

## Talbot Mackenzie & Associates

**Consulting Arborists** 

December 23, 2016

Murdoch deGreeff INC. Landscape Planning & Design 200-524 Culduthel Road Victoria, BC V8Z1G1

Attn: Paul deGreeff

Re: Victoria Courthouse soil remediation

### **Assignment:**

- Visually examine health and structural condition of 15 trees located within the boundaries of the Law Courts Green area, and 5 trees located on municipal property – along the Burdett Avenue frontage.
- Provide mitigation recommendations to be used during remediation work to remove soil within the Law Courts Green Area.

**Methodology:** On December 14, 2016, we identified each tree within the boundaries of the Law Courts Green area of the property using a numeric metal tag attached to its lower trunk. Trees located on municipal property surrounding the law courts green area were not tagged, but are identified numerically (#1-5) on the attached site sketch. Information such as tree species, size(dbh), critical root zone (c.r.z.), crown spread, health and structural condition, relative tolerance to construction impact and general remarks and recommendations was recorded in the attached tree resource spreadsheet.

Note – The attached tree location sketch should be used for discussion purposes only, as the tree locations may not be accurately surveyed.

### Tree Resource:

The tree resource located within the boundaries of the Law Courts Green area consist of: 1 Beech, 7 Crimson King maple, 2 Tree of Heaven, 3 Robinia, 1 Tulip tree, 1 English oak.

4 elm and 1 Pin oak are located on the Burdett Avenue municipal boulevard – directly fronting the Law Courts Green area.

### **Observations:**

In our opinion, Beech 016, English oak 029 and possibly Robinia 022 and 023 and the 5 trees on the Burdett Avenue municipal boulevard(NT1-5) have the best potential to be retained, providing the impacts to their critical root zones can be mitigated during the soil remediation work.

Norway maple (Crimson King) typically have wide spreading root systems, and in our experience, large roots are usually encountered within the top few inches of soil.

Box 48153 RPO Uptown Victoria, BC V8Z 7H6 Ph: (250) 479-8733 ~ Fax: (250) 479-7050 Email: treehelp@telus.net

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### **Potential impacts:**

 Soil remediation – We anticipate that the highest onsite impacts will occur during excavation to remove soil, in areas that have been identified as contaminated.

### **Mitigation recommendations:**

- Arborist supervision: Any excavation that is proposed within the critical root zone of the trees to be retained must be supervised by the project arborist. Any roots critical to the trees survival must be retained and any non-critical roots in direct conflict with the excavation must be pruned to sound tissue to encourage new root growth. It may be necessary to excavate using a combination of hand digging, small machine excavation(using a cleanup bucket) and hydro excavation to expose roots in conflict with the proposed excavation, and determined then if they can be pruned or not without having a significant impact on the trees. If it is found that large structural roots must be pruned to accommodate the proposed construction, it may be necessary to remove additional trees to eliminate any risk associated with them.
- If the use of an airspade or hydro excavator is acceptable to the remediation contractor, we recommend a site meeting prior to the commencement of the project, to mark areas where these methods of excavation could be used, to mitigate soil disturbance within critical root zones of trees to be retained.

Please do not hesitate to call us at (250) 479-8733 should you have any further questions. Thank You.

Yours truly, Talbot Mackenzie & Associates

Tom Talbot & Graham Mackenzie
ISA Certified, & Consulting Arborists
Encl. – Tree Resource Spreadsheet – 1 page, Key to Headings in Resource Table – 1 page.

#### Disclosure Statement

Arborists are professionals who examine trees and use their training, knowledge and experience to recommend techniques and procedures that will improve their health and structure or to mitigate associated risks.

Trees are living organisms, whose health and structure change, and are influenced by age, continued growth, climate, weather conditions, and insect and disease pathogens. Indicators of structural weakness and disease are often hidden within the tree structure or beneath the ground. It is not possible for an Arborist to identify every flaw or condition that could result in failure nor can he/she guarantee that the tree will remain healthy and free of risk.

Remedial care and mitigation measures recommended are based on the visible and detectable indicators present at the time of the examination and cannot be guaranteed to alleviate all symptoms or to mitigate all risk posed.

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## Victoria Courthouse

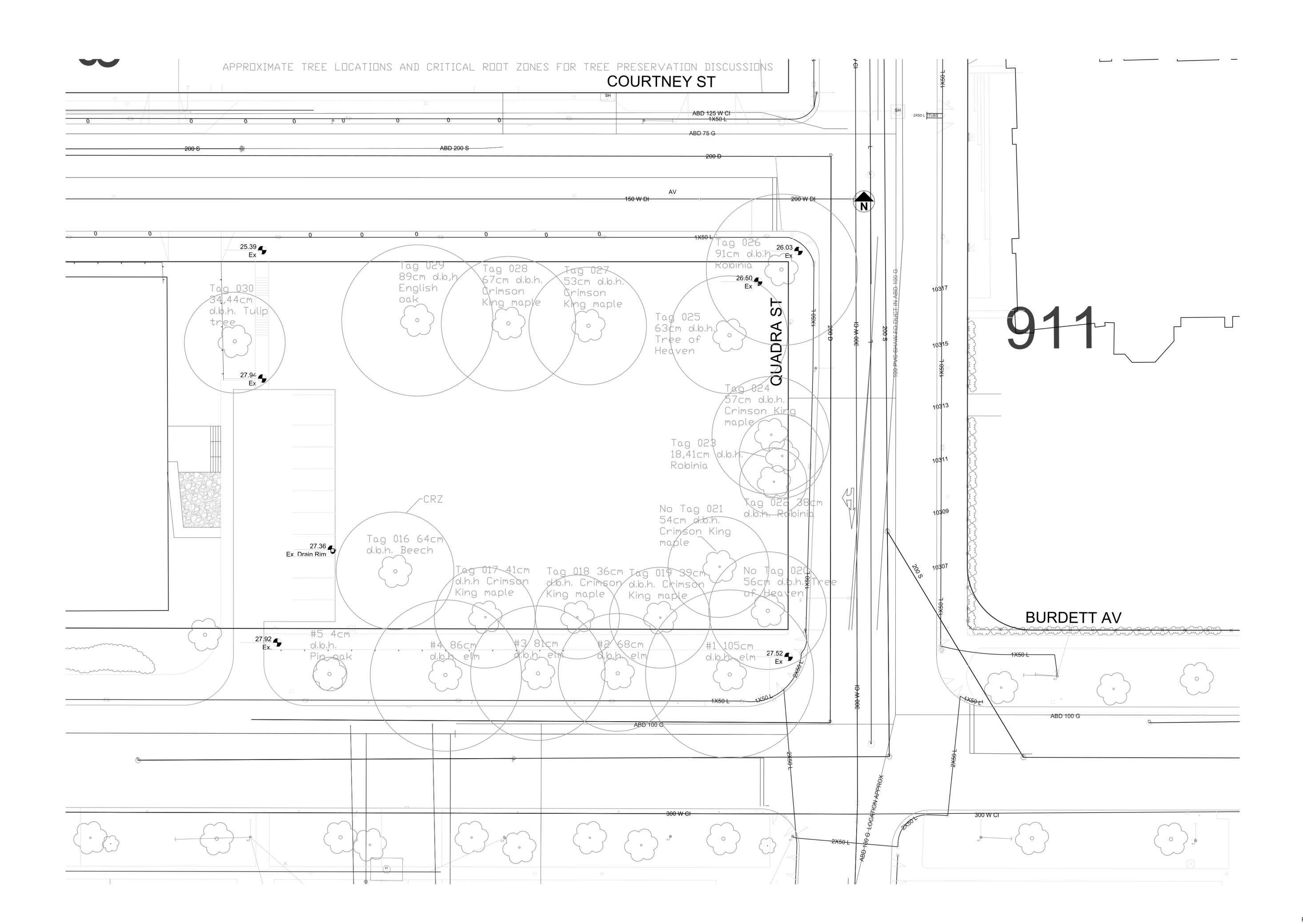
					•	T COUIT	1	1
Tag #	Common Name	Size (DBH)	CRZ	Crown Spread	Health Condition	Structural Condition	Ralative Tolerance	Remarks and Recommendations
No tag								
1	Elm	105cm	10m	17m	Good	Good	Moderate	Municipal tree
No tag 2	Elm	68cm	7m	11m	Fair	Fair	Moderate	Municipal tree
No tag								
3	Elm	81cm	8m	12m	Fair	Fair	Moderate	Municipal tree
No tag								
4	Elm	86cm	9m	14m	Fair	Fair	Moderate	Municipal tree
No tag								
5	Pin oak	4cm	2m	2m	Good	Fair	Good	Municipal tree, recent planting
016	Beech	64cm	7m	11m	Good	Fair	Moderate	Surface rooted, included bark.
017	Crimson King maple Crimson	41cm	6m	10m	Good	Fair	Moderate	Surface rooted
018	King maple	36cm	5m	9m	Fair	Fair	Moderate	Surface rooted.
019	Crimson King maple	39cm	6m	10m	Fair	Fair	Moderate	Included bark
	Tree of							Twig dieback in upper canopy, Health stress,
020	Heaven	56cm	7m	12m	Fair/poor	Fair	Moderate	bark damage at base.
021	Crimson King maple	54cm	6m	10m	Fair	Fair	Moderate	Surface rooted, compacted soil .
022	Robinia	38cm	4m	7m	Fair	Fair	Good	Surface rooted
023	Robinia	18,41cm	5m	8m	Fair	Fair	Moderate	Surface rooted
024	Crimson King maple		7m	12m	Fair	Fair	Moderate	Surface rooted
025	Tree of Heaven	63cm	7m	9m	Fair	Fair/poor	Moderate	Girdling root, large limb tearout
026	Robinia	91cm	9m	14m	Fair	Fair	Good	Tearout wounds, previously cable braced - braced limb has been removed, surface rooted.
520	Crimson King	51011	5111	14111	i ali	i ali	5000	bracea mino nas peem removea, surface footea.
027	maple	53cm	7m	14m	Fair	Fair	Moderate	Extensive surface rooting
	Crimson King							
028	maple	67cm	8m	14m	Fair	Fair	Moderate	Extensive surface rooting
323	English		J					2 previous large scaffold limbs tearouts. Recently compacted soils from machine
029	oak	89cm	9m	17m	Fair	Fair/poor	Good	activity.
030			6m	12m	Fair	Fair/poor	Good	Included bark at main stem union, small planting space for large tree.

## Key to Headings in Resource Table

Condition health/structure -

- Good no visible flaws or minor health or structural flaw
- Fair health or structural flaw present that can be corrected through normal arboricultural or horticultural care.
- Poor significant health or structural defects that compromise the longterm survival or retention of the specimen.

Relative Tolerance – relative tolerance of the selected species to development impacts.





January 20, 2017

Brookfield Global Integrated Solutions 23 – 3318 Oak Street Victoria, British Columbia, V8X 1R1

Attention: Nicola Moyles

Project Manager

Re: Green Space Remediation, Project Number: BCGV605283

**Purchase Order Update** 

850 Burdett Avenue, Victoria, British Columbia

PWL File: 13858C

Pinchin West Ltd. (PWL, Consultant), is pleased to provide to Brookfield Global Integrated Solutions (Client) the following additional Tervita Corporation Ltd. (Contractor) costs for the Green Space Remediation at the 850 Burdett Avenue, Victoria, British Columbia.

E-mail: nicola.moyles@brookfieldgis.com

The estimated cost provided by the Contractor to implement the recommended work program detailed in the document entitled "*Instruction to Bidders*" dated December 5, 2017 is \$ 286,643.29 (excluding all applicable taxes).

The cost outlined above will be additional to the original Purchase Order (PO#8055224) that was for \$42,000.00 bringing the estimated Purchase Order total to \$328,643.29 as per the email correspondence between PWL and the Client January 20, 2017.

We trust that the information provided in this letter is sufficient to update the Purchase Order sufficiently. If you have any questions, or require additional information, please do not hesitate to contact Jason Quamme at jquamme@pinchinwest.com.

Encl.: Instruction to Bidders

Tervita's Response

G:\Global References\Standard Documents\General\Contracts-Specifications-Agreements\Contract Admin Documents\Tender Review and Recommendations Letter.docx Template: Master Loblaw Tender Review and Recommendations Letter, July 3, 2015





### Instructions to Bidders

Project Address: 850 Burdett Avenue, Victoria, British Columbia

Project Name: Green Space Remediation

Date: December 5, 2016

PWL File Number: 13858C

### 1.0 INTRODUCTION

Pinchin West Ltd. (PWL) is pleased to provide the following Instructions to Bidders (IB) document for solicitation of bids from interested contractors (herein referred to as the "Contractor") for the planned remedial excavation at 850 Burdett Avenue, Victoria, British Columbia.

The property location is shown on Figure 1. The property at 850 Burdett Avenue is developed with a Provincial Court facility. For the purposes of this remedial excavation, the eastern portion of the property, an urban park that is approximately 2,864 square metres (m<sup>2</sup>), is hereafter termed the Site.

This document is being provided to Contractors for the purpose of obtaining bids for the defined scope of work.

#### 2.0 BACKGROUND

PWL recently completed an Environmental Soil Sampling Investigation in relation to the Site, the findings of which are provided in the report entitled "Environmental Soil Sampling Investigation, 850 Burdett Avenue, Victoria, British Columbia" dated October 31, 2016. It is PWL's understanding that a temporary human occupied shelter/civil action camp known in the media as Victoria's "Tent City" had been established at the Site. As part of the removal of the camp PWL was contracted to undertake the Environmental Soil Sampling Investigation. The findings of the Environmental Soil Sampling Investigation identified soil with parameter concentrations exceeding the Contaminated Sites Regulation (CSR) standards for commercial land use and urban park land use. The environmental contaminates of concern include: polycyclic aromatic hydrocarbons (PAHs), benzene, lead and zinc as well as detectable concentrations of methamphetamine. The locations of the impacts and the estimated extents of the excavation area are shown on Figure 2.

The reported soil exceedances were located across the Site to a maximum depth of 0.5 metres below ground surface (mbgs) with a majority of the identified impacts localized to surficial soils.

PWL has recommended that a remedial excavation be conducted at the Site to remove the identified impacted soil with a subsequent verification soil sampling program to confirm remedial success.



December 5, 2016

PWL File: 13858C

General photographs of the Site are attached for reference.

### 3.0 REMEDIAL APPROACH AND OBJECTIVES

The desired outcome for this project is the removal of contaminated soils from across the Site. The Site is currently characterized as a 2,864 m² area of exposed soil with 14 large trees around the perimeter. The remedial approach will be to accumulate identified impacted soil into several distinct stockpiles. These stockpiles will then be characterized for disposal prior to being transported off-Site to an appropriately certified disposal facility. Closure samples will be collected from the base of the excavation and the excavation will be backfilled with the objective of restoring the Site to an urban park and playground area.

### 4.0 SCOPE OF WORK

The scope of work includes the excavation, transportation and disposal of approximately 1,432 cubic meters (m³) of soil impacted with either lead and methamphetamine or lead/zinc and hydrocarbons. This is estimated to be 2,864 tonnes. Please note that when compiling costs for the project the following are responsibilities of the Contractor and must be considered:

- 4.1 The Site, as per Figure 2, is approximately 50 metres (m) long by 50 m wide with 14 large trees located around the perimeter of the Site;
- 4.2 The soil lithology is silt, sand and gravel, followed by sand, silt and cobbles to a maximum investigation depth of 1.5 mbgs. Bedrock was encountered as shallow as 0.6 mbgs in the southwestern corner of the Site and is anticipated to vary significantly across the Site;
- 4.3 Provide all necessary equipment, manpower and permits (if any) to complete the project;
- 4.4 Contractor access to the Site and staging area will be via Quadra Street. The parking area located to the west of the Site will remain occupied by tenants and other contractors during the project;
- 4.5 Design and implement a Site specific health and safety program for the project (including site safety plan, traffic management plan and emergency response plan). The adjacent Courthouse Building will remain occupied by tenants during the project and the work area will require secured fencing throughout the duration of the project, while leaving access routes and emergency exits of the Courthouse Building unobstructed. Additionally due to the public nature of the project confidentially must be maintained by the Contractor and all potential sub-contractors. Any and all requests for information will handled by PWL and the Client;



December 5, 2016 PWL File: 13858C

- 4.6 Identify the locations of buried and overhead utility services prior to any excavation activities. Contractor will be required to expose the underground utilities (if any) in the immediate vicinity of the work area using a hydrovacuum truck or by hand digging to confirm their location and to protect them from damage. Damage to utilities will be the responsibility of the Contractor. To date no utilities have been identified in previous investigation areas. Any utility exposure activities unknown at the time of tender will be subject to a Change Order;
- 4.7 A certified arborist will be retained by the Client to assess the trees and vegetation on-Site and provide guidance and direction towards protecting the vegetation which the Contractor must follow. The Contractor will be required to protect tree and root health and may need to support trees as directed by the arborist and/or hydrovac/hand dig around the root zone of the trees. Any tree support requirements unknown at the time of tender will be subject to a Change Order;
- 4.8 The Site will be excavated to an approximate depth of 0.5 mbgs. The estimated volume of excavated soil is 2.864 tonnes:
- 4.9 Excavation activities will be conducted as follows:
  - a) The impacted soil where possible will be excavated to 0.5 mbgs;
  - During excavation activities, PWL will assess the excavation for the presence of visual and/or olfactory signs of subsurface impacts, and direct further excavation as needed to remove impacted soils;
  - c) Soil identified for disposal will be collected into stockpiles of no more than 250 m³. Stockpiles should be adequately covered and secured prior to rain events;
  - d) Stockpiled soil will be sampled by PWL staff and analyzed for disposal characterization purposes. Turn-around time on analytical results will be 48 hours from laboratory receipt of samples;
  - e) Prior to transportation of excavated material, preferred and alternate disposal facilities will be recommended by the Contractor. The recommended disposal options will then be evaluated by PWL and an approved disposal option will be chosen. PWL notes that the option chosen may not necessarily be the cheapest option as disposal facilities will be evaluated based on multiple factors including perceived or actual impact to the community, the environment and specific stakeholders. Furthermore, PWL notes that this decision making process may result in additional standby time above and beyond the estimated 3 days;
  - f) The Contractor will delay transportation of soil until analytical results are returned and evaluated by PWL or the Contractor is authorized to move the soil by PWL; and

these types of soil be generated;

- g) Excavated material will be removed off-Site and disposed of at the approved disposal facility. For the purposes of this bidding process the soil is assumed non-hazardous. For bid form comparison purposes a cost for 2,126 tonnes of Commercial Land-use+ (CL+) metals and hydrocarbons impacted soil and 738 tonnes of CL+ metals only impacted soil is requested. Additionally for comparison purposes a cost for 500 tonnes of hazardous soil and 500 tonnes of < Residential Land-use (<RL) soil is requested under the additions and deletions section of the bid form should
- 4.10 Following presumed completion of excavation, PWL will collect closure soil samples from the base of the excavation to assess soil conditions. The closure soil samples will be gathered at the same time as the characterization soil samples where possible to minimize stand-by time. Turn-around time on analytical results will be 48 hours from laboratory receipt of samples. Contractor is expected to maintain Site security to prevent public access and should immediately be able to conduct additional excavation work or complete the backfilling, dependent on the results of the confirmation sampling;
- 4.11 If additional excavation is necessary, a cycle in which confirmation sampling is conducted prior to either further excavation or backfilling will occur until backfilling is approved by PWL;
- A.12 Reinstatement of the Site will involve backfilling two distinct areas: a playground area approximately 555 m² and the remainder of the Site. The location of the playground area is yet to be determined but will be identified prior to excavation work. The Contractor is responsible for verifying the quality of backfill prior to shipment. All backfill materials will consist of a free draining granular material with less than 5 % fines and will meet urban park land use standards. All backfill is to be placed in no more than 300 mm lifts and is to be vibrated in place with a minimum of 5 passes utilizing a vibratory compactor, unless otherwise directed by PWL and the arborist. The Contractor will be responsible for ensuring that backfill material is compacted to a 95% Standard Proctor Modified Dry Density. The Contractor will be responsible for coordinating a representative compaction test for every 200 m² section of the Site. Compaction tests will be conducted on every 300 mm lift and the results of the tests will need to be provided to PWL. PWL will be present on-Site during the backfill activities to collect verification samples of the backfill material and document the backfill quality and procedure:
- 4.13 Backfill specific material and design requirements for the reinstatement of the playground area have the following additional requirements:
  - a) A base level of 127 mm of 3/4" compacted road base material above the free draining granular material;
  - b) A mid-level of 77 mm of 3/4" compacted clear crush material above the roadbase material; and

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- c) Space for a 305 mm lift of engineered wood fibre safety surfacing, which will be provided by others.
- 4.14 The playground will be installed by others post-reinstatement activities;
- 4.15 Final reinstatement of the remainder of the Site (excluding the playground area) will be finished with a minimum 100 mm lift of a top soil appropriate for sod and/or landscaping.

### 5.0 GENERAL INSTRUCTIONS

If there is any clarification required about the information presented within this IB please present inquires to Jason Quamme via email (jquamme@pinchinwest.com) or via telephone at \$.22 Inquiries will be accepted until December 18, 2016 at 17:00 PST. As part of the IB, submissions of the following are mandatory requirements:

- A signed proposal and detailed bid breakdown in the form of the attached bid form (alternate forms of bid will be rejected);
- An anticipated work schedule for commencement and completion of the scope of work;
- An overview of the remedial approach to efficiently match the scope requested in this document; and
- Any applicable value added services.

Quotes will be evaluated based on the following criteria:

- Cost 50%
- Schedule (realistic, efficient and meets project objectives) 25%
- Remedial Approach and Value Added Services 25%

The Contractor will display prices in Canadian funds, excluding applicable taxes. Please send submissions to Jason Quamme via email (<a href="mailto:iquamme@pinchinwest.com">iquamme@pinchinwest.com</a>) no later than December 19, 2016 17:00 PST. Please note the expected start date will be in early January, depending on Contractor availability and that the lowest cost proposal will not necessary be accepted. Any errors, inconsistencies or ambiguities in the proposal submission shall be subject to PWL's interpretation. Bids that are non-compliant, adapted or qualified may not be accepted. The Contractor will be retained through PWL's Standing Agreement for Sub-Contracting Services.

December 5, 2016

PWL File: 13858C

If there are any questions regarding this tender please feel free to contact the undersigned.

Sincerely,

### PINCHIN WEST LTD.

Prepared by:

Reviewed by:

Jason Quamme, BSc., A.Ag, EP Project Manager

s.22

jquamme@pinchinwest.com

Brennan Anstey, P.Eng.

Senior Environmental Engineering Manager

s.22

banstey@pinchinwest.com

Reviewed by:

Greg Rusling, B.Sc., P.Ag. General Manager – Prairies

s.22

grusling@pinchinwest.com

Attachment A: Bid Form

Attachment B: Figures

Attachment C: Analytical Results
Attachment D: Site Photographs

File: 13858C\_IB\_01

PWL Letter Template, Nov 20, 2015

Attachment A

Bid Form

# Green Space Remediation at 850 Burdett Avenue, Victoria, British Columbia BID FORM

	Contempl	ated Items			
	Quantity	Unit	Cost	Add per Unit	Delete per Unit
Planning (including site safety plan, permits, traffic management plan & emergency response plan)	1	Lump Sum		Not applicable	Not applicable
Utility location	1	Lump Sum		Not applicable	Not applicable
Mobilization, demobilization, Site setup & Site security	1	Lump Sum		Not applicable	Not applicable
Excavate & stockpile soil on-Site	2,864	tonnes*			
Transport impacted soil to preferred disposal option (assume CL + metals and hydrocarbon impacted, non-hazardous)	2,126	tonnes*			
Dispose of impacted soil at preferred disposal option (assume CL + metals and hydrocarbon impacted, non-hazardous)	2,126	tonnes*			
Transport impacted soil to preferred disposal option (assume CL + metals only impacted, non-hazardous)	738	tonnes*			
Dispose of impacted soil at preferred disposal option (assume CL + metals only impacted, non-hazardous)	738	tonnes*			
Costs for standby	3	day			
Purchase, place & compact clean imported fill material for playground area	444	tonnes**			
Purchase, place & compact clean imported fill material for remainder of Site	1,478	tonnes**			
Compaction testing	14	tests			
Purchase, place & compact imported topsoil material	369	tonnes**			
CONTRACTOR TOTAL					

	Additions a	nd Deletions			
	Quantity	Unit	Cost	Add per Unit	Delete per Unit
Transport impacted hazardous soil	500	tonnes			
Dispose of impacted hazardous soil	500	tonnes			
Transport non-impacted soil (< RL)	500	tonnes			
Dispose of non-impacted soil (< RL)	500	tonnes			
Transport impacted soil to alternate disposal option (assume CL + metals and hydrocarbon impacted, non-hazardous)	2,126	tonnes*			
Dispose of impacted soil at alternate disposal option (assume CL + metals and hydrocarbon impacted, non-hazardous)	2,126	tonnes*			
Transport impacted soil to alternate disposal option (assume CL + metals only impacted, non-hazardous)	738	tonnes*			
Dispose of impacted soil at alternate disposal option (assume CL + metals only impacted, non-hazardous)	738	tonnes*			
Additional costs for mobilization per extra excavation/analytical cycle (if required)	1	mobilization			

<sup>\*</sup>conservative conversion rate of 1m³ material = 2.0 tonnes material

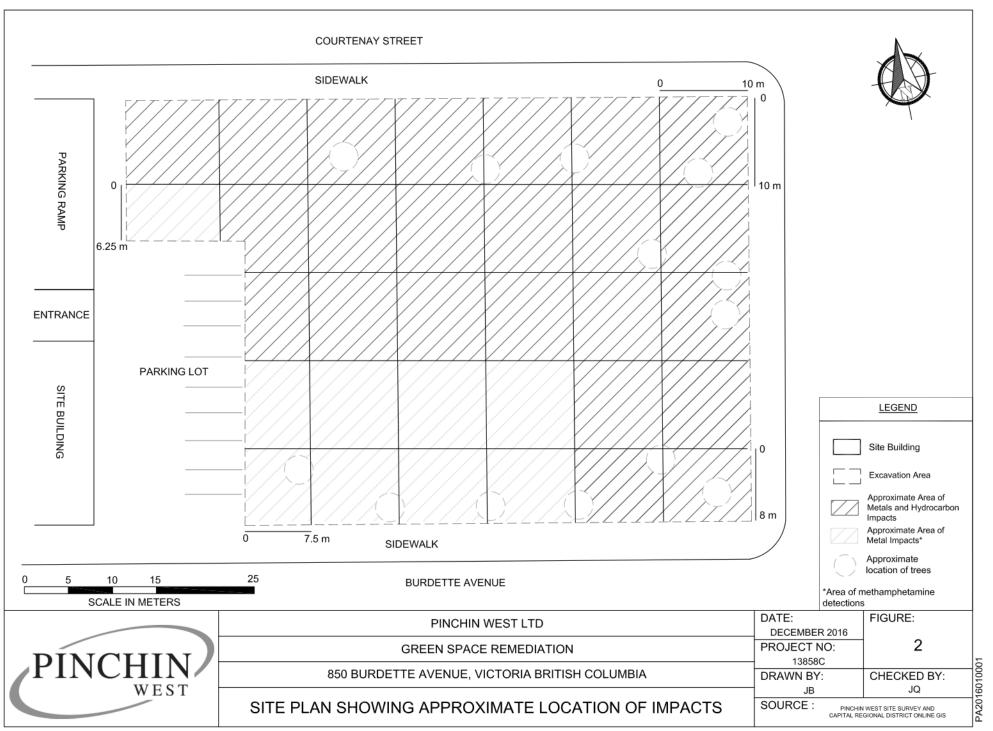
<sup>\*\*</sup> conversion rate of 1m3 material = 1.6 tonnes material

