of the site (June 3, 2024).

Photograph No. 10
Shows soil cores at 24-BH/MW2 from grade to 30ft below the grade (June 3, 2024).

Photograph No. 11

Looking South – Shows a drilling operation at a shallow borehole 24-BH3 located in the southern corner of the site (June 3, 2024).

Photograph No. 12

Shows a typical groundwater sampling operation completed at the site on June 4, 2024.

Appendix B –
Copy of Legal Plan, Current Title, Site Registry and Utility Locate Report

SUBDIVISION PLAN OF LOT 26 (PLAN 51446) AND OF PARCEL 1 (REF. PLAN 10860) of LOT D (PLAN 9358), ALL OF SEC. 14, TP. 16, N.W.D.

15-324.M3

PLAN 78151

Ref. # AB103397-9

INTEGRATED SURVEY AREA Nº 24, ABBOTSFORD

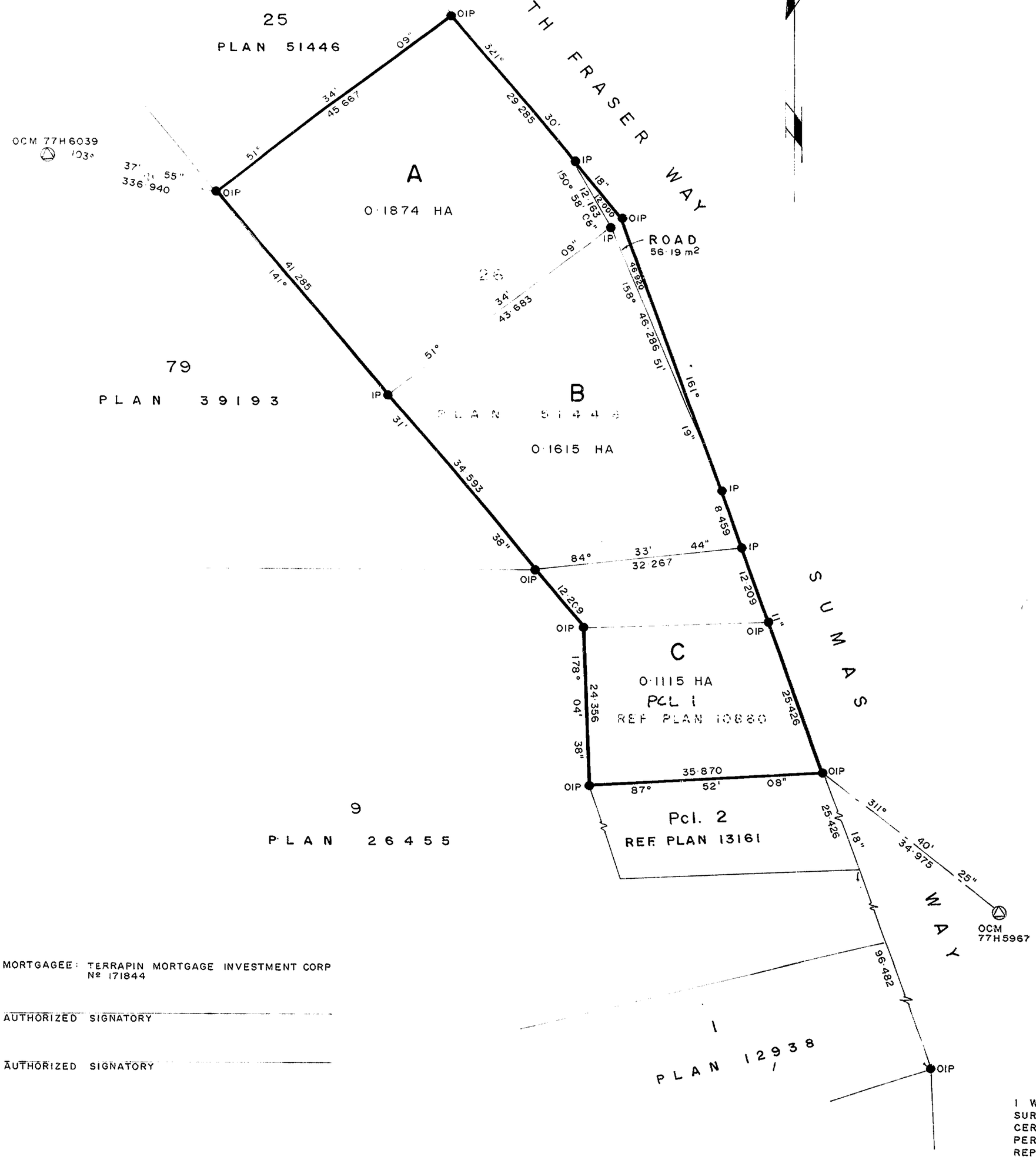
BEARINGS ARE GRID BEARINGS DERIVED FROM OCM'S 77H6039 & 77H5967. THIS PLAN SHOWS GROUND LEVEL MEASURED DISTANCES PRIOR TO COMPUTATIONS OF UTM COORDINATES MULTIPLY BY COMBINED FACTOR OF 0·9996290

SCALE 1 : 500 ALL DISTANCES ARE IN METRES

10 5 0 10 20 30 M

LEGEND

△	OCM	OLD CONTROL MONUMENT FOUND
●	OIP	OLD IRON POST FOUND
●	IP	IRON POST FOUND
	HA	HECTARES
	m2	SQUARE METRES



DEPOSITED IN THE LAND TITLE OFFICE AT NEW WESTMINSTER, B.C. THIS 8 DAY OF June, 1988

E. J. Lavender
REGISTRAR

BB/AS

OWNER VENTECH CAPITAL CORPORATION Nº 336048

AUTHORIZED SIGNATORY

AUTHORIZED SIGNATORY

OWNER

MENNO PETER FROESE

WITNESS

ADDRESS OF WITNESS

OCCUPATION OF WITNESS

MORTGAGEE: INVAN MORTGAGE CORP Nº 327735

AUTHORIZED SIGNATORY

AUTHORIZED SIGNATORY

MORTGAGEE STANDARD MANAGEMENT INC Nº 316291

AUTHORIZED SIGNATORY

AUTHORIZED SIGNATORY

MORTGAGEE TERRAFUND FINANCIAL INC Nº 273218

AUTHORIZED SIGNATORY

AUTHORIZED SIGNATORY

MORTGAGEE: TERRAPIN MORTGAGE INVESTMENT CORP Nº 171844

AUTHORIZED SIGNATORY

AUTHORIZED SIGNATORY

I W. M. GRIFFITH A BRITISH COLUMBIA LAND SURVEYOR OF CLEARBROOK, BRITISH COLUMBIA CERTIFY THAT I WAS PRESENT AT AND PERSONALLY SUPERINTENDED THE SURVEY REPRESENTED BY THIS PLAN AND THAT THE SURVEY AND PLAN ARE CORRECT. THE SURVEY WAS COMPLETED ON THE 19 TH DAY OF APRIL, 1988

W M Griffith
B.C.L.S.

W. M. GRIFFITH & ASSOC.
B.C. LAND SURVEYORS
102A 2669 LANGDON ST.
CLEARBROOK, B.C.
PH. 853 2861

APPROVED UNDER THE LAND TITLE ACT THIS 25th DAY OF May, 1988

APPROVING OFFICER
DISTRICT OF ABBOTSFORD

APPROVED UNDER THE LAND TITLE ACT THIS 2nd DAY OF May, 1988

APPROVING OFFICER
MINISTRY OF TRANSPORTATION AND HIGHWAYS

THIS PLAN LIES WITHIN THE CENTRAL FRASER VALLEY REGIONAL DISTRICT

TITLE SEARCH PRINT 2024-05-29, 11:09:18

File Reference: 259-839805 Requestor: Aimee Reid

CURRENT INFORMATION ONLY - NO CANCELLED INFORMATION SHOWN

Land Title District	NEW WESTMINSTER
Land Title Office	NEW WESTMINSTER
Title Number	BB146506
From Title Number	AB103398
Application Received	2007-12-18
Application Entered	2007-12-27

Registered Owner in Fee Simple

Registered Owner/Mailing Address: VENTECH CAPITAL CORPORATION, INC.NO. 336048
1660 - 401 WEST GEORGIA STREET
VANCOUVER, BC
V6B 5A1

Taxation Authority Abbotsford, City of

Description of Land

Parcel Identifier: 011-427-027

Legal Description:

LOT B SECTION 14 TOWNSHIP 16 NEW WESTMINSTER DISTRICT PLAN 78151

Legal Notations

NOTICE OF INTEREST, BUILDERS LIEN ACT (S.3(2)), SEE BB146507
FILED 2007-12-18

THIS TITLE MAYBE AFFECTED BY A PERMIT UNDER PART 29 OF THE MUNICIPAL ACT. D.F. AB167603 EXPIRES N/A
CANCELLED BY AB190193 22/09/1988

THIS TITLE MAY BE AFFECTED BY A DEVELOPMENT VARIANCE PERMIT UNDER PART 29 OF THE MUNICIPAL ACT EXPIRY DATE-NOT APPLICABLE
D.F. AB190194

THIS TITLE MAY BE AFFECTED BY A PERMIT UNDER PART 29 OF THE MUNICIPAL ACT SEE DF AD81369 EXPIRES: N/A

HERETO IS ANNEXED EASEMENT AD65613 OVER PART (HATCHED SHOWN ON PLAN 84663) OF LOT C PLAN 78151

Charges, Liens and Interests

Nature:	EASEMENT
Registration Number:	AD65614
Registration Date and Time:	1990-03-02 14:13
Remarks:	PART BOLDLY OUTLINED ON PLAN 84663 APPURTENANT TO LOT C PLAN 78151 WITH PRIORITY OVER AA231592 & AA231593

Nature:	MORTGAGE
Registration Number:	CA3042588
Registration Date and Time:	2013-03-22 08:22
Registered Owner:	THE TORONTO-DOMINION BANK

Nature:	ASSIGNMENT OF RENTS
Registration Number:	CA3042589
Registration Date and Time:	2013-03-22 08:22
Registered Owner:	THE TORONTO-DOMINION BANK

Duplicate Indefeasible Title NONE OUTSTANDING

Transfers NONE

Pending Applications NONE

From: BCOLHELP@gov.bc.ca
To: Matteo Siniscalchi
Subject: Site Registry Search Results
Date: Wednesday, May 29, 2024 3:02:47 PM

Site Registry - Area Search

BC Registries and Online Services

These are the records from the Site Registry that match the search criteria provided:

Folio: VAN-24006323-A0

Latitude: 49deg 2min 13.5sec

Longitude: 122deg 16min 6.9sec

Radius: 0.5km

Site ID:	Address/City:	Last Updated:
0000003993	34416 MARSHAL ROAD AND 34455 DELAIR ROAD, ABBOTSFORD	2004-10-15
0000005349	1990 SUMAS WAY, ABBOTSFORD	2010-11-11
0000005771	2010 SUMAS WAY, ABBOTSFORD	2009-01-27
0000007363	15 - 2047 SUMAS WAY, ABBOTSFORD	2011-09-09
0000010330	1733 RIVERSIDE DRIVE, ABBOTSFORD	2007-04-12
0000013795	1799 RIVERSIDE ROAD, ABBOTSFORD	2012-12-05
0000025698	34314 MARSHALL ROAD, ABBOTSFORD	2022-05-17

End of Search Results

Site Registry - Site Details Report

BC Registries and Online Services

SITE LOCATION

Site ID:	5349	**Latitude:**	49d 2m 16.6s
Victoria File:		**Longitude:**	122d 16m 05.2s
Regional File:			
Common Name:	1990 SUMAS WAY, ABBOTSFORD	**Prov/State:**	BC
Site Address:	1990 SUMAS WAY		
City:	ABBOTSFORD		
Postal Code:	V2S 4L4		

Notations:	6	**Participants:**	7	**Associated Sites:**	0
Documents:	0	**Susp. Land Use:**	1	**Parcel Descriptions:**	1

Location Description: SITE CREATED BY SITE PROFILE, ENTERED 1998-09-02. LOCATION DERIVED BY BC ENVIRONMENT REFERENCING RECTIFIED NAD 83 ORTHOPHOTOGRAPHY

NOTATIONS:

Notation Type: NOTICE OF INDEPENDENT REMEDIATION INITIATION SUBMITTED (WMA 28(2))
Notation Class: WASTE MANAGEMENT ACT: CONTAMINATED SITES NOTATIONS
Initiated: 1998-08-10
Completed: 1998-08-10
Ministry Contact: MCCAMMON, ALAN (SURREY) W
Note: APPLIED FOR DEVELOPMENT PERMIT TO PERFORM LINE REPLACEMENTS AT THE EXISTING SERVICE STATION. REMEDIATION & CONSTRUCTION WILL BE PERFORMED
Required Actions:

Notation Participants

Name: ARCO PRODUCTS CANADA LTD.
Role: SUBMITTED BY
Name: MCCAMMON, ALAN (SURREY) W
Role: RECEIVED BY

Notation Type: SITE PROFILE RECEIVED
Notation Class: WASTE MANAGEMENT ACT: CONTAMINATED SITES NOTATIONS
Initiated: 1998-08-31
Completed:
Ministry Contact: MCCAMMON, ALAN (SURREY) W
Note:
Required Actions:

Notation Participants

Name: CPG ENGINEERING INCORPERATED (VANCOUVER)
Role: SUBMITTED BY
Name: ARCO PRODUCTS CANADA LTD.

Role: REQUESTED BY
Name: MCCAMMON, ALAN (SURREY) W
Role: RECEIVED BY

Notation Type: SITE PROFILE - NO FURTHER INVESTIGATION REQUIRED BY THE MINISTRY
Notation Class: WASTE MANAGEMENT ACT: CONTAMINATED SITES NOTATIONS
Initiated: 1998-09-17
Completed: 1998-09-17
Ministry Contact: MCCAMMON, ALAN (SURREY) W
Note: AUTO INSERTED FROM SITE PROFILE. NO FURTHER INVESTIGATION REQUIRED AS ARCO IS UPGRADING THE SERVICE STATION UNDER GUIDANCE DOCUMENT #4.
Required Actions:

Notation Type: SITE PROFILE RECEIVED
Notation Class: ENVIRONMENTAL MANAGEMENT ACT: GENERAL
Initiated: 2010-11-04
Completed:
Ministry Contact: LARSEN, KELLI
Note:
Required Actions:

Notation Participants

Name: MAXX MANAGEMENT GROUP
Role: SITE PROFILE SUBMITTED BY

Notation Type: SITE PROFILE ORDER ISSUED
Notation Class: ENVIRONMENTAL MANAGEMENT ACT: GENERAL
Initiated: 2010-11-08
Completed: 2010-11-08
Ministry Contact: LARSEN, KELLI
Note:
Required Actions: A SITE PROFILE MUST BE SUBMITTED TO THE DIRECTOR PRIOR TO OBTAINING ANY FUTURE APPROVALS FOR SUBDIVISION, ZONING, DEMOLITION, SOIL REMOVAL, DEVELOPMENT, OR DEVELOPMENT VARIANCE

Notation Participants

Name: LARSEN, KELLI
Role: ISSUED BY

Notation Type: SITE PROFILE REVIEWED - NO FURTHER INVESTIGATION REQUIRED BY THE MINISTRY
Notation Class: ENVIRONMENTAL MANAGEMENT ACT: GENERAL
Initiated: 2010-11-08
Completed:
Ministry Contact: LARSEN, KELLI
Note: RELEASE UNDER SCENARIO 1 (DEMOLITION ONLY)
Required Actions:

SITE PARTICIPANTS:

Participant: MCCAMMON, ALAN (SURREY) W
Role(s): EMPLOYEE
Start Date: 1998-08-10 **End Date:**
Notes:

Participant: ARCO PRODUCTS CANADA LTD.
Role(s): ORGANIZATION
Start Date: 1998-08-10 **End Date:**
Notes: MICHAEL WHELAN

Participant: BRYDEN, JODY D
Role(s): PERSON
Start Date: 1998-08-31 **End Date:**
Notes:

Participant: CPG ENGINEERING INCORPERATED (VANCOUVER)
Role(s): ORGANIZATION
Start Date: 1998-08-31 **End Date:**
Notes:

Participant: HARBOB WESTERN DEVELOPMENTS (LANGLEY)
Role(s): ORGANIZATION
Start Date: 2010-11-04 **End Date:**
Notes:

Participant: MAXX MANAGEMENT GROUP
Role(s): ORGANIZATION
Start Date: 2010-11-04 **End Date:**
Notes:

Participant: LARSEN, KELLI
Role(s): EMPLOYEE
Start Date: 2010-11-04 **End Date:**
Notes:

No documents have been submitted for this site

No associated sites have been submitted for this site

SUSPECT LAND USES:

Land Use: PETROL PROD., DISPENSE FACILITY, INC. SERV STA./CARDLOT
Notes: INSERTED FOR SITE PROFILE DATED 1998-06-04(described on Site Profile dated 98-06-04)

PARCEL DESCRIPTIONS:

Date Noted: 1998-06-04 **Parcel ID:** 006317219
Crown Land PIN: **Crown Lands File Number:**
Land Description: LOT 1 SECTION 14 TOWNSHIP 16 NEW WESTMINSTER DISTRICT PLAN 73740

SITE PROFILE/SITE DISCLOSURE STATEMENT HISTORY

SITE PROFILE INFORMATION (SEC. III AND X)

Date Received: 2010-10-28
Date Completed: 2010-11-04

Date Local Authority Received:	2010-11-02
Date Registrar:	
Date Decision:	2010-11-08
Date Entered:	
Decision:	INVESTIGATION NOT REQUIRED

III COMMERCIAL AND INDUSTRIAL PURPOSES OR ACTIVITIES ON SITE

Schedule 2

Reference	Description
F5	PETROL PROD., DISPENSE FACILITY, INC. SERV STA./CARDLOT
F5	PETROL PROD., DISPENSE FACILITY, INC. SERV STA./CARDLOT

AREAS OF POTENTIAL CONCERN

Petroleum, solvent or other polluting substance spills to the environment greater than 100 litres?.....NO

Residue left after removal of piled materials such as chemicals, coal, ore, smelter slag, air quality control system baghouse dust?.....NO

Discarded barrels, drums or tanks?.....NO

Contamination resulting from migration of substances from other properties?.....NO

FILL MATERIALS

Fill dirt, soil, gravel, sand or like materials from a contaminated site or from a source used for any of the activiities listed under Schedule 2?.....NO

Discarded or waste granular materials such as sand blasting grit, asphalt paving or roofing material, spent foundry casting sands, mine ore, waste rock or float?.....NO

Dredged sediments, or sediments and debris materials originating from locations adjacent to foreshore industrial activities, or municipal sanitary or stormwater discharges?.....NO

WASTE DISPOSAL

Materials such as household garbage, mixed municipal refuse, or demolition debris?.....NO

Waste or byproducts such as tank bottoms, residues, sludge, or flocculation precipitates from industrial processes or wastewater treatment?.....NO

Waste products from smelting or mining activities, such as smelter slag, mine tailings, or cull materials from coal processing?.....NO

Waste products from natural gas and oil well drilling activities, such as drilling fluids and muds?.....NO

Waste products from photographic developing or finishing laboratories; asphalt tar manufacturing; boilers, incinerators or other thermal facilities (eg. ash); appliance, small equipment or engine repair or salvage; dry cleaning operations (eg. solvents); or automobile and truck parts cleaning or repair?.....NO

Materials such as household garbage, mixed municipal refuse, or demolition debris?.....NO

Waste or byproducts such as tank bottoms, residues, sludge, or flocculation precipitates from industrial processes or wastewater treatment?.....NO

Waste products from smelting or mining activities, such as smelter slag, mine tailings, or cull materials from coal processing?.....NO

Waste products from natural gas and oil well drilling activities, such as drilling fluids and muds?.....NO

Waste products from photographic developing or finishing laboratories; asphalt tar manufacturing; boilers, incinerators or other thermal facilities (eg. ash); appliance, small equipment or engine repair or salvage; dry cleaning operations (eg. solvents); for from the cleaning or repair of parts of boats, ships, barges, automobiles or trucks, including sandblasting grit or paint scrapings?.....NO

TANKS OR CONTAINERS USED OR STORED

Underground fuel or chemical storage tanks?.....NO

Above ground fuel or chemical storage tanks?.....NO

Underground fuel or chemical storage tanks other than storage tanks for compressed gases?.....YES

Above ground fuel or chemical storage tanks other than storage tanks for compressed gases?.....YES

SPECIAL (HAZARDOUS) WASTES OR SUBSTANCES

PCB-containing electrical transformers or capacitors either at grade, attached above ground to poles, located within buildings, or stored?.....NO

Waste asbestos or asbestos containing materials such as pipe wrapping, blown-in insulation or panelling buried?.....NO

Paints, solvents, mineral spirits or waste pest control products or pest control product containers stored in volumes greater than 205 litres?.....NO

PCB-containing electrical transformers or capacitors either at grade, attached above ground to poles, located within buildings, or stored?.....NO

Waste asbestos or asbestos containing materials such as pipe wrapping, blown-in insulation or panelling buried?.....NO

Paints, solvents, mineral spirits or waste pest control products or pest control product containers stored in volumes greater than 205 litres?.....NO

LEGAL OR REGULATORY ACTIONS OR CONSTRAINTS

Government orders or other notifications pertaining to environmental conditions or quality of soil, water, groundwater or other environmental media?.....NO

Liens to recover costs, restrictive covenants on land use, or other charges or encumbrances, stemming from contaminants or wastes remaining onsite or from other environmental conditions?.....NO

Government notifications relating to past or recurring environmental violations at the site or any facility located on the site?.....NO

X ADDITIONAL COMMENTS AND EXPLANATIONS

Note 1: Please list any past or present government orders, permits, approvals, certificates and notifications pertaining to the environmental condition, use or quality of soil, surface water, groundwater or biota at the site.