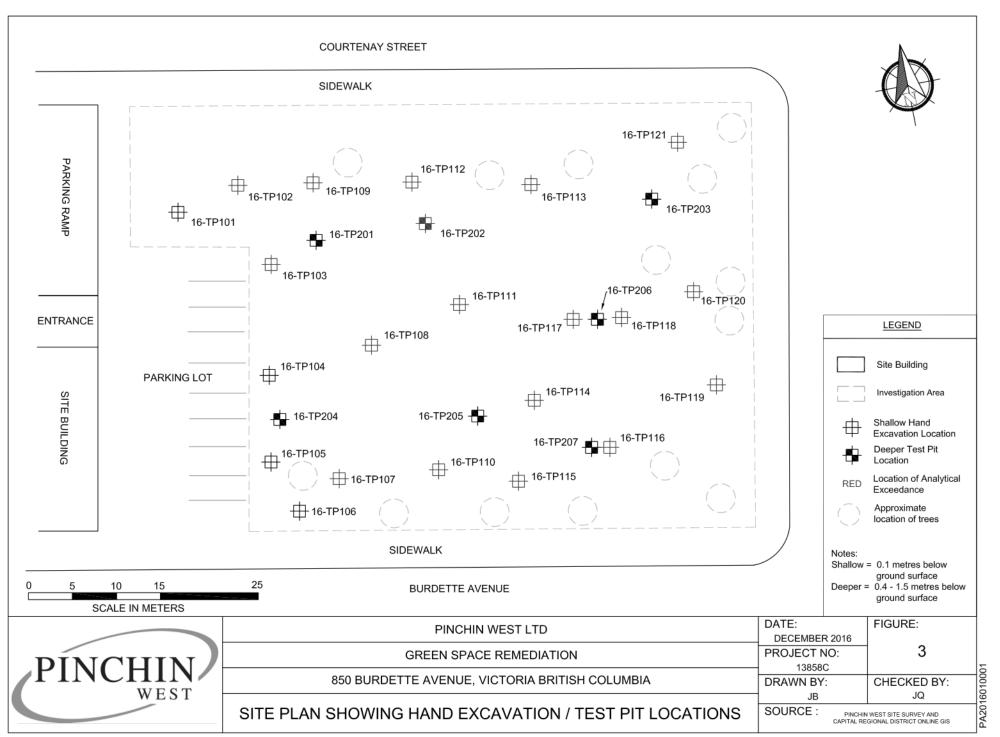
Attachment B Figures





CLIENT NAME:												
PINCHIN WEST LTD												
PROJECT	PROJECT NAME:											
	GREEN SPACE REMEDIATION											
LOCATIO	LOCATION:											
	850 BURDETT AVENUE, VICTORIA, BRITISH COLUMBIA											
TITLE:					FIGURE NO.							
	KEY MAP											
DATE: PROJECT NO.: IMAGE SOURCE: OPENSTREETMAPS.ORG JQ CHECKED BY: TB												





Attachment C
Analytical Tables

## Table 1: Petroleum Hydrocarbons in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia

Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109
Farameter	Standards*	Standards**	Standards***	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
				0.1 mbgs								
EPHs10-19	ns	ns	ns	<200	<200	<200	<200	<200	<200	<200	<200	<200
EPHs19-32	ns	ns	ns	<200	<200	<200	<200	260	<200	<200	<200	<200
LEPHs	1000	2000	1000	<200	<200	<200	<200	<200	<200	<200	<200	<200
HEPHs	1000	5000	1000	<200	<200	<200	<200	260	<200	<200	<200	<200
2-Methylnaphthalene	ns	ns	ns	< 0.050	0.066	0.117	<0.050	<0.050	<0.050	<0.050	0.055	<0.050
Acenaphthene	ns	ns	ns	< 0.050	0.172	<0.050	<0.050	<0.050	< 0.050	<0.050	< 0.050	< 0.050
Acenaphthylene	ns	ns	ns	<0.050	< 0.050	0.208	0.08	< 0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	ns	ns	ns	<0.050	0.656	0.152	0.055	< 0.050	< 0.050	<0.050	0.148	< 0.050
Benz[a]anthracene	1	10	1	0.052	0.985	0.557	0.233	0.065	0.089	0.075	0.374	0.075
Benzo[a]pyrene (B[a]P)	1	10	1	0.054	0.794	0.771	0.300	0.077	0.146	0.077	0.336	0.065
Benzo[b]fluoranthene	1	10	1	0.099	1.14	1.02	0.453	0.151	0.241	<0.20	0.487	0.100
Benzo[g,h,i]perylene	ns	ns	ns	<0.050	0.460	0.577	0.182	0.057	0.110	<0.050	0.197	<0.050
Benzo[k]fluoranthene	1	10	1	<0.050	0.442	0.371	0.156	0.054	0.101	<0.050	0.195	<0.050
Chrysene	ns	ns	ns	<0.070	0.872	0.674	0.320	0.090	0.119	0.095	0.370	0.083
Dibenz[a,h]anthracene	1	10	1	<0.050	0.103	0.111	<0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050
Fluoranthene	ns	ns	ns	0.121	2.23	1.13	0.523	0.129	0.145	0.142	0.876	0.156
Fluorene	ns	ns	ns	<0.050	0.239	<0.050	<0.050	<0.050	<0.050	<0.050	0.067	<0.050
Indeno [1,2,3-cd] pyrene	1	10	1	<0.050	0.540	0.666	0.221	0.066	0.115	0.058	0.251	<0.050
Naphthalene	5	50	5	<0.050	0.113	0.097	<0.050	<0.050	<0.050	<0.050	0.079	<0.050
Phenanthrene	5	50	5	0.058	2.06	0.621	0.300	0.077	0.085	0.079	0.631	0.124
Pyrene	10	100	10	0.107	1.78	1.15	0.534	0.127	0.144	0.143	0.762	0.145

## Notes:

Values in μg/g unless otherwise stated

mbgs = metres below ground surface

ns = no standard

EPHs = Extractable Petroleum Hydrocarbons

LEPHs = Light EPH, corrected for polycyclic aromatic hydrocarbons (PAH)

HEPHs = Heavy EPH, corrected for PAH

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

## Table 1: Petroleum Hydrocarbons in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia

Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP110	16-TP111-0.1M	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M
Parameter	Standards*	Standards**	Standards***	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
				0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs
EPHs10-19	ns	ns	ns	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
EPHs19-32	ns	ns	ns	<200	<200	<200	<200	<200	<200	370	350	320	420	<200
LEPHs	1000	2000	1000	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
HEPHs	1000	5000	1000	<200	<200	<200	<200	<200	<200	330	320	290	370	<200
2-Methylnaphthalene	ns	ns	ns	<0.050	0.203	0.076	0.128	<0.050	0.258	0.975	0.879	1.15	0.342	0.183
Acenaphthene	ns	ns	ns	<0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	<0.050	<0.050	<0.050
Acenaphthylene	ns	ns	ns	0.056	0.403	0.06	0.247	0.074	0.334	1.91	2.25	1.82	1.87	0.398
Anthracene	ns	ns	ns	0.05	0.266	0.087	0.22	<0.050	0.218	1.15	1.26	1.11	1.73	0.237
Benz[a]anthracene	1	10	1	0.192	1.10	0.314	0.871	0.204	0.805	4.41	5.00	4.16	6.11	0.919
Benzo[a]pyrene (B[a]P)	1	10	1	0.186	1.19	0.294	0.962	0.219	0.847	5.65	6.86	5.51	6.55	1.05
Benzo[b]fluoranthene	1	10	1	0.277	1.53	0.403	1.22	0.295	1.08	6.98	8.46	6.71	8.21	1.45
Benzo[g,h,i]perylene	ns	ns	ns	0.102	0.669	0.188	0.533	0.132	0.484	2.85	3.68	2.81	3.56	0.568
Benzo[k]fluoranthene	1	10	1	0.120	0.605	0.159	0.465	0.117	0.401	3.08	3.52	2.73	3.83	0.570
Chrysene	ns	ns	ns	0.209	1.17	0.372	0.914	0.238	0.854	4.88	5.81	4.76	6.84	0.964
Dibenz[a,h]anthracene	1	10	1	< 0.050	0.192	0.050	0.154	< 0.050	0.146	0.824	1.04	0.817	0.965	0.175
Fluoranthene	ns	ns	ns	0.333	1.58	0.757	1.36	0.293	1.13	6.88	7.40	6.22	12.3	1.26
Fluorene	ns	ns	ns	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	<0.20	<0.20	<0.20	<0.20	<0.050
Indeno [1,2,3-cd] pyrene	1	10	1	0.133	0.829	0.228	0.668	0.162	0.619	3.83	4.90	3.81	4.62	0.762
Naphthalene	5	50	5	0.137	0.355	0.089	0.229	0.051	0.868	2.00	2.20	2.08	0.860	0.395
Phenanthrene	5	50	5	0.147	0.654	0.407	0.624	0.116	0.504	2.77	2.91	2.52	5.99	0.520
Pyrene	10	100	10	0.333	1.62	0.692	1.40	0.324	1.28	7.71	8.42	7.07	12.6	1.41

## Notes:

Values in μg/g unless otherwise stated

mbgs = metres below ground surface

ns = no standard

EPHs = Extractable Petroleum Hydrocarbons

LEPHs = Light EPH, corrected for polycyclic aromatic hydrocarbons (PAH)

HEPHs = Heavy EPH, corrected for PAH

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

## Table 1: Petroleum Hydrocarbons in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia

Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP121-0.1M	16-TP201-0.6M	16-TP202-0.5M	16-TP202-1.0M	16-TP202-1.5M	16-TP203-0.5M	16-TP204-0.4M	16-TP205-0.4M	16-TP206-0.5M	16-TP207-0.5M
Farameter	Standards*	Standards**	Standards***	9/7/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016
				0.1 mbgs	0.6 mbgs	0.5 mbgs	1.0 mbgs	1.5 mbgs	0.5 mbgs	0.4 mbgs	0.4 mbgs	0.5 mbgs	0.5 mbgs
EPHs10-19	ns	ns	ns	<200	<200	<200	-	-	<200	<200	<200	<200	<200
EPHs19-32	ns	ns	ns	<200	<200	<200	-	•	<200	<200	<200	<200	<200
LEPHs	1000	2000	1000	<200	<200	<200	-	•	<200	<200	<200	<200	<200
HEPHs	1000	5000	1000	<200	<200	<200	-	-	<200	<200	<200	<200	<200
2-Methylnaphthalene	ns	ns	ns	0.136	0.211	0.513	-	•	0.075	<0.050	< 0.050	<0.050	<0.050
Acenaphthene	ns	ns	ns	< 0.050	< 0.050	<0.050	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	ns	ns	ns	0.385	< 0.050	0.749	-	•	0.056	<0.050	<0.050	<0.050	0.07
Anthracene	ns	ns	ns	0.216	< 0.050	0.407	-	•	< 0.050	<0.050	< 0.050	<0.050	<0.050
Benz[a]anthracene	1	10	1	0.86	0.155	1.74	-		0.121	<0.050	< 0.050	<0.050	0.168
Benzo[a]pyrene (B[a]P)	1	10	1	1.09	0.168	2.28	-	-	0.171	< 0.050	< 0.050	<0.050	0.233
Benzo[b]fluoranthene	1	10	1	1.48	0.246	2.96	-	-	0.205	< 0.050	< 0.050	<0.050	0.274
Benzo[g,h,i]perylene	ns	ns	ns	0.546	0.091	1.32	-	-	0.088	< 0.050	< 0.050	<0.050	0.107
Benzo[k]fluoranthene	1	10	1	0.572	0.089	1.18	-	-	0.085	<0.050	<0.050	<0.050	0.118
Chrysene	ns	ns	ns	0.917	0.189	1.88	-	-	0.125	< 0.050	< 0.050	<0.050	0.162
Dibenz[a,h]anthracene	1	10	1	0.179	< 0.050	0.386	-	-	<0.050	< 0.050	< 0.050	<0.050	<0.050
Fluoranthene	ns	ns	ns	1.19	0.335	2.58	-	-	0.184	<0.050	<0.050	<0.050	0.258
Fluorene	ns	ns	ns	< 0.050	< 0.050	<0.050	-	-	<0.050	<0.050	< 0.050	<0.050	<0.050
Indeno [1,2,3-cd] pyrene	1	10	1	0.745	0.122	1.93	-	-	0.113	<0.050	<0.050	<0.050	0.145
Naphthalene	5	50	5	0.272	0.13	0.726	-	-	0.074	<0.050	<0.050	<0.050	0.109
Phenanthrene	5	50	5	0.451	0.215	1.10	-	-	0.112	<0.050	<0.050	<0.050	0.117
Pyrene	10	100	10	1.33	0.333	2.78	-	-	0.206	<0.050	< 0.050	<0.050	0.29

## Notes:

Values in μg/g unless otherwise stated

mbgs = metres below ground surface

ns = no standard

EPHs = Extractable Petroleum Hydrocarbons

LEPHs = Light EPH, corrected for polycyclic aromatic hydrocarbons (PAH)

HEPHs = Heavy EPH, corrected for PAH

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

## Table 2: Volatile Organic Compounds in Soil

Job Number: 13858B

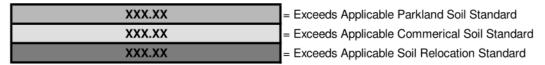
Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Power atom	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110	16-TP111-0.1M
Parameter	Standards*	Standards**	Standards***	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
				0.1 mbgs										
1,1,1,2-Tetrachloroethane	32	73	ns	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,1-Trichloroethane	5	50	5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,2,2-Tetrachloroethane	4.1	9.3	5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,2-Trichloroethane	5	50	5	<0.050	<0.050	<0.050	<0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1-Dichloroethane	5	50	5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1-Dichloroethene	5	50	5	<0.050	<0.050	<0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichlorobenzene	1	10	1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichloroethane	5	50	5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichloropropane	5	50	5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,3-Dichlorobenzene	1	10	1	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,4-Dichlorobenzene	1	10	1	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
2-Hexanone	ns	ns	ns	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
Acetone	14000	54000	ns	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Benzene	0.04	0.04	0.04	<0.0050	<0.0050	0.0107	< 0.0050	< 0.0050	<0.0050	<0.0050	<0.0050	0.349	<0.0050	0.0084
BDCM (bromodichloromethane)	8.2	18	ns	<0.050	<0.050	<0.050	< 0.050	< 0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
Bromoform (tribromomethane)	620	2200	ns	<0.050	<0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
Carbon Disulfide	360	720	ns	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
Carbon Tetrachloride	5	50	5	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	< 0.050	< 0.050
Monochlorobenzene	1	10	1	<0.050	<0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050	< 0.050	<0.050	< 0.050	< 0.050
Chloroethane (ethyl chloride)	30	65	ns	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloroform	5	50	5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloromethane (methyl chloride)	47	160	ns	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-dichloroethene (cis)	5	50	5	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,2-Dichloroethene (trans)	5	50	5	<0.050	<0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,3-dichloropropene (cis)	ns	ns	5	<0.050	<0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,3-dichloropropene (trans)	ns	ns	5	<0.050	<0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,3-dichloropropene	5	5	5	<0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050	<0.050	< 0.050
DBCM (dibromochloromethane)	11	26	ns	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dichloromethane	5	50	5	< 0.30	< 0.30	< 0.30	<0.30	<0.30	<0.30	< 0.30	< 0.30	< 0.30	<0.30	< 0.30
Ethylbenzene	1	7	1	<0.015	<0.015	<0.015	< 0.015	< 0.015	<0.015	<0.015	< 0.015	0.087	< 0.015	< 0.015
Ethyl ether	1800	1800	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
m&p-Xylene	ns	ns	ns	<0.050	<0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	0.634	< 0.050	< 0.050
Methyl ethyl ketone (MEK)	22000	110000	ns	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Methyl isobutyl ketone (MIBK)	5300	47000	ns	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
Methyl tert-butyl ether (MTBE)	320	700	ns	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Heptane (nC7)	ns	ns	ns	<0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	0.270	< 0.050	< 0.050
n-Octane (nC8)	ns	ns	ns	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	0.219	< 0.050	< 0.050
o-Xylene	ns	ns	ns	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	0.419	< 0.050	< 0.050
Styrene	5	50	5	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
Tetrachloroethylene (PERC)	5	5	5	<0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
Toluene	1.5	2.5	1.5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.627	<0.050	<0.050
Total Xylenes	5	20	5	<0.075	< 0.075	<0.075	<0.075	<0.075	<0.075	< 0.075	< 0.075	1.05	<0.075	<0.075
Trichloroethylene (TCE)	0.015	0.015	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Trichlorofluoromethane (Freon 11)	390	2000	ns	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Vinyl chloride (chloroethene)	0.79	7.5	ns	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
VH	ns	ns	ns	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
VPHs	200	200	ns	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100

## Notes:

Values in μg/g unless otherwise stated mbgs = metres below ground surface ns = no standard VH = Volatile Hydrocarbons

VPH = Volatile Petroleum Hydrocarbons



\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

## Table 2: Volatile Organic Compounds in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M	16-TP121-0.1M	16-TP201-0.6M
Parameter	Standards*	Standards**	Standards***	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	10/11/2016
				0.1 mbgs	0.6 mbgs									
1,1,1,2-Tetrachloroethane	32	73	ns	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050
1,1,1-Trichloroethane	5	50	5	<0.050	<0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050
1,1,2,2-Tetrachloroethane	4.1	9.3	5	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	< 0.050
1,1,2-Trichloroethane	5	50	5	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050
1,1-Dichloroethane	5	50	5	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050
1,1-Dichloroethene	5	50	5	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050
1,2-Dichlorobenzene	1	10	1	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	< 0.050
1,2-Dichloroethane	5	50	5	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	< 0.050
1,2-Dichloropropane	5	50	5	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	< 0.050
1,3-Dichlorobenzene	1	10	1	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	< 0.050
1,4-Dichlorobenzene	1	10	1	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	< 0.050
2-Hexanone	ns	ns	ns	<0.050	<0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-
Acetone	14000	54000	ns	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	-
Benzene	0.04	0.04	0.04	0.0258	<0.0050	< 0.0050	0.025	0.0724	0.0308	0.016	0.0072	0.0067	<0.0050	0.0169
BDCM (bromodichloromethane)	8.2	18	ns	<0.050	<0.050	< 0.050	<0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050	< 0.050
Bromoform (tribromomethane)	620	2200	ns	<0.050	<0.050	< 0.050	<0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050	<0.050
Carbon Disulfide	360	720	ns	<0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050	< 0.050	<0.050	<0.050	-
Carbon Tetrachloride	5	50	5	<0.050	<0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050	< 0.050	<0.050	<0.050	<0.050
Monochlorobenzene	1	10	1	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	< 0.050
Chloroethane (ethyl chloride)	30	65	ns	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloroform	5	50	5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloromethane (methyl chloride)	47	160	ns	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-dichloroethene (cis)	5	50	5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichloroethene (trans)	5	50	5	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050
1,3-dichloropropene (cis)	ns	ns	5	<0.050	<0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,3-dichloropropene (trans)	ns	ns	5	<0.050	<0.050	<0.050	<0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,3-dichloropropene	5	5	5	<0.050	<0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-
DBCM (dibromochloromethane)	11	26	ns	<0.050	<0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050	< 0.050	<0.050	<0.050	<0.050
Dichloromethane	5	50	5	< 0.30	<0.30	< 0.30	< 0.30	<0.30	< 0.30	<0.30	<0.30	< 0.30	< 0.30	< 0.30
Ethylbenzene	1	7	1	<0.015	<0.015	< 0.015	0.027	0.069	0.025	0.031	< 0.015	<0.015	<0.015	0.018
Ethyl ether	1800	1800	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	-
m&p-Xylene	ns	ns	ns	0.078	<0.050	<0.050	0.189	0.505	0.132	0.175	0.093	<0.050	<0.050	0.107
Methyl ethyl ketone (MEK)	22000	110000	ns	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	
Methyl isobutyl ketone (MIBK)	5300	47000	ns	<0.050	<0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-
Methyl tert-butyl ether (MTBE)	320	700	ns	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Heptane (nC7)	ns	ns	ns	<0.050	<0.050	<0.050	0.058	0.093	<0.050	0.063	<0.050	<0.050	<0.050	-
n-Octane (nC8)	ns	ns	ns	<0.050	<0.050	<0.050	<0.050	0.102	<0.050	0.098	<0.050	<0.050	<0.050	-
o-Xylene	ns	ns	ns	0.051	<0.050	<0.050	0.106	0.361	0.115	0.164	0.076	<0.050	<0.050	0.083
Styrene	5	50	5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Tetrachloroethylene (PERC)	5	5	5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	1.5	2.5	1.5	0.097	<0.050	<0.050	0.185	0.33	0.084	0.087	0.051	<0.050	<0.050	0.077
Total Xylenes	5	20	5	0.129	<0.075	< 0.075	0.295	0.866	0.248	0.339	0.169	<0.075	<0.075	0.19
Trichloroethylene (TCE)	0.015	0.015	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Trichlorofluoromethane (Freon 11)	390	2000	ns	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Vinyl chloride (chloroethene)	0.79	7.5	ns	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
VH	ns	ns	ns	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
VPHs	200	200	ns	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100

## Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface ns = no standard

VH = Volatile Hydrocarbons

VPH = Volatile Petroleum Hydrocarbons

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

## Table 2: Volatile Organic Compounds in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP202-0.5M	16-TP202-1.0M	16-TP202-1.5M	16-TP203-0.5M	16-TP204-0.4M	16-TP205-0.4M	16-TP206-0.5M	16-TP207-0.5M
Farameter	Standards*	Standards**	Standards***	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016
				0.5 mbgs	1.0 mbgs	1.5 mbgs	0.5 mbgs	0.4 mbgs	0.4 mbgs	0.5 mbgs	0.5 mbgs
1,1,1,2-Tetrachloroethane	32	73	ns	< 0.050	-	-	< 0.050	<0.050	< 0.050	< 0.050	< 0.050
1,1,1-Trichloroethane	5	50	5	< 0.050	-	-	< 0.050	<0.050	< 0.050	< 0.050	< 0.050
1,1,2,2-Tetrachloroethane	4.1	9.3	5	< 0.050	-	-	< 0.050	<0.050	< 0.050	< 0.050	< 0.050
1,1,2-Trichloroethane	5	50	5	< 0.050	-	-	< 0.050	<0.050	< 0.050	< 0.050	< 0.050
1,1-Dichloroethane	5	50	5	<0.050	-	-	< 0.050	<0.050	< 0.050	< 0.050	< 0.050
1,1-Dichloroethene	5	50	5	<0.050	-	-	< 0.050	<0.050	< 0.050	< 0.050	< 0.050
1,2-Dichlorobenzene	1	10	1	< 0.050	-	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,2-Dichloroethane	5	50	5	<0.050	-	-	< 0.050	<0.050	< 0.050	< 0.050	< 0.050
1,2-Dichloropropane	5	50	5	<0.050	-	-	< 0.050	<0.050	< 0.050	< 0.050	< 0.050
1,3-Dichlorobenzene	1	10	1	<0.050	-	-	< 0.050	<0.050	< 0.050	< 0.050	< 0.050
1,4-Dichlorobenzene	1	10	1	<0.050	-	-	<0.050	<0.050	< 0.050	< 0.050	< 0.050
2-Hexanone	ns	ns	ns	-	-	-	-	-	-	-	-
Acetone	14000	54000	ns	-	-	-	-	-	-	-	-
Benzene	0.04	0.04	0.04	0.0168	-	-	<0.0050	<0.0050	< 0.0050	<0.0050	<0.0050
BDCM (bromodichloromethane)	8.2	18	ns	<0.050	-	-	<0.050	<0.050	< 0.050	<0.050	< 0.050
Bromoform (tribromomethane)	620	2200	ns	<0.050	-	-	<0.050	<0.050	< 0.050	<0.050	< 0.050
Carbon Disulfide	360	720	ns	-	-	-	-	-	-	-	-
Carbon Tetrachloride	5	50	5	<0.050	-	-	<0.050	<0.050	< 0.050	<0.050	<0.050
Monochlorobenzene	1	10	1	<0.050	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
Chloroethane (ethyl chloride)	30	65	ns	<0.10	-	-	<0.10	<0.10	<0.10	<0.10	<0.10
Chloroform	5	50	5	<0.10	-	-	<0.10	<0.10	<0.10	<0.10	<0.10
Chloromethane (methyl chloride)	47	160	ns	<0.10	-	-	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-dichloroethene (cis)	5	50	5	<0.050	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichloroethene (trans)	5	50	5	<0.050	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
1,3-dichloropropene (cis)	ns	ns	5	<0.050	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
1,3-dichloropropene (trans)	ns	ns	5	<0.050	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
1,3-dichloropropene	5	5	5	-	-	-	-	-	-	-	-
DBCM (dibromochloromethane)	11	26	ns	<0.050	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
Dichloromethane	5	50	5	<0.30	-	-	<0.30	<0.30	< 0.30	<0.30	<0.30
Ethylbenzene	1	7	1	0.024	-	-	<0.015	<0.015	<0.015	<0.015	<0.015
Ethyl ether	1800	1800	ns	-	-	-	-	-	-	-	-
m&p-Xylene	ns	ns	ns	0.116	-	-	<0.050	<0.050	< 0.050	<0.050	<0.050
Methyl ethyl ketone (MEK)	22000	110000	ns	-	-	-	-	-	-	-	-
Methyl isobutyl ketone (MIBK)	5300	47000	ns	-	-	-	-	-	_	-	-
Methyl tert-butyl ether (MTBE)	320	700	ns	<0.20	_	-	<0.20	<0.20	<0.20	<0.20	<0.20
n-Heptane (nC7)	ns	ns	ns	-	_	-	-	-	-	-	-
n-Octane (nC8)	ns	ns	ns	-	-	-	-	-	_	-	-
o-Xylene	ns	ns	ns	0.11	_	_	<0.050	<0.050	<0.050	<0.050	<0.050
Styrene	5	50	5	<0.050	_	_	<0.050	<0.050	<0.050	<0.050	<0.050
Tetrachloroethylene (PERC)	5	5	5	<0.050	-	_	<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	1.5	2.5	1.5	0.075	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
Total Xylenes	5	20	5	0.225	-		<0.075	<0.075	<0.075	<0.075	<0.075
Trichloroethylene (TCE)	0.015	0.015	0.015	<0.010	_		<0.010	<0.010	<0.010	<0.010	<0.010
Trichlorofluoromethane (Freon 11)	390	2000	ns	<0.10	-		<0.10	<0.10	<0.10	<0.10	<0.10
Vinyl chloride (chloroethene)	0.79	7.5	ns	<0.10	-		<0.10	<0.10	<0.10	<0.10	<0.10
VH	ns	ns	ns	<100	-	-	<100	<100	<100	<100	<100
VPHs	200	200		<100	-		<100	<100	<100	<100	<100
VI 110	200	200	ns	<100	_	-	<100	<100	<u> </u>	<100	<100

## Notes:

Values in μg/g unless otherwise stated mbgs = metres below ground surface ns = no standard

VH = Volatile Hydrocarbons VPH = Volatile Petroleum Hydrocarbons

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

## Table 3: Metals in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110
Farameter	Standards*	Standards**	Standards***	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
				0.1 mbgs									
рН	ns	ns		5.46	6.42	5.67	5.34	5.26	5.38	5.53	5.57	5.57	5.31
Antimony	20	40	20	0.52	0.81	0.84	0.55	0.75	0.85	0.50	0.85	0.56	0.66
Arsenic	15	15	15	3.35	4.07	4.83	4.89	3.39	5.00	4.71	4.91	4.74	4.27
Barium	400	400	400	94.4	156	179	126	104	134	70.5	102	102	112
Beryllium	4	8	4	0.32	0.33	0.40	0.36	0.29	0.38	0.31	0.34	0.29	0.31
Cadmium	1.5 @ pH < 6.5	1.5 @ pH < 6.5	1.5	0.236	0.423	0.798	0.545	0.424	0.464	0.466	0.663	0.575	0.411
Chromium	60	60	60	28.3	34.1	37.1	41.2	32.8	46.5	33.5	45.8	55.0	36.9
Cobalt	50	300	50	7.97	9.17	9.88	10.3	7.64	11.3	9.61	9.70	9.61	10.6
Copper	100 @ pH 5.0 — < 5.5 150 @ pH > 5.5	100 @ pH 5.0 — < 5.5 200 @ pH 5.5 - <6.0 250 @ pH > 6.0	90	32.0	49.9	62.2	43.4	43.3	44.1	31.6	39.5	30.6	30.5
Lead	100 @ pH < 6.0 250 @ pH 6.0 — < 6.5 400 @ pH >6.5	100 @ pH < 6.0 250 @ pH 6.0 — < 6.5 700 @ pH >6.5	100	52.6	66.6	200	92.1	79.0	75.9	149	128	98.9	130
Mercury (inorganic)	15	40	15	0.067	0.096	0.134	0.097	0.102	0.136	0.077	0.125	0.076	0.068
Molybdenum	10	40	10	0.76	0.73	0.59	0.63	1.10	1.26	0.44	0.63	0.37	0.43
Nickel	100	500	100	20.4	24.1	25.2	26.3	18.8	28.6	26.0	25.5	23.8	25.6
Selenium	3	10	3	0.26	0.25	0.30	0.27	<0.20	0.28	0.21	0.36	0.25	<0.20
Silver	20	40	20	0.11	0.17	0.31	0.21	0.19	0.20	0.11	0.26	0.18	0.15
Thallium	ns	ns	ns	0.057	0.067	0.074	0.067	0.057	0.068	0.067	0.072	0.067	0.071
Tin	50	300	50	2.0	<2.0	2.4	<2.0	<2.0	<2.0	<2.0	2.5	<2.0	2.4
Uranium	16	200	ns	0.507	0.604	1.19	1.02	0.576	0.742	0.913	1.11	0.972	0.833
Vanadium	200	ns	200	56.1	59.6	68.0	70.1	49.2	73.4	66.5	69.7	64.4	77.6
Zinc	150 @ pH < 6.5 450 @ pH >6.5	150 @ pH < 6.5 600 @ pH > 6.5	150	83.9	139	119	81.3	96.5	111	68.0	91.5	81.8	83.0

## Notes:

Values in μg/g unless otherwise stated mbgs = metres below ground surface

ns = no standard

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

<sup>\*</sup> Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*</sup> Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*\*</sup> Soil relocation to nonagricultural land standards in Schedule 7 of the B.C. Contaminated Sites Regulation (CSR).

## Table 3: Metals in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP111-0.1M	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M
Farameter	Standards*	Standards**	Standards***	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
				0.1 mbgs									
рН	ns	ns		5.80	5.69	5.49	5.53	5.21	5.75	5.73	5.89	5.51	5.57
Antimony	20	40	20	1.91	1.16	0.55	0.65	0.65	0.57	0.51	0.53	0.59	0.76
Arsenic	15	15	15	5.51	3.88	4.60	4.55	4.56	5.28	4.89	5.51	4.32	4.75
Barium	400	400	400	212	133	136	154	158	249	241	302	134	167
Beryllium	4	8	4	0.38	0.31	0.36	0.53	0.46	0.41	0.43	0.47	0.27	0.38
Cadmium	1.5 @ pH < 6.5	1.5 @ pH < 6.5	1.5	0.605	0.402	0.388	0.717	0.545	0.526	0.562	0.677	0.503	0.554
Chromium	60	60	60	41.1	29.9	37.1	46.7	38.1	37.1	34.3	39.2	31.4	36.1
Cobalt	50	300	50	10.0	7.99	8.42	10.3	9.88	9.66	8.21	9.47	6.87	8.30
Copper	100 @ pH 5.0 — < 5.5 150 @ pH > 5.5	100 @ pH 5.0 — < 5.5 200 @ pH 5.5 - <6.0 250 @ pH > 6.0	90	39.6	32.1	31.6	41.3	39.0	32.3	33.2	35.4	27.3	34.4
Lead	100 @ pH < 6.0 250 @ pH 6.0 — < 6.5 400 @ pH >6.5	100 @ pH < 6.0 250 @ pH 6.0 — < 6.5 700 @ pH >6.5	100	303	197	177	118	153	207	133	219	201	241
Mercury (inorganic)	15	40	15	0.129	0.150	0.186	0.103	0.128	0.134	0.124	0.175	0.137	0.185
Molybdenum	10	40	10	0.75	0.52	0.62	1.67	1.46	0.81	1.01	0.86	0.64	0.87
Nickel	100	500	100	27.7	22.6	23.1	28.0	25.4	29.6	23.9	26.3	18.1	21.5
Selenium	3	10	3	0.26	0.24	0.25	0.27	0.27	0.25	0.24	0.28	0.24	0.32
Silver	20	40	20	0.23	0.30	0.18	0.26	0.22	0.19	0.20	0.24	0.18	0.26
Thallium	ns	ns	ns	0.070	0.068	0.073	0.094	0.083	0.073	0.067	0.073	0.052	0.080
Tin	50	300	50	2.7	2.4	<2.0	<2.0	2.2	<2.0	<2.0	4.7	11.4	3.8
Uranium	16	200	ns	1.05	0.854	0.882	1.66	1.41	0.999	1.12	1.15	0.883	1.08
Vanadium	200	ns	200	68.9	57.0	59.9	74.6	66.0	67.6	60.1	65.5	52.0	60.5
Zinc	150 @ pH < 6.5 450 @ pH >6.5	150 @ pH < 6.5 600 @ pH > 6.5	150	152	100	87.4	96.3	97.6	85.6	82.8	94.6	73.8	105

## Notes:

Values in μg/g unless otherwise stated mbgs = metres below ground surface

ns = no standard

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

<sup>\*</sup> Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*</sup> Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*\*</sup> Soil relocation to nonagricultural land standards in Schedule 7 of the B.C. Contaminated Sites Regulation (CSR).

## Table 3: Metals in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP121-0.1M	16-TP201-0.6M	16-TP202-0.5M	16-TP202-1.0M	16-TP202-1.5M	16-TP203-0.5M	16-TP204-0.4M	16-TP205-0.4M	16-TP206-0.5M	16-TP107-0.5M
Farameter	Standards*	Standards**	Standards***	9/7/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016
				0.1 mbgs	0.6 mbgs	0.5 mbgs	1.0 mbgs	1.5 mbgs	0.5 mbgs	0.4 mbgs	0.4 mbgs	0.5 mbgs	0.5 mbgs
рН	ns	ns		5.34	7.56	6.55	7.5	7.59	7.89	6.6	6.72	7.6	6.61
Antimony	20	40	20	0.75	0.41	0.68	0.46	0.24	0.52	1.37	0.14	0.24	0.14
Arsenic	15	15	15	4.29	4.61	6.05	5.32	4.47	4.44	5.48	4.17	3.55	3.89
Barium	400	400	400	165	166	262	228	79.6	117	57.7	57.2	182	68.5
Beryllium	4	8	4	0.36	0.35	0.43	0.4	0.32	0.25	0.32	0.28	0.34	0.28
Cadmium	1.5 @ pH < 6.5	1.5 @ pH < 6.5	1.5	0.377	0.208	0.238	0.247	0.07	0.174	0.697	0.078	0.129	0.08
Chromium	60	60	60	30.7	29.4	30.9	27.3	29.6	20	27.1	19	27.9	21.3
Cobalt	50	300	50	8.31	10.2	10.8	10.5	10.5	7.58	10.1	9.34	8.78	7.77
Copper	100 @ pH 5.0 — < 5.5 150 @ pH > 5.5	100 @ pH 5.0 — < 5.5 200 @ pH 5.5 - <6.0 250 @ pH > 6.0	90	36.9	34.7	35.6	29.1	26.7	21.6	32.6	25.7	14.0	19.9
Lead	100 @ pH < 6.0 250 @ pH 6.0 — < 6.5 400 @ pH >6.5	100 @ pH < 6.0 250 @ pH 6.0 — < 6.5 700 @ pH >6.5	100	156	127	198	100	7.37	62.6	13.5	3.46	47.4	17.1
Mercury (inorganic)	15	40	15	0.170	0.172	0.198	0.102	< 0.050	0.065	< 0.050	< 0.050	< 0.050	< 0.050
Molybdenum	10	40	10	0.82	0.45	0.59	0.56	0.4	0.35	0.54	0.18	0.3	0.26
Nickel	100	500	100	22.1	24.4	28.4	26.8	24.9	18.6	27.5	21.4	20.7	19.6
Selenium	3	10	3	0.26	0.23	0.26	<0.20	<0.20	<0.20	<0.20	<0.20	0.22	<0.20
Silver	20	40	20	0.17	0.14	0.16	0.11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Thallium	ns	ns	ns	0.066	0.057	0.078	0.071	0.066	<0.050	0.077	0.068	0.073	0.062
Tin	50	300	50	2.8	2.3	2.4	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Uranium	16	200	ns	0.726	0.38	0.51	0.444	0.382	0.347	0.388	0.238	0.403	0.35
Vanadium	200	ns	200	58.1	69.5	68.1	70.4	64.1	47.7	71.6	56.4	56.4	58.8
Zinc	150 @ pH < 6.5 450 @ pH >6.5	150 @ pH < 6.5 600 @ pH > 6.5	150	102	77.7	93.4	75.0	40.2	62.2	44.8	40.4	95.9	36.4

## Notes:

Values in μg/g unless otherwise stated mbgs = metres below ground surface

ns = no standard

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

<sup>\*</sup> Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*</sup> Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*\*</sup> Soil relocation to nonagricultural land standards in Schedule 7 of the B.C. Contaminated Sites Regulation (CSR).

## Table 4: Toxicity Characteristic Leaching Procedure Metals in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	HWR Leachate Quality	16-TP201-0.6M	16-TP202-0.5M
Parameter	Standards*	10/11/2016	10/11/2016
		0.6 mbgs	0.5 mbgs
1st Preliminary pH	ns	7.97	7.17
2nd Preliminary pH	ns	1.67	1.60
Final pH	ns	5.02	4.99
Extraction Solution Initial pH	ns	4.95	4.95
Antimony (Sb)-Leachable	ns	<1000	<1000
Arsenic (As)-Leachable	2500	<1000	<1000
Barium (Ba)-Leachable	100000	<2500	<2500
Beryllium (Be)-Leachable	ns	<25	<25
Boron (B)-Leachable	500000	<500	<500
Cadmium (Cd)-Leachable	500	<50	<50
Calcium (Ca)-Leachable	ns	82900	55400
Chromium (Cr)-Leachable	5000	<250	<250
Cobalt (Co)-Leachable	ns	<50	<50
Copper (Cu)-Leachable	100000	<50	<50
Iron (Fe)-Leachable	ns	<150	<150
Lead (Pb)-Leachable	5000	<250	<250
Magnesium (Mg)-Leachable	ns	2990	4490
Mercury (Hg)-Leachable	100	<1.0	<1.0
Nickel (Ni)-Leachable	ns	<250	<250
Selenium (Se)-Leachable	ns	<1000	<1000
Silver (Ag)-Leachable	5000	<50	<50
Thallium (TI)-Leachable	ns	<1000	<1000
Vanadium (V)-Leachable	ns	<150	<150
Zinc (Zn)-Leachable	500000	<500	<500

## Notes:

Values in  $\mu g/L$  unless otherwise stated mbgs = metres below ground surface ns = no standard

= Exceeds Applicable Leachate Quality Soil Standard

<sup>\*</sup> Leachate quality standards provided in Schedule 4, Part 3, Table 1 of the B.C. Hazardous Waste Regulation (HWR).

## Table 5: Bacteria in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110
Parameter	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
	0.1 mbgs									
E. coli	143	4	<2	1020	>1820.14	635	<2	<2	<2	<2
Coliform Bacteria - Fecal	143	4	<2	1020	>1820.14	635	<2	<2	<2	<2
Coliform Bacteria - Total	>1769.88	>1830.49	247	1790	>1820.14	>1884.07	53	77	15	9

### Notes:

Values in MPN/g unless otherwise stated mbgs = metres below ground surface ns = no standard

## Table 5: Bacteria in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, Britis Client: Brookfield Global Integrated Solu

Parameter	16-TP111-0.1M	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M	16-TP121-0.1M
Parameter	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
	0.1 mbgs										
E. coli	4	<2	4	1810	<2	4	3	<2	<2	<2	<2
Coliform Bacteria - Fecal	4	<2	4	1810	<2	4	3	<2	<2	<2	<2
Coliform Bacteria - Total	266	4	608	1810	>1879.67	79	>1775.55	38	268	621	146

### Notes:

Values in MPN/g unless otherwise stated mbgs = metres below ground surface ns = no standard

## Table 6: Nutrients and lodide in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil Standards*	CSR Commercial Soil Standards*	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110
	CSA Farkiand Son Standards	CSA Commercial Son Standards	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
			0.1 mbgs									
Total Phosphate as P	ns	ns	14.00	16.80	3.98	3.38	11.50	17.20	4.82	2.47	2.08	2.74
Ammonia, Total Leachable (as N)	ns	ns	0.74	2.96	0.71	1.73	16.70	2.47	1.03	0.62	0.72	0.63
lodide	ns	ns	<5.6	<5.6	<5.8	<5.6	<5.7	<5.7	<5.5	<5.8	<5.4	<5.6

Notes:

Values in μg/g unless otherwise stated

mbgs = metres below ground surface

ns = no standard

XXX.XX = Exceeds Applicable Parkland Soil Standard

XXX.XX = Exceeds Applicable Commercial Soil Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

## Table 6: Nutrients and lodide in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil Standards*	CSR Commercial Soil Standards*	16-TP111-0.1M	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M	16-TP121-0.1M
		CSA Commercial Son Standards	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
			0.1 mbgs										
Total Phosphate as P	ns	ns	3.60	4.49	6.59	2.42	4.39	2.34	2.91	2.74	2.20	3.57	7.47
Ammonia, Total Leachable (as N)	ns	ns	0.49	0.45	0.69	0.79	3.85	0.80	2.13	0.66	2.79	2.62	0.63
lodide	ns	ns	<5.5	<5.6	<5.8	<5.9	<5.8	<5.5	<5.6	<5.6	<5.9	< 5.6	<5.7

Notes:

Values in μg/g unless otherwise stated

mbgs = metres below ground surface

ns = no standard

XXX.XX = Exceeds Applicable Parkland Soil Standard

XXX.XX = Exceeds Applicable Commercial Soil Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

## Table 7: Alcohols in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil Standards*	CSR Commercial Soil Standards**	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110
			9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
			0.1 mbgs									
sec-Butanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
n-Butanol	6100	61000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Isobutanol	1300	40000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Isopropanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methanol	31,000	100,000	<0.50	8.07	7.39	2.58	2.22	<0.50	1.92	6.7	4.58	3.25
Pentanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

### Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface ns = no standard

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard

<sup>\*</sup> Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*</sup> Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

## Table 7: Alcohols in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter		CSR Commercial Soil Standards**	16-TP111-0.1M	16-TP112-	16-TP113-	16-TP114-	16-TP115-	16-TP116-	16-TP117-	16-TP118-	16-TP119-	16-TP120-	16-TP121-
	CSR Parkland Soil			0.1M									
	Standards*		9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
			0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs
sec-Butanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
n-Butanol	6100	61000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Isobutanol	1300	40000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Isopropanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methanol	31,000	100,000	0.66	0.98	3.97	8.80	11.3	<0.50	10.2	3.66	4.79	6.73	7.18
Pentanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

### Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface ns = no standard

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard

<sup>\*</sup> Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*</sup> Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

## Table 8: Fatty Acids in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil Standards**	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110	16-TP111-0.1M
	Standards*		9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
			0.1 mbgs										
Acetic Acid	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Butyric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Caproic (Hexanoic) Acid	ns	ns	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Formic Acid	100,000	100,000	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300
Isobutyric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Isovaleric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Propionic Acid	ns	ns	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Valeric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

### Notes:

Values in μg/g unless otherwise stated mbgs = metres below ground surface ns = no standard

XXX.XX XXX.XX

= Exceeds Applicable Parkland Soil Standard = Exceeds Applicable Commerical Soil Standard

<sup>\*</sup> Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*</sup> Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

## Table 8: Fatty Acids in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Darameter	CSR Parkland Soil	CSR Commercial Soil	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M	16-TP121-0.1M
Parameter	Standards*	Standards**	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
			0.1 mbgs									
Acetic Acid	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Butyric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Caproic (Hexanoic) Acid	ns	ns	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Formic Acid	100,000	100,000	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300
Isobutyric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Isovaleric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Propionic Acid	ns	ns	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Valeric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

## Notes:

Values in μg/g unless otherwise stated mbgs = metres below ground surface ns = no standard

XXX.XX

XXX.XX

= Exceeds Applicable Parkland Soil Standard = Exceeds Applicable Commerical Soil Standard

<sup>\*</sup> Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*</sup> Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

# Table 9: Illicit Drugs in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

D	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110	16-TP111-0.1M
Parameter	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
	0.1 mbgs										
Methamphetamine	<0.10	<0.10	<0.10	0.15	0.40	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Cocaine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Heroin	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Amphetamine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Pseudoephedrine/ephedrine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MDMA (ecstacy)	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Lysergic acid diethylamide	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	< 0.10

## Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface ns = no standard

XXX.XX

= Concentrations reported above laboratory detection limits

# Table 9: Illicit Drugs in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, Britis Client: Brookfield Global Integrated Solu

Parameter	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M	16-TP121-0.1M	16-TP204-0.4M
Parameter	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	10/11/2016
	0.1 mbgs	0.4 mbgs									
Methamphetamine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Cocaine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-
Heroin	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-
Amphetamine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	< 0.10	< 0.10	-
Pseudoephedrine/ephedrine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-
MDMA (ecstacy)	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-
Lysergic acid diethylamide	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	< 0.10	<0.10	-

## Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface ns = no standard

XXX.XX

= Concentrations reported above laboratory detection limits

Attachment D
Site Photographs

PINCHIN





Photo 1 – General photo of the central area of the Site.



Photo 2 – General photo of the northwest corner of the Site.

PINCHIN







Photo 3 – General photo of the southern portion of the Site.



Photo 4 – General photo of the western portion of the Site.

Tervita Corporation 893 Van Isle Way Langford, BC V9B 5R8 (250) 915-2010



December 19th, 2016

Pinchin West Ltd.
Suite 200, 13775 Commerce Parkway,
Richmond, BC. V6V 2V4
ATTN: Jason Quamme, Project Manager

RE: Green Space Remediation; 850 Burdett Avenue, Victoria, BC

Dear Mr. Quamme,

Tervita Corporation (Tervita) is pleased to submit the enclosed quotation for the site remediation of the vacant property located at 850 Burdett Ave. in Victoria, BC. Tervita has carefully reviewed the bidders instructions provided by Pinchin West Ltd, (Pinchin West), and has prepared the following submission for your review.

Based on the information provided, Tervita will excavate 1,432 m3 or 2,864 tonnes of CL+ (BC CSR) contaminated soil, of which approximately 2,126 tonnes are expected to be contaminated with metals and hydrocarbons and 738 tonnes are contaminated with metals. Tervita expects the work to take approximately 12 working days. Tervita has successfully completed many projects of similar nature. Our experience and proven track record will ensure the best possible results and lowest liability in the most cost effective manner. Tervita will have crew and equipment ready to meet Pinchin West's schedule for work to commence in early January, 2017.

#### 1.0 SCOPE OF WORK

Tervita has reviewed the provided documentation and understands the scope of work will entail the following:

- Participate in a project kick-off meeting;
- Obtain necessary permits, licenses and authorizations (such as hydrant access, utility decommissioning etc.);
- Mobilization of crew and equipment to site and setting up on-site facilities as required;
- Conduct utility locate and implementation of Health and Safety Program as well as Traffic Management Plan;
- Excavation and disposal of CL+ metals and hydrocarbon contaminated soil;
- Upon receiving analytical results and permission from Pinchin West, excavation will be backfilled and compacted in two distinct areas, a playground area (555 m²) and the remaining area (2309 m²);

850 Burdett Avenue Green Space Remediation | v1 | 1

Site restoration, cleanup and demobilization.

#### 2.0 PROJECT SCHEDULE

Tervita has a crew available to start this project in early January 2017. We are happy to work with Pinchin West to determine the appropriate start date upon the notice of award and are flexible in adapting to any changes that may be required. Based upon the scope of work and laboratory turn-around time for sample results Tervita expects the project will be completed over 12 working days including standby time of 3 days for lab results.

The approximate schedule in **Appendix B** shows the total number of working days allocated to each activity, not including weekends or statutory holidays.

#### 3.0 PROJECT WORK PLAN

## Mobilization/Demobilization of Crew and Equipment

Tervita's site crew will consist of a site supervisor, an excavator operator with extensive site remediation experience and an experienced labourer. Mobile equipment will include a 325 size excavator and a roller compactor. A seacan will be mobilized to site for safe storage of tools, materials and health and safety equipment. A spill kit and a complement of small tools and materials come standard with this storage container.

#### Site Preparation and Health and Safety

Once on site, Tervita will hold a site specific kickoff meeting, reviewing site hazards, task specific Job Safety Analyses (JSA's), and the scope of work.

For this project, Tervita will be providing a Health and Safety Supervisor to ensure all personal on site will follow the Health and Safety Program as well as a Site-Specific Health and Safety Plan.

Prior to any work, Tervita will complete a Notice of Project to WorkSafe BC, BC One Call, and a private utility locate in order to identify and subsurface utilities.

Site preparation will include:

- Work area fencing up to 250 metres, with access for the court house patrons.
- Portable Toilet installation
- If required a street sweeper will be contracted for daily cleanup to remove any remaining sediment and dust from the road and work area.

#### Soil Excavation and Sampling

Once all necessary permits, safe work procedures and ground clearances are in place, Tervita will commence with the excavation areas in the order specified by the environmental engineer. Tervita proposes bulk excavating the soil from outside of the drip line of the 14 trees onsite. As noted, an arborist will be contracted to provide direction on the proper procedure for removing the contaminated soil from within the drip line of the trees. Soil will be stockpiled on and covered with polyethylene liner to reduce leaching of material and contamination of the clean recently exposed

surface. Tervita will allow Pinchin West sufficient time for sampling and classification of soil and stockpiled materials.

#### Soil Disposal

Once the soil is classified, Tervita intends to load out soil via tandem trucks to either the David Street barge ramp for loading onto a 4,500 tonne barge or via truck and pup to Tervita's Highwest facility in the Highlands. Tervita assumes debris to be minimal in the contaminated soil and that soil is transportable.

Any HW soil will be transported to the Richmond Bioremediation Facility located at 15111 Williams Road in Richmond BC, RS: 100072. This facility is permitted to handle waste up to and including Hazardous Waste. Transport will be conducted using tandem truck and pup trailers for transport on Seaspan ferries.

Each load of soil leaving the site will be accompanied by a Tervita manifest indicating its classification and dumping location. Scanned copies of these manifests, along with the scale slips, will be made available within 3-5 working days after dumping.

Please note that final acceptance into the facilities is subject to approval. All soil disposal pricing is based on the information provided to date, and the consultant's classifications. Any clean soil not wished to be reused as fill will be transported to a local clean fill facility for final disposal.

#### **Backfilling and Compaction**

Once approval has been granted by Pinchin West, Tervita will commence backfilling the excavation of the playground and remaining area. Backfill will be placed in lifts no more than 300 mm and be vibrated in place with a minimum of 5 passes. Material will be compacted to 95% SPMDD. A geotechnical engineer will be retained to conduct proctor testing on the intended backfill material prior to placement, and the engineer will also conduct compaction testing on site during visits. 305 mm of engineered wood fibre safety material will be the final placement in the playground area and 100 mm of topsoil will be the final placement in the remaining area.

#### Site Restoration and Demobilization

Once the excavation is completed to the satisfaction of Pinchin West, Tervita will demobilize all crew and equipment. Tervita will ensure that the site is clean, tidy and free of hazards to the public prior to demobilizing from the site. Temporary fencing can be removed, or the rental transferred to the client, at their request.

#### 4.0 Project Cost Estimate

Please see **Appendix A** for the completed bid form.

#### 5.0 Assumptions

The following general assumptions have been applied to the estimate, in addition to those described above:

 A single mobilization and demobilization to and from the site, additional remobilization will be an extra.

- Soil disposal at Tervita's Highlands facility is an option depending upon timing of project as the facility has been undergoing upgrades over the past 6 months. Upgrades are estimated to be completed in January, 2017.
- Soil disposal acceptance is subject to a waste application approval and further analytical on the constituents of the contaminated material and physical properties of the soil. Soil disposal costs based on the analytical provided in the tender package.
- Geotechnical compaction testing based on 1 site visit and 14 compaction tests only.
- Any transport of CL+ material to Richmond Bioremediation Facility estimates a full barge load.
- Estimate assumes no lane closures or special use permits are required for the completion of the project, only temporary fencing and closure of parking spaces on Quadra St. entrance.
- Backfill from the aggregate supplier is assumed to be suitable (environmentally and geotechnically). Alternate backfill sources may change the rates provided.
- Tervita assumes that work completed to remove contaminated soil within the drip line of the trees will be completed as per T&M cost plus 15 rates.

This quote is submitted contingent upon the right to negotiate and execute mutually acceptable contract terms and conditions, which are reflective of the work contemplated, and an equitable distribution of the risks involved therein. In addition, Tervita Corporation's Application for Credit must be completed by Pinchin West and approved by Tervita Corporation, at Tervita Corporation's sole discretion. In the event that such agreement cannot be reached, or such Application for Credit is not approved by Tervita Corporation, Tervita Corporation reserves the right to decline to enter into such an agreement without prejudice or penalty.

Thank you for the opportunity to provide pricing for this project. Should you have any questions regarding our response or require more information about Tervita, please do not hesitate to contact the undersigned.