Note 2: If completed by a consultant, receiver or trustee, please indicate the type and degree of access to information used to complete this site profile.

SITE PROFILE INFORMATION (SEC. III AND X)

Date Received:	1998-06-04
Date Completed:	1998-08-31
Date Local Authority Received:	1998-08-26
Date Registrar:	
Date Decision:	1998-09-17
Date Entered:	
Decision:	INVESTIGATION NOT REQUIRED

III COMMERCIAL AND INDUSTRIAL PURPOSES OR ACTIVITIES ON SITE

Schedule 2

Reference	**Description**
F5	PETROL PROD., DISPENSE FACILITY, INC. SERV STA./CARDLOT
F5	PETROL PROD., DISPENSE FACILITY, INC. SERV STA./CARDLOT

AREAS OF POTENTIAL CONCERN

Petroleum, solvent or other polluting substance spills to the environment greater than 100 litres?.....NO

Residue left after removal of piled materials such as chemicals, coal, ore, smelter slag, air quality control system baghouse dust?.....NO

Discarded barrels, drums or tanks?.....NO

Contamination resulting from migration of substances from other properties?.....NO

FILL MATERIALS

Fill dirt, soil, gravel, sand or like materials from a contaminated site or from a source used for any of the activiities listed under Schedule 2?.....NO

Discarded or waste granular materials such as sand blasting grit, asphalt paving or roofing material, spent foundry casting sands, mine ore, waste rock or float?.....NO

Dredged sediments, or sediments and debris materials originating from locations adjacent to foreshore industrial activities, or municipal sanitary or stormwater discharges?.....NO

WASTE DISPOSAL

Materials such as household garbage, mixed municipal refuse, or demolition debris?.....NO

Waste or byproducts such as tank bottoms, residues, sludge, or flocculation precipitates from industrial processes or wastewater treatment?.....NO

Waste products from smelting or mining activities, such as smelter slag, mine tailings, or cull materials from coal processing?.....NO

Waste products from natural gas and oil well drilling activities, such as drilling fluids and muds?.....NO

Waste products from photographic developing or finishing laboratories; asphalt tar manufacturing; boilers, incinerators or other thermal facilities (eg. ash); appliance, small equipment or engine repair or salvage; dry cleaning operations (eg. solvents); or automobile and truck parts cleaning or repair?.....NO

Materials such as household garbage, mixed municipal refuse, or demolition debris?.....NO

Waste or byproducts such as tank bottoms, residues, sludge, or flocculation precipitates from industrial processes or wastewater treatment?.....NO

Waste products from smelting or mining activities, such as smelter slag, mine tailings, or cull materials from coal processing?.....NO

Waste products from natural gas and oil well drilling activities, such as drilling fluids and muds?.....NO

Waste products from photographic developing or finishing laboratories; asphalt tar manufacturing; boilers, incinerators or other thermal facilities (eg. ash); appliance, small equipment or engine repair or salvage; dry cleaning operations (eg. solvents); for from the cleaning or repair of parts of boats, ships, barges, automobiles or trucks, including sandblasting grit or paint scrapings?.....NO

TANKS OR CONTAINERS USED OR STORED

Underground fuel or chemical storage tanks?.....NO

Above ground fuel or chemical storage tanks?.....NO

Underground fuel or chemical storage tanks other than storage tanks for compressed gases?.....YES

Above ground fuel or chemical storage tanks other than storage tanks for compressed gases?.....YES

SPECIAL (HAZARDOUS) WASTES OR SUBSTANCES

PCB-containing electrical transformers or capacitors either at grade, attached above ground to poles, located within buildings, or stored?.....NO

Waste asbestos or asbestos containing materials such as pipe wrapping, blown-in insulation or panelling buried?.....NO

Paints, solvents, mineral spirits or waste pest control products or pest control product containers stored in volumes greater than 205 litres?.....NO

PCB-containing electrical transformers or capacitors either at grade, attached above ground to poles, located within buildings, or stored?.....NO

Waste asbestos or asbestos containing materials such as pipe wrapping, blown-in insulation or panelling buried?.....NO

Paints, solvents, mineral spirits or waste pest control products or pest control product containers stored in volumes greater than 205 litres?.....NO

LEGAL OR REGULATORY ACTIONS OR CONSTRAINTS

Government orders or other notifications pertaining to environmental conditions or quality of soil, water, groundwater or other environmental media?.....NO

Liens to recover costs, restrictive covenants on land use, or other charges or encumbrances, stemming from contaminants or wastes remaining onsite or from other environmental conditions?.....NO

Government notifications relating to past or recurring environmental violations at the site or any facility located on the site?.....NO

X ADDITIONAL COMMENTS AND EXPLANATIONS

Note 1: Please list any past or present government orders, permits, approvals, certificates and notifications pertaining to the environmental condition, use or quality of soil, surface water, groundwater or biota at the site.

Note 2: If completed by a consultant, receiver or trustee, please indicate the type and degree of access to information used to complete this site profile.

PROFILE COMPLETED BY MICHAEL WHELAN OF ARCO PRODUCTS CANADA LTD.

End of Site Details Report

Site Registry - Site Details Report

BC Registries and Online Services

SITE LOCATION

Site ID:	3993	**Latitude:**	49d 2m 14.0s
Victoria File:	26250-20/3993	**Longitude:**	122d 16m 09.0s
Regional File:			
Common Name:	34416 MARSHAL ROAD AND 34455 DELAIR ROAD	**Prov/State:**	BC
Site Address:	34416 MARSHAL ROAD AND 34455 DELAIR ROAD		
City:	ABBOTSFORD		
Postal Code:	V2S 6Y3		

Notations:	6	**Participants:**	8	**Associated Sites:**	0
Documents:	5	**Susp. Land Use:**	5	**Parcel Descriptions:**	5

Location Description: SITE CREATED BY SITE PROFILE, ENTERED 97-05-29

NOTATIONS:

Notation Type: SITE PROFILE RECEIVED
Notation Class: WASTE MANAGEMENT ACT: CONTAMINATED SITES NOTATIONS
Initiated: 1997-05-09
Completed:
Ministry Contact: POPE, DOUGLAS
Note:
Required Actions:

Notation Type: SITE PROFILE - FURTHER INVESTIGATION REQUIRED BY THE MINISTRY
Notation Class: WASTE MANAGEMENT ACT: CONTAMINATED SITES NOTATIONS
Initiated: 1997-05-29
Completed:
Ministry Contact: POPE, DOUGLAS
Note:
Required Actions:

Notation Type: SITE PROFILE RECEIVED
Notation Class: WASTE MANAGEMENT ACT: CONTAMINATED SITES NOTATIONS
Initiated: 1999-12-08
Completed: 1999-12-08
Ministry Contact: WAKELIN, DARRELL W
Note:
Required Actions:

Notation Type: DETAILED SITE INVESTIGATION REPORT: INTERNAL REVIEW REQUESTED
Notation Class: WASTE MANAGEMENT ACT: CONTAMINATED SITES NOTATIONS
Initiated: 1999-12-20
Completed: 1999-12-20

Ministry Contact: DANKEVY, STEPHEN (SURREY) NEIL
Note:
Required Actions:

Notation Type: CERTIFICATE OF COMPLIANCE REQUESTED WITHOUT INSPECTION
Notation Class: WASTE MANAGEMENT ACT: CONTAMINATED SITES NOTATIONS
Initiated: 2000-03-15
Completed: 2000-03-15
Ministry Contact: DANKEVY, STEPHEN (SURREY) NEIL
Note: APPLICATION ON THE ADVICE OF A ROSTERED PROFESSIONAL EXPERT UNDER PROTOCOL 6 OF THE CONTAMINATED SITES REGULATION
Required Actions:

Notation Participants

Name: WAL-MART CANADA INC (HEAD OFFICE FOR BC)
Role: REQUESTED BY
Name: WIENS, JOHN
Role: ROSTERED EXPERT UNDER PROTOCOL SIX

Notation Type: CERTIFICATE OF COMPLIANCE ISSUED (WMA 27.6(2))
Notation Class: WASTE MANAGEMENT ACT: CONTAMINATED SITES NOTATIONS
Initiated: 2000-04-05
Completed: 2000-04-05
Ministry Contact: DANKEVY, STEPHEN (SURREY) NEIL
Note:
Required Actions:

Notation Participants

Name: WIENS, JOHN
Role: ROSTERED EXPERT UNDER PROTOCOL SIX
Name: WAL-MART CANADA INC (HEAD OFFICE FOR BC)
Role: RECEIVED BY
Name: POPE, DOUGLAS
Role: ISSUED BY

SITE PARTICIPANTS:

Participant: WESTFAIR PROPERTIES LIMITED (VANCOUVER)
Role(s): ORGANIZATION
Start Date: 1997-05-09 **End Date:**
Notes:

Participant: POPE, DOUGLAS
Role(s): EMPLOYEE
Start Date: 1997-05-09 **End Date:** 2002-05-21
Notes:

Participant: VEDDER TRANSPORT WAREHOUSING (1972) LTD.
Role(s): ORGANIZATION
Start Date: 1997-05-09 **End Date:**
Notes:

Participant: WAL-MART CANADA INC (HEAD OFFICE FOR BC)

Role(s): ORGANIZATION
Start Date: 1998-07-23 **End Date:**
Notes:

Participant: AGRA EARTH & ENVIRONMENTAL LIMITED (VICTORIA (SUMAS STREET))
Role(s): ORGANIZATION
Start Date: 1998-07-23 **End Date:**
Notes:

Participant: WAKELIN, DARRELL W
Role(s): EMPLOYEE
Start Date: 1999-12-08 **End Date:** 2002-11-29
Notes:

Participant: DANKEVY, STEPHEN (SURREY) NEIL
Role(s): EMPLOYEE
Start Date: 1999-12-20 **End Date:**
Notes:

Participant: WIENS, JOHN
Role(s): PERSON
Start Date: 2000-03-15 **End Date:**
Notes:

DOCUMENTS:

Title: STAGE 1 PRELIMINARY SITE INVESTIGATION, 34455 DELAIR ROAD, 34408-34474 MARSHALL ROAD, BC
Document Date: 1998-07-23 **Received Date:** 2000-03-15

Document Participants

Name: AGRA EARTH & ENVIRONMENTAL LIMITED (VICTORIA (SUMAS STREET))
Role: AUTHOR
Name: WAL-MART CANADA INC (HEAD OFFICE FOR BC)
Role: COMMISSIONER

Title: REMOVAL OF FOUR UNDERGROUND STORAGE TANKS, 34416 MARSHALL ROAD, ABBOTSFORD, BC
Document Date: 1999-05-18 **Received Date:** 2000-03-15

Document Participants

Name: AGRA EARTH & ENVIRONMENTAL LIMITED (VICTORIA (SUMAS STREET))
Role: AUTHOR
Name: WAL-MART CANADA INC (HEAD OFFICE FOR BC)
Role: COMMISSIONER

Title: STAGE 2 PRELIMINARY SITE INVESTIGTION, 34455 DELAIR ROAD AND 34408-34474 MARSHALL ROAD, ABBOTSFORD, BC
Document Date: 1999-05-25 **Received Date:** 2000-03-15

Document Participants

Name: AGRA EARTH & ENVIRONMENTAL LIMITED (VICTORIA (SUMAS STREET))

Role: AUTHOR
Name: WAL-MART CANADA INC (HEAD OFFICE FOR BC)
Role: COMMISSIONER

Title: CONTAMINATED SOIL REMEDIATION AND CONFIRMATORY SAMPLING, 34408 - 34474 MARSHALL ROAD, ABBOTSFORD, BC
Document Date: 2000-02-29 **Received Date:** 2000-03-15

Document Participants

Name: AGRA EARTH & ENVIRONMENTAL LIMITED (VICTORIA (SUMAS STREET))
Role: AUTHOR
Name: WAL-MART CANADA INC (HEAD OFFICE FOR BC)
Role: COMMISSIONER

Title: APPLICATION FOR CERTIFICATE OF COMPLIANCE, PROTOCOL 6 - PROTOCOL FOR INDEPENDENT REDEMPTION FOR LOW TO MODERATE RISK SITES
Document Date: 2000-03-14 **Received Date:** 2000-03-15

Document Participants

Name: AGRA EARTH & ENVIRONMENTAL LIMITED (VICTORIA (SUMAS STREET))
Role: AUTHOR
Name: WAL-MART CANADA INC (HEAD OFFICE FOR BC)
Role: COMMISSIONER

No associated sites have been submitted for this site

SUSPECT LAND USES:

Land Use: TRUCK, RAIL OR MARINE BULK FREIGHT HANDLING
Notes: INSERTED FOR SITE PROFILE DATED 97-05-02(described on Site Profile dated 97-05-02)

Land Use: ANTIFREEZE BULK STORAGE AND RECYCLING
Notes: INSERTED FOR SITE PROFILE DATED 97-05-02(described on Site Profile dated 97-05-02)

Land Use: AUTO/TRUCK/BUS/SUBWAY/OTHR VEHICLE REPAIR/SALVAGE/WRECKING
Notes: INSERTED FOR SITE PROFILE DATED 97-05-02(described on Site Profile dated 97-05-02)

Land Use: PETROL PROD., WHOLESALE BULK STORAGE OR DISTRIBUTION
Notes: INSERTED FOR SITE PROFILE DATED 97-05-02(described on Site Profile dated 97-05-02)

Land Use: PAINT/LACQUER/VARNISH MANU/FORMULAT/RECYCLE/WHLSLE BULK STOR
Notes: INSERTED FOR SITE PROFILE DATED 97-05-02(described on Site Profile dated 97-05-02)

PARCEL DESCRIPTIONS:

Date Noted: 1997-05-02 **Parcel ID:** 006506305
Crown Land PIN: **Crown Lands File Number:**
Land Description: LOT 79 EXCEPT: FIRSTLY: PART DEDICATED ROAD ON PLAN 73834, SECONDLY; PART DEDICATED ROAD ON PLAN LMP26979 SECTION 14 AND 15 TOWNSHIP 16

NEW WESTMINSTER DISTRICT PLAN 39193

Date Noted:	1997-05-02	**Parcel ID:**	013394169
Crown Land PIN:		**Crown Lands File Number:**	
Land Description:	PARCEL 'A' (REFERENCE PLAN 7379) SOUTH WEST QUARTER SECTION 14 TOWNSHIP 16EXCEPT: PART ON HIGHWAY PLAN 22373, NEW WESTMINSTER DISTRICT		

Date Noted:	1999-10-16	**Parcel ID:**	024606685
Crown Land PIN:		**Crown Lands File Number:**	
Land Description:	LOT B SECTION 14 TOWNSHIP 16 NEW WESTMINSTER DISTRICT PLAN LMP43562		

Date Noted:	1999-10-16	**Parcel ID:**	024606669
Crown Land PIN:		**Crown Lands File Number:**	
Land Description:	LOT A EXCEPT: PART SUBDIVIDED BY PLAN BCP737SECTION 14 TOWNSHIP 16 NEW WESTMINSTER DISTRICT PLAN LMP43562		

Date Noted:	2002-09-14	**Parcel ID:**	025482327
Crown Land PIN:		**Crown Lands File Number:**	
Land Description:	LOT 1 SECTION 14 AND 15 TOWNSHIP 16 NEW WESTMINSTER DISTRICT PLAN BCP737		

SITE PROFILE/SITE DISCLOSURE STATEMENT HISTORY

SITE PROFILE INFORMATION (SEC. III AND X)

Date Received:	1997-05-02
Date Completed:	1997-05-09
Date Local Authority Received:	1997-05-05
Date Registrar:	
Date Decision:	1997-05-29
Date Entered:	
Decision:	INVESTIGATION REQUIRED

III COMMERCIAL AND INDUSTRIAL PURPOSES OR ACTIVITIES ON SITE

Schedule 2

Reference	Description
A8	PAINT/LACQUER/VARNISH MANU/FORMULAT/RECYCLE/WHLSLE BULK STOR
F8	PETROL PROD., WHOLESALE BULK STORAGE OR DISTRIBUTION
G2	AUTO/TRUCK/BUS/SUBWAY/OTHR VEHICLE REPAIR/SALVAGE/WRECKING
G7	TRUCK, RAIL OR MARINE BULK FREIGHT HANDLING
H1	ANTIFREEZE BULK STORAGE AND RECYCLING

AREAS OF POTENTIAL CONCERN

Petroleum, solvent or other polluting substance spills to the environment greater than 100 litres?.....NO

Residue left after removal of piled materials such as chemicals, coal, ore, smelter slag, air quality control system baghouse dust?.....NO

Discarded barrels, drums or tanks?.....YES

FILL MATERIALS

Fill dirt, soil, gravel, sand or like materials from a contaminated site or from a source used for any of the activiities listed under Schedule 2?.....NO

Discarded or waste granular materials such as sand blasting grit, asphalt paving or roofing material, spent foundry casting sands, mine ore, waste rock or float?.....NO

Dredged sediments, or sediments and debris materials originating from locations adjacent to foreshore industrial activities, or municipal sanitary or stormwater discharges?.....NO

WASTE DISPOSAL

Materials such as household garbage, mixed municipal refuse, or demolition debris?.....NO

Waste or byproducts such as tank bottoms, residues, sludge, or flocculation precipitates from industrial processes or wastewater treatment?.....NO

Waste products from smelting or mining activities, such as smelter slag, mine tailings, or cull materials from coal processing?.....NO

Waste products from natural gas and oil well drilling activities, such as drilling fluids and muds?.....NO

Waste products from photographic developing or finishing laboratories; asphalt tar manufacturing; boilers, incinerators or other thermal facilities (eg. ash); appliance, small equipment or engine repair or salvage; dry cleaning operations (eg. solvents); or automobile and truck parts cleaning or repair?.....YES

TANKS OR CONTAINERS USED OR STORED

Underground fuel or chemical storage tanks?.....YES

Above ground fuel or chemical storage tanks?.....YES

SPECIAL (HAZARDOUS) WASTES OR SUBSTANCES

PCB-containing electrical transformers or capacitors either at grade, attached above ground to poles, located within buildings, or stored?.....YES

Waste asbestos or asbestos containing materials such as pipe wrapping, blown-in insulation or panelling buried?.....NO

Paints, solvents, mineral spirits or waste pest control products or pest control product containers stored in volumes greater than 205 litres?.....YES

LEGAL OR REGULATORY ACTIONS OR CONSTRAINTS

Government orders or other notifications pertaining to environmental conditions or quality of soil, water, groundwater or other environmental media?.....NO

Liens to recover costs, restrictive covenants on land use, or other charges or encumbrances, stemming from contaminants or wastes remaining onsite or from other environmental conditions?.....NO

Government notifications relating to past or recurring environmental violations at the site or any facility located on the site?.....NO

X ADDITIONAL COMMENTS AND EXPLANATIONS

Note 1: Please list any past or present government orders, permits, approvals, certificates and notifications pertaining to the environmental condition, use or quality of soil, surface water, groundwater or biota at the site.

Note 2: If completed by a consultant, receiver or trustee, please indicate the type and degree of access to information used to complete this site profile.

PHASE I ENVIRONMENTAL SITE ASSESSMENT DATED APRIL 21, 1997 PREPARED BY AGRA EARTH & ENVIRONMENTAL HAS BEEN COMPLETED

End of Site Details Report

Site Details Report

Appendix C –
EXP's Borehole Logs

RECORD OF BOREHOLE : 24-BH/MW/VP1

EXP Services, Inc.
3001 Wayburne Drive
Burnaby, BC V5G 4W3

PROJECT NUMBER VAN-24006323-A0
PROJECT NAME Phase II Environmental Site Assessment
DRILLING DATE 2024-06-03 to 2024-06-03
DRILLING CONTRACTOR Blue Max Environmental Drilling
DRILLING METHOD Sonic Core
EQUIPMENT TYPE Truck Mounted Sonic Drill
LOGGED BY MS **CHECKED BY** SD

CLIENT P.P.M.C Gill Ltd.
PROJECT LOCATION 1965 Sumas Way, Abbotsford, BC
BOREHOLE LOCATION
ELEVATION (approximate)
GROUND WATER DEPTHS: **AT TIME OF DRILLING** ---
AT END OF DRILLING ---
0hrs AFTER DRILLING 2.499m Measured on 6/3/2024

DEPTH (m)	STRATA	SOIL DESCRIPTION	ELEV. DEPTH (m)	SAMPLES NUMBER	SAMPLES TYPE	VOC Concentration (ppm) 2 4 6 8 / LEL (%) 0.0002 0.0004 0.0006 0.0008	WELL DIAGRAM Casing Top Elev: m
		ASPHALT - 50 mm thick	0.0				Flush Mount Cover+Concrete
		SAND AND GRAVEL (Fill) - Grey, compact, damp	0.3				
		SILTY SAND - (Former Exposed Surface) - Dark brown, organic, damp		24-BH1@2.5'	SC	0	Bentonite Chips 6.35mm Teflon Tubing
1		SILT - (Native) - Brown, dense, wet-like	0.9				50mm PVC Screen Silica Sand
2							Bentonite Chips
		SAND - (Native) - Brown, trace silt, compact, damp - Grey/brown and wet at 4.6 m	2.4				
3						0	
4				24-BH1@15'	SC	0	Silica Sand 50mm PVC Screen
5							
		SILT - (Native) - Brown, dense, wet	5.8				
6				24-BH1@20'	SC	0	

Bottom of hole at 6.1m.

(Continued Next Page)

RECORD OF BOREHOLE : 24-BH/MW2

EXP Services, Inc.
3001 Wayburne Drive
Burnaby, BC V5G 4W3

PROJECT NUMBER VAN-24006323-A0
PROJECT NAME Phase II Environmental Site Assessment
DRILLING DATE 2024-06-03 to 2024-06-03
DRILLING CONTRACTOR Blue Max Environmental Drilling
DRILLING METHOD Sonic Core
EQUIPMENT TYPE Truck Mounted Sonic Drill
LOGGED BY MS **CHECKED BY** SD

CLIENT P.P.M.C Gill Ltd.
PROJECT LOCATION 1965 Sumas Way, Abbotsford, BC
BOREHOLE LOCATION
ELEVATION (approximate)
GROUND WATER DEPTHS: ▽ **AT TIME OF DRILLING** —
▼ **AT END OF DRILLING** —
▼ **0hrs AFTER DRILLING** 3.078m Measured on 6/3/2024

DEPTH (m)	STRATA	SOIL DESCRIPTION	ELEV. DEPTH (m)	SAMPLES NUMBER	SAMPLES TYPE	VOC Concentration ✠ (ppm) 2 4 6 8 / LEL (%) 0.0002 0.0004 0.0006 0.0008	WELL DIAGRAM Casing Top Elev: m
0		ASPHALT - 50 mm thick	0.0				Flush Mount Cover+Concrete
		SAND AND GRAVEL (Fill) - Grey, compact, damp	0.3	Metals			Silica Sand
1		SILTY SAND - (Former Exposed Surface) - Dark brown, organic, damp		24-BH2@2.5'	SC		
2		SILTY CLAY - (Native) - Brown, soft, wet-like	1.5				Bentonite Chips
3							▼
		SILT - (Native) - Brown, soft, wet-like	3.0				
4							
5		SAND - (Native) - Brown, trace silt copmact, damp - Wer at 5.8 m depth	4.6				
6				VOCs, LEPH, PAHs & metals 24-BH2@20'	SC		Silica Sand 50mm PVC Screen
7							
		SILT - (Native) - Brown, wet, soft	7.3	24-BH2@25'	SC		
8							
		SANDY TILL - (Native) - Grey, dry, very dense - Embedded fine gravel	8.5				
9							
10							Bentonite Chips
11							
12							

Bottom of hole at 12.2m

(Continued Next Page)

RECORD OF BOREHOLE : 24-BH3

EXP Services, Inc.
3001 Wayburne Drive
Burnaby, BC V5G 4W3

PROJECT NUMBER VAN-24006323-A0
PROJECT NAME Phase II Environmental Site Assessment
DRILLING DATE 2024-06-03 to 2024-06-03
DRILLING CONTRACTOR Blue Max Environmental Drilling
DRILLING METHOD Sonic Core
EQUIPMENT TYPE Truck Mounted Sonic Drill
LOGGED BY MS **CHECKED BY** SD

CLIENT P.P.M.C Gill Ltd.
PROJECT LOCATION 1965 Sumas Way, Abbotsford, BC
BOREHOLE LOCATION
ELEVATION (approximate)
GROUND WATER DEPTHS: ▽ **AT TIME OF DRILLING** —
▼ **AT END OF DRILLING** —
▼ **AFTER DRILLING** —

DEPTH (m)	STRATA	SOIL DESCRIPTION	ELEV. DEPTH (m)	SAMPLES NUMBER	SAMPLES TYPE	VOC Concentration ✠ (ppm) 2 4 6 8 / ◔ LEL (%) 0.0002 0.0004 0.0006 0.0008	WELL DIAGRAM Casing Top Elev: m
		ASPHALT - 50 mm thick	0.0				
		SAND AND GRAVEL (Fill) - Grey, compact, damp					
		SILTY SAND - (Former Exposed Surface) - Dark brown, organic, damp	0.3				
				Metals			
				24-BH3@2.5'	SC		
		SILT - (Native) - Brown, soft, damp	0.9				
1							← Bentonite Chips
		Bottom of hole at 1.5m.					

(Continued Next Page)

Appendix D –
Certificate of Analysis – Soil

CERTIFICATE OF ANALYSIS

REPORTED TO	exp Services Inc. (Burnaby) Suite 275 3001 Wayburne Drive Burnaby, BC V5G 4W3		
ATTENTION	Sushil Dogra	**WORK ORDER**	24F0492
PO NUMBER		**RECEIVED / TEMP**	2024-06-04 15:40 / 4.5°C
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 17:19
PROJECT INFO		**COC NUMBER**	NO#

Introduction:

CARO Analytical Services is a testing laboratory full of smart, engaged scientists driven to make the world a safer and healthier place. Through our clients' projects we become an essential element for a better world. We employ methods conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts. CARO is accredited by the Canadian Association for Laboratories Accreditation (CALA) to ISO/IEC 17025:2017 for specific tests listed in the scope of accreditation approved by CALA.

Big Picture Sidekicks

You know that the sample you collected after snowshoeing to site, digging 5 meters, and racing to get it on a plane so you can submit it to the lab for time sensitive results needed to make important and expensive decisions (whew) is VERY important. We know that too.

We've Got Chemistry

It's simple. We figure the more you enjoy working with our fun and engaged team members; the more likely you are to give us continued opportunities to support you.

Ahead of the Curve

Through research, regulation knowledge, and instrumentation, we are your analytical centre for the technical knowledge you need, BEFORE you need it, so you can stay up to date and in the know.

By engaging our services, you are agreeing to CARO Analytical Service's Standard Terms and Conditions outlined here: https://www.caro.ca/terms-conditions

If you have any questions or concerns, please contact me at aquesada@caro.ca

Authorized By:

Adrian Quesada
Junior Account Manager

TEST RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0492
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 17:19

Analyte	Result	RL	Units	Analyzed	Qualifier
24-BH1@2.5' (24F0492-01) | Matrix: Soil | Sampled: 2024-06-03					
General Parameters					
pH (1:2 H2O Solution)	**5.50**	0.10	pH units	2024-06-09	
Strong Acid Leachable Metals					
Aluminum	**24700**	40	mg/kg dry	2024-06-10	
Antimony	**0.50**	0.10	mg/kg dry	2024-06-10	
Arsenic	**7.21**	0.30	mg/kg dry	2024-06-10	
Barium	**112**	1.0	mg/kg dry	2024-06-10	
Beryllium	**0.74**	0.10	mg/kg dry	2024-06-10	
Boron	**2.5**	2.0	mg/kg dry	2024-06-10	
Cadmium	**0.513**	0.040	mg/kg dry	2024-06-10	
Chromium	**73.2**	1.0	mg/kg dry	2024-06-10	
Cobalt	**13.2**	0.10	mg/kg dry	2024-06-10	
Copper	**36.3**	0.40	mg/kg dry	2024-06-10	
Iron	**33000**	20.0	mg/kg dry	2024-06-10	
Lead	**20.2**	0.20	mg/kg dry	2024-06-10	
Lithium	**18.7**	0.10	mg/kg dry	2024-06-10	
Manganese	**1080**	0.40	mg/kg dry	2024-06-10	
Mercury	**0.085**	0.040	mg/kg dry	2024-06-10	
Molybdenum	**0.93**	0.10	mg/kg dry	2024-06-10	
Nickel	**43.0**	0.60	mg/kg dry	2024-06-10	
Selenium	**0.47**	0.20	mg/kg dry	2024-06-10	
Silver	**0.24**	0.10	mg/kg dry	2024-06-10	
Strontium	**53.9**	0.20	mg/kg dry	2024-06-10	
Thallium	**0.11**	0.10	mg/kg dry	2024-06-10	
Tin	**1.11**	0.20	mg/kg dry	2024-06-10	
Tungsten	< 0.20	0.20	mg/kg dry	2024-06-10	
Uranium	**0.817**	0.050	mg/kg dry	2024-06-10	
Vanadium	**68.3**	1.0	mg/kg dry	2024-06-10	
Zinc	**277**	2.0	mg/kg dry	2024-06-10	
24-BH1@15' (24F0492-02) | Matrix: Soil | Sampled: 2024-06-03					
BCMOE Aggregate Hydrocarbons					
VHs (6-10)	< 20	20	mg/kg dry	2024-06-06	
VPHs	< 20	20	mg/kg dry	N/A	
EPHs10-19	< 50	50	mg/kg dry	2024-06-07	
EPHs19-32	< 50	50	mg/kg dry	2024-06-07	
LEPHs	< 50	50	mg/kg dry	N/A	
HEPHs	< 50	50	mg/kg dry	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	*84*	*60-140*	%	*2024-06-07*	
General Parameters					
Moisture	**18.2**	1.0	% wet	2024-06-10	

TEST RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0492
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 17:19

Analyte	Result	RL	Units	Analyzed	Qualifier
24-BH1@15' (24F0492-02) | Matrix: Soil | Sampled: 2024-06-03, Continued					
General Parameters, Continued					
pH (1:2 H2O Solution)	**6.66**	0.10	pH units	2024-06-09	
Polycyclic Aromatic Hydrocarbons (PAH)					
Acenaphthene	< 0.050	0.050	mg/kg dry	2024-06-07	
Acenaphthylene	< 0.050	0.050	mg/kg dry	2024-06-07	
Anthracene	< 0.050	0.050	mg/kg dry	2024-06-07	
Benz(a)anthracene	< 0.050	0.050	mg/kg dry	2024-06-07	
Benzo(a)pyrene	< 0.050	0.050	mg/kg dry	2024-06-07	
Benzo(b)fluoranthene	< 0.050	0.050	mg/kg dry	2024-06-07	
Benzo(b+j)fluoranthene	< 0.050	0.050	mg/kg dry	2024-06-07	
Benzo(g,h,i)perylene	< 0.050	0.050	mg/kg dry	2024-06-07	
Benzo(k)fluoranthene	< 0.050	0.050	mg/kg dry	2024-06-07	
2-Chloronaphthalene	< 0.050	0.050	mg/kg dry	2024-06-07	
Chrysene	< 0.050	0.050	mg/kg dry	2024-06-07	
Dibenz(a,h)anthracene	< 0.050	0.050	mg/kg dry	2024-06-07	
7,12-Dimethylbenz(a)anthracene	< 0.020	0.020	mg/kg dry	2024-06-13	
Fluoranthene	< 0.050	0.050	mg/kg dry	2024-06-07	
Fluorene	< 0.050	0.050	mg/kg dry	2024-06-07	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	mg/kg dry	2024-06-07	
1-Methylnaphthalene	< 0.050	0.050	mg/kg dry	2024-06-07	
2-Methylnaphthalene	< 0.050	0.050	mg/kg dry	2024-06-07	
Naphthalene	< 0.050	0.050	mg/kg dry	2024-06-07	
4-Nitropyrene	< 0.050	0.050	mg/kg dry	2024-06-13	
Phenanthrene	< 0.050	0.050	mg/kg dry	2024-06-07	
Pyrene	< 0.050	0.050	mg/kg dry	2024-06-07	
Quinoline	< 0.050	0.050	mg/kg dry	2024-06-07	
Surrogate: Acenaphthene-d10	*89*	*50-140*	%	*2024-06-07*	
Surrogate: Chrysene-d12	*83*	*50-140*	%	*2024-06-07*	
Surrogate: Naphthalene-d8	*89*	*50-140*	%	*2024-06-07*	
Surrogate: Perylene-d12	*79*	*50-140*	%	*2024-06-07*	
Surrogate: Phenanthrene-d10	*87*	*55-140*	%	*2024-06-07*	
Strong Acid Leachable Metals					
Aluminum	**9770**	40	mg/kg dry	2024-06-10	
Antimony	**0.19**	0.10	mg/kg dry	2024-06-10	
Arsenic	**3.62**	0.30	mg/kg dry	2024-06-10	
Barium	**50.7**	1.0	mg/kg dry	2024-06-10	
Beryllium	**0.19**	0.10	mg/kg dry	2024-06-10	
Boron	< 2.0	2.0	mg/kg dry	2024-06-10	
Cadmium	**0.057**	0.040	mg/kg dry	2024-06-10	
Chromium	**31.3**	1.0	mg/kg dry	2024-06-10	
Cobalt	**5.83**	0.10	mg/kg dry	2024-06-10	
Copper	**13.4**	0.40	mg/kg dry	2024-06-10	
Iron	**16300**	20.0	mg/kg dry	2024-06-10	

TEST RESULTS

REPORTED TO exp Services Inc. (Burnaby)
PROJECT VAN-24006323-A0

WORK ORDER 24F0492
REPORTED 2024-06-13 17:19

Analyte	Result	RL	Units	Analyzed	Qualifier
24-BH1@15' (24F0492-02) | Matrix: Soil | Sampled: 2024-06-03, Continued					
Strong Acid Leachable Metals, Continued					
Lead	**1.64**	0.20	mg/kg dry	2024-06-10	
Lithium	**6.94**	0.10	mg/kg dry	2024-06-10	
Manganese	**249**	0.40	mg/kg dry	2024-06-10	
Mercury	< 0.040	0.040	mg/kg dry	2024-06-10	
Molybdenum	**0.15**	0.10	mg/kg dry	2024-06-10	
Nickel	**22.2**	0.60	mg/kg dry	2024-06-10	
Selenium	< 0.20	0.20	mg/kg dry	2024-06-10	
Silver	< 0.10	0.10	mg/kg dry	2024-06-10	
Strontium	**25.4**	0.20	mg/kg dry	2024-06-10	
Thallium	< 0.10	0.10	mg/kg dry	2024-06-10	
Tin	**0.21**	0.20	mg/kg dry	2024-06-10	
Tungsten	< 0.20	0.20	mg/kg dry	2024-06-10	
Uranium	**0.218**	0.050	mg/kg dry	2024-06-10	
Vanadium	**41.5**	1.0	mg/kg dry	2024-06-10	
Zinc	**28.9**	2.0	mg/kg dry	2024-06-10	
Volatile Organic Compounds (VOC)					
Benzene	< 0.030	0.030	mg/kg dry	2024-06-06	
Bromodichloromethane	< 0.100	0.100	mg/kg dry	2024-06-06	
Bromoform	< 0.100	0.100	mg/kg dry	2024-06-06	
1,3-Butadiene	< 0.100	0.100	mg/kg dry	2024-06-06	
Carbon tetrachloride	< 0.050	0.050	mg/kg dry	2024-06-06	
Chlorobenzene	< 0.050	0.050	mg/kg dry	2024-06-06	
Chloroform	< 0.050	0.050	mg/kg dry	2024-06-06	
n-Decane	< 0.200	0.200	mg/kg dry	2024-06-06	
Dibromochloromethane	< 0.100	0.100	mg/kg dry	2024-06-06	
1,2-Dibromoethane	< 0.100	0.100	mg/kg dry	2024-06-06	
Dibromomethane	< 0.100	0.100	mg/kg dry	2024-06-06	
1,2-Dichlorobenzene	< 0.050	0.050	mg/kg dry	2024-06-06	
1,3-Dichlorobenzene	< 0.050	0.050	mg/kg dry	2024-06-06	
1,4-Dichlorobenzene	< 0.050	0.050	mg/kg dry	2024-06-06	
1,1-Dichloroethane	< 0.050	0.050	mg/kg dry	2024-06-06	
1,2-Dichloroethane	< 0.050	0.050	mg/kg dry	2024-06-06	
1,1-Dichloroethylene	< 0.050	0.050	mg/kg dry	2024-06-06	
cis-1,2-Dichloroethylene	< 0.050	0.050	mg/kg dry	2024-06-06	
trans-1,2-Dichloroethylene	< 0.050	0.050	mg/kg dry	2024-06-06	
Dichloromethane	< 0.100	0.100	mg/kg dry	2024-06-06	
1,2-Dichloropropane	< 0.050	0.050	mg/kg dry	2024-06-06	
1,3-Dichloropropene (cis + trans)	< 0.050	0.050	mg/kg dry	2024-06-06	
Ethylbenzene	< 0.050	0.050	mg/kg dry	2024-06-06	
n-Hexane	< 0.200	0.200	mg/kg dry	2024-06-06	
Isopropylbenzene (Cumene)	< 0.050	0.050	mg/kg dry	2024-06-06	
Methyl cyclohexane	< 0.050	0.050	mg/kg dry	2024-06-06	

TEST RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0492
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 17:19

Analyte	Result	RL	Units	Analyzed	Qualifier
24-BH1@15' (24F0492-02) | Matrix: Soil | Sampled: 2024-06-03, Continued					
Volatile Organic Compounds (VOC), Continued					
Methyl tert-butyl ether	< 0.040	0.040	mg/kg dry	2024-06-06	
Naphthalene	< 0.500	0.500	mg/kg dry	2024-06-06	
Styrene	< 0.050	0.050	mg/kg dry	2024-06-06	
1,1,2,2-Tetrachloroethane	< 0.050	0.050	mg/kg dry	2024-06-06	
Tetrachloroethylene	< 0.050	0.050	mg/kg dry	2024-06-06	
Toluene	< 0.200	0.200	mg/kg dry	2024-06-06	
1,1,1-Trichloroethane	< 0.050	0.050	mg/kg dry	2024-06-06	
1,1,2-Trichloroethane	< 0.050	0.050	mg/kg dry	2024-06-06	
Trichloroethylene	< 0.040	0.040	mg/kg dry	2024-06-06	
Trichlorofluoromethane	< 0.100	0.100	mg/kg dry	2024-06-06	
1,2,4-Trimethylbenzene	< 0.100	0.100	mg/kg dry	2024-06-06	
1,3,5-Trimethylbenzene	< 0.100	0.100	mg/kg dry	2024-06-06	
Vinyl chloride	< 0.100	0.100	mg/kg dry	2024-06-06	
Xylenes (total)	< 0.100	0.100	mg/kg dry	2024-06-06	
Surrogate: Toluene-d8	*80*	*60-140*	%	*2024-06-06*	
Surrogate: 4-Bromofluorobenzene	*49*	*60-140*	%	*2024-06-06*	S02
Surrogate: 1,4-Dichlorobenzene-d4	*77*	*60-140*	%	*2024-06-06*	
24-BH2@2.5' (24F0492-04) | Matrix: Soil | Sampled: 2024-06-03					
General Parameters					
pH (1:2 H2O Solution)	**5.66**	0.10	pH units	2024-06-09	
Strong Acid Leachable Metals					
Aluminum	**25300**	40	mg/kg dry	2024-06-10	
Antimony	**0.46**	0.10	mg/kg dry	2024-06-10	
Arsenic	**9.20**	0.30	mg/kg dry	2024-06-10	
Barium	**181**	1.0	mg/kg dry	2024-06-10	
Beryllium	**0.54**	0.10	mg/kg dry	2024-06-10	
Boron	**2.0**	2.0	mg/kg dry	2024-06-10	
Cadmium	**0.403**	0.040	mg/kg dry	2024-06-10	
Chromium	**63.6**	1.0	mg/kg dry	2024-06-10	
Cobalt	**16.7**	0.10	mg/kg dry	2024-06-10	
Copper	**31.9**	0.40	mg/kg dry	2024-06-10	
Iron	**38000**	20.0	mg/kg dry	2024-06-10	
Lead	**8.57**	0.20	mg/kg dry	2024-06-10	
Lithium	**16.9**	0.10	mg/kg dry	2024-06-10	
Manganese	**610**	0.40	mg/kg dry	2024-06-10	
Mercury	**0.058**	0.040	mg/kg dry	2024-06-10	
Molybdenum	**0.93**	0.10	mg/kg dry	2024-06-10	
Nickel	**74.8**	0.60	mg/kg dry	2024-06-10	
Selenium	**0.41**	0.20	mg/kg dry	2024-06-10	
Silver	**0.21**	0.10	mg/kg dry	2024-06-10	

TEST RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0492
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 17:19