Sincerely,

Alex Browne

**Project Coordinator** 

Tervita Environmental Services, Vancouver Island

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Appendix A - Bid Form



## Green Space Remediation at 850 Burdett Avenue, Victoria, British Columbia

## **BID FORM**

	Contempl	ated Items			
	Quantity	Unit	Cost	Add per Unit	Delete per Unit
Planning (including site safety plan, permits, traffic management plan & emergency response plan)	1	Lump Sum	\$5,534.43	Not applicable	Not applicable
Utility location	1	Lump Sum	\$1,503.48	Not applicable	Not applicable
Mobilization, demobilization, Site setup & Site security	1	Lump Sum	\$ 9,011.18	Not applicable	Not applicable
Excavate & stockpile soil on-Site	2,864	tonnes*	\$ 8,191.04	\$ 2.86	\$ 2.86
Transport impacted soil to preferred disposal option (assume CL + metals and hydrocarbon impacted, non-hazardous)	2,126	tonnes*	\$ 27,170.28	\$ 12.78	\$ 12.78
Dispose of impacted soil at preferred disposal option (assume CL + metals and hydrocarbon impacted, non-hazardous)	2,126	tonnes*	\$ 99,974.00	\$ 46.99	\$ 46.99
Transport impacted soil to preferred disposal option (assume CL + metals only impacted, non-hazardous)	738	tonnes*	\$ 9,660.42	\$ 13.09	\$ 13.09
Dispose of impacted soil at preferred disposal option (assume CL + metals only impacted, non-hazardous)	738	tonnes*	\$ 34,678.62	\$ 46.99	\$ 46.99
Costs for standby	3	day	\$ 8,988.72	\$ 2,996.24	\$ 2,996.24
Purchase, place & compact clean imported fill material for playground area	444	tonnes**	\$ 9,847.92	\$ 22.18	\$ 22.18
Purchase, place & compact clean imported fill material for remainder of Site	1,478	tonnes**	\$ 39,521.72	\$ 26.74	\$ 26.74
Compaction testing	14	tests	\$ 1,600.76	\$ 114.34	\$ 114.34
Purchase, place & compact imported topsoil material	369	tonnes**	\$ 30,951.72	\$ 83.88	\$ 83.88
CONTRACTOR TOTAL			\$286,634.29		

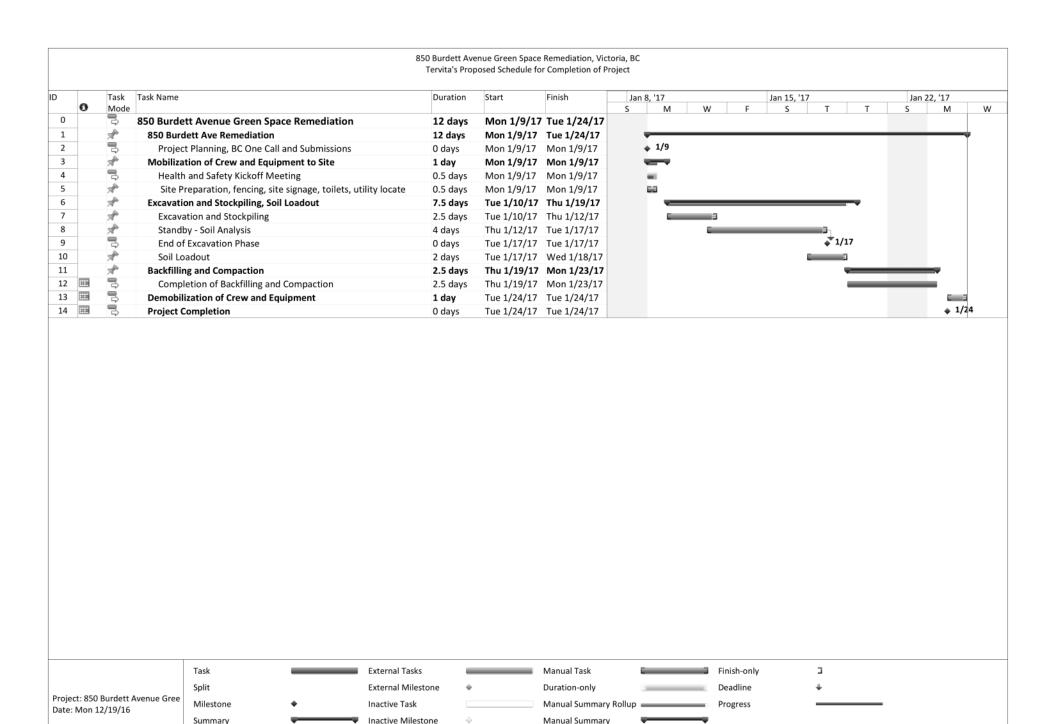
	Additions a	nd Deletions			
	Quantity	Unit	Cost	Add per Unit	Delete per Unit
Transport impacted hazardous soil	500	tonnes	\$ 39,395.00	\$ 78.79	\$ 78.79
Dispose of impacted hazardous soil	500	tonnes	\$ 27,005.00	\$ 54.01	\$ 54.01
Transport non-impacted soil (< RL)	500	tonnes	\$ 7,900.00	\$ 15.80	\$ 15.80
Dispose of non-impacted soil (< RL)	500	tonnes	\$ 830.00	\$ 1.66	\$ 1.66
Transport impacted soil to alternate disposal option (assume CL + metals and hydrocarbon impacted, non-hazardous)	2,126	tonnes*	\$ 83,998.26	\$ 39.51	\$ 39.51
Dispose of impacted soil at alternate disposal option (assume CL + metals and hydrocarbon impacted, non-hazardous)	2,126	tonnes*	\$ 64,311.50	\$ 30.25	\$ 30.25
Transport impacted soil to alternate disposal option (assume CL + metals only impacted, non-hazardous)	738	tonnes*	\$ 29,158.38	\$ 39.51	\$ 39.51
Dispose of impacted soil at alternate disposal option (assume CL + metals only impacted, non-hazardous)	738	tonnes*	\$ 22,324.50	\$ 30.25	\$ 30.25
Additional costs for mobilization per extra excavation/analytical cycle (if required)	1	mobilization	\$ 1,461.30	\$ 1,461.30	\$ 1,461.30

<sup>\*</sup>conservative conversion rate of 1m³ material = 2.0 tonnes material

<sup>\*\*</sup> conversion rate of 1m3 material = 1.6 tonnes material



Appendix B - Project Schedule



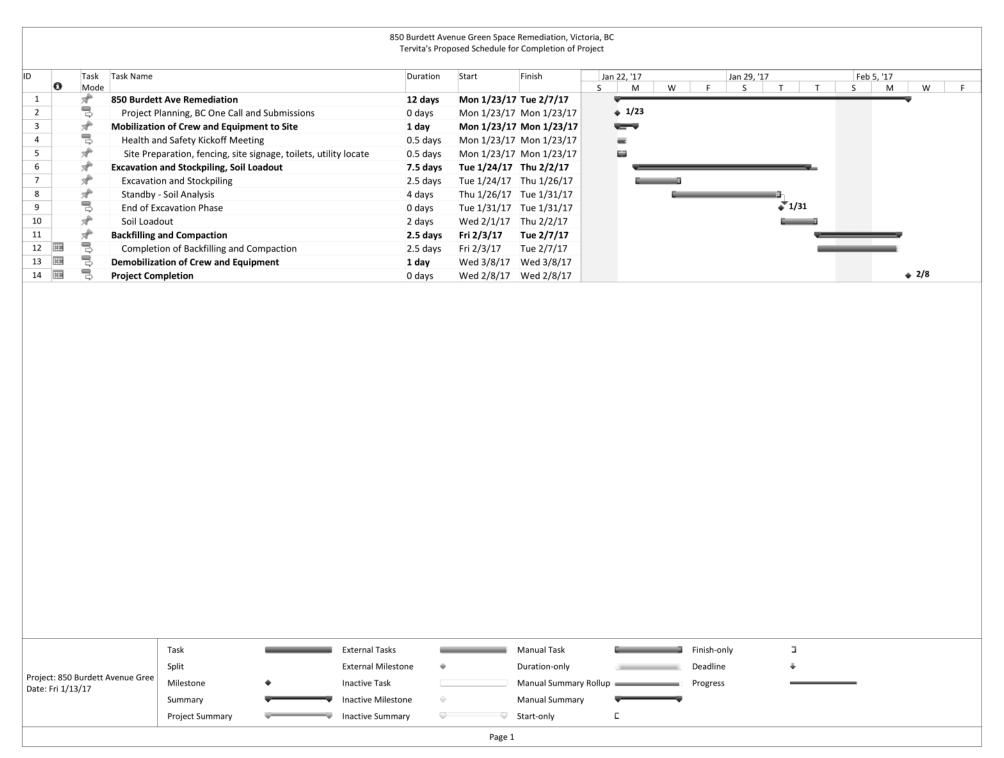
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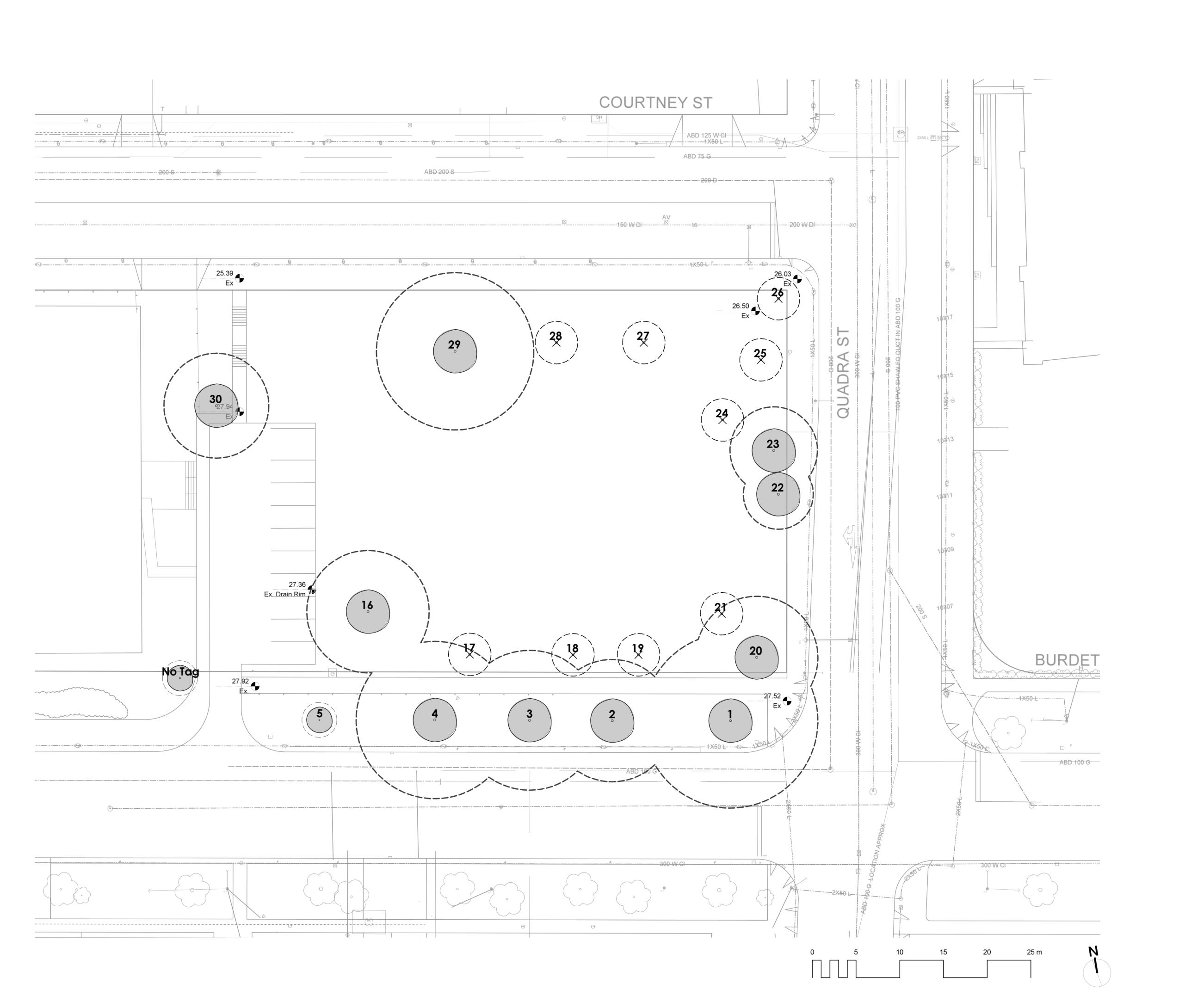
Page 1

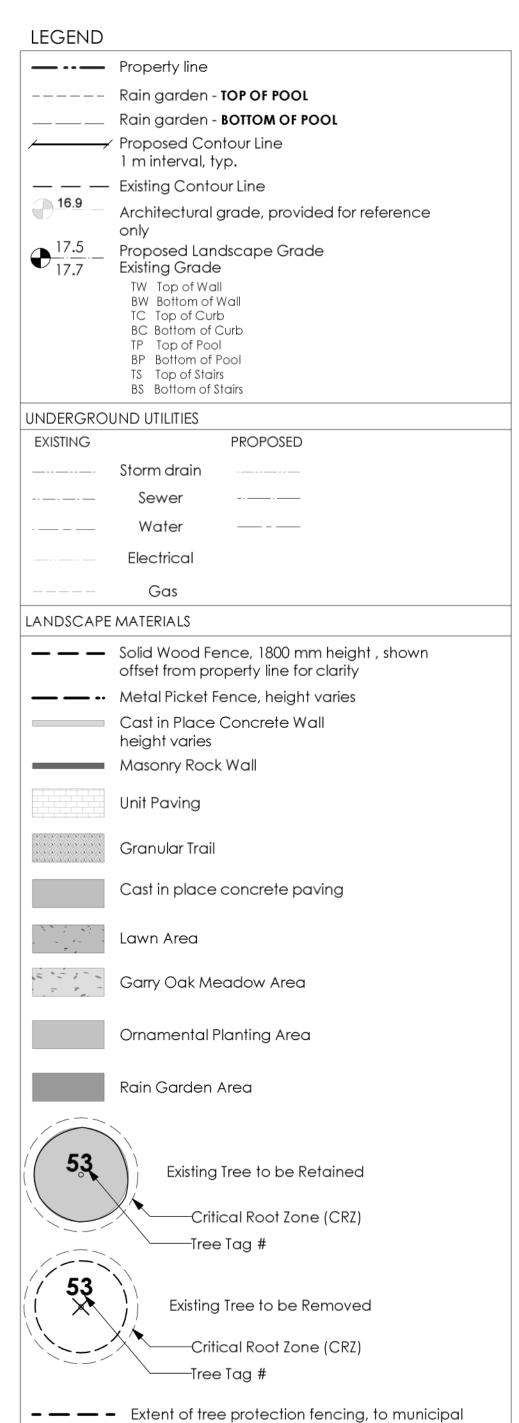
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Project Summary

Inactive Summary







# ALL DRAWINGS TO BE READ IN ASSOCIATION WITH LANDSCAPE SPECIFICATIONS DOCUMENT.

standards, refer to Arborist report for details.

# **DRAWING NOTES**

millimetres.

- DO NOT SCALE DRAWING: Verify all property lines and existing structures/vegetation to remain, prior to commencing work.
   All plan dimensions in metres and all detail dimensions in
- Plant quantities on Plans shall take precedence over plant list quantities.
- 4. Contractor to confirm location and elevation of all existing
- services and utilities prior to start of construction.

  5. Provide layout of all work for approval by Landscape Architect
- prior to proceeding with work.

  6. Contractor to provide irrigation system for all planters to current
- 6. Contractor to provide irrigation system for all planters to current IIABC Standards and Contract Specifications.7. Landscape installation to carry a 1 year warranty from date of
- acceptance.

  8. Plant material, installation and maintenance to conform to the
- current edition of the Canadian Landscape Standard.
  9. General Contractor and/or sub-contractors are responsible for all costs related to production and submission to consultant of all landscape as-built information including irrigation.
- Tree protection fencing, for existing trees, to be installed prior to commencement of all site work

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	Murda de Gre	
200 - 524 C Victoria, BO	Landscape Planning	
CLIENT ADDRI VICTO		
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Landscape Materials

sheet title

Plan

L1.01



October 27, 2016

Brookfield Global Integrated Solutions 23 – 3318 Oak Street Victoria, British Columbia, V8X 1R1

Attention: Nicola Moyles

Project Manager

Re: Green Space Remediation, Project Number: BCGV605283

850 Burdett Avenue, Victoria, British Columbia

PWL File: 13858B

Pinchin West Ltd. (PWL) is pleased to provide Brookfield Global Integrated Solutions (Client) with the following preliminary update and cost estimate for a Green Space Remediation for the above-noted property. This represents an updated scope of work.

E-mail: nicola.moyles@brookfieldgis.com

It is PWL's understanding that the Green Space Remediation is required as part of the due diligence requirements in relation to the cleanup of the eastern (public garden) portion of the property.

#### 1.0 BACKGROUND

Based on your correspondence, it is PWL's understanding that the Site consists of an approximate 0.97 hectare parcel of land. The developed western portion of the Site contains a Provincial Court facility. The eastern portion of the property contains a public garden approximately 3,000 square metres in area. It was reported that a temporary human occupied shelter/civil action camp had been established on this portion of the property and as part of the removal of the camp the Client has requested a soil investigation. During decommissioning of the camp, it was reported that two suspected illegal drug manufacturing operations, numerous hypodermic needles, and an extensive rat population were identified by the Client.

PWL completed an initial round of soil investigation work in relation to the Site. The findings of the initial soil investigation completed by PWL identified soil with parameter concentrations exceeding the applicable ministry of environmental (MOE) contaminated site regulations (CSR) as summarized below:

- Soil samples 16-TP102, 16-TP103, 16-TP111, 16-TP113, 16-TP116 through 16-TP121exceeded the Urban Park (PL) soil standard for various polycyclic aromatic hydrocarbons;
- Soil samples 16-TP109 and 16-TP116 exceeded the Commercial Land use (CL) soil standard for benzene;



Soil samples 16-TP103, 16-TP107, 16-TP108, 16-TP110 through 16-TP121exceeded the
 CL soil standard for lead:

PWL should also note that detectable concentrations of methamphetamines were also identified within the soil samples 16-TP104 and 16-TP106.

Based on the findings noted above, PWL recommended that an additional round of soil investigation be completed at the Site to vertically delineate the above-noted impacts.

A preliminary draft key map showing the Site plan and testpit locations is provided as Figure 2 (attached).

A preliminary draft summary of the current analytical results is provided as Tables 1 through 10 (attached).

#### 2.0 SCOPE OF WORK

The work completed under this project was performed in general accordance with standard environmental consulting practices and the Canadian Standards Association publication entitled "Phase II Environmental Site Assessment, CSA Standard Z769-00 (R 2013)".

The scope of work for the second round of soil investigation consisted of the following activities:

- Retain the services of an independent contractor and public utility services to identify the locations of buried and overhead utility services prior to any drilling/excavation activities. Certain underground utilities (especially if constructed of plastic, fibreglass, clay, concrete pipe, repaired lines, etc.) cannot be located by standard locating practices. PWL and its utility locators will require all Site plans to be provided by the Client, Site owner or Site representatives to identify the locations of untraceable buried utilities. PWL will not be responsible for any damages to utilities that are not on plans provided or cannot be identified by standard locating practices. PWL may recommend the use of day-lighting techniques prior to any drilling/excavating. If day-lighting is recommended, PWL will notify the Client of the cost, which is additional to this proposal;
- environmental concern AEC to assess soil quality and to provide information on Site-specific geological characteristics. Each testpit will be advanced to a maximum depth of 1.5 metres below ground surface, or until refusal is encountered. Re-instatement of the investigation locations will be with excavated material and visually compacted using the excavator. The proposed testpits are subject to change based on Site conditions, presence of utilities or other obstructions, and field observations. All field work will be conducted by a qualified professional (Technologist Rate);

- Field screen soil samples for the presence of petroleum/volatile organic compound
   (VOC)-derived vapours using visual and olfactory considerations, along with a photo ionization detector (PID) calibrated to isobutylene or equivalent. A combination of visual,
   olfactory observations, PID organic vapour readings and reported locations of suspected
   contaminant sources will be utilized to identify the most apparent "worst-case" soil
   samples for laboratory analysis;
- Submit two soil samples per testpit location, based on the field screening methodologies
  for chemical analyses of (VOCs) including benzene, toluene, ethylbenzene and xylenes
  (collectively referred to as BTEX), light extractable petroleum hydrocarbons (LEPH),
  heavy extractable petroleum hydrocarbons (HEPH), volatile petroleum hydrocarbons
  (VPH), polycyclic aromatic hydrocarbons (PAHs), metals and/or methamphetamine;
- Submit soil samples to, a laboratory accredited by the Standards Council of Canada and the Canadian Association for Laboratory Accreditation. The soil samples will be submitted on regular (5 to 7 business day) turnaround time;
- Evaluate the soil analytical results by comparison to the applicable criteria stipulated in the MOE CSR; and
- Prepare a factual report for the Site documenting the findings of the assessment and recommendations (if any) related to subsurface impacts.

#### 3.0 PROJECT ESTIMATED COST

The estimated costs to complete the initial round of soil investigation work previously outlined in the proposal entitled "*Proposal for Soil Investigation*" dated August 30, 2016 (PO#8054973) are presented below:

PWL Professional fees (including field work, project management and reporting)	\$7,000.00
Laboratory Analysis (select soil samples, analyzed for above mentioned parameters based on standard turnaround time. For budgeting purposes PWL has assumed 30 soil samples)	\$20,000.00
Disbursements (including mileage, equipment costs, etc.)	\$1,000.00
The estimated costs to complete the work program detailed above (see presented below:	cond round of soil investigation) are
PWL Professional fees (including field work, project management and reporting)	\$5,000.00
Testpit Investigation (including excavation subcontractor and utility clearances)	\$3,000.00
Laboratory Analysis (select soil samples, analyzed for above mentioned parameters based on standard turnaround time for 7 soil samples)	\$5,000.00
Disbursements (including mileage, equipment costs, etc.)	\$1,000.00
Total Estimated Cost for Both Proposals (excluding all applicable taxes)	\$42,000.00

PWL reserves the right to modify the work program; however, no budgetary changes will be made without notification and consent from the Client. PWL will utilize our Standard Rates and Disbursement Schedule for such additional costs. The estimated cost presented is for the two rounds of work proposed as outlined herein, and does not include Client meetings, obtaining municipal or other required permits, preparation of proposals/cost estimates for follow-up work or remediation activities, or additional work beyond the Soil Investigation scope of work.

The rates and disbursements are based on the Master Service Agreement Reference No.

NC2012CSLT00746000BLJC between the Pinchin Group of Companies and Brookfield Global Integrated Solutions dated January 31, 2012. Environmental Rate Fee Schedule has been attached for reference.

#### 4.0 CLOSING

We trust that the information provided herein is sufficient for the Client to evaluate PWL's soil investigation. If you have any questions, or require additional information, please do not hesitate to contact the undersigned.

We look forward to working with you on this assignment.

Sincerely,

Pinchin West Ltd.

Prepared by:

Jason Quamme, BSc, A.Ag, EP

Project Manager

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jquamme@pinchinwest.com

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Template: Phase II ESA Stage II PSI Proposal Template July 28, 2016

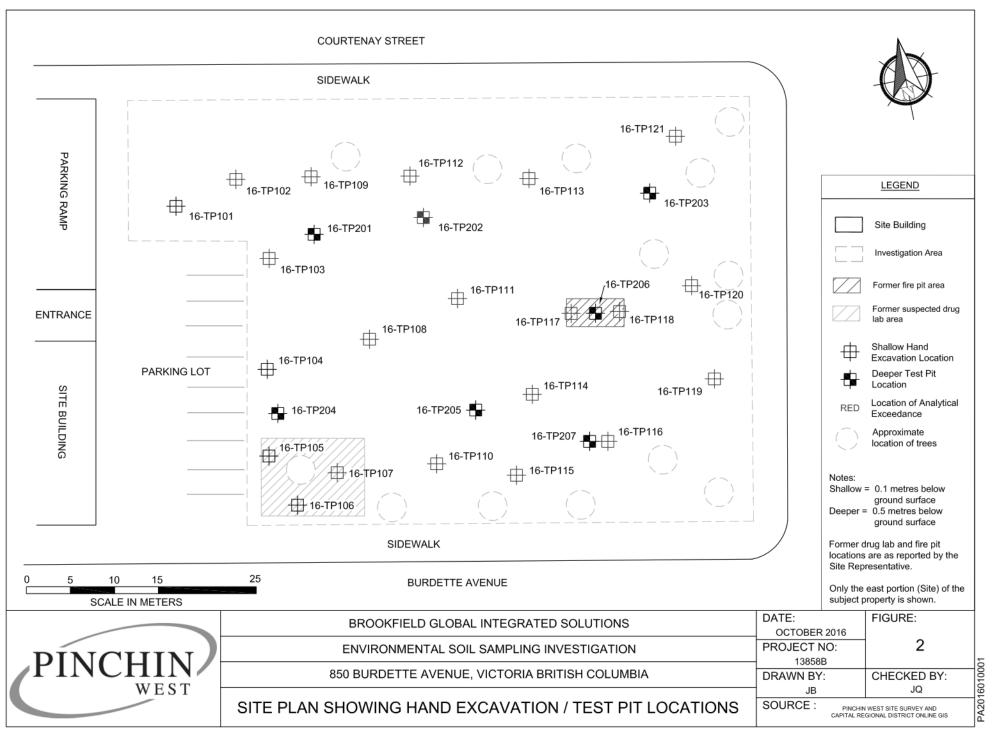
Reviewed by:

Brennan Anstey, P.Eng.

Senior Environmental Engineering Manager

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banstey@pinchinwest.com



# Table 1: Petroleum Hydrocarbons in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia

Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109
- Turumeter	Standards*	Standards**	Standards***	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
				0.1 mbgs								
EPHs10-19	ns	ns	ns	<200	<200	<200	<200	<200	<200	<200	<200	<200
EPHs19-32	ns	ns	ns	<200	<200	<200	<200	260	<200	<200	<200	<200
LEPHs	1000	2000	1000	<200	<200	<200	<200	<200	<200	<200	<200	<200
HEPHs	1000	5000	1000	<200	<200	<200	<200	260	<200	<200	<200	<200
2-Methylnaphthalene	ns	ns	ns	< 0.050	0.066	0.117	< 0.050	< 0.050	<0.050	<0.050	0.055	< 0.050
Acenaphthene	ns	ns	ns	< 0.050	0.172	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050
Acenaphthylene	ns	ns	ns	< 0.050	< 0.050	0.208	0.08	< 0.050	<0.050	<0.050	<0.050	< 0.050
Anthracene	ns	ns	ns	< 0.050	0.656	0.152	0.055	< 0.050	<0.050	<0.050	0.148	< 0.050
Benz[a]anthracene	1	10	1	0.052	0.985	0.557	0.233	0.065	0.089	0.075	0.374	0.075
Benzo[a]pyrene (B[a]P)	1	10	1	0.054	0.794	0.771	0.300	0.077	0.146	0.077	0.336	0.065
Benzo[b]fluoranthene	1	10	1	0.099	1.14	1.02	0.453	0.151	0.241	<0.20	0.487	0.100
Benzo[g,h,i]perylene	ns	ns	ns	< 0.050	0.460	0.577	0.182	0.057	0.110	<0.050	0.197	< 0.050
Benzo[k]fluoranthene	1	10	1	<0.050	0.442	0.371	0.156	0.054	0.101	<0.050	0.195	<0.050
Chrysene	ns	ns	ns	< 0.070	0.872	0.674	0.320	0.090	0.119	0.095	0.370	0.083
Dibenz[a,h]anthracene	1	10	1	<0.050	0.103	0.111	< 0.050	<0.050	<0.050	<0.050	<0.050	< 0.050
Fluoranthene	ns	ns	ns	0.121	2.23	1.13	0.523	0.129	0.145	0.142	0.876	0.156
Fluorene	ns	ns	ns	<0.050	0.239	<0.050	<0.050	< 0.050	<0.050	<0.050	0.067	<0.050
Indeno [1,2,3-cd] pyrene	1	10	1	<0.050	0.540	0.666	0.221	0.066	0.115	0.058	0.251	<0.050
Naphthalene	5	50	5	<0.050	0.113	0.097	<0.050	<0.050	<0.050	<0.050	0.079	<0.050
Phenanthrene	5	50	5	0.058	2.06	0.621	0.300	0.077	0.085	0.079	0.631	0.124
Pyrene	10	100	10	0.107	1.78	1.15	0.534	0.127	0.144	0.143	0.762	0.145

## Notes:

Values in  $\mu g/g$  unless otherwise stated

mbgs = metres below ground surface

ns = no standard

EPHs = Extractable Petroleum Hydrocarbons

LEPHs = Light EPH, corrected for polycyclic aromatic hydrocarbons (PAH)

HEPHs = Heavy EPH, corrected for PAH

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

# Table 1: Petroleum Hydrocarbons in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP110	16-TP111-0.1M	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M
Farameter	Standards*	Standards**	Standards***	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
				0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs
EPHs10-19	ns	ns	ns	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
EPHs19-32	ns	ns	ns	<200	<200	<200	<200	<200	<200	370	350	320	420	<200
LEPHs	1000	2000	1000	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
HEPHs	1000	5000	1000	<200	<200	<200	<200	<200	<200	330	320	290	370	<200
2-Methylnaphthalene	ns	ns	ns	< 0.050	0.203	0.076	0.128	< 0.050	0.258	0.975	0.879	1.15	0.342	0.183
Acenaphthene	ns	ns	ns	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	ns	ns	ns	0.056	0.403	0.06	0.247	0.074	0.334	1.91	2.25	1.82	1.87	0.398
Anthracene	ns	ns	ns	0.05	0.266	0.087	0.22	< 0.050	0.218	1.15	1.26	1.11	1.73	0.237
Benz[a]anthracene	1	10	1	0.192	1.10	0.314	0.871	0.204	0.805	4.41	5.00	4.16	6.11	0.919
Benzo[a]pyrene (B[a]P)	1	10	1	0.186	1.19	0.294	0.962	0.219	0.847	5.65	6.86	5.51	6.55	1.05
Benzo[b]fluoranthene	1	10	1	0.277	1.53	0.403	1.22	0.295	1.08	6.98	8.46	6.71	8.21	1.45
Benzo[g,h,i]perylene	ns	ns	ns	0.102	0.669	0.188	0.533	0.132	0.484	2.85	3.68	2.81	3.56	0.568
Benzo[k]fluoranthene	1	10	1	0.120	0.605	0.159	0.465	0.117	0.401	3.08	3.52	2.73	3.83	0.570
Chrysene	ns	ns	ns	0.209	1.17	0.372	0.914	0.238	0.854	4.88	5.81	4.76	6.84	0.964
Dibenz[a,h]anthracene	1	10	1	< 0.050	0.192	0.050	0.154	<0.050	0.146	0.824	1.04	0.817	0.965	0.175
Fluoranthene	ns	ns	ns	0.333	1.58	0.757	1.36	0.293	1.13	6.88	7.40	6.22	12.3	1.26
Fluorene	ns	ns	ns	< 0.050	< 0.050	< 0.050	<0.050	<0.050	< 0.050	<0.20	<0.20	<0.20	<0.20	<0.050
Indeno [1,2,3-cd] pyrene	1	10	1	0.133	0.829	0.228	0.668	0.162	0.619	3.83	4.90	3.81	4.62	0.762
Naphthalene	5	50	5	0.137	0.355	0.089	0.229	0.051	0.868	2.00	2.20	2.08	0.860	0.395
Phenanthrene	5	50	5	0.147	0.654	0.407	0.624	0.116	0.504	2.77	2.91	2.52	5.99	0.520
Pyrene	10	100	10	0.333	1.62	0.692	1.40	0.324	1.28	7.71	8.42	7.07	12.6	1.41