Analyte	Result	RL	Units	Analyzed	Qualifier
24-BH2@2.5' (24F0492-04) | Matrix: Soil | Sampled: 2024-06-03, Continued					
Strong Acid Leachable Metals, Continued					
Strontium	**45.3**	0.20	mg/kg dry	2024-06-10	
Thallium	**0.10**	0.10	mg/kg dry	2024-06-10	
Tin	**0.47**	0.20	mg/kg dry	2024-06-10	
Tungsten	< 0.20	0.20	mg/kg dry	2024-06-10	
Uranium	**0.605**	0.050	mg/kg dry	2024-06-10	
Vanadium	**78.9**	1.0	mg/kg dry	2024-06-10	
Zinc	**102**	2.0	mg/kg dry	2024-06-10	
24-BH2@20' (24F0492-05) | Matrix: Soil | Sampled: 2024-06-03					
BCMOE Aggregate Hydrocarbons					
VHs (6-10)	< 20	20	mg/kg dry	2024-06-06	
VPHs	< 20	20	mg/kg dry	N/A	
EPHs10-19	< 50	50	mg/kg dry	2024-06-07	
EPHs19-32	< 50	50	mg/kg dry	2024-06-07	
LEPHs	< 50	50	mg/kg dry	N/A	
HEPHs	< 50	50	mg/kg dry	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	*90*	*60-140*	%	*2024-06-07*	
General Parameters					
Moisture	**15.8**	1.0	% wet	2024-06-10	
pH (1:2 H2O Solution)	**7.12**	0.10	pH units	2024-06-09	
Polycyclic Aromatic Hydrocarbons (PAH)					
Acenaphthene	< 0.050	0.050	mg/kg dry	2024-06-12	
Acenaphthylene	< 0.050	0.050	mg/kg dry	2024-06-12	
Anthracene	< 0.050	0.050	mg/kg dry	2024-06-12	
Benz(a)anthracene	< 0.050	0.050	mg/kg dry	2024-06-12	
Benzo(a)pyrene	< 0.050	0.050	mg/kg dry	2024-06-12	
Benzo(b)fluoranthene	< 0.050	0.050	mg/kg dry	2024-06-12	
Benzo(b+j)fluoranthene	< 0.050	0.050	mg/kg dry	2024-06-12	
Benzo(g,h,i)perylene	< 0.050	0.050	mg/kg dry	2024-06-12	
Benzo(k)fluoranthene	< 0.050	0.050	mg/kg dry	2024-06-12	
2-Chloronaphthalene	< 0.050	0.050	mg/kg dry	2024-06-12	
Chrysene	< 0.050	0.050	mg/kg dry	2024-06-12	
Dibenz(a,h)anthracene	< 0.050	0.050	mg/kg dry	2024-06-12	
7,12-Dimethylbenz(a)anthracene	< 0.020	0.020	mg/kg dry	2024-06-13	
Fluoranthene	< 0.050	0.050	mg/kg dry	2024-06-12	
Fluorene	< 0.050	0.050	mg/kg dry	2024-06-12	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	mg/kg dry	2024-06-12	
1-Methylnaphthalene	< 0.050	0.050	mg/kg dry	2024-06-12	
2-Methylnaphthalene	< 0.050	0.050	mg/kg dry	2024-06-12	
Naphthalene	< 0.050	0.050	mg/kg dry	2024-06-12	

TEST RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0492
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 17:19

Analyte	Result	RL	Units	Analyzed	Qualifier
24-BH2@20' (24F0492-05) | Matrix: Soil | Sampled: 2024-06-03, Continued					
Polycyclic Aromatic Hydrocarbons (PAH), Continued					
4-Nitropyrene	< 0.050	0.050	mg/kg dry	2024-06-13	
Phenanthrene	< 0.050	0.050	mg/kg dry	2024-06-12	
Pyrene	< 0.050	0.050	mg/kg dry	2024-06-12	
Quinoline	< 0.050	0.050	mg/kg dry	2024-06-12	
Surrogate: Acenaphthene-d10	*92*	*50-140*	%	*2024-06-12*	
Surrogate: Chrysene-d12	*98*	*50-140*	%	*2024-06-12*	
Surrogate: Naphthalene-d8	*91*	*50-140*	%	*2024-06-12*	
Surrogate: Perylene-d12	*86*	*50-140*	%	*2024-06-12*	
Surrogate: Phenanthrene-d10	*138*	*55-140*	%	*2024-06-12*	
Strong Acid Leachable Metals					
Aluminum	**12300**	40	mg/kg dry	2024-06-10	
Antimony	**0.30**	0.10	mg/kg dry	2024-06-10	
Arsenic	**5.48**	0.30	mg/kg dry	2024-06-10	
Barium	**62.6**	1.0	mg/kg dry	2024-06-10	
Beryllium	**0.25**	0.10	mg/kg dry	2024-06-10	
Boron	< 2.0	2.0	mg/kg dry	2024-06-10	
Cadmium	**0.107**	0.040	mg/kg dry	2024-06-10	
Chromium	**39.2**	1.0	mg/kg dry	2024-06-10	
Cobalt	**9.44**	0.10	mg/kg dry	2024-06-10	
Copper	**21.0**	0.40	mg/kg dry	2024-06-10	
Iron	**22000**	20.0	mg/kg dry	2024-06-10	
Lead	**2.56**	0.20	mg/kg dry	2024-06-10	
Lithium	**7.11**	0.10	mg/kg dry	2024-06-10	
Manganese	**342**	0.40	mg/kg dry	2024-06-10	
Mercury	< 0.040	0.040	mg/kg dry	2024-06-10	
Molybdenum	**0.33**	0.10	mg/kg dry	2024-06-10	
Nickel	**31.0**	0.60	mg/kg dry	2024-06-10	
Selenium	< 0.20	0.20	mg/kg dry	2024-06-10	
Silver	< 0.10	0.10	mg/kg dry	2024-06-10	
Strontium	**42.8**	0.20	mg/kg dry	2024-06-10	
Thallium	< 0.10	0.10	mg/kg dry	2024-06-10	
Tin	**0.30**	0.20	mg/kg dry	2024-06-10	
Tungsten	**0.24**	0.20	mg/kg dry	2024-06-10	
Uranium	**0.315**	0.050	mg/kg dry	2024-06-10	
Vanadium	**58.7**	1.0	mg/kg dry	2024-06-10	
Zinc	**41.0**	2.0	mg/kg dry	2024-06-10	
Volatile Organic Compounds (VOC)					
Benzene	< 0.030	0.030	mg/kg dry	2024-06-06	
Bromodichloromethane	< 0.100	0.100	mg/kg dry	2024-06-06	
Bromoform	< 0.100	0.100	mg/kg dry	2024-06-06	
1,3-Butadiene	< 0.100	0.100	mg/kg dry	2024-06-06	
Carbon tetrachloride	< 0.050	0.050	mg/kg dry	2024-06-06	

TEST RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0492
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 17:19

Analyte	Result	RL	Units	Analyzed	Qualifier
24-BH2@20' (24F0492-05) | Matrix: Soil | Sampled: 2024-06-03, Continued					
Volatile Organic Compounds (VOC), Continued					
Chlorobenzene	< 0.050	0.050	mg/kg dry	2024-06-06	
Chloroform	< 0.050	0.050	mg/kg dry	2024-06-06	
n-Decane	< 0.200	0.200	mg/kg dry	2024-06-06	
Dibromochloromethane	< 0.100	0.100	mg/kg dry	2024-06-06	
1,2-Dibromoethane	< 0.100	0.100	mg/kg dry	2024-06-06	
Dibromomethane	< 0.100	0.100	mg/kg dry	2024-06-06	
1,2-Dichlorobenzene	< 0.050	0.050	mg/kg dry	2024-06-06	
1,3-Dichlorobenzene	< 0.050	0.050	mg/kg dry	2024-06-06	
1,4-Dichlorobenzene	< 0.050	0.050	mg/kg dry	2024-06-06	
1,1-Dichloroethane	< 0.050	0.050	mg/kg dry	2024-06-06	
1,2-Dichloroethane	< 0.050	0.050	mg/kg dry	2024-06-06	
1,1-Dichloroethylene	< 0.050	0.050	mg/kg dry	2024-06-06	
cis-1,2-Dichloroethylene	< 0.050	0.050	mg/kg dry	2024-06-06	
trans-1,2-Dichloroethylene	< 0.050	0.050	mg/kg dry	2024-06-06	
Dichloromethane	< 0.100	0.100	mg/kg dry	2024-06-06	
1,2-Dichloropropane	< 0.050	0.050	mg/kg dry	2024-06-06	
1,3-Dichloropropene (cis + trans)	< 0.050	0.050	mg/kg dry	2024-06-06	
Ethylbenzene	< 0.050	0.050	mg/kg dry	2024-06-06	
n-Hexane	< 0.200	0.200	mg/kg dry	2024-06-06	
Isopropylbenzene (Cumene)	< 0.050	0.050	mg/kg dry	2024-06-06	
Methyl cyclohexane	< 0.050	0.050	mg/kg dry	2024-06-06	
Methyl tert-butyl ether	< 0.040	0.040	mg/kg dry	2024-06-06	
Naphthalene	< 0.500	0.500	mg/kg dry	2024-06-06	
Styrene	< 0.050	0.050	mg/kg dry	2024-06-06	
1,1,2,2-Tetrachloroethane	< 0.050	0.050	mg/kg dry	2024-06-06	
Tetrachloroethylene	< 0.050	0.050	mg/kg dry	2024-06-06	
Toluene	< 0.200	0.200	mg/kg dry	2024-06-06	
1,1,1-Trichloroethane	< 0.050	0.050	mg/kg dry	2024-06-06	
1,1,2-Trichloroethane	< 0.050	0.050	mg/kg dry	2024-06-06	
Trichloroethylene	< 0.040	0.040	mg/kg dry	2024-06-06	
Trichlorofluoromethane	< 0.100	0.100	mg/kg dry	2024-06-06	
1,2,4-Trimethylbenzene	< 0.100	0.100	mg/kg dry	2024-06-06	
1,3,5-Trimethylbenzene	< 0.100	0.100	mg/kg dry	2024-06-06	
Vinyl chloride	< 0.100	0.100	mg/kg dry	2024-06-06	
Xylenes (total)	< 0.100	0.100	mg/kg dry	2024-06-06	
Surrogate: Toluene-d8	*95*	*60-140*	%	*2024-06-06*	
Surrogate: 4-Bromofluorobenzene	*51*	*60-140*	%	*2024-06-06*	S02
Surrogate: 1,4-Dichlorobenzene-d4	*80*	*60-140*	%	*2024-06-06*	
24-BH3@2.5' (24F0492-07) | Matrix: Soil | Sampled: 2024-06-03					
General Parameters					
pH (1:2 H2O Solution)	**6.08**	0.10	pH units	2024-06-09	

TEST RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0492
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 17:19

Analyte	Result	RL	Units	Analyzed	Qualifier
24-BH3@2.5' (24F0492-07) | Matrix: Soil | Sampled: 2024-06-03, Continued					
Strong Acid Leachable Metals					
Aluminum	**19000**	40	mg/kg dry	2024-06-10	
Antimony	**0.49**	0.10	mg/kg dry	2024-06-10	
Arsenic	**8.75**	0.30	mg/kg dry	2024-06-10	
Barium	**115**	1.0	mg/kg dry	2024-06-10	
Beryllium	**0.35**	0.10	mg/kg dry	2024-06-10	
Boron	**3.0**	2.0	mg/kg dry	2024-06-10	
Cadmium	**0.250**	0.040	mg/kg dry	2024-06-10	
Chromium	**46.1**	1.0	mg/kg dry	2024-06-10	
Cobalt	**11.7**	0.10	mg/kg dry	2024-06-10	
Copper	**29.0**	0.40	mg/kg dry	2024-06-10	
Iron	**28700**	20.0	mg/kg dry	2024-06-10	
Lead	**42.5**	0.20	mg/kg dry	2024-06-10	
Lithium	**12.7**	0.10	mg/kg dry	2024-06-10	
Manganese	**524**	0.40	mg/kg dry	2024-06-10	
Mercury	**0.046**	0.040	mg/kg dry	2024-06-10	
Molybdenum	**1.03**	0.10	mg/kg dry	2024-06-10	
Nickel	**37.9**	0.60	mg/kg dry	2024-06-10	
Selenium	**0.28**	0.20	mg/kg dry	2024-06-10	
Silver	< 0.10	0.10	mg/kg dry	2024-06-10	
Strontium	**36.9**	0.20	mg/kg dry	2024-06-10	
Thallium	< 0.10	0.10	mg/kg dry	2024-06-10	
Tin	**0.64**	0.20	mg/kg dry	2024-06-10	
Tungsten	**0.20**	0.20	mg/kg dry	2024-06-10	
Uranium	**0.617**	0.050	mg/kg dry	2024-06-10	
Vanadium	**66.1**	1.0	mg/kg dry	2024-06-10	
Zinc	**81.7**	2.0	mg/kg dry	2024-06-10	
DUP-1 (24F0492-08) | Matrix: Soil | Sampled: 2024-06-03					
BCMOE Aggregate Hydrocarbons					
VHs (6-10)	< 20	20	mg/kg dry	2024-06-06	
VPHs	< 20	20	mg/kg dry	N/A	
EPHs10-19	< 50	50	mg/kg dry	2024-06-07	
EPHs19-32	< 50	50	mg/kg dry	2024-06-07	
LEPHs	< 50	50	mg/kg dry	N/A	
HEPHs	< 50	50	mg/kg dry	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	*91*	*60-140*	%	*2024-06-07*	
General Parameters					
Moisture	**17.7**	1.0	% wet	2024-06-10	
pH (1:2 H2O Solution)	**6.67**	0.10	pH units	2024-06-09	
Polycyclic Aromatic Hydrocarbons (PAH)					

TEST RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0492
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 17:19

Analyte	Result	RL	Units	Analyzed	Qualifier
DUP-1 (24F0492-08) | Matrix: Soil | Sampled: 2024-06-03, Continued					
Polycyclic Aromatic Hydrocarbons (PAH), Continued					
Acenaphthene	< 0.050	0.050	mg/kg dry	2024-06-12	
Acenaphthylene	< 0.050	0.050	mg/kg dry	2024-06-12	
Anthracene	< 0.050	0.050	mg/kg dry	2024-06-12	
Benz(a)anthracene	< 0.050	0.050	mg/kg dry	2024-06-12	
Benzo(a)pyrene	< 0.050	0.050	mg/kg dry	2024-06-12	
Benzo(b)fluoranthene	< 0.050	0.050	mg/kg dry	2024-06-12	
Benzo(b+j)fluoranthene	< 0.050	0.050	mg/kg dry	2024-06-12	
Benzo(g,h,i)perylene	< 0.050	0.050	mg/kg dry	2024-06-12	
Benzo(k)fluoranthene	< 0.050	0.050	mg/kg dry	2024-06-12	
2-Chloronaphthalene	< 0.050	0.050	mg/kg dry	2024-06-12	
Chrysene	< 0.050	0.050	mg/kg dry	2024-06-12	
Dibenz(a,h)anthracene	< 0.050	0.050	mg/kg dry	2024-06-12	
7,12-Dimethylbenz(a)anthracene	< 0.020	0.020	mg/kg dry	2024-06-13	
Fluoranthene	< 0.050	0.050	mg/kg dry	2024-06-12	
Fluorene	< 0.050	0.050	mg/kg dry	2024-06-12	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	mg/kg dry	2024-06-12	
1-Methylnaphthalene	< 0.050	0.050	mg/kg dry	2024-06-12	
2-Methylnaphthalene	< 0.050	0.050	mg/kg dry	2024-06-12	
Naphthalene	< 0.050	0.050	mg/kg dry	2024-06-12	
4-Nitropyrene	< 0.050	0.050	mg/kg dry	2024-06-13	
Phenanthrene	< 0.050	0.050	mg/kg dry	2024-06-12	
Pyrene	< 0.050	0.050	mg/kg dry	2024-06-12	
Quinoline	< 0.050	0.050	mg/kg dry	2024-06-12	
Surrogate: Acenaphthene-d10	*101*	*50-140*	%	*2024-06-12*	
Surrogate: Chrysene-d12	*112*	*50-140*	%	*2024-06-12*	
Surrogate: Naphthalene-d8	*95*	*50-140*	%	*2024-06-12*	
Surrogate: Perylene-d12	*96*	*50-140*	%	*2024-06-12*	
Surrogate: Phenanthrene-d10	*154*	*55-140*	%	*2024-06-12*	S02
Strong Acid Leachable Metals					
Aluminum	**11000**	40	mg/kg dry	2024-06-10	
Antimony	**0.26**	0.10	mg/kg dry	2024-06-10	
Arsenic	**3.36**	0.30	mg/kg dry	2024-06-10	
Barium	**56.2**	1.0	mg/kg dry	2024-06-10	
Beryllium	**0.21**	0.10	mg/kg dry	2024-06-10	
Boron	< 2.0	2.0	mg/kg dry	2024-06-10	
Cadmium	**0.065**	0.040	mg/kg dry	2024-06-10	
Chromium	**34.6**	1.0	mg/kg dry	2024-06-10	
Cobalt	**6.62**	0.10	mg/kg dry	2024-06-10	
Copper	**15.6**	0.40	mg/kg dry	2024-06-10	
Iron	**18000**	20.0	mg/kg dry	2024-06-10	
Lead	**1.95**	0.20	mg/kg dry	2024-06-10	
Lithium	**7.89**	0.10	mg/kg dry	2024-06-10	

TEST RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0492
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 17:19

Analyte	Result	RL	Units	Analyzed	Qualifier
DUP-1 (24F0492-08) | Matrix: Soil | Sampled: 2024-06-03, Continued					
Strong Acid Leachable Metals, Continued					
Manganese	**273**	0.40	mg/kg dry	2024-06-10	
Mercury	< 0.040	0.040	mg/kg dry	2024-06-10	
Molybdenum	**0.17**	0.10	mg/kg dry	2024-06-10	
Nickel	**26.5**	0.60	mg/kg dry	2024-06-10	
Selenium	< 0.20	0.20	mg/kg dry	2024-06-10	
Silver	< 0.10	0.10	mg/kg dry	2024-06-10	
Strontium	**29.3**	0.20	mg/kg dry	2024-06-10	
Thallium	< 0.10	0.10	mg/kg dry	2024-06-10	
Tin	**0.23**	0.20	mg/kg dry	2024-06-10	
Tungsten	< 0.20	0.20	mg/kg dry	2024-06-10	
Uranium	**0.266**	0.050	mg/kg dry	2024-06-10	
Vanadium	**48.3**	1.0	mg/kg dry	2024-06-10	
Zinc	**31.6**	2.0	mg/kg dry	2024-06-10	
Volatile Organic Compounds (VOC)					
Benzene	< 0.030	0.030	mg/kg dry	2024-06-06	
Bromodichloromethane	< 0.100	0.100	mg/kg dry	2024-06-06	
Bromoform	< 0.100	0.100	mg/kg dry	2024-06-06	
1,3-Butadiene	< 0.100	0.100	mg/kg dry	2024-06-06	
Carbon tetrachloride	< 0.050	0.050	mg/kg dry	2024-06-06	
Chlorobenzene	< 0.050	0.050	mg/kg dry	2024-06-06	
Chloroform	< 0.050	0.050	mg/kg dry	2024-06-06	
n-Decane	< 0.200	0.200	mg/kg dry	2024-06-06	
Dibromochloromethane	< 0.100	0.100	mg/kg dry	2024-06-06	
1,2-Dibromoethane	< 0.100	0.100	mg/kg dry	2024-06-06	
Dibromomethane	< 0.100	0.100	mg/kg dry	2024-06-06	
1,2-Dichlorobenzene	< 0.050	0.050	mg/kg dry	2024-06-06	
1,3-Dichlorobenzene	< 0.050	0.050	mg/kg dry	2024-06-06	
1,4-Dichlorobenzene	< 0.050	0.050	mg/kg dry	2024-06-06	
1,1-Dichloroethane	< 0.050	0.050	mg/kg dry	2024-06-06	
1,2-Dichloroethane	< 0.050	0.050	mg/kg dry	2024-06-06	
1,1-Dichloroethylene	< 0.050	0.050	mg/kg dry	2024-06-06	
cis-1,2-Dichloroethylene	< 0.050	0.050	mg/kg dry	2024-06-06	
trans-1,2-Dichloroethylene	< 0.050	0.050	mg/kg dry	2024-06-06	
Dichloromethane	< 0.100	0.100	mg/kg dry	2024-06-06	
1,2-Dichloropropane	< 0.050	0.050	mg/kg dry	2024-06-06	
1,3-Dichloropropene (cis + trans)	< 0.050	0.050	mg/kg dry	2024-06-06	
Ethylbenzene	< 0.050	0.050	mg/kg dry	2024-06-06	
n-Hexane	< 0.200	0.200	mg/kg dry	2024-06-06	
Isopropylbenzene (Cumene)	< 0.050	0.050	mg/kg dry	2024-06-06	
Methyl cyclohexane	< 0.050	0.050	mg/kg dry	2024-06-06	
Methyl tert-butyl ether	< 0.040	0.040	mg/kg dry	2024-06-06	
Naphthalene	< 0.500	0.500	mg/kg dry	2024-06-06	

TEST RESULTS

REPORTED TO exp Services Inc. (Burnaby)
PROJECT VAN-24006323-A0

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Analyte	Result	RL	Units	Analyzed	Qualifier
DUP-1 (24F0492-08) | Matrix: Soil | Sampled: 2024-06-03, Continued					
Volatile Organic Compounds (VOC), Continued					
Styrene	< 0.050	0.050	mg/kg dry	2024-06-06	
1,1,2,2-Tetrachloroethane	< 0.050	0.050	mg/kg dry	2024-06-06	
Tetrachloroethylene	< 0.050	0.050	mg/kg dry	2024-06-06	
Toluene	< 0.200	0.200	mg/kg dry	2024-06-06	
1,1,1-Trichloroethane	< 0.050	0.050	mg/kg dry	2024-06-06	
1,1,2-Trichloroethane	< 0.050	0.050	mg/kg dry	2024-06-06	
Trichloroethylene	< 0.040	0.040	mg/kg dry	2024-06-06	
Trichlorofluoromethane	< 0.100	0.100	mg/kg dry	2024-06-06	
1,2,4-Trimethylbenzene	< 0.100	0.100	mg/kg dry	2024-06-06	
1,3,5-Trimethylbenzene	< 0.100	0.100	mg/kg dry	2024-06-06	
Vinyl chloride	< 0.100	0.100	mg/kg dry	2024-06-06	
Xylenes (total)	< 0.100	0.100	mg/kg dry	2024-06-06	
Surrogate: Toluene-d8	*81*	*60-140*	%	*2024-06-06*	
Surrogate: 4-Bromofluorobenzene	*50*	*60-140*	%	*2024-06-06*	S02
Surrogate: 1,4-Dichlorobenzene-d4	*77*	*60-140*	%	*2024-06-06*	
DUP-2 (24F0492-09) | Matrix: Soil | Sampled: 2024-06-03					
General Parameters					
pH (1:2 H2O Solution)	**6.22**	0.10	pH units	2024-06-09	
Strong Acid Leachable Metals					
Aluminum	**19800**	40	mg/kg dry	2024-06-10	
Antimony	**0.47**	0.10	mg/kg dry	2024-06-10	
Arsenic	**10.2**	0.30	mg/kg dry	2024-06-10	
Barium	**130**	1.0	mg/kg dry	2024-06-10	
Beryllium	**0.38**	0.10	mg/kg dry	2024-06-10	
Boron	**4.0**	2.0	mg/kg dry	2024-06-10	
Cadmium	**0.308**	0.040	mg/kg dry	2024-06-10	
Chromium	**49.5**	1.0	mg/kg dry	2024-06-10	
Cobalt	**11.7**	0.10	mg/kg dry	2024-06-10	
Copper	**28.9**	0.40	mg/kg dry	2024-06-10	
Iron	**29000**	20.0	mg/kg dry	2024-06-10	
Lead	**44.2**	0.20	mg/kg dry	2024-06-10	
Lithium	**13.1**	0.10	mg/kg dry	2024-06-10	
Manganese	**496**	0.40	mg/kg dry	2024-06-10	
Mercury	**0.057**	0.040	mg/kg dry	2024-06-10	
Molybdenum	**1.06**	0.10	mg/kg dry	2024-06-10	
Nickel	**39.1**	0.60	mg/kg dry	2024-06-10	
Selenium	**0.25**	0.20	mg/kg dry	2024-06-10	
Silver	**0.10**	0.10	mg/kg dry	2024-06-10	
Strontium	**38.3**	0.20	mg/kg dry	2024-06-10	
Thallium	< 0.10	0.10	mg/kg dry	2024-06-10	

TEST RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0492
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 17:19

Analyte	Result	RL	Units	Analyzed	Qualifier
DUP-2 (24F0492-09) | Matrix: Soil | Sampled: 2024-06-03, Continued					
Strong Acid Leachable Metals, Continued					
Tin	**0.75**	0.20	mg/kg dry	2024-06-10	
Tungsten	**0.20**	0.20	mg/kg dry	2024-06-10	
Uranium	**0.671**	0.050	mg/kg dry	2024-06-10	
Vanadium	**69.3**	1.0	mg/kg dry	2024-06-10	
Zinc	**99.7**	2.0	mg/kg dry	2024-06-10	

Sample Qualifiers:

S02 Surrogate recovery outside of control limits. Data accepted based on acceptable recovery of other surrogates.

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0492
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Analysis Description	Method Ref.	Technique	Accredited	Location
EPH in Soil	EPA 3570* / BCMOE EPHs*	Shaker Extraction (Hexane-Acetone 1:1) / Gas Chromatography (GC-FID)	✓	Richmond
HEPHs in Soil	BCMOE LEPH/HEPH	Calculation		N/A
LEPHs in Soil	BCMOE LEPH/HEPH	Calculation		N/A
Moisture in Soil	ASTM D2974-87*	Gravimetry (Dried at 105C)		N/A
pH in Soil	Carter 16.2 / SM 4500-H+ B (2021)	1:2 Soil/Water Slurry / Electrometry	✓	Richmond
Polycyclic Aromatic Hydrocarbons in Soil	EPA 3570* / EPA 8270D	Shaker Extraction (Hexane-Acetone 1:1) / GC-MSD (SIM)	✓	Richmond
SALM in Soil	BCMOE SALM V.2 / EPA 6020B	HNO3+HCl Hot Block Digestion / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	✓	Richmond
VH in Soil	EPA 5035A/5030B / BCMOE VHs	Methanol Extract, Purge&Trap / Purge&Trap or Headspace, Gas Chromatography (GC-FID)	✓	Richmond
Volatile Organic Compounds in Soil	EPA 5035A/5030B / EPA 8260D	Methanol Extract, Purge&Trap / GC-MSD (SIM)	✓	Richmond
Volatile Organic Compounds, add-ons in Soil	EPA 5035A/5030B / EPA 8260D	Methanol Extract, Purge&Trap / GC-MSD (SIM)	✓	Richmond
VPHs in Soil	BCMOE VPH	Calculation: VH - (Benzene + Toluene + Ethylbenzene + Xylenes + Styrene)		N/A

Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method

Glossary of Terms:

RL	Reporting Limit (default)
% wet	Percent (as received basis)
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
mg/kg dry	Milligrams per kilogram (dry weight basis)
pH units	pH < 7 = acidic, ph > 7 = basic
ASTM	ASTM International Test Methods
BCMOE	British Columbia Environmental Laboratory Manual, British Columbia Ministry of Environment
EPA	United States Environmental Protection Agency Test Methods
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0492
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 17:19

General Comments:

The results in this report apply to the received samples analyzed in accordance with the Chain of Custody document. This analytical report must be reproduced in its entirety. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Caro will dispose of all samples within 30 days of sample receipt, unless otherwise agreed.

Results in **Bold** indicate values that are above CARO's method reporting limits. Any results that are above regulatory limits are highlighted **red**. Please note that results will only be highlighted red if the regulatory limits are included on the CARO report. Any Bold and/or highlighted results do not take into account method uncertainty. If you would like method uncertainty or regulatory limits to be included on your report, please contact your Account Manager:aquesada@caro.ca

Please note any regulatory guidelines applied to this report are added as a convenience to the client, at their request, to help provide some initial context to analytical results obtained. Although CARO makes every effort to ensure accuracy of the associated regulatory guideline(s) applied, the guidelines applied cannot be assumed to be correct due to a variety of factors and as such CARO Analytical Services assumes no liability or responsibility for the use of those guidelines to make any decisions. The original source of the regulation should be verified and a review of the guideline(s) should be validated as correct in order to make any decisions arising from the comparison of the analytical data obtained to the relevant regulatory guideline for one's particular circumstances. Further, CARO Analytical Services assumes no liability or responsibility for any loss attributed from the use of these guidelines in any way.

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0492
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The following section displays the quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with QC samples that ensure your data is of the highest quality. Common QC types include:

- **Method Blank (Blk)**: A blank sample that undergoes sample processing identical to that carried out for the test samples. Method blank results are used to assess contamination from the laboratory environment and reagents.
- **Duplicate (Dup)**: An additional or second portion of a randomly selected sample in the analytical run carried through the entire analytical process. Duplicates provide a measure of the analytical method's precision (reproducibility).
- **Blank Spike (BS)**: A sample of known concentration which undergoes processing identical to that carried out for test samples, also referred to as a laboratory control sample (LCS). Blank spikes provide a measure of the analytical method's accuracy.
- **Matrix Spike (MS)**: A second aliquot of sample is fortified with a known concentration of target analytes and carried through the entire analytical process. Matrix spikes evaluate potential matrix effects that may affect the analyte recovery.
- **Reference Material (SRM)**: A homogenous material of similar matrix to the samples, certified for the parameter(s) listed. Reference Materials ensure that the analytical process is adequate to achieve acceptable recoveries of the parameter(s) tested.

Each QC type is analyzed at a 5-10% frequency, i.e. one blank/duplicate/spike for every 10-20 samples. For all types of QC, the specified recovery (% Rec) and relative percent difference (RPD) limits are derived from long-term method performance averages and/or prescribed by the reference method.

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
BCMOE Aggregate Hydrocarbons, Batch B4F1961										
Blank (B4F1961-BLK1)				Prepared: 2024-06-06, Analyzed: 2024-06-07						
EPHs10-19	< 50	50	mg/kg wet							
EPHs19-32	< 50	50	mg/kg wet							
Surrogate: 2-Methylnonane (EPH/F2-4)	*74.2*		*mg/kg wet*	84.2		*88*	*60-140*			
LCS (B4F1961-BS2)				Prepared: 2024-06-06, Analyzed: 2024-06-07						
EPHs10-19	2700	50	mg/kg wet	2900		92	70-130			
EPHs19-32	3800	50	mg/kg wet	4130		93	70-130			
Surrogate: 2-Methylnonane (EPH/F2-4)	*71.6*		*mg/kg wet*	82.3		*87*	*60-140*			
BCMOE Aggregate Hydrocarbons, Batch B4F1972										
Blank (B4F1972-BLK1)				Prepared: 2024-06-06, Analyzed: 2024-06-06						
VHs (6-10)	< 20	20	mg/kg wet							
LCS (B4F1972-BS2)				Prepared: 2024-06-06, Analyzed: 2024-06-06						
VHs (6-10)	320	20	mg/kg wet	342		95	70-130			
General Parameters, Batch B4F2273										
Duplicate (B4F2273-DUP1)			**Source: 24F0492-05**	Prepared: 2024-06-09, Analyzed: 2024-06-09						
pH (1:2 H2O Solution)	7.11	0.10	pH units		7.12			< 1	4	
Reference (B4F2273-SRM1)				Prepared: 2024-06-09, Analyzed: 2024-06-09						
pH (1:2 H2O Solution)	7.92	0.10	pH units	8.12		98	95-105			
Polycyclic Aromatic Hydrocarbons (PAH), Batch B4F1961										
Blank (B4F1961-BLK1)				Prepared: 2024-06-06, Analyzed: 2024-06-07						
Acenaphthene	< 0.050	0.050	mg/kg wet							
Acenaphthylene	< 0.050	0.050	mg/kg wet							
Anthracene	< 0.050	0.050	mg/kg wet							
Benz(a)anthracene	< 0.050	0.050	mg/kg wet							
Benzo(a)pyrene	< 0.050	0.050	mg/kg wet							
Benzo(b)fluoranthene	< 0.050	0.050	mg/kg wet							
Benzo(b+j)fluoranthene	< 0.050	0.050	mg/kg wet							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0492
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Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Polycyclic Aromatic Hydrocarbons (PAH), Batch B4F1961, Continued										
Blank (B4F1961-BLK1), Continued				Prepared: 2024-06-06, Analyzed: 2024-06-07						
Benzo(g,h,i)perylene	< 0.050	0.050	mg/kg wet							
Benzo(k)fluoranthene	< 0.050	0.050	mg/kg wet							
2-Chloronaphthalene	< 0.050	0.050	mg/kg wet							
Chrysene	< 0.050	0.050	mg/kg wet							
Dibenz(a,h)anthracene	< 0.050	0.050	mg/kg wet							
7,12-Dimethylbenz(a)anthracene	< 0.020	0.020	mg/kg wet							
Fluoranthene	< 0.050	0.050	mg/kg wet							
Fluorene	< 0.050	0.050	mg/kg wet							
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	mg/kg wet							
1-Methylnaphthalene	< 0.050	0.050	mg/kg wet							
2-Methylnaphthalene	< 0.050	0.050	mg/kg wet							
Naphthalene	< 0.050	0.050	mg/kg wet							
4-Nitropyrene	< 0.050	0.050	mg/kg wet							
Phenanthrene	< 0.050	0.050	mg/kg wet							
Pyrene	< 0.050	0.050	mg/kg wet							
Quinoline	< 0.050	0.050	mg/kg wet							
Surrogate: Acenaphthene-d10	*0.778*		*mg/kg wet*	0.849		*92*	*50-140*			
Surrogate: Chrysene-d12	*0.734*		*mg/kg wet*	0.849		*86*	*50-140*			
Surrogate: Naphthalene-d8	*0.775*		*mg/kg wet*	0.849		*91*	*50-140*			
Surrogate: Perylene-d12	*0.699*		*mg/kg wet*	0.849		*82*	*50-140*			
Surrogate: Phenanthrene-d10	*0.763*		*mg/kg wet*	0.849		*90*	*55-140*			
LCS (B4F1961-BS1)				Prepared: 2024-06-06, Analyzed: 2024-06-07						
Acenaphthene	0.111	0.050	mg/kg wet	0.135		82	50-140			
Acenaphthylene	0.110	0.050	mg/kg wet	0.133		82	50-140			
Anthracene	0.111	0.050	mg/kg wet	0.135		83	50-140			
Benz(a)anthracene	0.112	0.050	mg/kg wet	0.135		83	50-140			
Benzo(a)pyrene	0.107	0.050	mg/kg wet	0.133		80	50-140			
Benzo(b)fluoranthene	0.142	0.050	mg/kg wet	0.133		106	50-140			
Benzo(b+j)fluoranthene	0.256	0.050	mg/kg wet	0.267		96	50-140			
Benzo(g,h,i)perylene	0.110	0.050	mg/kg wet	0.133		82	50-140			
Benzo(k)fluoranthene	0.118	0.050	mg/kg wet	0.134		88	50-140			
2-Chloronaphthalene	0.114	0.050	mg/kg wet	0.133		85	50-140			
Chrysene	0.114	0.050	mg/kg wet	0.133		86	50-140			
Dibenz(a,h)anthracene	0.127	0.050	mg/kg wet	0.136		93	50-140			
7,12-Dimethylbenz(a)anthracene	0.100	0.020	mg/kg wet	0.134		75	50-140			
Fluoranthene	0.117	0.050	mg/kg wet	0.136		86	50-140			
Fluorene	0.111	0.050	mg/kg wet	0.138		81	50-140			
Indeno(1,2,3-cd)pyrene	0.100	0.050	mg/kg wet	0.133		75	50-140			
1-Methylnaphthalene	0.115	0.050	mg/kg wet	0.134		86	50-140			
2-Methylnaphthalene	0.120	0.050	mg/kg wet	0.134		89	50-140			
Naphthalene	0.117	0.050	mg/kg wet	0.134		88	50-140			
4-Nitropyrene	0.077	0.050	mg/kg wet	0.135		57	50-140			
Phenanthrene	0.115	0.050	mg/kg wet	0.133		86	50-140			
Pyrene	0.117	0.050	mg/kg wet	0.136		86	50-140			
Quinoline	0.132	0.050	mg/kg wet	0.136		97	50-140			
Surrogate: Acenaphthene-d10	*0.590*		*mg/kg wet*	0.678		*87*	*50-140*			
Surrogate: Chrysene-d12	*0.555*		*mg/kg wet*	0.678		*82*	*50-140*			
Surrogate: Naphthalene-d8	*0.592*		*mg/kg wet*	0.678		*87*	*50-140*			
Surrogate: Perylene-d12	*0.536*		*mg/kg wet*	0.678		*79*	*50-140*			
Surrogate: Phenanthrene-d10	*0.577*		*mg/kg wet*	0.678		*85*	*55-140*			
Strong Acid Leachable Metals, Batch B4F2272										
Blank (B4F2272-BLK1)				Prepared: 2024-06-09, Analyzed: 2024-06-10						
Aluminum	< 40	40	mg/kg dry							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0492
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 17:19

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Strong Acid Leachable Metals, Batch B4F2272, Continued										
Blank (B4F2272-BLK1), Continued				Prepared: 2024-06-09, Analyzed: 2024-06-10						
Antimony	< 0.10	0.10	mg/kg dry							
Arsenic	< 0.30	0.30	mg/kg dry							
Barium	< 1.0	1.0	mg/kg dry							
Beryllium	< 0.10	0.10	mg/kg dry							
Boron	< 2.0	2.0	mg/kg dry							
Cadmium	< 0.040	0.040	mg/kg dry							
Chromium	< 1.0	1.0	mg/kg dry							
Cobalt	< 0.10	0.10	mg/kg dry							
Copper	< 0.40	0.40	mg/kg dry							
Iron	< 20.0	20.0	mg/kg dry							
Lead	< 0.20	0.20	mg/kg dry							
Lithium	< 0.10	0.10	mg/kg dry							
Manganese	< 0.40	0.40	mg/kg dry							
Mercury	< 0.040	0.040	mg/kg dry							
Molybdenum	< 0.10	0.10	mg/kg dry							
Nickel	< 0.60	0.60	mg/kg dry							
Selenium	< 0.20	0.20	mg/kg dry							
Silver	< 0.10	0.10	mg/kg dry							
Strontium	< 0.20	0.20	mg/kg dry							
Thallium	< 0.10	0.10	mg/kg dry							
Tin	< 0.20	0.20	mg/kg dry							
Tungsten	< 0.20	0.20	mg/kg dry							
Uranium	< 0.050	0.050	mg/kg dry							
Vanadium	< 1.0	1.0	mg/kg dry							
Zinc	< 2.0	2.0	mg/kg dry							
LCS (B4F2272-BS1)				Prepared: 2024-06-09, Analyzed: 2024-06-10						
Aluminum	214	40	mg/kg dry	200		107	80-120			
Antimony	2.07	0.10	mg/kg dry	2.00		103	80-120			
Arsenic	21.4	0.30	mg/kg dry	20.0		107	80-120			
Barium	2.2	1.0	mg/kg dry	2.00		109	80-120			
Beryllium	2.14	0.10	mg/kg dry	2.00		107	80-120			
Boron	21.8	2.0	mg/kg dry	20.0		109	80-120			
Cadmium	2.16	0.040	mg/kg dry	2.00		108	80-120			
Chromium	2.2	1.0	mg/kg dry	2.00		108	80-120			
Cobalt	2.17	0.10	mg/kg dry	2.00		109	80-120			
Copper	2.14	0.40	mg/kg dry	2.00		107	80-120			
Iron	222	20.0	mg/kg dry	200		111	80-120			
Lead	2.18	0.20	mg/kg dry	2.00		109	80-120			
Lithium	2.14	0.10	mg/kg dry	2.00		107	80-120			
Manganese	2.20	0.40	mg/kg dry	2.00		110	80-120			
Mercury	0.209	0.040	mg/kg dry	0.200		104	80-120			
Molybdenum	2.08	0.10	mg/kg dry	2.00		104	80-120			
Nickel	2.15	0.60	mg/kg dry	2.00		107	80-120			
Selenium	22.1	0.20	mg/kg dry	20.0		111	80-120			
Silver	2.18	0.10	mg/kg dry	2.00		109	80-120			
Strontium	2.23	0.20	mg/kg dry	2.00		112	80-120			
Thallium	2.14	0.10	mg/kg dry	2.00		107	80-120			
Tin	2.11	0.20	mg/kg dry	2.00		105	80-120			
Tungsten	2.09	0.20	mg/kg dry	2.00		105	80-120			
Uranium	2.21	0.050	mg/kg dry	2.00		111	80-120			
Vanadium	2.2	1.0	mg/kg dry	2.00		110	80-120			
Zinc	21.1	2.0	mg/kg dry	20.0		105	80-120			
Duplicate (B4F2272-DUP1)	**Source: 24F0492-07**			Prepared: 2024-06-09, Analyzed: 2024-06-10						
Aluminum	18600	40	mg/kg dry		19000			2	40	
Antimony	0.43	0.10	mg/kg dry		0.49				30	

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0492
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 17:19