## Notes:

Values in μg/g unless otherwise stated

mbgs = metres below ground surface

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LEPHs = Light EPH, corrected for polycyclic aromatic hydrocarbons (PAH)

HEPHs = Heavy EPH, corrected for PAH

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

## Table 1: Petroleum Hydrocarbons in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

16-TP121-0.1M 16-TP201-0.6M 16-TP202-0.5M | 16-TP202-1.0M | 16-TP202-1.5M 16-TP203-0.5M 16-TP204-0.4M | 16-TP205-0.4M | 16-TP206-0.5M 16-TP207-0.5M **CSR Soil Relocation CSR Parkland Soil CSR Commercial Soil** Parameter Standards\*\* 10/11/2016 10/11/2016 10/11/2016 10/11/2016 10/11/2016 10/11/2016 10/11/2016 Standards\* Standards\*\*\* 9/7/2016 10/11/2016 10/11/2016 0.5 mbgs 0.5 mbgs 0.1 mbgs 0.6 mbgs 0.5 mbgs 1.0 mbgs 1.5 mbgs 0.4 mbgs 0.4 mbgs 0.5 mbgs EPHs10-19 <200 <200 <200 <200 <200 <200 <200 <200 ns ns ns EPHs19-32 <200 <200 <200 <200 <200 <200 <200 <200 ns LEPHs 1000 2000 1000 <200 <200 <200 <200 <200 <200 <200 <200 HEPHs 1000 5000 <200 <200 <200 <200 1000 <200 <200 <200 <200 -0.136 0.513 0.075 < 0.050 < 0.050 < 0.050 2-Methylnaphthalene 0.211 < 0.050 ns ns ns < 0.050 < 0.050 < 0.050 <0.050 < 0.050 < 0.050 < 0.050 < 0.050 Acenaphthene ns ns ns --0.385 < 0.050 0.749 0.056 < 0.050 < 0.050 < 0.050 0.07 Acenaphthylene ns ns ns Anthracene ns ns ns 0.216 < 0.050 0.407 < 0.050 < 0.050 < 0.050 < 0.050 < 0.050 Benz[a]anthracene 0.86 0.121 < 0.050 < 0.050 < 0.050 0.168 1 10 0.155 1.74 --1.09 2.28 Benzo[a]pyrene (B[a]P) 10 0.171 < 0.050 < 0.050 < 0.050 0.233 0.168 Benzo[b]fluoranthene 10 1.48 2.96 < 0.050 < 0.050 0.274 0.246 0.205 < 0.050 --Benzo[g,h,i]perylene 0.546 1.32 0.088 < 0.050 < 0.050 < 0.050 0.107 0.091 ns ns ns Benzo[k]fluoranthene 10 0.572 0.089 1.18 0.085 <0.050 < 0.050 < 0.050 0.118 1 --0.917 1.88 0.125 <0.050 < 0.050 0.162 Chrysene 0.189 < 0.050 ns ns ns 10 0.179 < 0.050 0.386 < 0.050 < 0.050 < 0.050 < 0.050 < 0.050 Dibenz[a,h]anthracene Fluoranthene 1.19 0.335 2.58 0.184 < 0.050 < 0.050 < 0.050 0.258 ns ns ns Fluorene < 0.050 < 0.050 < 0.050 < 0.050 < 0.050 < 0.050 < 0.050 ns ns ns < 0.050 Indeno [1,2,3-cd] pyrene 10 0.745 0.122 1.93 0.113 < 0.050 < 0.050 < 0.050 0.145 1 -Naphthalene 0.726 5 50 5 0.272 0.13 0.074 < 0.050 < 0.050 < 0.050 0.109

0.215

0.333

1.10

2.78

-

-

0.112

0.206

<0.050

< 0.050

< 0.050

< 0.050

< 0.050

< 0.050

0.117

0.29

0.451

1.33

5

10

## Notes:

Pyrene

Values in  $\mu g/g$  unless otherwise stated

mbgs = metres below ground surface

ns = no standard

Phenanthrene

EPHs = Extractable Petroleum Hydrocarbons

LEPHs = Light EPH, corrected for polycyclic aromatic hydrocarbons (PAH)

HEPHs = Heavy EPH, corrected for PAH

XXX.XX	= Exceeds Applicable Parkland Soil Standard
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XXX.XX	= Exceeds Applicable Soil Relocation Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

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\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

\*\*\* Soil relocation to nonagricultural land standards in Schedule 7 of the B.C. Contaminated Sites Regulation (CSR).

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# Table 2: Volatile Organic Compounds in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Paramatan.	CSR Urban Park Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110	16-TP111-0.1M
Parameter	Standards*	Standards**	Standards***	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
				0.1 mbgs										
1,1,1,2-Tetrachloroethane	32	73	ns	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,1,1-Trichloroethane	5	50	5	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,1,2,2-Tetrachloroethane	4.1	9.3	5	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050
1,1,2-Trichloroethane	5	50	5	< 0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050
1,1-Dichloroethane	5	50	5	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050
1,1-Dichloroethene	5	50	5	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,2-Dichlorobenzene	1	10	1	< 0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050
1,2-Dichloroethane	5	50	5	< 0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichloropropane	5	50	5	< 0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050
1,3-Dichlorobenzene	1	10	1	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,4-Dichlorobenzene	1	10	1	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
2-Hexanone	ns	ns	ns	< 0.050	<0.050	<0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050	<0.050
Acetone	14000	54000	ns	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Benzene	0.04	0.04	0.04	< 0.0050	<0.0050	0.0107	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.349	< 0.0050	0.0084
BDCM (bromodichloromethane)	8.2	18	ns	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	< 0.050	< 0.050
Bromoform (tribromomethane)	620	2200	ns	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
Carbon Disulfide	360	720	ns	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
Carbon Tetrachloride	5	50	5	< 0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050
Monochlorobenzene	1	10	1	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Chloroethane (ethyl chloride)	30	65	ns	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloroform	5	50	5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloromethane (methyl chloride)	47	160	ns	<0.10	<0.10	<0.10	<0.10	< 0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-dichloroethene (cis)	5	50	5	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,2-Dichloroethene (trans)	5	50	5	< 0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050
1,3-dichloropropene (cis)	ns	ns	5	<0.050	<0.050	<0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,3-dichloropropene (trans)	ns	ns	5	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	< 0.050
1,3-dichloropropene	5	5	5	<0.050	<0.050	<0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050
DBCM (dibromochloromethane)	11	26	ns	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dichloromethane	5	50	5	<0.30	<0.30	<0.30	< 0.30	<0.30	< 0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	1	7	1	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.087	<0.015	<0.015
Ethyl ether	1800	1800	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
m&p-Xylene	ns	ns	ns	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.634	<0.050	<0.050
Methyl ethyl ketone (MEK)	22000	110000	ns	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Methyl isobutyl ketone (MIBK)	5300	47000	ns	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Methyl tert-butyl ether (MTBE)	320	700	ns	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Heptane (nC7)	ns	ns	ns	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.270	<0.050	<0.050
n-Octane (nC8)	ns	ns	ns	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.219	<0.050	<0.050
o-Xylene	ns	ns	ns	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.419	<0.050	<0.050
Styrene	5	50	5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Tetrachloroethylene (PERC)	5	5	5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	1.5	2.5	1.5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.627	<0.050	<0.050
Total Xylenes	5	20	5	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	1.05	<0.075	<0.075
Trichloroethylene (TCE)	0.015	0.015	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Trichlorofluoromethane (Freon 11)	390	2000	ns	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Vinyl chloride (chloroethene)	0.79	7.5	ns	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
VH	ns	ns	ns	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
VPHs	200	200	ns	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100

# Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface

ns = no standard

VH = Volatile Hydrocarbons VPH = Volatile Petroleum Hydrocarbons

XXX.XX = Exceeds Applicable Parkland Soil Standard

XXX.XX = Exceeds Applicable Commercial Soil Standard

XXX.XX = Exceeds Applicable Soil Relocation Standard

\* Urban Park Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

# Table 2: Volatile Organic Compounds in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

<b>D</b>	CSR Urban Park Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M	16-TP121-0.1M	16-TP201-0.6M
Parameter	Standards*	Standards**	Standards***	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	10/11/2016
				0.1 mbgs	0.6 mbgs									
1,1,1,2-Tetrachloroethane	32	73	ns	<0.050	< 0.050	<0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050
1,1,1-Trichloroethane	5	50	5	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050	<0.050	<0.050	< 0.050
1,1,2,2-Tetrachloroethane	4.1	9.3	5	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,2-Trichloroethane	5	50	5	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	<0.050	<0.050	<0.050	<0.050
1,1-Dichloroethane	5	50	5	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	<0.050	<0.050
1,1-Dichloroethene	5	50	5	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050	<0.050	< 0.050
1,2-Dichlorobenzene	1	10	1	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050	<0.050	< 0.050
1,2-Dichloroethane	5	50	5	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,2-Dichloropropane	5	50	5	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050	<0.050	< 0.050
1,3-Dichlorobenzene	1	10	1	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,4-Dichlorobenzene	1	10	1	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050	<0.050
2-Hexanone	ns	ns	ns	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	-
Acetone	14000	54000	ns	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	-
Benzene	0.04	0.04	0.04	0.0258	<0.0050	<0.0050	0.025	0.0724	0.0308	0.016	0.0072	0.0067	<0.0050	0.0169
BDCM (bromodichloromethane)	8.2	18	ns	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bromoform (tribromomethane)	620	2200	ns	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050
Carbon Disulfide	360	720	ns	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	< 0.050	< 0.050	-
Carbon Tetrachloride	5	50	5	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050
Monochlorobenzene	1	10	1	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Chloroethane (ethyl chloride)	30	65	ns	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloroform	5	50	5	<0.10	<0.10	<0.10	<0.10	< 0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloromethane (methyl chloride)	47	160	ns	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-dichloroethene (cis)	5	50	5	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050
1,2-Dichloroethene (trans)	5	50	5	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050
1,3-dichloropropene (cis)	ns	ns	5	< 0.050	< 0.050	<0.050	<0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,3-dichloropropene (trans)	ns	ns	5	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,3-dichloropropene	5	5	5	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-
DBCM (dibromochloromethane)	11	26	ns	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dichloromethane	5	50	5	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	< 0.30	<0.30	<0.30
Ethylbenzene	1	7	1	<0.015	<0.015	<0.015	0.027	0.069	0.025	0.031	<0.015	<0.015	<0.015	0.018
Ethyl ether	1800	1800	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	-
m&p-Xylene	ns	ns	ns	0.078	<0.050	<0.050	0.189	0.505	0.132	0.175	0.093	<0.050	<0.050	0.107
Methyl ethyl ketone (MEK)	22000	110000	ns	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	-
Methyl isobutyl ketone (MIBK)	5300	47000	ns	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-
Methyl tert-butyl ether (MTBE)	320	700	ns	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Heptane (nC7)	ns	ns	ns	<0.050	<0.050	<0.050	0.058	0.093	<0.050	0.063	<0.050	<0.050	<0.050	-
n-Octane (nC8)	ns	ns	ns	<0.050	<0.050	<0.050	<0.050	0.102	<0.050	0.098	<0.050	<0.050	<0.050	-
o-Xylene	ns	ns	ns	0.051	<0.050	<0.050	0.106	0.361	0.115	0.164	0.076	<0.050	<0.050	0.083
Styrene	5	50	5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Tetrachloroethylene (PERC)	5	5	5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	1.5	2.5	1.5	0.097	<0.050	<0.050	0.185	0.33	0.084	0.087	0.051	<0.050	<0.050	0.077
Total Xylenes	5	20	5	0.129	<0.075	<0.075	0.295	0.866	0.248	0.339	0.169	<0.075	<0.075	0.19
Trichloroethylene (TCE)	0.015	0.015	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Trichlorofluoromethane (Freon 11)	390	2000	ns	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Vinyl chloride (chloroethene)	0.79	7.5	ns	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
VH	ns	ns	ns	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
VPHs	200	200	ns	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100

# Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface

ns = no standard

VH = Volatile Hydrocarbons VPH = Volatile Petroleum Hydrocarbons

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

\* Urban Park Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine)

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

# Table 2: Volatile Organic Compounds in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Barrary at an	CSR Urban Park Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP202-0.5M	16-TP202-1.0M	16-TP202-1.5M	16-TP203-0.5M	16-TP204-0.4M	16-TP205-0.4M	16-TP206-0.5M	16-TP207-0.5M
Parameter	Standards*	Standards**	Standards***	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016
				0.5 mbgs	1.0 mbgs	1.5 mbgs	0.5 mbgs	0.4 mbgs	0.4 mbgs	0.5 mbgs	0.5 mbgs
1,1,1,2-Tetrachloroethane	32	73	ns	<0.050	-	-	<0.050	<0.050	< 0.050	<0.050	<0.050
1,1,1-Trichloroethane	5	50	5	<0.050	-	-	<0.050	<0.050	< 0.050	<0.050	<0.050
1,1,2,2-Tetrachloroethane	4.1	9.3	5	<0.050	-	-	<0.050	<0.050	< 0.050	<0.050	<0.050
1,1,2-Trichloroethane	5	50	5	<0.050	-	-	<0.050	<0.050	< 0.050	<0.050	<0.050
1,1-Dichloroethane	5	50	5	< 0.050	-	-	<0.050	<0.050	< 0.050	< 0.050	< 0.050
1,1-Dichloroethene	5	50	5	< 0.050	-	-	<0.050	<0.050	< 0.050	< 0.050	< 0.050
1,2-Dichlorobenzene	1	10	1	< 0.050	-	-	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,2-Dichloroethane	5	50	5	< 0.050	-	-	< 0.050	<0.050	< 0.050	< 0.050	< 0.050
1,2-Dichloropropane	5	50	5	< 0.050	-	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,3-Dichlorobenzene	1	10	1	<0.050	-	-	<0.050	<0.050	< 0.050	<0.050	< 0.050
1,4-Dichlorobenzene	1	10	1	<0.050	-	-	<0.050	<0.050	< 0.050	<0.050	< 0.050
2-Hexanone	ns	ns	ns	-	-	-	-	-	-	-	-
Acetone	14000	54000	ns	-	-	-	-	-	-	-	-
Benzene	0.04	0.04	0.04	0.0168	-	-	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0050
BDCM (bromodichloromethane)	8.2	18	ns	< 0.050	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
Bromoform (tribromomethane)	620	2200	ns	< 0.050	_	_	<0.050	<0.050	<0.050	<0.050	<0.050
Carbon Disulfide	360	720	ns	-	_	-	-	-	-	-	-
Carbon Tetrachloride	5	50	5	<0.050	_	_	<0.050	<0.050	<0.050	<0.050	<0.050
Monochlorobenzene	1	10	1	<0.050	-	_	<0.050	<0.050	<0.050	<0.050	<0.050
Chloroethane (ethyl chloride)	30	65	ns	<0.10	_	_	<0.10	<0.10	<0.10	<0.10	<0.10
Chloroform	5	50	5	<0.10	_	_	<0.10	<0.10	<0.10	<0.10	<0.10
Chloromethane (methyl chloride)	47	160		<0.10	-	_	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-dichloroethene (cis)	5	50	ns 5	<0.050	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichloroethene (trans)	5	50	5	<0.050	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
1,3-dichloropropene (cis)			5	<0.050			<0.050	<0.050	<0.050	<0.050	<0.050
1,3-dichloropropene (trans)	ns	ns	5	<0.050	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
	ns 5	ns 5	5	<0.050			<0.050	<0.030	<0.050	<0.050	<0.030
1,3-dichloropropene DBCM (dibromochloromethane)		•		-0.050	-	-	-0.050	-0.050	-0.050	-0.050	-0.050
	11 5	26	ns	<0.050	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
Dichloromethane	5	50 7	5	<0.30	-	-	<0.30	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	1	,	1	0.024	-	-	<0.015	<0.015	<0.015	<0.015	<0.015
Ethyl ether	1800	1800	ns		-	-		-		-	
m&p-Xylene	ns	ns	ns	0.116	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
Methyl ethyl ketone (MEK)	22000	110000	ns	<del>                                     </del>	-	-	-	-	-	-	-
Methyl isobutyl ketone (MIBK)	5300	47000	ns	-	-	-	-	-	-	-	-
Methyl tert-butyl ether (MTBE)	320	700	ns	<0.20	-	-	<0.20	<0.20	<0.20	<0.20	<0.20
n-Heptane (nC7)	ns	ns	ns	-	-	-	-	-	-	-	-
n-Octane (nC8)	ns	ns	ns	-	-	-	-	-	-	-	-
o-Xylene	ns	ns	ns	0.11	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
Styrene	5	50	5	<0.050	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
Tetrachloroethylene (PERC)	5	5	5	<0.050	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	1.5	2.5	1.5	0.075	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
Total Xylenes	5	20	5	0.225	-	-	<0.075	<0.075	<0.075	<0.075	<0.075
Trichloroethylene (TCE)	0.015	0.015	0.015	<0.010	-	-	<0.010	<0.010	<0.010	<0.010	<0.010
Trichlorofluoromethane (Freon 11)	390	2000	ns	<0.10	-	-	<0.10	<0.10	<0.10	<0.10	<0.10
Vinyl chloride (chloroethene)	0.79	7.5	ns	<0.10	-	-	<0.10	<0.10	<0.10	<0.10	<0.10
VH	ns	ns	ns	<100	-	-	<100	<100	<100	<100	<100
VPHs	200	200	ns	<100	-	-	<100	<100	<100	<100	<100

# Notes:

Values in  $\mu g/g$  unless otherwise stated

mbgs = metres below ground surface

ns = no standard

VH = Volatile Hydrocarbons VPH = Volatile Petroleum Hydrocarbons

XXX.XX = Exceeds

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

\* Urban Park Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

Table 3: Metals in Soil
Job Number: 13858B
Site: 850 Burdett Avenue, Victoria, British Columbia
Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110	16-TP111-0.1M
Parameter	Standards*	Standards**	Standards***	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
				0.1 mbgs										
pН	ns	ns		5.46	6.42	5.67	5.34	5.26	5.38	5.53	5.57	5.57	5.31	5.80
Antimony	20	40	20	0.52	0.81	0.84	0.55	0.75	0.85	0.50	0.85	0.56	0.66	1.91
Arsenic	15	15	15	3.35	4.07	4.83	4.89	3.39	5.00	4.71	4.91	4.74	4.27	5.51
Barium	400	400	400	94.4	156	179	126	104	134	70.5	102	102	112	212
Beryllium	4	8	4	0.32	0.33	0.40	0.36	0.29	0.38	0.31	0.34	0.29	0.31	0.38
Cadmium	1.5 @ pH < 6.5	1.5 @ pH < 6.5	1.5	0.236	0.423	0.798	0.545	0.424	0.464	0.466	0.663	0.575	0.411	0.605
Chromium	60	60	60	28.3	34.1	37.1	41.2	32.8	46.5	33.5	45.8	55.0	36.9	41.1
Cobalt	50	300	50	7.97	9.17	9.88	10.3	7.64	11.3	9.61	9.70	9.61	10.6	10.0
Copper	100 @ pH 5.0 — < 5.5 150 @ pH > 5.5	100 @ pH 5.0 — < 5.5 200 @ pH 5.5 - <6.0 250 @ pH > 6.0	90	32.0	49.9	62.2	43.4	43.3	44.1	31.6	39.5	30.6	30.5	39.6
Lead	100 @ pH < 6.0 250 @ pH 6.0 — < 6.5 400 @ pH >6.5	100 @ pH < 6.0 250 @ pH 6.0 — < 6.5 700 @ pH >6.5	100	52.6	66.6	200	92.1	79.0	75.9	149	128	98.9	130	303
Mercury (inorganic)	15	40	15	0.067	0.096	0.134	0.097	0.102	0.136	0.077	0.125	0.076	0.068	0.129
Molybdenum	10	40	10	0.76	0.73	0.59	0.63	1.10	1.26	0.44	0.63	0.37	0.43	0.75
Nickel	100	500	100	20.4	24.1	25.2	26.3	18.8	28.6	26.0	25.5	23.8	25.6	27.7
Selenium	3	10	3	0.26	0.25	0.30	0.27	<0.20	0.28	0.21	0.36	0.25	<0.20	0.26
Silver	20	40	20	0.11	0.17	0.31	0.21	0.19	0.20	0.11	0.26	0.18	0.15	0.23
Thallium	ns	ns	ns	0.057	0.067	0.074	0.067	0.057	0.068	0.067	0.072	0.067	0.071	0.070
Tin	50	300	50	2.0	<2.0	2.4	<2.0	<2.0	<2.0	<2.0	2.5	<2.0	2.4	2.7
Uranium	16	200	ns	0.507	0.604	1.19	1.02	0.576	0.742	0.913	1.11	0.972	0.833	1.05
Vanadium	200	ns	200	56.1	59.6	68.0	70.1	49.2	73.4	66.5	69.7	64.4	77.6	68.9
Zinc	150 @ pH < 6.5 450 @ pH >6.5	150 @ pH < 6.5 600 @ pH > 6.5	150	83.9	139	119	81.3	96.5	111	68.0	91.5	81.8	83.0	152

# Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface ns = no standard

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

Table 3: Metals in Soil
Job Number: 13858B
Site: 850 Burdett Avenue, Victoria, British Columbia
Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M	16-TP121-0.1M	16-TP201-0.6M
Parameter	Standards*	Standards**	Standards***	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	10/11/2016
				0.1 mbgs	0.6 mbgs									
рН	ns	ns		5.69	5.49	5.53	5.21	5.75	5.73	5.89	5.51	5.57	5.34	7.56
Antimony	20	40	20	1.16	0.55	0.65	0.65	0.57	0.51	0.53	0.59	0.76	0.75	0.41
Arsenic	15	15	15	3.88	4.60	4.55	4.56	5.28	4.89	5.51	4.32	4.75	4.29	4.61
Barium	400	400	400	133	136	154	158	249	241	302	134	167	165	166
Beryllium	4	8	4	0.31	0.36	0.53	0.46	0.41	0.43	0.47	0.27	0.38	0.36	0.35
Cadmium	1.5 @ pH < 6.5	1.5 @ pH < 6.5	1.5	0.402	0.388	0.717	0.545	0.526	0.562	0.677	0.503	0.554	0.377	0.208
Chromium	60	60	60	29.9	37.1	46.7	38.1	37.1	34.3	39.2	31.4	36.1	30.7	29.4
Cobalt	50	300	50	7.99	8.42	10.3	9.88	9.66	8.21	9.47	6.87	8.30	8.31	10.2
Copper	100 @ pH 5.0 — < 5.5 150 @ pH > 5.5	100 @ pH 5.0 — < 5.5 200 @ pH 5.5 - <6.0 250 @ pH > 6.0	90	32.1	31.6	41.3	39.0	32.3	33.2	35.4	27.3	34.4	36.9	34.7
Lead	100 @ pH < 6.0 250 @ pH 6.0 — < 6.5 400 @ pH >6.5	100 @ pH < 6.0 250 @ pH 6.0 — < 6.5 700 @ pH >6.5	100	197	177	118	153	207	133	219	201	241	156	127
Mercury (inorganic)	15	40	15	0.150	0.186	0.103	0.128	0.134	0.124	0.175	0.137	0.185	0.170	0.172
Molybdenum	10	40	10	0.52	0.62	1.67	1.46	0.81	1.01	0.86	0.64	0.87	0.82	0.45
Nickel	100	500	100	22.6	23.1	28.0	25.4	29.6	23.9	26.3	18.1	21.5	22.1	24.4
Selenium	3	10	3	0.24	0.25	0.27	0.27	0.25	0.24	0.28	0.24	0.32	0.26	0.23
Silver	20	40	20	0.30	0.18	0.26	0.22	0.19	0.20	0.24	0.18	0.26	0.17	0.14
Thallium	ns	ns	ns	0.068	0.073	0.094	0.083	0.073	0.067	0.073	0.052	0.080	0.066	0.057
Tin	50	300	50	2.4	<2.0	<2.0	2.2	<2.0	<2.0	4.7	11.4	3.8	2.8	2.3
Uranium	16	200	ns	0.854	0.882	1.66	1.41	0.999	1.12	1.15	0.883	1.08	0.726	0.38
Vanadium	200	ns	200	57.0	59.9	74.6	66.0	67.6	60.1	65.5	52.0	60.5	58.1	69.5
Zinc	150 @ pH < 6.5 450 @ pH >6.5	150 @ pH < 6.5 600 @ pH > 6.5	150	100	87.4	96.3	97.6	85.6	82.8	94.6	73.8	105	102	77.7

# Notes:

Values in μg/g unless otherwise stated mbgs = metres below ground surface ns = no standard

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

Table 3: Metals in Soil Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP202-0.5M	16-TP202-1.0M	16-TP202-1.5M	16-TP203-0.5M	16-TP204-0.4M	16-TP205-0.4M	16-TP206-0.5M	16-TP107-0.5M
Farameter	Standards*	Standards**	Standards***	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016
				0.5 mbgs	1.0 mbgs	1.5 mbgs	0.5 mbgs	0.4 mbgs	0.4 mbgs	0.5 mbgs	0.5 mbgs
рН	ns	ns		6.55	7.5	7.59	7.89	6.6	6.72	7.6	6.61
Antimony	20	40	20	0.68	0.46	0.24	0.52	1.37	0.14	0.24	0.14
Arsenic	15	15	15	6.05	5.32	4.47	4.44	5.48	4.17	3.55	3.89
Barium	400	400	400	262	228	79.6	117	57.7	57.2	182	68.5
Beryllium	4	8	4	0.43	0.4	0.32	0.25	0.32	0.28	0.34	0.28
Cadmium	1.5 @ pH < 6.5	1.5 @ pH < 6.5	1.5	0.238	0.247	0.07	0.174	0.697	0.078	0.129	0.08
Chromium	60	60	60	30.9	27.3	29.6	20	27.1	19	27.9	21.3
Cobalt	50	300	50	10.8	10.5	10.5	7.58	10.1	9.34	8.78	7.77
Copper	100 @ pH 5.0 — < 5.5 150 @ pH > 5.5	100 @ pH 5.0 — < 5.5 200 @ pH 5.5 - <6.0 250 @ pH > 6.0	90	35.6	29.1	26.7	21.6	32.6	25.7	14.0	19.9
Lead	100 @ pH < 6.0 250 @ pH 6.0 — < 6.5 400 @ pH >6.5	100 @ pH < 6.0 250 @ pH 6.0 — < 6.5 700 @ pH >6.5	100	198	100	7.37	62.6	13.5	3.46	47.4	17.1
Mercury (inorganic)	15	40	15	0.198	0.102	<0.050	0.065	< 0.050	< 0.050	< 0.050	< 0.050
Molybdenum	10	40	10	0.59	0.56	0.4	0.35	0.54	0.18	0.3	0.26
Nickel	100	500	100	28.4	26.8	24.9	18.6	27.5	21.4	20.7	19.6
Selenium	3	10	3	0.26	<0.20	<0.20	<0.20	<0.20	<0.20	0.22	<0.20
Silver	20	40	20	0.16	0.11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Thallium	ns	ns	ns	0.078	0.071	0.066	< 0.050	0.077	0.068	0.073	0.062
Tin	50	300	50	2.4	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Uranium	16	200	ns	0.51	0.444	0.382	0.347	0.388	0.238	0.403	0.35
Vanadium	200	ns	200	68.1	70.4	64.1	47.7	71.6	56.4	56.4	58.8
Zinc	150 @ pH < 6.5 450 @ pH >6.5	150 @ pH < 6.5 600 @ pH > 6.5	150	93.4	75.0	40.2	62.2	44.8	40.4	95.9	36.4

# Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface ns = no standard

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

## Table 4: Toxicity Characteristic Leaching Procedure Metals in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	CSR Leachate Quality	16-TP201-0.6M	16-TP202-0.5M
Parameter	Standards*	10/11/2016	10/11/2016
		0.6 mbgs	0.5 mbgs
1st Preliminary pH	ns	7.97	7.17
2nd Preliminary pH	ns	1.67	1.60
Final pH	ns	5.02	4.99
Extraction Solution Initial pH	ns	4.95	4.95
Antimony (Sb)-Leachable	ns	<1000	<1000
Arsenic (As)-Leachable	2500	<1000	<1000
Barium (Ba)-Leachable	100000	<2500	<2500
Beryllium (Be)-Leachable	ns	<25	<25
Boron (B)-Leachable	500000	<500	<500
Cadmium (Cd)-Leachable	500	<50	<50
Calcium (Ca)-Leachable	ns	82900	55400
Chromium (Cr)-Leachable	5000	<250	<250
Cobalt (Co)-Leachable	ns	<50	<50
Copper (Cu)-Leachable	100000	<50	<50
Iron (Fe)-Leachable	ns	<150	<150
Lead (Pb)-Leachable	5000	<250	<250
Magnesium (Mg)-Leachable	ns	2990	4490
Mercury (Hg)-Leachable	100	<1.0	<1.0
Nickel (Ni)-Leachable	ns	<250	<250
Selenium (Se)-Leachable	ns	<1000	<1000
Silver (Ag)-Leachable	5000	<50	<50
Thallium (TI)-Leachable	ns	<1000	<1000
Vanadium (V)-Leachable	ns	<150	<150
Zinc (Zn)-Leachable	500000	<500	<500

## Notes:

Values in  $\mu g/L$  unless otherwise stated mbgs = metres below ground surface ns = no standard

XXX.XX

= Exceeds Applicable Leachate Quality Soil Standard

 $<sup>^{\</sup>star}$  Leachate quality standards provided in Schedule 4, Part 3, Table 1 of the B.C. Hazardous Waste Regulation.