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Strong Acid Leachable Metals, Batch B4F2272, Continued										
Duplicate (B4F2272-DUP1), Continued	**Source: 24F0492-07**			Prepared: 2024-06-09, Analyzed: 2024-06-10						
Arsenic	8.65	0.30	mg/kg dry		8.75			1	30	
Barium	118	1.0	mg/kg dry		115			3	40	
Beryllium	0.36	0.10	mg/kg dry		0.35				30	
Boron	2.5	2.0	mg/kg dry		3.0				30	
Cadmium	0.254	0.040	mg/kg dry		0.250			1	30	
Chromium	45.1	1.0	mg/kg dry		46.1			2	30	
Cobalt	11.6	0.10	mg/kg dry		11.7			1	30	
Copper	27.8	0.40	mg/kg dry		29.0			4	30	
Iron	27700	20.0	mg/kg dry		28700			3	30	
Lead	42.4	0.20	mg/kg dry		42.5			< 1	40	
Lithium	12.8	0.10	mg/kg dry		12.7			1	30	
Manganese	522	0.40	mg/kg dry		524			< 1	30	
Mercury	0.048	0.040	mg/kg dry		0.046				40	
Molybdenum	1.07	0.10	mg/kg dry		1.03			4	40	
Nickel	36.6	0.60	mg/kg dry		37.9			3	30	
Selenium	0.27	0.20	mg/kg dry		0.28				30	
Silver	< 0.10	0.10	mg/kg dry		< 0.10				40	
Strontium	34.0	0.20	mg/kg dry		36.9			8	40	
Thallium	< 0.10	0.10	mg/kg dry		< 0.10				30	
Tin	0.53	0.20	mg/kg dry		0.64				40	
Tungsten	< 0.20	0.20	mg/kg dry		0.20				40	
Uranium	0.579	0.050	mg/kg dry		0.617			6	30	
Vanadium	63.3	1.0	mg/kg dry		66.1			4	30	
Zinc	85.9	2.0	mg/kg dry		81.7			5	30	
Reference (B4F2272-SRM1)				Prepared: 2024-06-09, Analyzed: 2024-06-10						
Aluminum	12300	40	mg/kg dry	12100		102	70-130			
Antimony	0.68	0.10	mg/kg dry	0.634		107	70-130			
Arsenic	88.2	0.30	mg/kg dry	83.6		106	70-130			
Barium	41.4	1.0	mg/kg dry	41.4		100	70-130			
Beryllium	0.40	0.10	mg/kg dry	0.377		107	70-130			
Chromium	70.0	1.0	mg/kg dry	66.0		106	70-130			
Cobalt	11.5	0.10	mg/kg dry	10.8		106	70-130			
Copper	21.1	0.40	mg/kg dry	20.3		104	70-130			
Iron	21900	20.0	mg/kg dry	20400		107	70-130			
Lead	17.7	0.20	mg/kg dry	16.7		106	70-130			
Lithium	18.4	0.10	mg/kg dry	16.8		109	70-130			
Manganese	343	0.40	mg/kg dry	319		107	70-130			
Mercury	0.104	0.040	mg/kg dry	0.114		91	70-130			
Nickel	34.8	0.60	mg/kg dry	32.5		107	70-130			
Silver	1.69	0.10	mg/kg dry	1.55		109	70-130			
Strontium	23.8	0.20	mg/kg dry	22.5		106	70-130			
Uranium	1.28	0.050	mg/kg dry	1.15		112	70-130			
Vanadium	39.4	1.0	mg/kg dry	36.3		109	70-130			
Zinc	44.0	2.0	mg/kg dry	39.7		111	70-130			
Volatile Organic Compounds (VOC), Batch B4F1972										
Blank (B4F1972-BLK1)				Prepared: 2024-06-06, Analyzed: 2024-06-06						
Benzene	< 0.030	0.030	mg/kg wet							
Bromodichloromethane	< 0.100	0.100	mg/kg wet							
Bromoform	< 0.100	0.100	mg/kg wet							
1,3-Butadiene	< 0.100	0.100	mg/kg wet							
Carbon tetrachloride	< 0.050	0.050	mg/kg wet							
Chlorobenzene	< 0.050	0.050	mg/kg wet							
Chloroform	< 0.050	0.050	mg/kg wet							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0492
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 17:19

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Volatile Organic Compounds (VOC), Batch B4F1972, Continued										
Blank (B4F1972-BLK1), Continued				Prepared: 2024-06-06, Analyzed: 2024-06-06						
Dibromochloromethane	< 0.100	0.100	mg/kg wet							
1,2-Dibromoethane	< 0.100	0.100	mg/kg wet							
Dibromomethane	< 0.100	0.100	mg/kg wet							
1,2-Dichlorobenzene	< 0.050	0.050	mg/kg wet							
1,3-Dichlorobenzene	< 0.050	0.050	mg/kg wet							
1,4-Dichlorobenzene	< 0.050	0.050	mg/kg wet							
1,1-Dichloroethane	< 0.050	0.050	mg/kg wet							
1,2-Dichloroethane	< 0.050	0.050	mg/kg wet							
1,1-Dichloroethylene	< 0.050	0.050	mg/kg wet							
cis-1,2-Dichloroethylene	< 0.050	0.050	mg/kg wet							
trans-1,2-Dichloroethylene	< 0.050	0.050	mg/kg wet							
Dichloromethane	< 0.100	0.100	mg/kg wet							
1,2-Dichloropropane	< 0.050	0.050	mg/kg wet							
1,3-Dichloropropene (cis + trans)	< 0.050	0.050	mg/kg wet							
Ethylbenzene	< 0.050	0.050	mg/kg wet							
Methyl tert-butyl ether	< 0.040	0.040	mg/kg wet							
Styrene	< 0.050	0.050	mg/kg wet							
1,1,2,2-Tetrachloroethane	< 0.050	0.050	mg/kg wet							
Tetrachloroethylene	< 0.050	0.050	mg/kg wet							
Toluene	< 0.200	0.200	mg/kg wet							
1,1,1-Trichloroethane	< 0.050	0.050	mg/kg wet							
1,1,2-Trichloroethane	< 0.050	0.050	mg/kg wet							
Trichloroethylene	< 0.040	0.040	mg/kg wet							
Trichlorofluoromethane	< 0.100	0.100	mg/kg wet							
Vinyl chloride	< 0.100	0.100	mg/kg wet							
Xylenes (total)	< 0.100	0.100	mg/kg wet							
Surrogate: Toluene-d8	*3.44*		*mg/kg wet*	4.00		*86*	*60-140*			
Surrogate: 4-Bromofluorobenzene	*2.07*		*mg/kg wet*	3.98		*52*	*60-140*			*S02*
Surrogate: 1,4-Dichlorobenzene-d4	*2.98*		*mg/kg wet*	3.92		*76*	*60-140*			
LCS (B4F1972-BS1)				Prepared: 2024-06-06, Analyzed: 2024-06-06						
Benzene	2.53	0.030	mg/kg wet	2.01		126	60-140			
Bromodichloromethane	2.55	0.100	mg/kg wet	2.01		127	60-140			
Bromoform	1.52	0.100	mg/kg wet	2.01		76	60-140			
1,3-Butadiene	1.91	0.100	mg/kg wet	1.98		96	50-150			
Carbon tetrachloride	2.22	0.050	mg/kg wet	2.01		111	60-140			
Chlorobenzene	1.97	0.050	mg/kg wet	2.01		98	60-140			
Chloroform	2.51	0.050	mg/kg wet	2.01		125	60-140			
Dibromochloromethane	1.96	0.100	mg/kg wet	2.01		98	60-140			
1,2-Dibromoethane	1.80	0.100	mg/kg wet	2.01		90	60-140			
Dibromomethane	1.53	0.100	mg/kg wet	2.01		76	60-140			
1,2-Dichlorobenzene	1.50	0.050	mg/kg wet	2.01		75	60-140			
1,3-Dichlorobenzene	1.55	0.050	mg/kg wet	2.01		77	60-140			
1,4-Dichlorobenzene	1.67	0.050	mg/kg wet	2.01		83	60-140			
1,1-Dichloroethane	2.75	0.050	mg/kg wet	2.01		137	60-140			
1,2-Dichloroethane	2.63	0.050	mg/kg wet	2.01		131	60-140			
1,1-Dichloroethylene	1.95	0.050	mg/kg wet	2.01		97	60-140			
cis-1,2-Dichloroethylene	1.90	0.050	mg/kg wet	2.01		95	60-140			
trans-1,2-Dichloroethylene	2.03	0.050	mg/kg wet	2.01		101	60-140			
Dichloromethane	2.34	0.100	mg/kg wet	2.01		116	60-140			
1,2-Dichloropropane	2.61	0.050	mg/kg wet	2.01		130	60-140			
1,3-Dichloropropene (cis + trans)	5.49	0.050	mg/kg wet	4.02		137	60-140			
Ethylbenzene	1.90	0.050	mg/kg wet	2.01		95	60-140			
Methyl tert-butyl ether	2.76	0.040	mg/kg wet	2.00		138	60-140			
Styrene	1.92	0.050	mg/kg wet	2.01		95	60-140			
1,1,2,2-Tetrachloroethane	1.86	0.050	mg/kg wet	2.01		93	60-140			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0492
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 17:19

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Volatile Organic Compounds (VOC), Batch B4F1972, Continued										
LCS (B4F1972-BS1), Continued				Prepared: 2024-06-06, Analyzed: 2024-06-06						
Tetrachloroethylene	1.57	0.050	mg/kg wet	2.01		78	60-140			
Toluene	2.41	0.200	mg/kg wet	2.01		120	60-140			
1,1,1-Trichloroethane	2.41	0.050	mg/kg wet	2.01		120	60-140			
1,1,2-Trichloroethane	2.03	0.050	mg/kg wet	2.01		101	60-140			
Trichloroethylene	1.67	0.040	mg/kg wet	2.01		83	60-140			
Trichlorofluoromethane	2.51	0.100	mg/kg wet	2.01		125	50-150			
Vinyl chloride	2.48	0.100	mg/kg wet	2.01		124	50-150			
Xylenes (total)	6.24	0.100	mg/kg wet	6.03		103	60-140			
Surrogate: Toluene-d8	*3.19*		*mg/kg wet*	4.00		*80*	*60-140*			
Surrogate: 4-Bromofluorobenzene	*2.30*		*mg/kg wet*	3.98		*58*	*60-140*			*S02*
Surrogate: 1,4-Dichlorobenzene-d4	*2.71*		*mg/kg wet*	3.92		*69*	*60-140*			

QC Qualifiers:

S02 Surrogate recovery outside of control limits. Data accepted based on acceptable recovery of other surrogates.

Appendix E –
Certificate of Analysis –Groundwater

CERTIFICATE OF ANALYSIS

REPORTED TO	exp Services Inc. (Burnaby) Suite 275 3001 Wayburne Drive Burnaby, BC V5G 4W3		
ATTENTION	Sushil Dogra	**WORK ORDER**	24F0474
PO NUMBER		**RECEIVED / TEMP**	2024-06-04 15:40 / 4.5°C
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 10:23
PROJECT INFO		**COC NUMBER**	NO#

Introduction:

CARO Analytical Services is a testing laboratory full of smart, engaged scientists driven to make the world a safer and healthier place. Through our clients' projects we become an essential element for a better world. We employ methods conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts. CARO is accredited by the Canadian Association for Laboratories Accreditation (CALA) to ISO/IEC 17025:2017 for specific tests listed in the scope of accreditation approved by CALA.

Big Picture Sidekicks

You know that the sample you collected after snowshoeing to site, digging 5 meters, and racing to get it on a plane so you can submit it to the lab for time sensitive results needed to make important and expensive decisions (whew) is VERY important. We know that too.

We've Got Chemistry

It's simple. We figure the more you enjoy working with our fun and engaged team members; the more likely you are to give us continued opportunities to support you.

Ahead of the Curve

Through research, regulation knowledge, and instrumentation, we are your analytical centre for the technical knowledge you need, BEFORE you need it, so you can stay up to date and in the know.

Work Order Comments:

This is a revised report; please refer to Appendix 3 for details.

By engaging our services, you are agreeing to CARO Analytical Service's Standard Terms and Conditions outlined here: https://www.caro.ca/terms-conditions

If you have any questions or concerns, please contact me at aquesada@caro.ca

Authorized By:

Adrian Quesada
Junior Account Manager

TEST RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0474
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 10:23

Analyte	Result	RL	Units	Analyzed	Qualifier
24-MW1 (24F0474-01) | Matrix: Water | Sampled: 2024-06-04					
BCMOE Aggregate Hydrocarbons					
VHw (6-10)	< 100	100	µg/L	2024-06-07	
VPHw	< 100	100	µg/L	N/A	
EPHw10-19	< 250	250	µg/L	2024-06-07	
EPHw19-32	< 250	250	µg/L	2024-06-07	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	*108*	*60-140*	%	*2024-06-07*	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**289**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	< 5.0	5.0	µg/L	2024-06-06	
Antimony, dissolved	< 0.20	0.20	µg/L	2024-06-06	
Arsenic, dissolved	< 0.50	0.50	µg/L	2024-06-06	
Barium, dissolved	**59.4**	5.0	µg/L	2024-06-06	
Beryllium, dissolved	< 0.10	0.10	µg/L	2024-06-06	
Boron, dissolved	< 50.0	50.0	µg/L	2024-06-06	
Cadmium, dissolved	**0.060**	0.010	µg/L	2024-06-06	
Calcium, dissolved	**75900**	200	µg/L	2024-06-06	
Chromium, dissolved	< 0.50	0.50	µg/L	2024-06-06	
Cobalt, dissolved	**0.97**	0.10	µg/L	2024-06-06	
Copper, dissolved	< 0.40	0.40	µg/L	2024-06-06	
Iron, dissolved	< 10	10	µg/L	2024-06-06	
Lead, dissolved	< 0.20	0.20	µg/L	2024-06-06	
Lithium, dissolved	**4.37**	0.10	µg/L	2024-06-06	
Magnesium, dissolved	**24100**	10	µg/L	2024-06-06	
Manganese, dissolved	**212**	0.20	µg/L	2024-06-06	
Mercury, dissolved	< 0.010	0.010	µg/L	2024-06-06	
Molybdenum, dissolved	**0.39**	0.10	µg/L	2024-06-06	
Nickel, dissolved	**4.61**	0.40	µg/L	2024-06-06	
Selenium, dissolved	< 0.50	0.50	µg/L	2024-06-06	
Silver, dissolved	< 0.050	0.050	µg/L	2024-06-06	
Sodium, dissolved	**46000**	100	µg/L	2024-06-06	
Strontium, dissolved	**495**	1.0	µg/L	2024-06-06	
Thallium, dissolved	< 0.020	0.020	µg/L	2024-06-06	
Tin, dissolved	**0.27**	0.20	µg/L	2024-06-06	
Titanium, dissolved	< 5.0	5.0	µg/L	2024-06-06	
Tungsten, dissolved	< 1.0	1.0	µg/L	2024-06-06	
Uranium, dissolved	**0.435**	0.020	µg/L	2024-06-06	
Vanadium, dissolved	< 5.0	5.0	µg/L	2024-06-06	
Zinc, dissolved	< 4.0	4.0	µg/L	2024-06-06	
Polycyclic Aromatic Hydrocarbons (PAH)					

TEST RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0474
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 10:23

Analyte	Result	RL	Units	Analyzed	Qualifier
24-MW1 (24F0474-01) | Matrix: Water | Sampled: 2024-06-04, Continued					
Polycyclic Aromatic Hydrocarbons (PAH), Continued					
Acenaphthene	< 0.050	0.050	µg/L	2024-06-07	
Acenaphthylene	< 0.200	0.200	µg/L	2024-06-07	
Acridine	< 0.050	0.050	µg/L	2024-06-07	
Anthracene	< 0.010	0.010	µg/L	2024-06-07	
Benz(a)anthracene	< 0.010	0.010	µg/L	2024-06-07	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2024-06-07	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2024-06-07	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2024-06-07	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2024-06-07	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2024-06-07	
Chrysene	< 0.050	0.050	µg/L	2024-06-07	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2024-06-07	
7,12-Dimethylbenz(a)anthracene	< 0.020	0.020	µg/L	2024-06-07	
Fluoranthene	< 0.030	0.030	µg/L	2024-06-07	
Fluorene	< 0.050	0.050	µg/L	2024-06-07	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2024-06-07	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2024-06-07	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2024-06-07	
Naphthalene	< 0.200	0.200	µg/L	2024-06-07	
4-Nitropyrene	< 0.050	0.050	µg/L	2024-06-07	
Phenanthrene	< 0.100	0.100	µg/L	2024-06-07	
Pyrene	< 0.020	0.020	µg/L	2024-06-07	
Quinoline	< 0.050	0.050	µg/L	2024-06-07	
Surrogate: Acridine-d9	*101*	*50-140*	%	*2024-06-07*	
Surrogate: Naphthalene-d8	*116*	*50-140*	%	*2024-06-07*	
Surrogate: Perylene-d12	*117*	*50-140*	%	*2024-06-07*	
Volatile Organic Compounds (VOC)					
Benzene	< 0.5	0.5	µg/L	2024-06-07	
Bromodichloromethane	< 1.0	1.0	µg/L	2024-06-07	
Bromoform	< 1.0	1.0	µg/L	2024-06-07	
1,3-Butadiene	< 1.0	1.0	µg/L	2024-06-07	
Carbon tetrachloride	< 0.5	0.5	µg/L	2024-06-07	
Chlorobenzene	< 1.0	1.0	µg/L	2024-06-07	
Chloroethane	< 2.0	2.0	µg/L	2024-06-07	
Chloroform	< 1.0	1.0	µg/L	2024-06-07	
n-Decane	< 2.0	2.0	µg/L	2024-06-07	
Dibromochloromethane	< 1.0	1.0	µg/L	2024-06-07	
1,2-Dibromoethane	< 0.3	0.3	µg/L	2024-06-07	
Dibromomethane	< 1.0	1.0	µg/L	2024-06-07	
1,2-Dichlorobenzene	< 0.5	0.5	µg/L	2024-06-07	
1,3-Dichlorobenzene	< 1.0	1.0	µg/L	2024-06-07	
1,4-Dichlorobenzene	< 1.0	1.0	µg/L	2024-06-07	

TEST RESULTS

REPORTED TO exp Services Inc. (Burnaby)
PROJECT VAN-24006323-A0

WORK ORDER 24F0474
REPORTED 2024-06-13 10:23

Analyte	Result	RL	Units	Analyzed	Qualifier
24-MW1 (24F0474-01) | Matrix: Water | Sampled: 2024-06-04, Continued					
Volatile Organic Compounds (VOC), Continued					
1,1-Dichloroethane	< 1.0	1.0	µg/L	2024-06-07	
1,2-Dichloroethane	< 1.0	1.0	µg/L	2024-06-07	
1,1-Dichloroethylene	< 1.0	1.0	µg/L	2024-06-07	
cis-1,2-Dichloroethylene	< 1.0	1.0	µg/L	2024-06-07	
trans-1,2-Dichloroethylene	< 1.0	1.0	µg/L	2024-06-07	
Dichloromethane	< 3.0	3.0	µg/L	2024-06-07	
1,2-Dichloropropane	< 1.0	1.0	µg/L	2024-06-07	
1,3-Dichloropropene (cis + trans)	< 1.0	1.0	µg/L	2024-06-07	
Ethylbenzene	< 1.0	1.0	µg/L	2024-06-07	
n-Hexane	< 2.0	2.0	µg/L	2024-06-07	
Isopropylbenzene (Cumene)	< 1.0	1.0	µg/L	2024-06-07	
Methyl cyclohexane	< 1.0	1.0	µg/L	2024-06-07	
Methyl tert-butyl ether	< 1.0	1.0	µg/L	2024-06-07	
Naphthalene	< 5.0	5.0	µg/L	2024-06-07	
Styrene	< 1.0	1.0	µg/L	2024-06-07	
1,1,2,2-Tetrachloroethane	< 0.5	0.5	µg/L	2024-06-07	
Tetrachloroethylene	< 1.0	1.0	µg/L	2024-06-07	
Toluene	< 1.0	1.0	µg/L	2024-06-07	
1,1,1-Trichloroethane	< 1.0	1.0	µg/L	2024-06-07	
1,1,2-Trichloroethane	< 1.0	1.0	µg/L	2024-06-07	
Trichloroethylene	< 1.0	1.0	µg/L	2024-06-07	
Trichlorofluoromethane	< 1.0	1.0	µg/L	2024-06-07	
1,2,4-Trimethylbenzene	< 1.0	1.0	µg/L	2024-06-07	
1,3,5-Trimethylbenzene	< 1.0	1.0	µg/L	2024-06-07	
Vinyl chloride	< 1.0	1.0	µg/L	2024-06-07	
Xylenes (total)	< 2.0	2.0	µg/L	2024-06-07	
Surrogate: Toluene-d8	*90*	*70-130*	%	*2024-06-07*	
Surrogate: 4-Bromofluorobenzene	*81*	*70-130*	%	*2024-06-07*	
Surrogate: 1,4-Dichlorobenzene-d4	*90*	*70-130*	%	*2024-06-07*	
24-MW2 (24F0474-02) | Matrix: Water | Sampled: 2024-06-04					
BCMOE Aggregate Hydrocarbons					
VHw (6-10)	< 100	100	µg/L	2024-06-07	
VPHw	< 100	100	µg/L	N/A	
EPHw10-19	< 250	250	µg/L	2024-06-07	
EPHw19-32	< 250	250	µg/L	2024-06-07	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	*110*	*60-140*	%	*2024-06-07*	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**75.4**	0.500	mg/L	N/A	

TEST RESULTS

REPORTED TO exp Services Inc. (Burnaby)
PROJECT VAN-24006323-A0

WORK ORDER 24F0474
REPORTED 2024-06-13 10:23

Analyte	Result	RL	Units	Analyzed	Qualifier
24-MW2 (24F0474-02) | Matrix: Water | Sampled: 2024-06-04, Continued					
Dissolved Metals					
Aluminum, dissolved	**353**	5.0	µg/L	2024-06-06	
Antimony, dissolved	**1.17**	0.20	µg/L	2024-06-06	
Arsenic, dissolved	**5.44**	0.50	µg/L	2024-06-06	
Barium, dissolved	**9.7**	5.0	µg/L	2024-06-06	
Beryllium, dissolved	< 0.10	0.10	µg/L	2024-06-06	
Boron, dissolved	< 50.0	50.0	µg/L	2024-06-06	
Cadmium, dissolved	< 0.040	0.010	µg/L	2024-06-06	RA1
Calcium, dissolved	**28300**	200	µg/L	2024-06-06	
Chromium, dissolved	**28.1**	0.50	µg/L	2024-06-06	
Cobalt, dissolved	**0.35**	0.10	µg/L	2024-06-06	
Copper, dissolved	**27.1**	0.40	µg/L	2024-06-06	
Iron, dissolved	**697**	10	µg/L	2024-06-06	
Lead, dissolved	**0.31**	0.20	µg/L	2024-06-06	
Lithium, dissolved	**1.64**	0.10	µg/L	2024-06-06	
Magnesium, dissolved	**1130**	10	µg/L	2024-06-06	
Manganese, dissolved	**17.4**	0.20	µg/L	2024-06-06	
Mercury, dissolved	< 0.010	0.010	µg/L	2024-06-06	
Molybdenum, dissolved	**62.7**	0.10	µg/L	2024-06-06	
Nickel, dissolved	**2.97**	0.40	µg/L	2024-06-06	
Selenium, dissolved	**0.75**	0.50	µg/L	2024-06-06	
Silver, dissolved	< 0.050	0.050	µg/L	2024-06-06	
Sodium, dissolved	**74400**	100	µg/L	2024-06-06	
Strontium, dissolved	**119**	1.0	µg/L	2024-06-06	
Thallium, dissolved	< 0.020	0.020	µg/L	2024-06-06	
Tin, dissolved	< 0.20	0.20	µg/L	2024-06-06	
Titanium, dissolved	**8.3**	5.0	µg/L	2024-06-06	
Tungsten, dissolved	< 1.0	1.0	µg/L	2024-06-06	
Uranium, dissolved	**0.150**	0.020	µg/L	2024-06-06	
Vanadium, dissolved	**7.6**	5.0	µg/L	2024-06-06	
Zinc, dissolved	**7.9**	4.0	µg/L	2024-06-06	
Polycyclic Aromatic Hydrocarbons (PAH)					
Acenaphthene	< 0.050	0.050	µg/L	2024-06-07	
Acenaphthylene	< 0.200	0.200	µg/L	2024-06-07	
Acridine	< 0.050	0.050	µg/L	2024-06-07	
Anthracene	< 0.010	0.010	µg/L	2024-06-07	
Benz(a)anthracene	< 0.010	0.010	µg/L	2024-06-07	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2024-06-07	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2024-06-07	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2024-06-07	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2024-06-07	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2024-06-07	
Chrysene	< 0.050	0.050	µg/L	2024-06-07	

TEST RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0474
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 10:23

Analyte	Result	RL	Units	Analyzed	Qualifier
24-MW2 (24F0474-02) | Matrix: Water | Sampled: 2024-06-04, Continued					
Polycyclic Aromatic Hydrocarbons (PAH), Continued					
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2024-06-07	
7,12-Dimethylbenz(a)anthracene	< 0.020	0.020	µg/L	2024-06-07	
Fluoranthene	< 0.030	0.030	µg/L	2024-06-07	
Fluorene	< 0.050	0.050	µg/L	2024-06-07	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2024-06-07	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2024-06-07	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2024-06-07	
Naphthalene	< 0.200	0.200	µg/L	2024-06-07	
4-Nitropyrene	< 0.050	0.050	µg/L	2024-06-07	
Phenanthrene	< 0.100	0.100	µg/L	2024-06-07	
Pyrene	< 0.020	0.020	µg/L	2024-06-07	
Quinoline	< 0.050	0.050	µg/L	2024-06-07	
Surrogate: Acridine-d9	*97*	*50-140*	%	*2024-06-07*	
Surrogate: Naphthalene-d8	*110*	*50-140*	%	*2024-06-07*	
Surrogate: Perylene-d12	*113*	*50-140*	%	*2024-06-07*	
Volatile Organic Compounds (VOC)					
Benzene	< 0.5	0.5	µg/L	2024-06-07	
Bromodichloromethane	< 1.0	1.0	µg/L	2024-06-07	
Bromoform	< 1.0	1.0	µg/L	2024-06-07	
1,3-Butadiene	< 1.0	1.0	µg/L	2024-06-07	
Carbon tetrachloride	< 0.5	0.5	µg/L	2024-06-07	
Chlorobenzene	< 1.0	1.0	µg/L	2024-06-07	
Chloroethane	< 2.0	2.0	µg/L	2024-06-07	
Chloroform	**1.2**	1.0	µg/L	2024-06-07	
n-Decane	< 2.0	2.0	µg/L	2024-06-07	
Dibromochloromethane	< 1.0	1.0	µg/L	2024-06-07	
1,2-Dibromoethane	< 0.3	0.3	µg/L	2024-06-07	
Dibromomethane	< 1.0	1.0	µg/L	2024-06-07	
1,2-Dichlorobenzene	< 0.5	0.5	µg/L	2024-06-07	
1,3-Dichlorobenzene	< 1.0	1.0	µg/L	2024-06-07	
1,4-Dichlorobenzene	< 1.0	1.0	µg/L	2024-06-07	
1,1-Dichloroethane	< 1.0	1.0	µg/L	2024-06-07	
1,2-Dichloroethane	< 1.0	1.0	µg/L	2024-06-07	
1,1-Dichloroethylene	< 1.0	1.0	µg/L	2024-06-07	
cis-1,2-Dichloroethylene	< 1.0	1.0	µg/L	2024-06-07	
trans-1,2-Dichloroethylene	< 1.0	1.0	µg/L	2024-06-07	
Dichloromethane	< 3.0	3.0	µg/L	2024-06-07	
1,2-Dichloropropane	< 1.0	1.0	µg/L	2024-06-07	
1,3-Dichloropropene (cis + trans)	< 1.0	1.0	µg/L	2024-06-07	
Ethylbenzene	< 1.0	1.0	µg/L	2024-06-07	
n-Hexane	< 2.0	2.0	µg/L	2024-06-07	
Isopropylbenzene (Cumene)	< 1.0	1.0	µg/L	2024-06-07	

TEST RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0474
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 10:23

Analyte	Result	RL	Units	Analyzed	Qualifier
24-MW2 (24F0474-02) | Matrix: Water | Sampled: 2024-06-04, Continued					
Volatile Organic Compounds (VOC), Continued					
Methyl cyclohexane	< 1.0	1.0	µg/L	2024-06-07	
Methyl tert-butyl ether	< 1.0	1.0	µg/L	2024-06-07	
Naphthalene	< 5.0	5.0	µg/L	2024-06-07	
Styrene	< 1.0	1.0	µg/L	2024-06-07	
1,1,2,2-Tetrachloroethane	< 0.5	0.5	µg/L	2024-06-07	
Tetrachloroethylene	< 1.0	1.0	µg/L	2024-06-07	
Toluene	< 1.0	1.0	µg/L	2024-06-07	
1,1,1-Trichloroethane	< 1.0	1.0	µg/L	2024-06-07	
1,1,2-Trichloroethane	< 1.0	1.0	µg/L	2024-06-07	
Trichloroethylene	< 1.0	1.0	µg/L	2024-06-07	
Trichlorofluoromethane	< 1.0	1.0	µg/L	2024-06-07	
1,2,4-Trimethylbenzene	< 1.0	1.0	µg/L	2024-06-07	
1,3,5-Trimethylbenzene	< 1.0	1.0	µg/L	2024-06-07	
Vinyl chloride	< 1.0	1.0	µg/L	2024-06-07	
Xylenes (total)	< 2.0	2.0	µg/L	2024-06-07	
Surrogate: Toluene-d8	*87*	*70-130*	%	*2024-06-07*	
Surrogate: 4-Bromofluorobenzene	*77*	*70-130*	%	*2024-06-07*	
Surrogate: 1,4-Dichlorobenzene-d4	*87*	*70-130*	%	*2024-06-07*	
DUP-A (24F0474-03) | Matrix: Water | Sampled: 2024-06-04					
BCMOE Aggregate Hydrocarbons					
VHw (6-10)	< 100	100	µg/L	2024-06-08	
VPHw	< 100	100	µg/L	N/A	
EPHw10-19	< 250	250	µg/L	2024-06-07	
EPHw19-32	< 250	250	µg/L	2024-06-07	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	*109*	*60-140*	%	*2024-06-07*	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**297**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	< 5.0	5.0	µg/L	2024-06-06	
Antimony, dissolved	< 0.20	0.20	µg/L	2024-06-06	
Arsenic, dissolved	< 0.50	0.50	µg/L	2024-06-06	
Barium, dissolved	**63.0**	5.0	µg/L	2024-06-06	
Beryllium, dissolved	< 0.10	0.10	µg/L	2024-06-06	
Boron, dissolved	< 50.0	50.0	µg/L	2024-06-06	
Cadmium, dissolved	**0.063**	0.010	µg/L	2024-06-06	
Calcium, dissolved	**78400**	200	µg/L	2024-06-06	
Chromium, dissolved	< 0.50	0.50	µg/L	2024-06-06	

TEST RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0474
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 10:23

Analyte	Result	RL	Units	Analyzed	Qualifier
DUP-A (24F0474-03) | Matrix: Water | Sampled: 2024-06-04, Continued					
Dissolved Metals, Continued					
Cobalt, dissolved	**0.97**	0.10	µg/L	2024-06-06	
Copper, dissolved	**0.79**	0.40	µg/L	2024-06-06	
Iron, dissolved	< 10	10	µg/L	2024-06-06	
Lead, dissolved	< 0.20	0.20	µg/L	2024-06-06	
Lithium, dissolved	**4.43**	0.10	µg/L	2024-06-06	
Magnesium, dissolved	**24600**	10	µg/L	2024-06-06	
Manganese, dissolved	**213**	0.20	µg/L	2024-06-06	
Mercury, dissolved	< 0.010	0.010	µg/L	2024-06-06	
Molybdenum, dissolved	**0.36**	0.10	µg/L	2024-06-06	
Nickel, dissolved	**4.53**	0.40	µg/L	2024-06-06	
Selenium, dissolved	< 0.50	0.50	µg/L	2024-06-06	
Silver, dissolved	< 0.050	0.050	µg/L	2024-06-06	
Sodium, dissolved	**47000**	100	µg/L	2024-06-06	
Strontium, dissolved	**513**	1.0	µg/L	2024-06-06	
Thallium, dissolved	< 0.020	0.020	µg/L	2024-06-06	
Tin, dissolved	**0.20**	0.20	µg/L	2024-06-06	
Titanium, dissolved	< 5.0	5.0	µg/L	2024-06-06	
Tungsten, dissolved	< 1.0	1.0	µg/L	2024-06-06	
Uranium, dissolved	**0.427**	0.020	µg/L	2024-06-06	
Vanadium, dissolved	< 5.0	5.0	µg/L	2024-06-06	
Zinc, dissolved	< 4.0	4.0	µg/L	2024-06-06	
Polycyclic Aromatic Hydrocarbons (PAH)					
Acenaphthene	< 0.050	0.050	µg/L	2024-06-07	
Acenaphthylene	< 0.200	0.200	µg/L	2024-06-07	
Acridine	< 0.050	0.050	µg/L	2024-06-07	
Anthracene	< 0.010	0.010	µg/L	2024-06-07	
Benz(a)anthracene	< 0.010	0.010	µg/L	2024-06-07	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2024-06-07	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2024-06-07	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2024-06-07	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2024-06-07	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2024-06-07	
Chrysene	< 0.050	0.050	µg/L	2024-06-07	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2024-06-07	
7,12-Dimethylbenz(a)anthracene	< 0.020	0.020	µg/L	2024-06-07	
Fluoranthene	< 0.030	0.030	µg/L	2024-06-07	
Fluorene	< 0.050	0.050	µg/L	2024-06-07	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2024-06-07	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2024-06-07	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2024-06-07	
Naphthalene	< 0.200	0.200	µg/L	2024-06-07	
4-Nitropyrene	< 0.050	0.050	µg/L	2024-06-07	

TEST RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0474
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 10:23

Analyte	Result	RL	Units	Analyzed	Qualifier
DUP-A (24F0474-03) | Matrix: Water | Sampled: 2024-06-04, Continued					
Polycyclic Aromatic Hydrocarbons (PAH), Continued					
Phenanthrene	< 0.100	0.100	µg/L	2024-06-07	
Pyrene	< 0.020	0.020	µg/L	2024-06-07	
Quinoline	< 0.050	0.050	µg/L	2024-06-07	
Surrogate: Acridine-d9	*95*	*50-140*	%	*2024-06-07*	
Surrogate: Naphthalene-d8	*108*	*50-140*	%	*2024-06-07*	
Surrogate: Perylene-d12	*109*	*50-140*	%	*2024-06-07*	
Volatile Organic Compounds (VOC)					
Benzene	< 0.5	0.5	µg/L	2024-06-08	
Bromodichloromethane	< 1.0	1.0	µg/L	2024-06-08	
Bromoform	< 1.0	1.0	µg/L	2024-06-08	
1,3-Butadiene	< 1.0	1.0	µg/L	2024-06-07	
Carbon tetrachloride	< 0.5	0.5	µg/L	2024-06-08	
Chlorobenzene	< 1.0	1.0	µg/L	2024-06-08	
Chloroethane	< 2.0	2.0	µg/L	2024-06-08	
Chloroform	< 1.0	1.0	µg/L	2024-06-08	
n-Decane	< 2.0	2.0	µg/L	2024-06-08	
Dibromochloromethane	< 1.0	1.0	µg/L	2024-06-08	
1,2-Dibromoethane	< 0.3	0.3	µg/L	2024-06-08	
Dibromomethane	< 1.0	1.0	µg/L	2024-06-08	
1,2-Dichlorobenzene	< 0.5	0.5	µg/L	2024-06-08	
1,3-Dichlorobenzene	< 1.0	1.0	µg/L	2024-06-08	
1,4-Dichlorobenzene	< 1.0	1.0	µg/L	2024-06-08	
1,1-Dichloroethane	< 1.0	1.0	µg/L	2024-06-08	
1,2-Dichloroethane	< 1.0	1.0	µg/L	2024-06-08	
1,1-Dichloroethylene	< 1.0	1.0	µg/L	2024-06-08	
cis-1,2-Dichloroethylene	< 1.0	1.0	µg/L	2024-06-08	
trans-1,2-Dichloroethylene	< 1.0	1.0	µg/L	2024-06-08	
Dichloromethane	< 3.0	3.0	µg/L	2024-06-08	
1,2-Dichloropropane	< 1.0	1.0	µg/L	2024-06-08	
1,3-Dichloropropene (cis + trans)	< 1.0	1.0	µg/L	2024-06-08	
Ethylbenzene	< 1.0	1.0	µg/L	2024-06-08	
n-Hexane	< 2.0	2.0	µg/L	2024-06-08	
Isopropylbenzene (Cumene)	< 1.0	1.0	µg/L	2024-06-08	
Methyl cyclohexane	< 1.0	1.0	µg/L	2024-06-08	
Methyl tert-butyl ether	< 1.0	1.0	µg/L	2024-06-08	
Naphthalene	< 5.0	5.0	µg/L	2024-06-08	
Styrene	< 1.0	1.0	µg/L	2024-06-08	
1,1,2,2-Tetrachloroethane	< 0.5	0.5	µg/L	2024-06-08	
Tetrachloroethylene	< 1.0	1.0	µg/L	2024-06-08	
Toluene	< 1.0	1.0	µg/L	2024-06-08	
1,1,1-Trichloroethane	< 1.0	1.0	µg/L	2024-06-08	
1,1,2-Trichloroethane	< 1.0	1.0	µg/L	2024-06-08	

TEST RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0474
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 10:23

Analyte	Result	RL	Units	Analyzed	Qualifier
DUP-A (24F0474-03) | Matrix: Water | Sampled: 2024-06-04, Continued					
Volatile Organic Compounds (VOC), Continued					
Trichloroethylene	< 1.0	1.0	µg/L	2024-06-08	
Trichlorofluoromethane	< 1.0	1.0	µg/L	2024-06-08	
1,2,4-Trimethylbenzene	< 1.0	1.0	µg/L	2024-06-08	
1,3,5-Trimethylbenzene	< 1.0	1.0	µg/L	2024-06-08	
Vinyl chloride	< 1.0	1.0	µg/L	2024-06-08	
Xylenes (total)	< 2.0	2.0	µg/L	2024-06-08	
Surrogate: Toluene-d8	*90*	*70-130*	%	*2024-06-08*	
Surrogate: 4-Bromofluorobenzene	*79*	*70-130*	%	*2024-06-08*	
Surrogate: 1,4-Dichlorobenzene-d4	*87*	*70-130*	%	*2024-06-08*	

Sample Qualifiers:

RA1 The Reporting Limit for this sample has been raised due to matrix interference.

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0474
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 10:23

Analysis Description	Method Ref.	Technique	Accredited	Location
Dissolved Metals in Water	EPA 200.8 / EPA 6020B	0.45 µm Filtration / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	✓	Richmond
EPH in Water	EPA 3511* / BCMOE EPHw	Hexane MicroExtraction (Base/Neutral) / Gas Chromatography (GC-FID)	✓	Richmond
Hardness in Water	SM 2340 B (2021)	Calculation: 2.497 [diss Ca] + 4.118 [diss Mg]	✓	N/A
HEPHw in Water	BCMOE LEPH/HEPH	Calculation		N/A
LEPHw in Water	BCMOE LEPH/HEPH	Calculation		N/A
Mercury, dissolved in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	✓	Richmond
Polycyclic Aromatic Hydrocarbons in Water	EPA 3511* / EPA 8270D	Hexane MicroExtraction (Base/Neutral) / GC-MSD (SIM)	✓	Richmond
VH in Water	EPA 5030B / BCMOE VHw	Purge&Trap / Gas Chromatography (GC-FID)	✓	Richmond
Volatile Organic Compounds in Water	EPA 5030B / EPA 8260D	Purge&Trap / GC-MSD (SIM)	✓	Richmond
Volatile Organic Compounds, add-ons in Water	EPA 5030B / EPA 8260D	Purge&Trap / GC-MSD (SIM)	✓	Richmond
VPHw in Water	BCMOE VPH	Calculation: VH - (Benzene + Toluene + Ethylbenzene + Xylenes + Styrene)		N/A

Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method

Glossary of Terms:

RL	Reporting Limit (default)
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
mg/L	Milligrams per litre
µg/L	Micrograms per litre
BCMOE	British Columbia Environmental Laboratory Manual, British Columbia Ministry of Environment
EPA	United States Environmental Protection Agency Test Methods
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0474
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 10:23

General Comments:

The results in this report apply to the received samples analyzed in accordance with the Chain of Custody document. This analytical report must be reproduced in its entirety. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Caro will dispose of all samples within 30 days of sample receipt, unless otherwise agreed.

Results in **Bold** indicate values that are above CARO's method reporting limits. Any results that are above regulatory limits are highlighted **red**. Please note that results will only be highlighted red if the regulatory limits are included on the CARO report. Any Bold and/or highlighted results do not take into account method uncertainty. If you would like method uncertainty or regulatory limits to be included on your report, please contact your Account Manager:aquesada@caro.ca

Please note any regulatory guidelines applied to this report are added as a convenience to the client, at their request, to help provide some initial context to analytical results obtained. Although CARO makes every effort to ensure accuracy of the associated regulatory guideline(s) applied, the guidelines applied cannot be assumed to be correct due to a variety of factors and as such CARO Analytical Services assumes no liability or responsibility for the use of those guidelines to make any decisions. The original source of the regulation should be verified and a review of the guideline(s) should be validated as correct in order to make any decisions arising from the comparison of the analytical data obtained to the relevant regulatory guideline for one's particular circumstances. Further, CARO Analytical Services assumes no liability or responsibility for any loss attributed from the use of these guidelines in any way.

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0474
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 10:23

The following section displays the quality control (QC) data that is associated with your sample data. Groups of samples are prepared in “batches” and analyzed in conjunction with QC samples that ensure your data is of the highest quality. Common QC types include:

- **Method Blank (Blk)**: A blank sample that undergoes sample processing identical to that carried out for the test samples. Method blank results are used to assess contamination from the laboratory environment and reagents.
- **Duplicate (Dup)**: An additional or second portion of a randomly selected sample in the analytical run carried through the entire analytical process. Duplicates provide a measure of the analytical method's precision (reproducibility).
- **Blank Spike (BS)**: A sample of known concentration which undergoes processing identical to that carried out for test samples, also referred to as a laboratory control sample (LCS). Blank spikes provide a measure of the analytical method's accuracy.
- **Matrix Spike (MS)**: A second aliquot of sample is fortified with a known concentration of target analytes and carried through the entire analytical process. Matrix spikes evaluate potential matrix effects that may affect the analyte recovery.
- **Reference Material (SRM)**: A homogenous material of similar matrix to the samples, certified for the parameter(s) listed. Reference Materials ensure that the analytical process is adequate to achieve acceptable recoveries of the parameter(s) tested.

Each QC type is analyzed at a 5-10% frequency, i.e. one blank/duplicate/spike for every 10-20 samples. For all types of QC, the specified recovery (% Rec) and relative percent difference (RPD) limits are derived from long-term method performance averages and/or prescribed by the reference method.