## Table 5: Bacteria in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia

Client: Brookfield Global Integrated Solutions

Parameter	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110	16-TP111-0.1M
Parameter	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
	0.1 mbgs										
E. coli	143	4	<2	1020	>1820.14	635	<2	<2	<2	<2	4
Coliform Bacteria - Fecal	143	4	<2	1020	>1820.14	635	<2	<2	<2	<2	4
Coliform Bacteria - Total	>1769.88	>1830.49	247	1790	>1820.14	>1884.07	53	77	15	9	266

## Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface

ns = no standard

XXX.XX

## Table 5: Bacteria in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, Britis Client: Brookfield Global Integrated Solu

Parameter	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M	16-TP121-0.1M
Parameter	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
	0.1 mbgs									
E. coli	<2	4	1810	<2	4	3	<2	<2	<2	<2
Coliform Bacteria - Fecal	<2	4	1810	<2	4	3	<2	<2	<2	<2
Coliform Bacteria - Total	4	608	1810	>1879.67	79	>1775.55	38	268	621	146

## Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface

ns = no standard

XXX.XX

## Table 6: Nutrients in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	CSR Urban Park Soil Standards*	CSR Commercial Soil Standards*	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109
Farameter CSN Orban Fark Son Standards	CSA Commercial Soil Standards	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	
			0.1 mbgs								
Total Phosphate As P	ns	ns	14.0	16.8	3.98	3.38	11.5	17.2	4.82	2.47	2.08
Ammonia, Total Leachable (as N)	ns	ns	0.735	2.960	0.711	1.73	16.7	2.47	1.030	0.624	0.715

## Notes:

Values in µg/g unless otherwise stated

mbgs = metres below ground surface

ns = no standard

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

## Table 6: Nutrients in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter CSR Urban	CSR Urban Park Soil Standards*	CSR Commercial Soil Standards*		16-TP111-0.1M	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M	16-TP121-0.1M
Parameter	CSh Orban Park Son Standards   CSh Com		9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
			0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs
Total Phosphate As P	ns	ns	2.74	3.60	4.49	6.59	2.42	4.39	2.34	2.91	2.74	2.20	3.57	7.47
Ammonia, Total Leachable (as N)	ns	ns	0.625	0.493	0.452	0.690	0.787	3.85	0.797	2.13	0.660	2.79	2.62	0.626

## Notes:

Values in μg/g unless otherwise stated

mbgs = metres below ground surface

ns = no standard

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX XX	= Exceeds Applicable Commercial Soil Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

# Table 7: Alcohols in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	CSR Urban Park Soil	CSR Commercial Soil	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110
Parameter	Standards*	Standards**	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
			0.1 mbgs									
sec-Butanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
n-Butanol	6100	61000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Isobutanol	1300	40000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Isopropanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methanol	31,000	100,000	<0.50	8.07	7.39	2.58	2.22	<0.50	1.92	6.7	4.58	3.25
Pentanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

## Notes:

Values in μg/g unless otherwise stated mbgs = metres below ground surface

ns = no standard

XXX.XX	
XXX.XX	

= Exceeds Applicable Parkland Soil Standard = Exceeds Applicable Commerical Soil Standard

\* Urban Park Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

# Table 7: Alcohols in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Doromotor	CSR Urban Park Soil	CSR Commercial Soil	16-TP111-0.1M	16-TP112- 0.1M	16-TP113- 0.1M	16-TP114- 0.1M	16-TP115- 0.1M	16-TP116- 0.1M	16-TP117- 0.1M	16-TP118- 0.1M	16-TP119- 0.1M	16-TP120- 0.1M	16-TP121- 0.1M
Parameter	Standards*	Standards**	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
			0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs
sec-Butanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
n-Butanol	6100	61000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Isobutanol	1300	40000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Isopropanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methanol	31,000	100,000	0.66	0.98	3.97	8.80	11.3	<0.50	10.2	3.66	4.79	6.73	7.18
Pentanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

## Notes:

Values in μg/g unless otherwise stated mbgs = metres below ground surface

ns = no standard

XXX.XX	
XXX.XX	

= Exceeds Applicable Parkland Soil Standard = Exceeds Applicable Commerical Soil Standard

\* Urban Park Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

# Table 8: Fatty Acids in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Doromotor	CSR Parkland Soil	CSR Commercial Soil	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110	16-TP111-0.1M
Parameter	Standards*	Standards**	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
			0.1 mbgs										
Acetic Acid	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Butyric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Caproic (Hexanoic) Acid	ns	ns	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Formic Acid	100,000	100,000	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300
Isobutyric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Isovaleric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Propionic Acid	ns	ns	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Valeric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

#### Notes:

Values in μg/g unless otherwise stated mbgs = metres below ground surface

ns = no standard

XXX.XX = Exceeds Applicable Parkland Soil Standard

= Exceeds Applicable Commercial Soil Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life

# Table 8: Fatty Acids in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Doromotor	CSR Parkland Soil	CSR Commercial Soil	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M	16-TP121-0.1M
Parameter	Standards*	Standards**	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
			0.1 mbgs									
Acetic Acid	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Butyric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Caproic (Hexanoic) Acid	ns	ns	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Formic Acid	100,000	100,000	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300
Isobutyric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Isovaleric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Propionic Acid	ns	ns	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Valeric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

#### Notes:

Values in μg/g unless otherwise stated mbgs = metres below ground surface

ns = no standard

XXX.XX = Exceeds Applicable Parkland Soil Standard

XXX.XX = Exceeds Applicable Commercial Soil Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life (marine).

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water, and groundwater flow to surface water used by aquatic life

# Table 9: Illicit Drugs in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter.	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110	16-TP111-0.1M
Parameter	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
	0.1 mbgs										
Methamphetamine	<0.10	<0.10	<0.10	0.15	0.40	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Cocaine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Heroin	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Amphetamine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	< 0.10	<0.10	<0.10	<0.10
Pseudoephedrine/ephedrine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MDMA (ecstacy)	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Lysergic acid diethylamide	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

## Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface ns = no standard

Table 9: Illicit Drugs in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, Britis Client: Brookfield Global Integrated Solu

Davamatav	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M	16-TP121-0.1M	16-TP204-0.4M
Parameter	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	10/11/2016
	0.1 mbgs	0.4 mbgs									
Methamphetamine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Cocaine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	< 0.10	<0.10	< 0.10	<0.10	-
Heroin	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	< 0.10	<0.10	< 0.10	<0.10	-
Amphetamine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-
Pseudoephedrine/ephedrine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	< 0.10	<0.10	<0.10	<0.10	-
MDMA (ecstacy)	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-
Lysergic acid diethylamide	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-

## Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface ns = no standard

## Table 10: lodide in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia

Client: Brookfield Global Integrated Solutions

Parameter	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110	16-TP111-0.1M
Parameter	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
	0.1 mbgs										
lodide	<5.6	<5.6	<5.8	<5.6	<5.7	<5.7	<5.5	<5.8	<5.4	<5.6	<5.5

## Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface

ns = no standard

## Table 10: lodide in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, Britis Client: Brookfield Global Integrated Solu

Parameter	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M	16-TP121-0.1M
Parameter	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
	0.1 mbgs									
lodide	<5.6	<5.8	<5.9	<5.8	<5.5	<5.6	<5.6	<5.9	<5.6	<5.7

## Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface

ns = no standard



# **FINAL**

# **Environmental Soil Sampling Investigation**

850 Burdett Avenue Victoria, British Columbia

Prepared for:

Brookfield Global Integrated Solutions

23 – 3318 Oak Street Victoria, British Columbia, V8X 1R1

Attn: Nicola Moyles Project Manager

October 31, 2016

PWL File: 13858B

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Issued To: Brookfield Global Integrated

Contact: Solutions

Nicola Moyles Project Manager

October 31, 2016

PWL File: 13858B

Issued On:

Issuing Office: Suite 200, 13775 Commerce Parkway,

Richmond, BC V6V 2V4

Primary PWL Contact: Jason Quamme

**Project Manager** 

Author: Jason Quamme, B.Sc., A.Ag, EP

Project Manager

s.22

jquamme@pinchinwest.com

Reviewer: Brennan Anstey, P. Eng.

Senior Environmental Engineering Manager

s.22

banstey@pinchinwest.com

Ill Bru

Reviewer: Tadd Berger, M.Sc., EP, P.Ag., CSAP

Operations Manager / Practice Leader

s.22

tberger@pinchinwest.com

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#### **EXECUTIVE SUMMARY**

Pinchin West Ltd. (PWL) was retained through an Authorization to Proceed signed by Nicola Moyles of Brookfield Global Integrated Solutions (Client) to conduct an Environmental Soil Sampling Investigation for the eastern portion of the property located at 850 Burdett Avenue in Victoria, British Columbia (hereafter referred to as the Site). The Site location is shown on Figure 1 and Figure 2 (all Figures are provided in Appendix I).

The property at 850 Burdett Avenue is developed with a Provincial Court facility. For the purposes of this report, the eastern portion of the property, a public garden that is approximately 3,000 square metres in area is considered the Site.

Based on your correspondence, it is PWL's understanding that a temporary human occupied shelter/civil action camp known in the media as Victoria's "Tent City" had been established at the Site and as part of the removal of the camp the Client has requested an Environmental Soil Sampling Investigation. During decommissioning of the camp, two suspected illegal drug manufacturing operations, numerous hypodermic needles, and an extensive rat population were reported by the Client.

The Environmental Soil Sampling Investigation was conducted at the Site between September 7, 2016 and October 11, 2016, during which PWL attended the Site to hand excavate, test pit excavate and collect soil samples. The test pits were advanced to a maximum depth of 1.5 metres below ground surface (mbgs) using a track-mounted excavator.

Select "worst case" soil samples collected during the Environmental Soil Sampling Investigation were submitted for laboratory analysis of contaminants potentially associated with camp activities including volatile organic compounds (VOCs), volatile petroleum hydrocarbons (VPH), light extractable petroleum hydrocarbons (LEPH), heavy extractable petroleum hydrocarbons (HEPH), polycyclic aromatic hydrocarbons (PAHs), metals, acetone, butanone, ethyl ether, methanol, acetic acid, formic acid, ammonia, chloroform, dichloromethane, ether, pH, iodine, pseudoephedrine, phosphorous, amphetamine, cocaine, heroin, lysergic acid diethylamide (LSD), 3,4-methylenedioxymethamphetamine (MDMA), methamphetamine, escherichia coli (E. coli), fecal coliforms and/or total coliforms.

Based on Site-specific information and information provided to PWL by the Client, the soil quality was assessed based on the BC Ministry of Environment Contaminated Sites Regulation (CSR) standards for commercial land use (CL), urban park land use (PL), soil relocation standards to non-agricultural land, intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

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The reported concentrations in the soil samples submitted for analysis of VOCs, LEPH, HEPH, VPH, PAHs, metals, acetone, butanone, ethyl ether, methanol, acetic acid, formic acid, ammonia, chloroform, dichloromethane, ether, pH, iodine, pseudoephedrine, phosphorous, amphetamine, cocaine, heroin, LSD, MDMA, methamphetamine, E. coli, fecal coliforms, total coliforms satisfied their respective CSR RL, PL and soil relocation standards with the following exceptions:

- Shallow soil samples 16-TP102, 16-TP103, 16-TP111, 16-TP113, and 16-TP115 through 16-TP121 exceeded the PL soil standard for various PAHs;
- Shallow soil samples 16-TP109 and 16-TP116 exceeded the PL and CL soil standard for benzene;
- Shallow soil samples 16-TP103, 16-TP107, 16-TP108, and 16-TP110 through 16-TP121 exceeded the PL and CL soil standard for lead;
- Shallow soil sample 16-TP111 exceeded the PL and CL soil standard for zinc;
- Shallow soil samples 16-TP104 and 16-TP105 reported detectable concentrations of methamphetamine; and
- Deeper soil samples 16-TP202 exceeded the PL soil standard for various PAHs.

PWL recommends that a Remedial Excavation be conducted at the Site to remove the identified impacted soil with a subsequent Verification Soil Sampling Program (VSSP) to confirm remedial success. Furthermore, it is PWL's opinion that sufficient characterization and delineation of the soil impacts has been achieved on-Site in order to precede with this recommended Remedial Excavation and VSSP. Sufficient characterization and delineation is based on the identified local geology, absence of groundwater, analytical results and underlying bedrock.

This Executive Summary is subject to the same standard limitations as contained in the report and must be read in conjunction with the entire report.

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Table 9 - Illicit Drugs in Soil

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#### 1.0 INTRODUCTION

Pinchin West Ltd. (PWL) was retained through an Authorization to Proceed signed by Nicola Moyles of Brookfield Global Integrated Solutions (Client) to conduct an Environmental Soil Sampling Investigation for the eastern portion of the property located at 850 Burdett Avenue in Victoria, British Columbia (hereafter referred to as the Site). The Site location is shown on Figure 1 and Figure 2 (all Figures are provided in Appendix I).

The property at 850 Burdett Avenue is developed with a Provincial Court facility. For the purposes of this report the eastern portion of the property containing a public garden approximately 3,000 square metres in area is considered the Site.

#### 1.1 Background

Based on your correspondence, it is PWL's understanding that a temporary human occupied shelter/civil action camp known in the media as Victoria's "Tent City" had been established at the Site and as part of the removal of the camp the Client has requested an Environmental Soil Sampling Investigation. During decommissioning of the camp, two suspected illegal drug manufacturing operations, numerous hypodermic needles, and an extensive rat population were reported by the Client.

#### 1.2 Scope of Work

The initial scope of work completed by PWL, as outlined in the PWL proposal entitled "Proposal for Soil Investigation 850 Burdett Avenue, Victoria, British Columbia" submitted to the Client on August 30, 2016, included the following:

- Attend Site and assess soil quality to provide information on Site-specific geological and hydrogeological characteristics and obtain soil samples using either hand excavation techniques or on-Site equipment. All field work was conducted by a qualified professional;
- Field screen soil samples for the presence of petroleum/volatile organic compound (VOC)derived vapours using visual and olfactory considerations, along with a photo-ionization detector (PID) calibrated to isobutylene or equivalent;
- Submit initial in-situ most-apparent "worst case" soil samples, based on the field screening methodologies for chemical analyses of VOCs including benzene, toluene, ethylbenzene and xylenes (collectively referred to as BTEX), light extractable petroleum hydrocarbons (LEPH), heavy extractable petroleum hydrocarbons (HEPH), volatile petroleum hydrocarbons (VPH), polycyclic aromatic hydrocarbons (PAHs), metals, acetone, butanone, ethyl ether, methanol, acetic acid, formic acid, ammonia, chloroform, dichloromethane, ether, pH, iodine, pseudoephedrine, phosphorous, amphetamine, cocaine, heroin, lysergic acid diethylamide

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(LSD), 3,4-methylenedioxymethamphetamine (MDMA), methamphetamine, escherichia coli (E. coli), fecal coliforms, total coliforms;

- Submit soil samples to a laboratory accredited by the Canadian Association for Laboratory Accreditation. The soil samples will be submitted on a regular (5 to 7 business day) turnaround time:
- Evaluate the soil analytical results by comparison to the applicable criteria stipulated in the BC Ministry of Environment Contaminated Sites Regulation (CSR); and
- Prepare a factual report for the Site documenting the findings of the assessment and recommendations (if any) related to subsurface impacts.

The scope of work described in the PWL proposal included providing support and closure sampling during remedial excavation work; however, this scope of work has yet to be initiated.

Based on the preliminary results of the initial round of soil sampling PWL identified soil with parameter concentrations exceeding the applicable MOE CSR standards for PAHs, benzene and lead. Furthermore, detectable concentrations of methamphetamine were also identified.

Based on these preliminary findings noted above, PWL recommended that an additional soil investigation be completed at the Site to vertically delineate the above-noted impacts.

The additional scope of work completed by PWL, as outlined in the PWL proposal entitled "Green Space Remediation 850 Burdett Avenue, Victoria, British Columbia" submitted to the Client on October 27, 2016, included the following:

- Retain the services of an independent contractor and public utility services to identify the locations of buried and overhead utility services prior to any drilling/excavation activities;
- Excavate up to seven test pits at the Site to assess soil quality and to provide information on Site-specific geological characteristics;
- Field screen soil samples for the presence of petroleum/VOC-derived vapours using visual and olfactory observations, along with a PID calibrated to isobutylene or equivalent;
- Submit two soil samples per test pit location, based on the field screening methodologies for chemical analyses of VOCs including BTEX, LEPH, HEPH, VPH, PAHs, metals and/or methamphetamine;
- Submit soil samples to, a laboratory accredited by the Standards Council of Canada and the Canadian Association for Laboratory Accreditation. The soil samples will be submitted on a regular (5 to 7 business day) turnaround time;

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- Evaluate the soil analytical results by comparison to the applicable criteria stipulated in the BC MOE CSR; and
- Prepare a factual report for the Site documenting the findings of the assessment and recommendations (if any) related to subsurface impacts.

#### 2.0 METHODOLOGY

The Environmental Soil Sampling Investigation was conducted in general accordance with the BC CSR and associated protocols and guidance documents, and PWL's standard operating procedures (SOPs).

#### 2.1 Contractors

The test pitting excavation activities were conducted by Don Mann Excavating Ltd. (Don Mann), under contract to PWL.

#### 2.2 Hand Excavation / Test Pit Activities

The Environmental Soil Sampling Investigation was conducted at the Site between September 7, 2016 and October 11, 2016.

The hand excavations were advanced to a maximum depth of 0.1 metres below ground surface (mbgs). The test pits were advanced to a maximum depth of approximately 1.5 mbgs using a track-mounted excavator. Soil samples were collected and containerized in laboratory-supplied glass sampling jars.

Subsurface soil conditions were logged on-Site by PWL personnel at the time of excavation activities. Soil samples were examined for visual and olfactory evidence of impacts and a portion of each sample was analyzed in the field for VOC and petroleum-derived vapour concentrations in soil headspace using a PID.

The locations of the hand excavation and test pits are shown on Figure 2 and a description of the subsurface stratigraphy encountered during the Environmental Soil Sampling Investigation is documented in the test pit logs included in Appendix II.

#### 2.3 Soil Sampling and Laboratory Analysis

One soil sample was recovered from each hand excavation and submitted for laboratory analysis of VOCs, LEPH, HEPH, VPH, PAHs, metals, acetone, butanone, ethyl ether, methanol, acetic acid, formic acid, ammonia, chloroform, dichloromethane, ether, pH, iodine, pseudoephedrine, phosphorous, amphetamine, cocaine, heroin, LSD, MDMA, methamphetamine, E. coli, fecal coliforms, total coliforms. Based on the preliminary analytical results, several soil samples were also analyzed using the toxicity characteristic leaching procedure (TCLP).

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Two "worst case" soil samples, based on vapour concentrations, visual and/or olfactory and depth considerations were recovered from each test pit and submitted for laboratory analysis of VOCs, LEPH, HEPH, VPH, PAHs, metals and/or methamphetamine.

#### 2.4 Analytical Laboratory

Selected soil samples were delivered to ALS Limited (ALS) for analysis. ALS is an independent laboratory accredited by the Canadian Association for Laboratory Accreditation. Formal chain of custody records of the sample submissions were maintained between PWL and the staff at ALS.

#### 2.5 QA/QC Protocols

Various quality assurance/quality control (QA/QC) protocols were followed during the Environmental Soil Sampling Investigation to ensure that representative samples were obtained and that representative analytical data were reported by the laboratory.

Field QA/QC protocols that were employed by PWL included the following:

- Soil samples were extracted from areas not in direct contact with the excavator bucket and/or sampling equipment, where possible, to minimize the potential for cross-contamination;
- Soil samples were placed in laboratory-supplied sample jars;
- Soil samples were placed in coolers on ice immediately upon collection, with appropriate sample temperatures maintained prior submission to the laboratory;
- Dedicated and disposable nitrile gloves were used for sample handling;
- Sample collection and handling procedures were performed in general accordance with the CSR and associated protocols and guidance documents, and PWL's SOPs.

ALS's internal laboratory QA/QC consisted of the analysis of laboratory duplicate, method blank, matrix spike and spiked blank samples, an evaluation of relative percent difference (RPD) calculations for laboratory duplicate samples, and an evaluation of surrogate recoveries.

#### 2.6 Regulatory Criteria

Environmental matters pertaining to contaminated sites in British Columbia fall under the jurisdiction of the BC MOE, pursuant to the Environmental Management Act (EMA). The two key regulations under the EMA relating to assessment and remediation of contaminated sites are the CSR, and the Hazardous Waste Regulation (HWR). The CSR sets out legal procedures for screening sites, determining if a site is a contaminated site, liability, remediation processes, and sets standards for site remediation and soil

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relocation. The HWR sets out legal procedures for the identification, handling, storage, transportation and disposal of hazardous wastes.

For a given substance in soil, the CSR provides either generic or matrix numerical standards. Generic standards are listed in Schedules 4 and 10 of the CSR, and consist of concentrations that apply regardless of site-specific factors. Matrix standards take into account site-specific factors, and the applicable standard for a substance is determined by using the lowest applicable concentration in Schedule 5 of the CSR. The site-specific standards account for human exposure by intake of contaminated soil and groundwater used for drinking water. Other factors include whether there is exposure by other environmental receptors such as soil invertebrates, livestock, and aquatic life, and whether the water at the contaminated site will be used for irrigation.

In accordance with protocols developed by the MOE, the aquatic life protective soil standards apply to sites situated within 500 metres of fresh or marine water used by aquatic life. Similarly, drinking water protective soil standards apply to sites situated within 500 metres of a groundwater or surface water supply source, or if future drinking water use is applicable, as defined in MOE Protocol 21.

An examination of conditions was undertaken to determine the appropriate water use conditions at the Site so that the appropriate soil standards from the CSR could be determined. Since the Site is zoned for commercial use and a court house is located on the property, the Commercial Land Use (CL) standards apply. However, as the area of investigation and potential remediation is only a portion of the property and is a public space used like an urban park, the Urban Park Use (PL) PL standards are also considered applicable. In terms of the site specific matrix standards within Schedule 5, the strictest of the following standards apply:

- Intake of contaminated soil:
- Toxicity to soil invertebrates and plants; and
- Groundwater used for drinking water.

The aquatic life protection standard (AW) would be applicable to the larger parcel; however, as the assessment is focussed solely on the park portion of the parcel, the AW standard is not considered applicable for this assessment based on distance and absence of identified preferential flow pathways.

For the Illicit drugs, no BC CSR standards have been developed. As such, the laboratory detection limit was used as the standard. Any detectable concentration of illicit drugs in the soil was considered an exceedance.

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#### 3.0 RESULTS

The following subsections present the results of the Environmental Soil Sampling Investigation.

#### 3.1 Site Geology and Hydrogeology

Based on the soil samples recovered during the excavation activities, the soil stratigraphy at the sampling locations below the surficial gravel generally consists of sandy gravel to the maximum test pit completion depth of 1.5 mbgs. Wet soil conditions were generally not observed. Bedrock was encountered at 0.6 mbgs at location 16-TP204. Bedrock may also have been encountered at 16-TP205. Bedrock was not encountered in any of other test pits, but is anticipated to be shallow throughout the Site based on the BC Ministry of Energy and Mines "Quaternary Geological Map of Greater Victoria". Within this reference map the surficial geology of the Site is described as shallow soils over bedrock. Scattered outcrops occur throughout this geological unit and bedrock is commonly found in the upper few metres (e.g. in utility line excavations).

Significant groundwater is not anticipated to be present above bedrock; however, a bedrock aquifer may be present. The assessment of a bedrock aquifer was outside the scope of this investigation.

A detailed description of the subsurface stratigraphy encountered during test pit advancement is documented in the test pit logs located in Appendix II.

#### 3.2 Soil Headspace Vapour Concentrations

Vapour concentrations measured in the headspace of soil samples collected during the excavation activities are presented on the test pit logs in Appendix II and ranged from 0.0 parts per million by volume (ppm<sub>v</sub>) to a maximum of 0.1 ppm<sub>v</sub>.

#### 3.3 Field Observations

No odours, staining or evidence of non-aqueous phase liquids or sheen were observed during the excavation activities.

#### 3.4 Analytical

As indicated in Tables 1 through 9, reported concentrations of VOCs, LEPH, HEPH, VPH, PAHs, metals, acetone, butanone, ethyl ether, methanol, acetic acid, formic acid, ammonia, chloroform, dichloromethane, ether, pH, iodine, pseudoephedrine, phosphorous, amphetamine, cocaine, heroin, LSD, MDMA, methamphetamine, E. coli, fecal coliforms, total coliforms in the soil samples met the applicable BC CSR CL and PL standards, with the following exceptions:



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- Shallow soil samples 16-TP102, 16-TP103, 16-TP111, 16-TP113, and 16-TP115 through 16-TP121 exceeded the PL soil standard for various PAHs;
- Shallow soil samples 16-TP109 and 16-TP116 exceeded the PI and CL soil standard for benzene;
- Shallow soil samples 16-TP103, 16-TP107, 16-TP108, and 16-TP110 through 16-TP121 exceeded the PL and CL soil standard for lead;
- Shallow soil sample 16-TP111 exceeded the PL and CL soil standard for zinc;
- Shallow soil samples 16-TP104 and 16-TP105 reported detectable concentrations of methamphetamine; and
- Deeper soil samples 16-TP202 exceeded the PL soil standard for various PAHs.

The laboratory analytical results of the Landfill Characterisation parameters including leachable metals and pH are summarized in Table 4. The parameters were below the applicable regulatory criteria. Impacted soil is therefore classified as non-hazardous, suitable for disposal at an appropriate licensed landfill.

#### 4.0 FINDINGS AND CONCLUSIONS

Based on the work completed, the following is a summary of the activities and findings of this Environmental Soil Sampling Investigation:

- The Environmental Soil Sampling Investigation was conducted at the Site between September 7, 2016 and October 11, 2016, during which PWL attended the Site to hand excavate, test pit excavate and collect soil samples. The test pits were advanced to a maximum depth of 1.5 mbgs using a track-mounted excavator;
- The soil stratigraphy at the sampling locations below the surficial gravel generally consists of sandy gravel to the maximum test pit completion depth of 1.5 mbgs. Wet soil conditions were generally not observed. Bedrock was encountered at 0.6 mbgs at location 16-TP204;
- Based on the Site-specific information, and information provided to PWL, the soil quality was
  assessed based on the BC CSR standards for CL, PL, intake of contaminated soil, toxicity to
  soil invertebrates and plants and groundwater used for drinking water;
- Select soil samples, based on the results of field screening, were submitted for laboratory analysis of VOCs, LEPH, HEPH, VPH, PAHs, metals, acetone, butanone, ethyl ether, methanol, acetic acid, formic acid, ammonia, chloroform, dichloromethane, ether, pH, iodine, pseudoephedrine, phosphorous, amphetamine, cocaine, heroin, LSD, MDMA, methamphetamine, E. coli, fecal coliforms and/or total coliforms;



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- Reported concentrations in the soil samples submitted for analysis of VOCs, LEPH, HEPH, VPH, PAHs, metals, acetone, butanone, ethyl ether, methanol, acetic acid, formic acid, ammonia, chloroform, dichloromethane, ether, pH, iodine, pseudoephedrine, phosphorous, amphetamine, cocaine, heroin, LSD, MDMA, methamphetamine, E. coli, fecal coliforms, total coliforms satisfied their respective CSR CL and PL standards with the following exceptions:
  - Shallow soil samples 16-TP102, 16-TP103, 16-TP111, 16-TP113, and 16-TP115 through 16-TP121 exceeded the PL soil standard for various PAHs;
  - Shallow soil samples 16-TP109 and 16-TP116 exceeded the PL and CL soil standard for benzene:
  - Shallow soil samples 16-TP103, 16-TP107, 16-TP108, and 16-TP110 through 16-TP121exceeded the PL and CL soil standard for lead;
  - o Shallow soil sample 16-TP111 exceeded the PL and CL soil standard for zinc;
  - Shallow soil samples 16-TP104 and 16-TP105 reported detectable concentrations of methamphetamine;
  - Deeper soil samples 16-TP202 exceeded the PL soil standard for various PAHs;
- Horizontal delineation is based on the presence of a sidewalk and parking lot that denotes the Site boundary; and
- Vertical delineation is achieved through the presence of bedrock and/or clean test pit samples at a maximum depth of 1.5 m. Therefore, remediation is not anticipated to be required beyond those depths.

PWL recommends that a Remedial Excavation be conducted across the entire Site to remove the identified impacted soil with a subsequent Verification Soil Sampling Program (VSSP) to confirm remedial success. Furthermore, it is PWL's opinion that sufficient characterization and delineation of the soil impacts has been achieved on-Site in order to precede with this recommended Remedial Excavation and VSSP. This delineation and characterization is based on the identified local geology, absence of groundwater, analytical results and underlying bedrock.

#### 5.0 LIMITATIONS

This Environmental Soil Sampling Investigation was performed for Brookfield Global Integrated Solutions on behalf of the Province of British Columbia (Client), in order to identify current and/or recognized environmental conditions at 850 Burdett Avenue in Victoria, British Columbia (Site). The term recognized environmental condition means the presence or likely presence of any hazardous substance on a property under conditions that indicate an existing release, past release, or a material threat of a release

FINAL

of a hazardous substance into structures on the property or into the ground, groundwater, or surface water of the property. This Environmental Soil Sampling Investigation does not quantify the extent of the current and/or recognized environmental condition or the cost of any remediation.

Conclusions derived are specific to the immediate area of study and cannot be extrapolated extensively away from sample locations. Samples have been analysed for a limited number of contaminants that are expected to be present at the Site, and the absence of information relating to a specific contaminant does not indicate that it is not present.

No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions on a property. Performance of this Environmental Soil Sampling Investigation to the standards established by PWL is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions on the Site, and recognizes reasonable limits on time and cost.

This Environmental Soil Sampling Investigation was performed in general compliance with currently acceptable practices for environmental site investigations, and specific Client requests, as applicable to this Site.

This report was prepared for the exclusive use of the Client, subject to the terms, conditions and limitations contained within the duly authorized proposal for this project. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, is the sole responsibility of such third parties. PWL accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted.

If additional parties require reliance on this report, written authorization from PWL will be required. PWL disclaims responsibility of consequential financial effects on transactions or property values, or requirements for follow-up actions and costs. No other warranties are implied or expressed. Furthermore, this report should not be construed as legal advice. PWL will not provide results or information to any party unless disclosure by PWL is required by law.

PWL makes no other representations whatsoever, including those concerning the legal significance of its findings, or as to other legal matters touched on in this report, including, but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to interpretation and these interpretations may change over time.

File: G:\Richmond\Project Files\13800-99\13851-99\13858\13858B\Report\13858B\_r01\_Revised Nov 10\_Final.docx Template: Master Report for Remedial Excavation, EDR, July 28, 2016

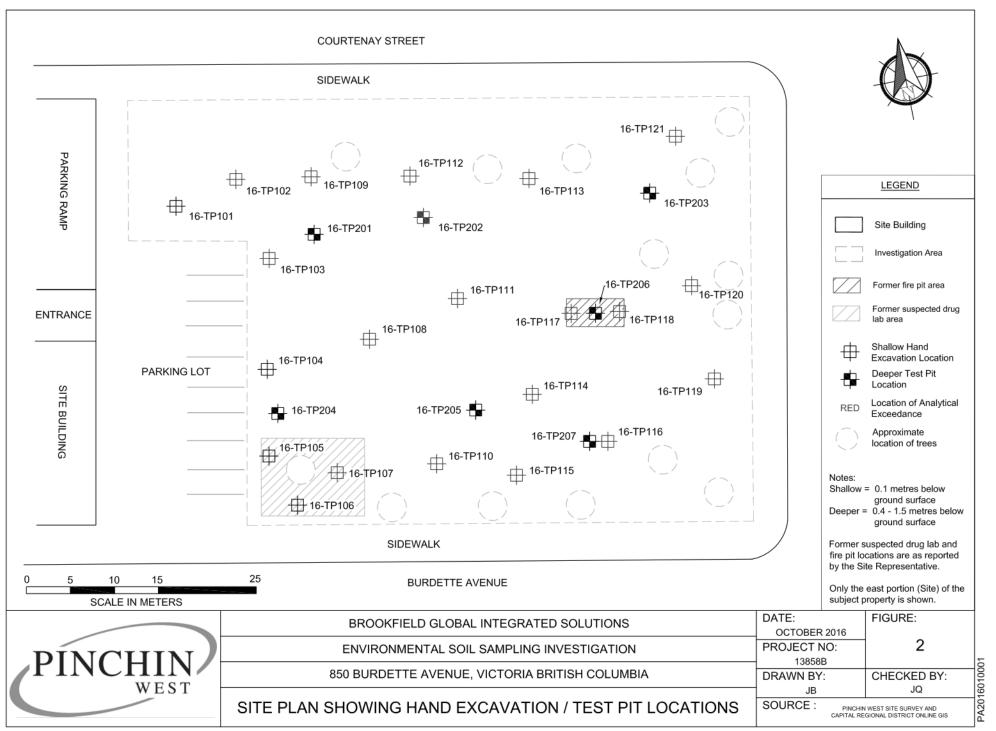


APPENDIX I Figures





	CLIENT NA	ME:											
	BROOKFIELD GLOBAL INTERGRATED SOLUTIONS												
	PROJECT NAME:												
	ENVIRONMENTAL SOIL SAMPLING INVESTIGATION												
	LOCATION	:											
	850 BURDETT AVENUE, VICTORIA, BRITISH COLUMBIA												
	TITLE:					FIGURE NO.							
	KEY MAP												
	DATE: OCT	PROJECT NO.: 13858B	IMAGE SOURCE: OPENSTREETMAPS.ORG	DRAWN BY: JQ	CHECKED BY: TB	1							
	2016												



APPENDIX II Test Pit Logs

Project No.: 13858B

Project: Environmental Soil Sampling Investigation

Client: Brookfield Global Integrated Solutions

Location: 850 Burdett Avenue, Victoria, British Columbia



		SUBSURFACE PROFILE		SAMP	LE	
Depth	Description		Depth (m)	Sample Name	Sample Type	Vapour (ppm)
oft m		Ground Surface	0.00			
		Brown SILT, some gravel, some sand, loose, dry, no staining, no odours.	0.25			
1-		Brown SAND with cobbles, some gravel and silt, dense, dry, no staining, no odours.				
2				0.6	Grab	0.0
3-			1.00			
4-		Brown SANDY COBBLES with gravel, dry, no staining, no odours.				
-   -   -   -   -   -   -   -   -   -				1.4	Grab	0.0
			1.50			
5		End of Test Pit				
-						

Excavated By: Don Mann Excavating

Excavation Method: Track-Mounted Excavator

Excavation Date: 10/11/2016

Logged By: J. Bocskei

Checked By: M. Andersen

Project No.: 13858B

Project: Environmental Soil Sampling Investigation

Client: Brookfield Global Integrated Solutions

Location: 850 Burdett Avenue, Victoria, British Columbia



	SUBSURFACE PROFILE		SAMP	LE				
Depth	Description	Depth (m)	Sample Name	Sample Type	Vapour (ppm)			
0 m 0	Ground Surface	0.00						
1- 2- 2	Ground Surface  Brown SILTY SAND, trace gravel, loose, dry, no staining, no odours.  Brown SAND and GRAVEL, some silt and cobbles, dense, dry, no staining, no odours.	0.00	0.5	Grab	0.1			
3- 1 - 1 - 4		1.50	1.0	Grab	0.0			
5-	End of Test Pit	1.50						

Excavated By: Don Mann Excavating

Excavation Method: Track-Mounted Excavator

Excavation Date: 10/11/2016

Logged By: J. Bocskei

Checked By: M. Andersen

Project No.: 13858B

Project: Environmental Soil Sampling Investigation

Client: Brookfield Global Integrated Solutions

Location: 850 Burdett Avenue, Victoria, British Columbia



	SUBSURFACE PROFILE	SAMP	LE		
Depth Symbol	Description	Depth (m)	Sample Name	Sample Type	Vapour (ppm)
oft m	Ground Surface	0.00			
1-	Dark brown SILTY SAND, some gravel, loose, dry, no staining, no odours.	0.40			
	Brown GRAVELY SAND, trace silt, dense, dry, no staining,				
-	no odours.		0.5	Grab	0.0
2-					
3-			1.0	Grab	0.0
- ` <u>•</u>		1.10	1.0	Glab	0.0
4-	Yellow brown SAND and GRAVEL, dense, dry, no staining, no odours.	1.10			
				Grab	
		1.50	1.5		0.0
5-	End of Test Pit				
-					
6-					

Excavated By: Don Mann Excavating

Excavation Method: Track-Mounted Excavator

Excavation Date: 10/11/2016

Logged By: J. Bocskei

Checked By: M. Andersen

Project No.: 13858B

Project: Environmental Soil Sampling Investigation

Client: Brookfield Global Integrated Solutions

Excavated By: Don Mann Excavating

Location: 850 Burdett Avenue, Victoria, British Columbia



	SUBSURFACE PROFILE	SAMP	LE		
Depth Symbol	Description	Depth (m)	Sample Name	Sample Type	Vapour (ppm)
0 m	Ground Surface	0.00			
- - 1	Dark brown SILTY SAND, dry, no staining, no odours.	0.30			
	Yellow brown GRAVELLY SAND, some cobbles, trace silt, loose, dry, no staining, no odours.  Bedrock refusal at 0.6 m		0.4	Grab	0.0
2		0.60			
3- 	End of Test Pit				

Excavation Method: Track-Mounted Excavator Checked By: M. Andersen

**Excavation Date:** 10/11/2016 **Sheet:** 1 of 1

Logged By: J. Bocskei

Project No.: 13858B

Project: Environmental Soil Sampling Investigation

Client: Brookfield Global Integrated Solutions

Location: 850 Burdett Avenue, Victoria, British Columbia



		SUBSURFACE PROFILE	SAMP	LE		
Depth	Symbol	Description	Depth (m)	Sample Name	Sample Type	Vapour (ppm)
oft m		Ground Surface	0.00			
		Dark brown SANDY SILT, dense, damp, no staining, no odours.  Yellow brown GRAVELLY SAND, trace silt, dense, dry, no	0.15			
1-		staining, no odours.				
-				0.4	Grab	0.0
2-	• •					
]	• •		0.80			
3-		Yellow SILT, some sand, some gravel, some cobbles, very dense, dry, no staining, no odours.		0.9	Grab	0.0
			1.10			
4-		End of Test Pit	1.10			
5-						
<del> </del>						
6-						
-						

Excavated By: Don Mann Excavating

Excavation Method: Track-Mounted Excavator

Excavation Date: 10/11/2016

Logged By: J. Bocskei

Checked By: M. Andersen

Project No.: 13858B

Project: Environmental Soil Sampling Investigation

Client: Brookfield Global Integrated Solutions

Location: 850 Burdett Avenue, Victoria, British Columbia



	SUBSURFACE PROFILE		SAMP	LE						
Depth	Description	Depth (m)	Sample Name	Sample Type	Vapour (ppm)					
0 t m	Ground Surface	0.00								
1-	Brown SANDY SILT, some gravel, loose, dry, no staining, no odours.									
1 7 🚆		0.40								
2-	Yellow brown GRAVELLY SAND, trace silt, trace cobbles, dense, dry, no staining, no odours.		0.5	Grab	0.1					
3-										
- 1			1.0	Grab	0.0					
4-				Grab						
+										
_		1.50	1.5		0.0					
5-	End of Test Pit									
6-										
-										

Excavated By: Don Mann Excavating

Excavation Method: Track-Mounted Excavator

Excavation Date: 10/11/2016

Logged By: J. Bocskei

Checked By: M. Andersen

Project No.: 13858B

Project: Environmental Soil Sampling Investigation

Client: Brookfield Global Integrated Solutions

Location: 850 Burdett Avenue, Victoria, British Columbia



	SUBSURFACE PROFILE		SAMP	LE	
Depth	Description	Depth (m)	Sample Name	Sample Type	Vapour (ppm)
0 ft m	Ground Surface	0.00			
1-	Dark brown SILTY SAND, some gravel, loose, dry, no staining, no odours.  Yellow brown GRAVELLY SAND, some silt, dense, dry, no staining, no odours.	0.25			
- •			0.5	Grab	0.0
2-					
- 1 - 1 - 4-			1.0	Grab	0.0
		1.40	1.4	Grab	0.0
5	End of Test Pit				

Excavated By: Don Mann Excavating

Excavation Method: Track-Mounted Excavator

Excavation Date: 10/11/2016

Logged By: J. Bocskei

Checked By: M. Andersen

APPENDIX III
Summary Tables

# Table 1: Petroleum Hydrocarbons in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia

Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109
Parameter	Standards*	Standards**	Standards***	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
				0.1 mbgs								
EPHs10-19	ns	ns	ns	<200	<200	<200	<200	<200	<200	<200	<200	<200
EPHs19-32	ns	ns	ns	<200	<200	<200	<200	260	<200	<200	<200	<200
LEPHs	1000	2000	1000	<200	<200	<200	<200	<200	<200	<200	<200	<200
HEPHs	1000	5000	1000	<200	<200	<200	<200	260	<200	<200	<200	<200
2-Methylnaphthalene	ns	ns	ns	< 0.050	0.066	0.117	<0.050	<0.050	<0.050	<0.050	0.055	<0.050
Acenaphthene	ns	ns	ns	< 0.050	0.172	<0.050	<0.050	< 0.050	<0.050	<0.050	< 0.050	< 0.050
Acenaphthylene	ns	ns	ns	<0.050	< 0.050	0.208	0.08	<0.050	<0.050	<0.050	<0.050	< 0.050
Anthracene	ns	ns	ns	<0.050	0.656	0.152	0.055	< 0.050	< 0.050	<0.050	0.148	< 0.050
Benz[a]anthracene	1	10	1	0.052	0.985	0.557	0.233	0.065	0.089	0.075	0.374	0.075
Benzo[a]pyrene (B[a]P)	1	10	1	0.054	0.794	0.771	0.300	0.077	0.146	0.077	0.336	0.065
Benzo[b]fluoranthene	1	10	1	0.099	1.14	1.02	0.453	0.151	0.241	<0.20	0.487	0.100
Benzo[g,h,i]perylene	ns	ns	ns	<0.050	0.460	0.577	0.182	0.057	0.110	<0.050	0.197	<0.050
Benzo[k]fluoranthene	1	10	1	<0.050	0.442	0.371	0.156	0.054	0.101	<0.050	0.195	< 0.050
Chrysene	ns	ns	ns	<0.070	0.872	0.674	0.320	0.090	0.119	0.095	0.370	0.083
Dibenz[a,h]anthracene	1	10	1	<0.050	0.103	0.111	<0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050
Fluoranthene	ns	ns	ns	0.121	2.23	1.13	0.523	0.129	0.145	0.142	0.876	0.156
Fluorene	ns	ns	ns	<0.050	0.239	<0.050	<0.050	<0.050	<0.050	<0.050	0.067	<0.050
Indeno [1,2,3-cd] pyrene	1	10	1	<0.050	0.540	0.666	0.221	0.066	0.115	0.058	0.251	<0.050
Naphthalene	5	50	5	<0.050	0.113	0.097	<0.050	<0.050	<0.050	<0.050	0.079	<0.050
Phenanthrene	5	50	5	0.058	2.06	0.621	0.300	0.077	0.085	0.079	0.631	0.124
Pyrene	10	100	10	0.107	1.78	1.15	0.534	0.127	0.144	0.143	0.762	0.145

# Notes:

Values in μg/g unless otherwise stated

mbgs = metres below ground surface

ns = no standard

EPHs = Extractable Petroleum Hydrocarbons

LEPHs = Light EPH, corrected for polycyclic aromatic hydrocarbons (PAH)

HEPHs = Heavy EPH, corrected for PAH

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

\*\*\* Soil relocation to nonagricultural land standards in Schedule 7 of the B.C. Contaminated Sites Regulation (CSR).

#### Table 1: Petroleum Hydrocarbons in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia

Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP110	16-TP111-0.1M	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M
Parameter	Standards*	Standards**	Standards***	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
				0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs
EPHs10-19	ns	ns	ns	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
EPHs19-32	ns	ns	ns	<200	<200	<200	<200	<200	<200	370	350	320	420	<200
LEPHs	1000	2000	1000	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
HEPHs	1000	5000	1000	<200	<200	<200	<200	<200	<200	330	320	290	370	<200
2-Methylnaphthalene	ns	ns	ns	< 0.050	0.203	0.076	0.128	<0.050	0.258	0.975	0.879	1.15	0.342	0.183
Acenaphthene	ns	ns	ns	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	<0.050	<0.050	<0.050
Acenaphthylene	ns	ns	ns	0.056	0.403	0.06	0.247	0.074	0.334	1.91	2.25	1.82	1.87	0.398
Anthracene	ns	ns	ns	0.05	0.266	0.087	0.22	<0.050	0.218	1.15	1.26	1.11	1.73	0.237
Benz[a]anthracene	1	10	1	0.192	1.10	0.314	0.871	0.204	0.805	4.41	5.00	4.16	6.11	0.919
Benzo[a]pyrene (B[a]P)	1	10	1	0.186	1.19	0.294	0.962	0.219	0.847	5.65	6.86	5.51	6.55	1.05
Benzo[b]fluoranthene	1	10	1	0.277	1.53	0.403	1.22	0.295	1.08	6.98	8.46	6.71	8.21	1.45
Benzo[g,h,i]perylene	ns	ns	ns	0.102	0.669	0.188	0.533	0.132	0.484	2.85	3.68	2.81	3.56	0.568
Benzo[k]fluoranthene	1	10	1	0.120	0.605	0.159	0.465	0.117	0.401	3.08	3.52	2.73	3.83	0.570
Chrysene	ns	ns	ns	0.209	1.17	0.372	0.914	0.238	0.854	4.88	5.81	4.76	6.84	0.964
Dibenz[a,h]anthracene	1	10	1	< 0.050	0.192	0.050	0.154	< 0.050	0.146	0.824	1.04	0.817	0.965	0.175
Fluoranthene	ns	ns	ns	0.333	1.58	0.757	1.36	0.293	1.13	6.88	7.40	6.22	12.3	1.26
Fluorene	ns	ns	ns	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	<0.20	<0.20	<0.20	<0.20	<0.050
Indeno [1,2,3-cd] pyrene	1	10	1	0.133	0.829	0.228	0.668	0.162	0.619	3.83	4.90	3.81	4.62	0.762
Naphthalene	5	50	5	0.137	0.355	0.089	0.229	0.051	0.868	2.00	2.20	2.08	0.860	0.395
Phenanthrene	5	50	5	0.147	0.654	0.407	0.624	0.116	0.504	2.77	2.91	2.52	5.99	0.520
Pyrene	10	100	10	0.333	1.62	0.692	1.40	0.324	1.28	7.71	8.42	7.07	12.6	1.41

#### Notes:

Values in μg/g unless otherwise stated

mbgs = metres below ground surface

ns = no standard

EPHs = Extractable Petroleum Hydrocarbons

LEPHs = Light EPH, corrected for polycyclic aromatic hydrocarbons (PAH)

HEPHs = Heavy EPH, corrected for PAH

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

#### Table 1: Petroleum Hydrocarbons in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia

Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP121-0.1M	16-TP201-0.6M	16-TP202-0.5M	16-TP202-1.0M	16-TP202-1.5M	16-TP203-0.5M	16-TP204-0.4M	16-TP205-0.4M	16-TP206-0.5M	16-TP207-0.5M
Farameter	Standards*	Standards**	Standards***	9/7/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016
				0.1 mbgs	0.6 mbgs	0.5 mbgs	1.0 mbgs	1.5 mbgs	0.5 mbgs	0.4 mbgs	0.4 mbgs	0.5 mbgs	0.5 mbgs
EPHs10-19	ns	ns	ns	<200	<200	<200	-	-	<200	<200	<200	<200	<200
EPHs19-32	ns	ns	ns	<200	<200	<200	-	•	<200	<200	<200	<200	<200
LEPHs	1000	2000	1000	<200	<200	<200	-	•	<200	<200	<200	<200	<200
HEPHs	1000	5000	1000	<200	<200	<200	-	-	<200	<200	<200	<200	<200
2-Methylnaphthalene	ns	ns	ns	0.136	0.211	0.513	-	•	0.075	<0.050	< 0.050	<0.050	<0.050
Acenaphthene	ns	ns	ns	< 0.050	< 0.050	<0.050	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	ns	ns	ns	0.385	< 0.050	0.749	-	•	0.056	<0.050	<0.050	<0.050	0.07
Anthracene	ns	ns	ns	0.216	< 0.050	0.407	-	•	< 0.050	<0.050	< 0.050	<0.050	<0.050
Benz[a]anthracene	1	10	1	0.86	0.155	1.74	-	-	0.121	<0.050	< 0.050	<0.050	0.168
Benzo[a]pyrene (B[a]P)	1	10	1	1.09	0.168	2.28	-	-	0.171	< 0.050	< 0.050	<0.050	0.233
Benzo[b]fluoranthene	1	10	1	1.48	0.246	2.96	-	-	0.205	< 0.050	< 0.050	<0.050	0.274
Benzo[g,h,i]perylene	ns	ns	ns	0.546	0.091	1.32	-	-	0.088	< 0.050	< 0.050	<0.050	0.107
Benzo[k]fluoranthene	1	10	1	0.572	0.089	1.18	-	-	0.085	<0.050	<0.050	<0.050	0.118
Chrysene	ns	ns	ns	0.917	0.189	1.88	-	-	0.125	< 0.050	< 0.050	<0.050	0.162
Dibenz[a,h]anthracene	1	10	1	0.179	< 0.050	0.386	-	-	<0.050	<0.050	< 0.050	<0.050	<0.050
Fluoranthene	ns	ns	ns	1.19	0.335	2.58	-	-	0.184	<0.050	<0.050	<0.050	0.258
Fluorene	ns	ns	ns	< 0.050	< 0.050	<0.050	-	-	<0.050	<0.050	< 0.050	<0.050	<0.050
Indeno [1,2,3-cd] pyrene	1	10	1	0.745	0.122	1.93	-	-	0.113	<0.050	<0.050	<0.050	0.145
Naphthalene	5	50	5	0.272	0.13	0.726	-	-	0.074	<0.050	<0.050	<0.050	0.109
Phenanthrene	5	50	5	0.451	0.215	1.10	-	-	0.112	<0.050	<0.050	<0.050	0.117
Pyrene	10	100	10	1.33	0.333	2.78	-	-	0.206	<0.050	< 0.050	<0.050	0.29

#### Notes:

Values in μg/g unless otherwise stated

mbgs = metres below ground surface

ns = no standard

EPHs = Extractable Petroleum Hydrocarbons

LEPHs = Light EPH, corrected for polycyclic aromatic hydrocarbons (PAH)

HEPHs = Heavy EPH, corrected for PAH

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

# Table 2: Volatile Organic Compounds in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

1.1. Trickrivenemen	B	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110	16-TP111-0.1M
11.12   Ternostranement   S2	Parameter	Standards*	Standards**	Standards***	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
1.1. Trickrivenemen					0.1 mbgs										
1.122 Frontendeman	1,1,1,2-Tetrachloroethane	32	73	ns	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050
1.1.2 Pintourophare	1,1,1-Trichloroethane	5	50	5	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	<0.050
1.1.Delicordemane	1,1,2,2-Tetrachloroethane	4.1	9.3	5	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050	< 0.050	<0.050
1.5   Distribution   1.5   1	1,1,2-Trichloroethane	5	50	5	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	<0.050
1, 2, Controloperame	1,1-Dichloroethane	5	50	5	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	<0.050
12-Delhoropempare   S   50   S   -0.050   -0.0	1,1-Dichloroethene	5	50	5	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050	<0.050
1.2 Dictinosposperse   5   50   5   .0.0550	1,2-Dichlorobenzene	1	10	1	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050	< 0.050	<0.050	< 0.050	<0.050
13 Discinsionarement   1	1,2-Dichloroethane	5	50	5	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050	< 0.050	<0.050	< 0.050	<0.050
1.4 Controlomorement   1	1,2-Dichloropropane	5	50	5	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050	< 0.050	<0.050	< 0.050	<0.050
Pleasurone   ns	1,3-Dichlorobenzene	1	10	1	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Acetone   14000   54000   ms   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0   <4.0	1,4-Dichlorobenzene	1	10	1	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050	< 0.050	<0.050	< 0.050	<0.050
Benzeme	2-Hexanone	ns	ns	ns	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050	< 0.050	<0.050	< 0.050	<0.050
BIOM (bromoderinery complements)   B.2   18	Acetone	14000	54000	ns	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Bromdom (tribromomethane)   620   2200   ns   4.050	Benzene	0.04	0.04	0.04	<0.0050	<0.0050	0.0107	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.349	<0.0050	0.0084
Carbon Desulicie 980 720 ns															

# Notes:

Values in μg/g unless otherwise stated mbgs = metres below ground surface ns = no standard

VH = Volatile Hydrocarbons VPH = Volatile Petroleum Hydrocarbons

XXX.XX

= Exceeds Applicable Parkland Soil Standard = Exceeds Applicable Commerical Soil Standard XXX.XX XXX.XX = Exceeds Applicable Soil Relocation Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

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# Table 2: Volatile Organic Compounds in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