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
BCMOE Aggregate Hydrocarbons, Batch B4F1868										
Blank (B4F1868-BLK1)				Prepared: 2024-06-06, Analyzed: 2024-06-06						
VHw (6-10)	< 100	100	µg/L							
LCS (B4F1868-BS2)				Prepared: 2024-06-06, Analyzed: 2024-06-06						
VHw (6-10)	1980	100	µg/L	2190		90	70-130			
BCMOE Aggregate Hydrocarbons, Batch B4F2006										
Blank (B4F2006-BLK1)				Prepared: 2024-06-06, Analyzed: 2024-06-07						
EPHw10-19	< 250	250	µg/L							
EPHw19-32	< 250	250	µg/L							
Surrogate: 2-Methylnonane (EPH/F2-4)	*2620*		*µg/L*	2480		*106*	*60-140*			
LCS (B4F2006-BS2)				Prepared: 2024-06-06, Analyzed: 2024-06-07						
EPHw10-19	19300	250	µg/L	17400		111	70-130			
EPHw19-32	24200	250	µg/L	25000		97	70-130			
Surrogate: 2-Methylnonane (EPH/F2-4)	*477*		*µg/L*	2480		*19*	*60-140*			*S09*
LCS Dup (B4F2006-BSD2)				Prepared: 2024-06-06, Analyzed: 2024-06-07						
EPHw10-19	19900	250	µg/L	17400		114	70-130	3	20	
EPHw19-32	25700	250	µg/L	25000		103	70-130	6	20	
Surrogate: 2-Methylnonane (EPH/F2-4)	*1500*		*µg/L*	2480		*60*	*60-140*			
Dissolved Metals, Batch B4F1935										
Blank (B4F1935-BLK1)				Prepared: 2024-06-06, Analyzed: 2024-06-06						
Aluminum, dissolved	< 5.0	5.0	µg/L							
Antimony, dissolved	< 0.20	0.20	µg/L							
Arsenic, dissolved	< 0.50	0.50	µg/L							
Barium, dissolved	< 5.0	5.0	µg/L							
Beryllium, dissolved	< 0.10	0.10	µg/L							
Boron, dissolved	< 50.0	50.0	µg/L							
Cadmium, dissolved	< 0.010	0.010	µg/L							
Calcium, dissolved	< 200	200	µg/L							
Chromium, dissolved	< 0.50	0.50	µg/L							
Cobalt, dissolved	< 0.10	0.10	µg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0474
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 10:23

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B4F1935, Continued										
Blank (B4F1935-BLK1), Continued				Prepared: 2024-06-06, Analyzed: 2024-06-06						
Copper, dissolved	< 0.40	0.40	µg/L							
Iron, dissolved	< 10	10	µg/L							
Lead, dissolved	< 0.20	0.20	µg/L							
Lithium, dissolved	< 0.10	0.10	µg/L							
Magnesium, dissolved	< 10	10	µg/L							
Manganese, dissolved	< 0.20	0.20	µg/L							
Molybdenum, dissolved	< 0.10	0.10	µg/L							
Nickel, dissolved	< 0.40	0.40	µg/L							
Selenium, dissolved	< 0.50	0.50	µg/L							
Silver, dissolved	< 0.050	0.050	µg/L							
Sodium, dissolved	< 100	100	µg/L							
Strontium, dissolved	< 1.0	1.0	µg/L							
Thallium, dissolved	< 0.020	0.020	µg/L							
Tin, dissolved	< 0.20	0.20	µg/L							
Titanium, dissolved	< 5.0	5.0	µg/L							
Tungsten, dissolved	< 1.0	1.0	µg/L							
Uranium, dissolved	< 0.020	0.020	µg/L							
Vanadium, dissolved	< 5.0	5.0	µg/L							
Zinc, dissolved	< 4.0	4.0	µg/L							
LCS (B4F1935-BS1)				Prepared: 2024-06-06, Analyzed: 2024-06-06						
Aluminum, dissolved	4060	5.0	µg/L	4000		102	80-120			
Antimony, dissolved	40.0	0.20	µg/L	40.0		100	80-120			
Arsenic, dissolved	407	0.50	µg/L	400		102	80-120			
Barium, dissolved	39.9	5.0	µg/L	40.0		100	80-120			
Beryllium, dissolved	40.5	0.10	µg/L	40.0		101	80-120			
Boron, dissolved	404	50.0	µg/L	400		101	80-120			
Cadmium, dissolved	40.3	0.010	µg/L	40.0		101	80-120			
Calcium, dissolved	3940	200	µg/L	4000		98	80-120			
Chromium, dissolved	40.8	0.50	µg/L	40.0		102	80-120			
Cobalt, dissolved	40.3	0.10	µg/L	40.0		101	80-120			
Copper, dissolved	41.3	0.40	µg/L	40.0		103	80-120			
Iron, dissolved	4080	10	µg/L	4000		102	80-120			
Lead, dissolved	40.1	0.20	µg/L	40.0		100	80-120			
Lithium, dissolved	40.6	0.10	µg/L	40.0		102	80-120			
Magnesium, dissolved	4050	10	µg/L	4000		101	80-120			
Manganese, dissolved	40.3	0.20	µg/L	40.0		101	80-120			
Molybdenum, dissolved	40.1	0.10	µg/L	40.0		100	80-120			
Nickel, dissolved	40.4	0.40	µg/L	40.0		101	80-120			
Selenium, dissolved	399	0.50	µg/L	400		100	80-120			
Silver, dissolved	39.8	0.050	µg/L	40.0		100	80-120			
Sodium, dissolved	4050	100	µg/L	4000		101	80-120			
Strontium, dissolved	40.7	1.0	µg/L	40.0		102	80-120			
Thallium, dissolved	40.3	0.020	µg/L	40.0		101	80-120			
Tin, dissolved	40.1	0.20	µg/L	40.0		100	80-120			
Titanium, dissolved	40.8	5.0	µg/L	40.0		102	80-120			
Tungsten, dissolved	39.9	1.0	µg/L	40.0		100	80-120			
Uranium, dissolved	40.4	0.020	µg/L	40.0		101	80-120			
Vanadium, dissolved	41.0	5.0	µg/L	40.0		103	80-120			
Zinc, dissolved	410	4.0	µg/L	400		103	80-120			
Dissolved Metals, Batch B4F2003										
Blank (B4F2003-BLK1)				Prepared: 2024-06-06, Analyzed: 2024-06-06						
Mercury, dissolved	< 0.010	0.010	µg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0474
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 10:23

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B4F2003, Continued										
Blank (B4F2003-BLK2)				Prepared: 2024-06-06, Analyzed: 2024-06-06						
Mercury, dissolved	< 0.010	0.010	µg/L							
Blank (B4F2003-BLK3)				Prepared: 2024-06-06, Analyzed: 2024-06-06						
Mercury, dissolved	< 0.010	0.010	µg/L							
Blank (B4F2003-BLK4)				Prepared: 2024-06-06, Analyzed: 2024-06-06						
Mercury, dissolved	< 0.010	0.010	µg/L							
LCS (B4F2003-BS1)				Prepared: 2024-06-06, Analyzed: 2024-06-06						
Mercury, dissolved	2.63	0.010	µg/L	2.50		105	80-120			
LCS (B4F2003-BS2)				Prepared: 2024-06-06, Analyzed: 2024-06-06						
Mercury, dissolved	2.48	0.010	µg/L	2.50		99	80-120			
LCS (B4F2003-BS3)				Prepared: 2024-06-06, Analyzed: 2024-06-06						
Mercury, dissolved	2.52	0.010	µg/L	2.50		101	80-120			
LCS (B4F2003-BS4)				Prepared: 2024-06-06, Analyzed: 2024-06-06						
Mercury, dissolved	2.58	0.010	µg/L	2.50		103	80-120			
Polycyclic Aromatic Hydrocarbons (PAH), Batch B4F2006										
Blank (B4F2006-BLK1)				Prepared: 2024-06-06, Analyzed: 2024-06-07						
Acenaphthene	< 0.050	0.050	µg/L							
Acenaphthylene	< 0.200	0.200	µg/L							
Acridine	< 0.050	0.050	µg/L							
Anthracene	< 0.010	0.010	µg/L							
Benz(a)anthracene	< 0.010	0.010	µg/L							
Benzo(a)pyrene	< 0.010	0.010	µg/L							
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L							
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L							
Benzo(k)fluoranthene	< 0.050	0.050	µg/L							
2-Chloronaphthalene	< 0.100	0.100	µg/L							
Chrysene	< 0.050	0.050	µg/L							
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L							
7,12-Dimethylbenz(a)anthracene	< 0.020	0.020	µg/L							
Fluoranthene	< 0.030	0.030	µg/L							
Fluorene	< 0.050	0.050	µg/L							
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L							
1-Methylnaphthalene	< 0.100	0.100	µg/L							
2-Methylnaphthalene	< 0.100	0.100	µg/L							
Naphthalene	< 0.200	0.200	µg/L							
4-Nitropyrene	< 0.050	0.050	µg/L							
Phenanthrene	< 0.100	0.100	µg/L							
Pyrene	< 0.020	0.020	µg/L							
Quinoline	< 0.050	0.050	µg/L							
Surrogate: Acridine-d9	*28.0*		*µg/L*	25.0		*112*	*50-140*			
Surrogate: Naphthalene-d8	*24.8*		*µg/L*	25.0		*99*	*50-140*			
Surrogate: Perylene-d12	*22.9*		*µg/L*	25.0		*91*	*50-140*			
LCS (B4F2006-BS1)				Prepared: 2024-06-06, Analyzed: 2024-06-07						
Acenaphthene	4.98	0.050	µg/L	4.98		100	50-140			
Acenaphthylene	5.34	0.200	µg/L	4.92		108	50-140			
Acridine	4.31	0.050	µg/L	4.95		87	50-140			
Anthracene	5.21	0.010	µg/L	4.98		105	50-140			
Benz(a)anthracene	5.39	0.010	µg/L	4.98		108	50-140			
Benzo(a)pyrene	4.19	0.010	µg/L	4.92		85	50-140			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0474
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 10:23

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Polycyclic Aromatic Hydrocarbons (PAH), Batch B4F2006, Continued										
LCS (B4F2006-BS1), Continued				Prepared: 2024-06-06, Analyzed: 2024-06-07						
Benzo(b+j)fluoranthene	8.87	0.050	µg/L	9.85		90	50-140			
Benzo(g,h,i)perylene	5.19	0.050	µg/L	4.92		105	50-140			
Benzo(k)fluoranthene	3.74	0.050	µg/L	4.95		76	50-140			
2-Chloronaphthalene	4.68	0.100	µg/L	4.92		95	50-140			
Chrysene	5.39	0.050	µg/L	4.90		110	50-140			
Dibenz(a,h)anthracene	4.35	0.010	µg/L	5.00		87	50-140			
7,12-Dimethylbenz(a)anthracene	4.38	0.020	µg/L	4.95		89	50-140			
Fluoranthene	5.15	0.030	µg/L	5.00		103	50-140			
Fluorene	5.09	0.050	µg/L	5.08		100	50-140			
Indeno(1,2,3-cd)pyrene	4.59	0.050	µg/L	4.92		93	50-140			
1-Methylnaphthalene	4.28	0.100	µg/L	4.95		87	50-140			
2-Methylnaphthalene	4.73	0.100	µg/L	4.95		96	50-140			
Naphthalene	4.84	0.200	µg/L	4.95		98	50-140			
4-Nitropyrene	4.44	0.050	µg/L	4.98		89	50-140			
Phenanthrene	4.84	0.100	µg/L	4.92		98	50-140			
Pyrene	5.07	0.020	µg/L	5.02		101	50-140			
Quinoline	4.70	0.050	µg/L	5.02		94	50-140			
Surrogate: Acridine-d9	*21.0*		*µg/L*	25.0		*84*	*50-140*			
Surrogate: Naphthalene-d8	*22.7*		*µg/L*	25.0		*91*	*50-140*			
Surrogate: Perylene-d12	*22.3*		*µg/L*	25.0		*89*	*50-140*			
LCS Dup (B4F2006-BSD1)				Prepared: 2024-06-06, Analyzed: 2024-06-07						
Acenaphthene	5.04	0.050	µg/L	4.98		101	50-140	1	30	
Acenaphthylene	5.39	0.200	µg/L	4.92		110	50-140	1	30	
Acridine	4.81	0.050	µg/L	4.95		97	50-140	11	30	
Anthracene	4.95	0.010	µg/L	4.98		99	50-140	5	30	
Benz(a)anthracene	5.51	0.010	µg/L	4.98		111	50-140	2	30	
Benzo(a)pyrene	4.58	0.010	µg/L	4.92		93	50-140	9	30	
Benzo(b+j)fluoranthene	9.65	0.050	µg/L	9.85		98	50-140	8	30	
Benzo(g,h,i)perylene	5.28	0.050	µg/L	4.92		107	50-140	2	30	
Benzo(k)fluoranthene	4.09	0.050	µg/L	4.95		83	50-140	9	30	
2-Chloronaphthalene	5.48	0.100	µg/L	4.92		111	50-140	16	30	
Chrysene	4.86	0.050	µg/L	4.90		99	50-140	10	30	
Dibenz(a,h)anthracene	4.65	0.010	µg/L	5.00		93	50-140	6	30	
7,12-Dimethylbenz(a)anthracene	4.57	0.020	µg/L	4.95		92	50-140	4	30	
Fluoranthene	4.82	0.030	µg/L	5.00		96	50-140	7	30	
Fluorene	4.92	0.050	µg/L	5.08		97	50-140	4	30	
Indeno(1,2,3-cd)pyrene	5.05	0.050	µg/L	4.92		103	50-140	10	30	
1-Methylnaphthalene	4.49	0.100	µg/L	4.95		91	50-140	5	30	
2-Methylnaphthalene	4.48	0.100	µg/L	4.95		91	50-140	5	30	
Naphthalene	5.01	0.200	µg/L	4.95		101	50-140	3	30	
4-Nitropyrene	4.24	0.050	µg/L	4.98		85	50-140	5	30	
Phenanthrene	4.84	0.100	µg/L	4.92		98	50-140	< 1	30	
Pyrene	5.05	0.020	µg/L	5.02		101	50-140	< 1	30	
Quinoline	4.63	0.050	µg/L	5.02		92	50-140	2	30	
Surrogate: Acridine-d9	*24.9*		*µg/L*	25.0		*100*	*50-140*			
Surrogate: Naphthalene-d8	*23.6*		*µg/L*	25.0		*94*	*50-140*			
Surrogate: Perylene-d12	*23.4*		*µg/L*	25.0		*94*	*50-140*			
Volatile Organic Compounds (VOC), Batch B4F1868										
Blank (B4F1868-BLK1)				Prepared: 2024-06-06, Analyzed: 2024-06-06						
Benzene	< 0.5	0.5	µg/L							
Bromodichloromethane	< 1.0	1.0	µg/L							
Bromoform	< 1.0	1.0	µg/L							
1,3-Butadiene	< 1.0	1.0	µg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0474
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 10:23

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Volatile Organic Compounds (VOC), Batch B4F1868, Continued										
Blank (B4F1868-BLK1), Continued				Prepared: 2024-06-06, Analyzed: 2024-06-06						
Carbon tetrachloride	< 0.5	0.5	µg/L							
Chlorobenzene	< 1.0	1.0	µg/L							
Chloroethane	< 2.0	2.0	µg/L							
Chloroform	< 1.0	1.0	µg/L							
Dibromochloromethane	< 1.0	1.0	µg/L							
1,2-Dibromoethane	< 0.3	0.3	µg/L							
Dibromomethane	< 1.0	1.0	µg/L							
1,2-Dichlorobenzene	< 0.5	0.5	µg/L							
1,3-Dichlorobenzene	< 1.0	1.0	µg/L							
1,4-Dichlorobenzene	< 1.0	1.0	µg/L							
1,1-Dichloroethane	< 1.0	1.0	µg/L							
1,2-Dichloroethane	< 1.0	1.0	µg/L							
1,1-Dichloroethylene	< 1.0	1.0	µg/L							
cis-1,2-Dichloroethylene	< 1.0	1.0	µg/L							
trans-1,2-Dichloroethylene	< 1.0	1.0	µg/L							
Dichloromethane	< 3.0	3.0	µg/L							
1,2-Dichloropropane	< 1.0	1.0	µg/L							
1,3-Dichloropropene (cis + trans)	< 1.0	1.0	µg/L							
Ethylbenzene	< 1.0	1.0	µg/L							
Methyl tert-butyl ether	< 1.0	1.0	µg/L							
Styrene	< 1.0	1.0	µg/L							
1,1,2,2-Tetrachloroethane	< 0.5	0.5	µg/L							
Tetrachloroethylene	< 1.0	1.0	µg/L							
Toluene	< 1.0	1.0	µg/L							
1,1,1-Trichloroethane	< 1.0	1.0	µg/L							
1,1,2-Trichloroethane	< 1.0	1.0	µg/L							
Trichloroethylene	< 1.0	1.0	µg/L							
Trichlorofluoromethane	< 1.0	1.0	µg/L							
Vinyl chloride	< 1.0	1.0	µg/L							
Xylenes (total)	< 2.0	2.0	µg/L							
Surrogate: Toluene-d8	*19.6*		*µg/L*	25.0		*78*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*18.0*		*µg/L*	24.9		*72*	*70-130*			
Surrogate: 1,4-Dichlorobenzene-d4	*21.0*		*µg/L*	24.5		*86*	*70-130*			
LCS (B4F1868-BS1)				Prepared: 2024-06-06, Analyzed: 2024-06-06						
Benzene	19.4	0.5	µg/L	20.1		96	70-130			
Bromodichloromethane	20.1	1.0	µg/L	20.1		100	70-130			
Bromoform	20.9	1.0	µg/L	20.1		104	70-130			
1,3-Butadiene	19.4	1.0	µg/L	19.8		98	60-140			
Carbon tetrachloride	21.0	0.5	µg/L	20.1		104	70-130			
Chlorobenzene	21.1	1.0	µg/L	20.1		105	70-130			
Chloroethane	19.2	2.0	µg/L	20.1		96	60-140			
Chloroform	20.9	1.0	µg/L	20.1		104	70-130			
Dibromochloromethane	20.3	1.0	µg/L	20.1		101	70-130			
1,2-Dibromoethane	20.2	0.3	µg/L	20.1		100	70-130			
Dibromomethane	22.6	1.0	µg/L	20.1		113	70-130			
1,2-Dichlorobenzene	22.9	0.5	µg/L	20.1		114	70-130			
1,3-Dichlorobenzene	22.4	1.0	µg/L	20.1		111	70-130			
1,4-Dichlorobenzene	22.3	1.0	µg/L	20.1		111	70-130			
1,1-Dichloroethane	19.7	1.0	µg/L	20.1		98	70-130			
1,2-Dichloroethane	19.3	1.0	µg/L	20.1		96	70-130			
1,1-Dichloroethylene	20.6	1.0	µg/L	20.1		102	70-130			
cis-1,2-Dichloroethylene	20.3	1.0	µg/L	20.1		101	70-130			
trans-1,2-Dichloroethylene	20.9	1.0	µg/L	20.1		104	70-130			
Dichloromethane	20.9	3.0	µg/L	20.1		104	70-130			
1,2-Dichloropropane	19.5	1.0	µg/L	20.1		97	70-130			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0474
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 10:23

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Volatile Organic Compounds (VOC), Batch B4F1868, Continued										
LCS (B4F1868-BS1), Continued				Prepared: 2024-06-06, Analyzed: 2024-06-06						
1,3-Dichloropropene (cis + trans)	35.9	1.0	µg/L	40.2		89	70-130			
Ethylbenzene	19.7	1.0	µg/L	20.1		98	70-130			
Methyl tert-butyl ether	18.5	1.0	µg/L	20.0		93	70-130			
Styrene	18.6	1.0	µg/L	20.1		92	70-130			
1,1,2,2-Tetrachloroethane	22.6	0.5	µg/L	20.1		112	70-130			
Tetrachloroethylene	21.2	1.0	µg/L	20.1		106	70-130			
Toluene	19.7	1.0	µg/L	20.1		98	70-130			
1,1,1-Trichloroethane	21.5	1.0	µg/L	20.1		107	70-130			
1,1,2-Trichloroethane	21.3	1.0	µg/L	20.1		106	70-130			
Trichloroethylene	19.3	1.0	µg/L	20.1		96	70-130			
Trichlorofluoromethane	22.6	1.0	µg/L	20.1		112	60-140			
Vinyl chloride	18.5	1.0	µg/L	20.1		92	60-140			
Xylenes (total)	60.8	2.0	µg/L	60.3		101	70-130			
Surrogate: Toluene-d8	*26.2*		*µg/L*	25.0		*105*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*27.9*		*µg/L*	24.9		*112*	*70-130*			
Surrogate: 1,4-Dichlorobenzene-d4	*27.2*		*µg/L*	24.5		*111*	*70-130*			

QC Qualifiers:

S09 The surrogate recovery for this sample is outside of established control limits Suspect matrix suppression, data not affected.

APPENDIX 3: REVISION HISTORY

REPORTED TO	exp Services Inc. (Burnaby)	**WORK ORDER**	24F0474
PROJECT	VAN-24006323-A0	**REPORTED**	2024-06-13 10:23

Sample ID	Changed	Change	Analysis	Analyte(s)
24F0474-01	2024-06-13	Made Reportable	Volatile Organic Compounds	1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Isopropylbenzene (Cumene), Methyl cyclohexane, Naphthalene, n-Decane, n-Hexane
24F0474-02	2024-06-13	Made Reportable	Volatile Organic Compounds	1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Isopropylbenzene (Cumene), Methyl cyclohexane, Naphthalene, n-Decane, n-Hexane
24F0474-03	2024-06-13	Made Reportable	Volatile Organic Compounds	1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Isopropylbenzene (Cumene), Methyl cyclohexane, Naphthalene, n-Decane, n-Hexane