B	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M	16-TP121-0.1M	16-TP201-0.6M
Parameter	Standards*	Standards**	Standards***	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	10/11/2016
				0.1 mbgs	0.6 mbgs									
1,1,1,2-Tetrachloroethane	32	73	ns	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,1,1-Trichloroethane	5	50	5	<0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	<0.050
1,1,2,2-Tetrachloroethane	4.1	9.3	5	< 0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050
1,1,2-Trichloroethane	5	50	5	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,1-Dichloroethane	5	50	5	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,1-Dichloroethene	5	50	5	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,2-Dichlorobenzene	1	10	1	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,2-Dichloroethane	5	50	5	<0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050
1,2-Dichloropropane	5	50	5	< 0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,3-Dichlorobenzene	1	10	1	<0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,4-Dichlorobenzene	1	10	1	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050
2-Hexanone	ns	ns	ns	< 0.050	< 0.050	< 0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	-
Acetone	14000	54000	ns	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	-
Benzene	0.04	0.04	0.04	0.0258	<0.0050	<0.0050	0.025	0.0724	0.0308	0.016	0.0072	0.0067	<0.0050	0.0169
BDCM (bromodichloromethane)	8.2	18	ns	<0.050	<0.050	< 0.050	< 0.050	<0.050	< 0.050	<0.050	< 0.050	< 0.050	<0.050	<0.050
Bromoform (tribromomethane)	620	2200	ns	<0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050
Carbon Disulfide	360	720	ns	<0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-
Carbon Tetrachloride	5	50	5	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	<0.050	<0.050	< 0.050	<0.050	< 0.050
Monochlorobenzene	1	10	1	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	<0.050	<0.050	< 0.050	<0.050	<0.050
Chloroethane (ethyl chloride)	30	65	ns	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloroform	5	50	5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloromethane (methyl chloride)	47	160	ns	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-dichloroethene (cis)	5	50	5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichloroethene (trans)	5	50	5	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	<0.050	<0.050	< 0.050	<0.050	<0.050
1,3-dichloropropene (cis)	ns	ns	5	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	<0.050	<0.050	< 0.050	<0.050	<0.050
1,3-dichloropropene (trans)	ns	ns	5	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	<0.050	<0.050	< 0.050	<0.050	<0.050
1,3-dichloropropene	5	5	5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-
DBCM (dibromochloromethane)	11	26	ns	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dichloromethane	5	50	5	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	1	7	1	<0.015	<0.015	<0.015	0.027	0.069	0.025	0.031	<0.015	<0.015	<0.015	0.018
Ethyl ether	1800	1800	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	-
m&p-Xylene	ns	ns	ns	0.078	<0.050	<0.050	0.189	0.505	0.132	0.175	0.093	<0.050	<0.050	0.107
Methyl ethyl ketone (MEK)	22000	110000	ns	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	-
Methyl isobutyl ketone (MIBK)	5300	47000	ns	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-
Methyl tert-butyl ether (MTBE)	320	700	ns	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Heptane (nC7)	ns	ns	ns	<0.050	<0.050	<0.050	0.058	0.093	<0.050	0.063	<0.050	<0.050	<0.050	-
n-Octane (nC8)	ns	ns	ns	<0.050	<0.050	<0.050	<0.050	0.102	<0.050	0.098	<0.050	<0.050	<0.050	-
o-Xylene	ns	ns	ns	0.051	<0.050	<0.050	0.106	0.361	0.115	0.164	0.076	<0.050	<0.050	0.083
Styrene	5	50	5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Tetrachloroethylene (PERC)	5	5	5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	1.5	2.5	1.5	0.097	<0.050	<0.050	0.185	0.33	0.084	0.087	0.051	<0.050	<0.050	0.077
Total Xylenes	5	2.3	5	0.129	<0.030	<0.075	0.185	0.866	0.084	0.339	0.031	<0.030	<0.030	0.19
Trichloroethylene (TCE)	0.015	0.015	0.015	<0.010	<0.075	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.073	<0.075	<0.010
Trichlorofluoromethane (Freon 11)	390	2000	0.013 ns	<0.010	<0.010	<0.10	<0.010	<0.10	<0.10	<0.010	<0.10	<0.10	<0.10	<0.010
Vinyl chloride (chloroethene)	0.79	7.5	ns	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
VH	ns			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
VPHs	200	ns 200	ns		<100	<100	<100		<100	<100	<100	<100	<100	
VE 112	200	200	ns	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100

# Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface ns = no standard

VH = Volatile Hydrocarbons

VPH = Volatile Petroleum Hydrocarbons

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
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# Table 2: Volatile Organic Compounds in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

1,1,2   Telepotheronthan   32   72   68   60.005   1	Pavamata.	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP202-0.5M	16-TP202-1.0M	16-TP202-1.5M	16-TP203-0.5M	16-TP204-0.4M	16-TP205-0.4M	16-TP206-0.5M	16-TP207-0.5M
1.1.1 = Trinumbrowthrane	Parameter	Standards*	Standards**	Standards***	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016
1.1. Trieffercement					0.5 mbgs	1.0 mbgs	1.5 mbgs	0.5 mbgs	0.4 mbgs	0.4 mbgs	0.5 mbgs	0.5 mbgs
11.22 Friendomentame	1,1,1,2-Tetrachloroethane	32	73	ns	<0.050	-	-	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
11.2 Prictionosthame	1,1,1-Trichloroethane	5	50	5	<0.050	-	-	<0.050	< 0.050	<0.050	<0.050	< 0.050
11.Delichrosostheme	1,1,2,2-Tetrachloroethane	4.1	9.3	5	<0.050	-	-	<0.050	< 0.050	<0.050	< 0.050	< 0.050
11-Delinformermene	1,1,2-Trichloroethane	5	50	5	<0.050	-	-	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
12.Delindopelamene	1,1-Dichloroethane	5	50	5	<0.050	-	-	<0.050	< 0.050	<0.050	<0.050	< 0.050
12-Delchiorpergene	1,1-Dichloroethene	5	50	5	<0.050	-	-	<0.050	< 0.050	<0.050	<0.050	
13-Delichorpergemene   S   50   S   c.0560     c.0560   c.	1,2-Dichlorobenzene	1	10	1	< 0.050	-	-	<0.050	< 0.050	<0.050	< 0.050	< 0.050
1.5Dehiorberezene	1,2-Dichloroethane	5	50	5	<0.050	-	-	<0.050	< 0.050	<0.050	<0.050	< 0.050
1.4 Delinforderezee	1,2-Dichloropropane	5	50	5	<0.050	-	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
24-Hosanone	1,3-Dichlorobenzene	1	10	1	<0.050	-	-	<0.050	< 0.050	<0.050	< 0.050	< 0.050
Acetone   14000	1,4-Dichlorobenzene	1	10	1	<0.050	-	-	<0.050	< 0.050	<0.050	<0.050	< 0.050
Benzene	2-Hexanone	ns	ns	ns	-	-	-	-	-	-	-	-
BDCM (promodicinicomenhane)   B.2   18   ms   c.0.050     <0.050   c.0.050   c	Acetone	14000	54000	ns	-	-	-	-	-	-	-	-
Bomolorm (Inbromomethane)	Benzene	0.04	0.04	0.04	0.0168	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Carbon Disultide  \$60   720   ns	BDCM (bromodichloromethane)	8.2	18	ns	<0.050	-	-	<0.050	<0.050	<0.050	< 0.050	< 0.050
Carbon Disultide  \$60   720   ns	Bromoform (tribromomethane)	620	2200	ns	<0.050	-	-	<0.050	< 0.050	<0.050	< 0.050	< 0.050
Carbon Fetrachloride	Carbon Disulfide	360	720		-	-	-	-	-	-	-	-
Chlorothane (ethyl chloride)   30   65   ns   <0.10   .   .   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10   <0.10	Carbon Tetrachloride	5			<0.050	-	-	<0.050	<0.050	<0.050	<0.050	< 0.050
Chioronform	Monochlorobenzene	1	10	1	<0.050	-	-	<0.050	< 0.050	<0.050	< 0.050	< 0.050
Chioronform	Chloroethane (ethyl chloride)	30	65	ns	<0.10	-	-	<0.10	<0.10	<0.10	<0.10	<0.10
Chloromethane (methyl chloride)	, , , , , , , , , , , , , , , , , , ,	5				-	-					
12-dichloroethene (cis)   5   50   5   \$     5   \$     \$	Chloromethane (methyl chloride)	47	160	ns		-	-		<0.10		<0.10	<0.10
12-Dichloroethene (trans)   5   50   5   <0.050	, ,	5				-	-	<0.050	<0.050	< 0.050	< 0.050	< 0.050
1.3-dichloropropene (cis)   ns   ns   5   <0.050   .   .   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.05		5	50	5	< 0.050	-	-	<0.050	<0.050	<0.050	< 0.050	< 0.050
1.3-dichloropropene (trans)   ns		ns		5		-	-					
1.3-dichloropropene   5   5   5   5   -				5		-	-					
DBCM (dibromochloromethane)		5	5	5		-	-	-			-	-
Dichlormethane   5   50   5   40.30   - 40.30   40.3		11	26	ns	<0.050	-	-	<0.050	<0.050	<0.050	<0.050	< 0.050
Ethylether   1800   1		5				-	-					
Ethyl ether   1800   1800   ns		1	7	1		-	-					
m8p-Xylene         ns         ns         ns         0.116         -         -         <0.050         <0.050         <0.050         <0.050           Methyl ethyl ketone (MEK)         22000         110000         ns         -	-	1800	1800	ns		-	-	-				-
Methyl ethyl ketone (MEK)   22000   110000   ns   -   -   -   -   -   -   -   -   -	-				0.116	-	-	<0.050	<0.050	<0.050	<0.050	< 0.050
Methyl isobutyl ketone (MIBK)         5300         47000         ns         -					<b>†</b>	-	-					-
Methyl tert-butyl ether (MTBE)         320         700         ns         <0.20         -         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20         <0.20 <td>, ,</td> <td></td> <td></td> <td></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td>	, ,				-	-	-	-	-	-	-	-
n-Heptane (nC7)         ns					<0.20	-	-	<0.20	<0.20	<0.20	<0.20	<0.20
n-Octane (nC8)         ns						-	-					
o-Xylene         ns         ns         ns         0.11         -         -         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.075         <0.07		<del>                                     </del>			-	-	-	-	-	-	-	-
Styrene         5         50         5         <0.050         -         -         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.075         <0.075         <0.075         <0.075         <0.075         <0.075         <0.075         <0.075         <0.075         <0.075         <0.075         <0.075         <0.010         <0.010         <0.010         <0.010         <0.010         <0.010	` /				0.11	-	-	<0.050	<0.050	<0.050	<0.050	< 0.050
Tetrachloroethylene (PERC)         5         5         < 0.050         -         -         < 0.050         < 0.050         < 0.050         < 0.050           Toluene         1.5         2.5         1.5         0.075         -         -         < 0.050	-	5				-	-					
Toluene         1.5         2.5         1.5         0.075         -         -         < 0.050         < 0.050         < 0.050         < 0.050           Total Xylenes         5         20         5         0.225         -         -         < 0.075		5				-	-					
Total Xylenes         5         20         5         0.225         -         -         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.075         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010 <t< td=""><td>• • • • • • • • • • • • • • • • • • • •</td><td>1.5</td><td></td><td></td><td></td><td>-</td><td>-</td><td></td><td></td><td></td><td></td><td></td></t<>	• • • • • • • • • • • • • • • • • • • •	1.5				-	-					
Trichloroethylene (TCE)         0.015         0.015         0.015         < 0.010         -         -         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010		5				-	-					
Trichlorofluoromethane (Freon 11)         390         2000         ns         <0.10         -         -         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10 <td>-</td> <td>0.015</td> <td></td> <td></td> <td></td> <td>-</td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td>	-	0.015				-	-					
Vinyl chloride (chloroethene)         0.79         7.5         ns         <0.10         -         -         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10         <0.10	· · · /					-	-					
VH ns ns ns <100 - <100 <100 <100 <100 <100	,					-	-					
	, , , , , , , , , , , , , , , , , , , ,					-	-			<del></del>		
	VPHs					-	-					

# Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface

ns = no standard

VH = Volatile Hydrocarbons

VPH = Volatile Petroleum Hydrocarbons

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

## Table 3: Metals in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110
Farameter	Standards*	Standards**	Standards***	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
				0.1 mbgs									
рН	ns	ns		5.46	6.42	5.67	5.34	5.26	5.38	5.53	5.57	5.57	5.31
Antimony	20	40	20	0.52	0.81	0.84	0.55	0.75	0.85	0.50	0.85	0.56	0.66
Arsenic	15	15	15	3.35	4.07	4.83	4.89	3.39	5.00	4.71	4.91	4.74	4.27
Barium	400	400	400	94.4	156	179	126	104	134	70.5	102	102	112
Beryllium	4	8	4	0.32	0.33	0.40	0.36	0.29	0.38	0.31	0.34	0.29	0.31
Cadmium	1.5 @ pH < 6.5	1.5 @ pH < 6.5	1.5	0.236	0.423	0.798	0.545	0.424	0.464	0.466	0.663	0.575	0.411
Chromium	60	60	60	28.3	34.1	37.1	41.2	32.8	46.5	33.5	45.8	55.0	36.9
Cobalt	50	300	50	7.97	9.17	9.88	10.3	7.64	11.3	9.61	9.70	9.61	10.6
Copper	100 @ pH 5.0 — < 5.5 150 @ pH > 5.5	100 @ pH 5.0 — < 5.5 200 @ pH 5.5 - <6.0 250 @ pH > 6.0	90	32.0	49.9	62.2	43.4	43.3	44.1	31.6	39.5	30.6	30.5
Lead	100 @ pH < 6.0 250 @ pH 6.0 — < 6.5 400 @ pH >6.5	100 @ pH < 6.0 250 @ pH 6.0 — < 6.5 700 @ pH >6.5	100	52.6	66.6	200	92.1	79.0	75.9	149	128	98.9	130
Mercury (inorganic)	15	40	15	0.067	0.096	0.134	0.097	0.102	0.136	0.077	0.125	0.076	0.068
Molybdenum	10	40	10	0.76	0.73	0.59	0.63	1.10	1.26	0.44	0.63	0.37	0.43
Nickel	100	500	100	20.4	24.1	25.2	26.3	18.8	28.6	26.0	25.5	23.8	25.6
Selenium	3	10	3	0.26	0.25	0.30	0.27	<0.20	0.28	0.21	0.36	0.25	<0.20
Silver	20	40	20	0.11	0.17	0.31	0.21	0.19	0.20	0.11	0.26	0.18	0.15
Thallium	ns	ns	ns	0.057	0.067	0.074	0.067	0.057	0.068	0.067	0.072	0.067	0.071
Tin	50	300	50	2.0	<2.0	2.4	<2.0	<2.0	<2.0	<2.0	2.5	<2.0	2.4
Uranium	16	200	ns	0.507	0.604	1.19	1.02	0.576	0.742	0.913	1.11	0.972	0.833
Vanadium	200	ns	200	56.1	59.6	68.0	70.1	49.2	73.4	66.5	69.7	64.4	77.6
Zinc	150 @ pH < 6.5 450 @ pH >6.5	150 @ pH < 6.5 600 @ pH > 6.5	150	83.9	139	119	81.3	96.5	111	68.0	91.5	81.8	83.0

#### Notes:

Values in μg/g unless otherwise stated

mbgs = metres below ground surface ns = no standard

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

<sup>\*</sup> Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*</sup> Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*\*</sup> Soil relocation to nonagricultural land standards in Schedule 7 of the B.C. Contaminated Sites Regulation (CSR).

## Table 3: Metals in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP111-0.1M	16-TP112-0.1M	16-TP113-0.1M		16-TP115-0.1M		16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	
T drameter	Standards*	Standards**	Standards***	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
				0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs
рН	ns	ns		5.80	5.69	5.49	5.53	5.21	5.75	5.73	5.89	5.51	5.57
Antimony	20	40	20	1.91	1.16	0.55	0.65	0.65	0.57	0.51	0.53	0.59	0.76
Arsenic	15	15	15	5.51	3.88	4.60	4.55	4.56	5.28	4.89	5.51	4.32	4.75
Barium	400	400	400	212	133	136	154	158	249	241	302	134	167
Beryllium	4	8	4	0.38	0.31	0.36	0.53	0.46	0.41	0.43	0.47	0.27	0.38
Cadmium	1.5 @ pH < 6.5	1.5 @ pH < 6.5	1.5	0.605	0.402	0.388	0.717	0.545	0.526	0.562	0.677	0.503	0.554
Chromium	60	60	60	41.1	29.9	37.1	46.7	38.1	37.1	34.3	39.2	31.4	36.1
Cobalt	50	300	50	10.0	7.99	8.42	10.3	9.88	9.66	8.21	9.47	6.87	8.30
Copper	100 @ pH 5.0 — < 5.5 150 @ pH > 5.5	100 @ pH 5.0 — < 5.5 200 @ pH 5.5 - <6.0 250 @ pH > 6.0	90	39.6	32.1	31.6	41.3	39.0	32.3	33.2	35.4	27.3	34.4
Lead	100 @ pH < 6.0 250 @ pH 6.0 — < 6.5 400 @ pH >6.5	100 @ pH < 6.0 250 @ pH 6.0 — < 6.5 700 @ pH >6.5	100	303	197	177	118	153	207	133	219	201	241
Mercury (inorganic)	15	40	15	0.129	0.150	0.186	0.103	0.128	0.134	0.124	0.175	0.137	0.185
Molybdenum	10	40	10	0.75	0.52	0.62	1.67	1.46	0.81	1.01	0.86	0.64	0.87
Nickel	100	500	100	27.7	22.6	23.1	28.0	25.4	29.6	23.9	26.3	18.1	21.5
Selenium	3	10	3	0.26	0.24	0.25	0.27	0.27	0.25	0.24	0.28	0.24	0.32
Silver	20	40	20	0.23	0.30	0.18	0.26	0.22	0.19	0.20	0.24	0.18	0.26
Thallium	ns	ns	ns	0.070	0.068	0.073	0.094	0.083	0.073	0.067	0.073	0.052	0.080
Tin	50	300	50	2.7	2.4	<2.0	<2.0	2.2	<2.0	<2.0	4.7	11.4	3.8
Uranium	16	200	ns	1.05	0.854	0.882	1.66	1.41	0.999	1.12	1.15	0.883	1.08
Vanadium	200	ns	200	68.9	57.0	59.9	74.6	66.0	67.6	60.1	65.5	52.0	60.5
Zinc	150 @ pH < 6.5 450 @ pH >6.5	150 @ pH < 6.5 600 @ pH > 6.5	150	152	100	87.4	96.3	97.6	85.6	82.8	94.6	73.8	105

## Notes:

ns = no standard

Values in μg/g unless otherwise stated mbgs = metres below ground surface

XXX.XX XXX.XX

XXX.XX

Exceeds Applicable Parkland Soil Standard
 Exceeds Applicable Commerical Soil Standard
 Exceeds Applicable Soil Relocation Standard

<sup>\*</sup> Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*</sup> Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*\*</sup> Soil relocation to nonagricultural land standards in Schedule 7 of the B.C. Contaminated Sites Regulation (CSR).

## Table 3: Metals in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	CSR Soil Relocation	16-TP121-0.1M	16-TP201-0.6M	16-TP202-0.5M	16-TP202-1.0M	16-TP202-1.5M	16-TP203-0.5M	16-TP204-0.4M	16-TP205-0.4M	16-TP206-0.5M	16-TP107-0.5M
Farameter	Standards*	Standards**	Standards***	9/7/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016
				0.1 mbgs	0.6 mbgs	0.5 mbgs	1.0 mbgs	1.5 mbgs	0.5 mbgs	0.4 mbgs	0.4 mbgs	0.5 mbgs	0.5 mbgs
рН	ns	ns		5.34	7.56	6.55	7.5	7.59	7.89	6.6	6.72	7.6	6.61
Antimony	20	40	20	0.75	0.41	0.68	0.46	0.24	0.52	1.37	0.14	0.24	0.14
Arsenic	15	15	15	4.29	4.61	6.05	5.32	4.47	4.44	5.48	4.17	3.55	3.89
Barium	400	400	400	165	166	262	228	79.6	117	57.7	57.2	182	68.5
Beryllium	4	8	4	0.36	0.35	0.43	0.4	0.32	0.25	0.32	0.28	0.34	0.28
Cadmium	1.5 @ pH < 6.5	1.5 @ pH < 6.5	1.5	0.377	0.208	0.238	0.247	0.07	0.174	0.697	0.078	0.129	0.08
Chromium	60	60	60	30.7	29.4	30.9	27.3	29.6	20	27.1	19	27.9	21.3
Cobalt	50	300	50	8.31	10.2	10.8	10.5	10.5	7.58	10.1	9.34	8.78	7.77
Copper	100 @ pH 5.0 — < 5.5 150 @ pH > 5.5	100 @ pH 5.0 — < 5.5 200 @ pH 5.5 - <6.0 250 @ pH > 6.0	90	36.9	34.7	35.6	29.1	26.7	21.6	32.6	25.7	14.0	19.9
Lead	100 @ pH < 6.0 250 @ pH 6.0 — < 6.5 400 @ pH >6.5	100 @ pH < 6.0 250 @ pH 6.0 — < 6.5 700 @ pH >6.5	100	156	127	198	100	7.37	62.6	13.5	3.46	47.4	17.1
Mercury (inorganic)	15	40	15	0.170	0.172	0.198	0.102	<0.050	0.065	< 0.050	< 0.050	<0.050	< 0.050
Molybdenum	10	40	10	0.82	0.45	0.59	0.56	0.4	0.35	0.54	0.18	0.3	0.26
Nickel	100	500	100	22.1	24.4	28.4	26.8	24.9	18.6	27.5	21.4	20.7	19.6
Selenium	3	10	3	0.26	0.23	0.26	<0.20	<0.20	<0.20	<0.20	<0.20	0.22	<0.20
Silver	20	40	20	0.17	0.14	0.16	0.11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Thallium	ns	ns	ns	0.066	0.057	0.078	0.071	0.066	< 0.050	0.077	0.068	0.073	0.062
Tin	50	300	50	2.8	2.3	2.4	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Uranium	16	200	ns	0.726	0.38	0.51	0.444	0.382	0.347	0.388	0.238	0.403	0.35
Vanadium	200	ns	200	58.1	69.5	68.1	70.4	64.1	47.7	71.6	56.4	56.4	58.8
Zinc	150 @ pH < 6.5 450 @ pH >6.5	150 @ pH < 6.5 600 @ pH > 6.5	150	102	77.7	93.4	75.0	40.2	62.2	44.8	40.4	95.9	36.4

## Notes:

Values in μg/g unless otherwise stated mbgs = metres below ground surface

ns = no standard

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard
XXX.XX	= Exceeds Applicable Soil Relocation Standard

<sup>\*</sup> Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*</sup> Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*\*</sup> Soil relocation to nonagricultural land standards in Schedule 7 of the B.C. Contaminated Sites Regulation (CSR).

#### Table 4: Toxicity Characteristic Leaching Procedure Metals in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	HWR Leachate Quality	16-TP201-0.6M	16-TP202-0.5M
Parameter	Standards*	10/11/2016	10/11/2016
		0.6 mbgs	0.5 mbgs
1st Preliminary pH	ns	7.97	7.17
2nd Preliminary pH	ns	1.67	1.60
Final pH	ns	5.02	4.99
Extraction Solution Initial pH	ns	4.95	4.95
Antimony (Sb)-Leachable	ns	<1000	<1000
Arsenic (As)-Leachable	2500	<1000	<1000
Barium (Ba)-Leachable	100000	<2500	<2500
Beryllium (Be)-Leachable	ns	<25	<25
Boron (B)-Leachable	500000	<500	<500
Cadmium (Cd)-Leachable	500	<50	<50
Calcium (Ca)-Leachable	ns	82900	55400
Chromium (Cr)-Leachable	5000	<250	<250
Cobalt (Co)-Leachable	ns	<50	<50
Copper (Cu)-Leachable	100000	<50	<50
Iron (Fe)-Leachable	ns	<150	<150
Lead (Pb)-Leachable	5000	<250	<250
Magnesium (Mg)-Leachable	ns	2990	4490
Mercury (Hg)-Leachable	100	<1.0	<1.0
Nickel (Ni)-Leachable	ns	<250	<250
Selenium (Se)-Leachable	ns	<1000	<1000
Silver (Ag)-Leachable	5000	<50	<50
Thallium (TI)-Leachable	ns	<1000	<1000
Vanadium (V)-Leachable	ns	<150	<150
Zinc (Zn)-Leachable	500000	<500	<500

#### Notes:

Values in  $\mu$ g/L unless otherwise stated mbgs = metres below ground surface ns = no standard

= Exceeds Applicable Leachate Quality Soil Standard

<sup>\*</sup> Leachate quality standards provided in Schedule 4, Part 3, Table 1 of the B.C. Hazardous Waste Regulation (HWR).

#### Table 5: Bacteria in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Dovometer	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110
Parameter	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
	0.1 mbgs									
E. coli	143	4	<2	1020	>1820.14	635	<2	<2	<2	<2
Coliform Bacteria - Fecal	143	4	<2	1020	>1820.14	635	<2	<2	<2	<2
Coliform Bacteria - Total	>1769.88	>1830.49	247	1790	>1820.14	>1884.07	53	77	15	9

#### Notes:

Values in MPN/g unless otherwise stated mbgs = metres below ground surface ns = no standard

#### Table 5: Bacteria in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, Britis Client: Brookfield Global Integrated Solu

Parameter	16-TP111-0.1M	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M	16-TP121-0.1M
Parameter	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
	0.1 mbgs										
E. coli	4	<2	4	1810	<2	4	3	<2	<2	<2	<2
Coliform Bacteria - Fecal	4	<2	4	1810	<2	4	3	<2	<2	<2	<2
Coliform Bacteria - Total	266	4	608	1810	>1879.67	79	>1775.55	38	268	621	146

#### Notes:

Values in MPN/g unless otherwise stated mbgs = metres below ground surface ns = no standard

#### Table 6: Nutrients and lodide in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter CSR Parkland Soil Standards*	CSR Parkland Soil Standards*	CSR Commercial Soil Standards*	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110
	Con Commercial Son Standards	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	
			0.1 mbgs									
Total Phosphate as P	ns	ns	14.00	16.80	3.98	3.38	11.50	17.20	4.82	2.47	2.08	2.74
Ammonia, Total Leachable (as N)	ns	ns	0.74	2.96	0.71	1.73	16.70	2.47	1.03	0.62	0.72	0.63
lodide	ns	ns	<5.6	<5.6	<5.8	<5.6	<5.7	<5.7	<5.5	<5.8	<5.4	<5.6

Notes:

Values in μg/g unless otherwise stated mbgs = metres below ground surface

ns = no standard

XXX.XX = Exceeds Applicable Parkland Soil Standard

XXX.XX = Exceeds Applicable Commercial Soil Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

#### Table 6: Nutrients and lodide in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter CSR Parkland Soil Standards*	CSR Parkland Soil Standards*	CSR Commercial Soil Standards*	16-TP111-0.1M	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M	16-TP121-0.1M
	CSA Commercial Son Standards	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	
			0.1 mbgs										
Total Phosphate as P	ns	ns	3.60	4.49	6.59	2.42	4.39	2.34	2.91	2.74	2.20	3.57	7.47
Ammonia, Total Leachable (as N)	ns	ns	0.49	0.45	0.69	0.79	3.85	0.80	2.13	0.66	2.79	2.62	0.63
lodide	ns	ns	<5.5	<5.6	<5.8	<5.9	<5.8	<5.5	< 5.6	<5.6	<5.9	< 5.6	<5.7

Notes:

Notes.

Values in μg/g unless otherwise stated mbgs = metres below ground surface

ns = no standard

XXX.XX = Exceeds Applicable Parkland Soil Standard

XXX.XX = Exceeds Applicable Commercial Soil Standard

= Exceeds Applicable Commerical Soil Standard

\* Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

\*\* Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

#### Table 7: Alcohols in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Davamatav	CSR Parkland Soil	CSR Commercial Soil	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110
Parameter	Standards*	Standards**	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
			0.1 mbgs									
sec-Butanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
n-Butanol	6100	61000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Isobutanol	1300	40000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Isopropanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methanol	31,000	100,000	<0.50	8.07	7.39	2.58	2.22	<0.50	1.92	6.7	4.58	3.25
Pentanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

#### Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface ns = no standard

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard

<sup>\*</sup> Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*</sup> Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

#### Table 7: Alcohols in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

			16-TP111-0.1M	16-TP112-	16-TP113-	16-TP114-	16-TP115-	16-TP116-	16-TP117-	16-TP118-	16-TP119-	16-TP120-	16-TP121-
Doromotor	CSR Parkland Soil	CSR Commercial Soil	10-11-111-0.11WI	0.1M									
Parameter	Standards*	Standards**	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
			0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs	0.1 mbgs
sec-Butanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
n-Butanol	6100	61000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Isobutanol	1300	40000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Isopropanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methanol	31,000	100,000	0.66	0.98	3.97	8.80	11.3	<0.50	10.2	3.66	4.79	6.73	7.18
Pentanol	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

#### Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface ns = no standard

XXX.XX	= Exceeds Applicable Parkland Soil Standard
XXX.XX	= Exceeds Applicable Commerical Soil Standard

<sup>\*</sup> Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*</sup> Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

#### Table 8: Fatty Acids in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110	16-TP111-0.1M
Parameter	Standards*	Standards**	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
			0.1 mbgs										
Acetic Acid	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Butyric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Caproic (Hexanoic) Acid	ns	ns	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Formic Acid	100,000	100,000	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300
Isobutyric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Isovaleric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Propionic Acid	ns	ns	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Valeric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

#### Notes:

Values in μg/g unless otherwise stated mbgs = metres below ground surface ns = no standard

XXX.XX XXX.XX

= Exceeds Applicable Parkland Soil Standard = Exceeds Applicable Commerical Soil Standard

<sup>\*</sup> Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*</sup> Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

#### Table 8: Fatty Acids in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

Parameter	CSR Parkland Soil	CSR Commercial Soil	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M	16-TP121-0.1M
Parameter	Standards*	Standards**	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
			0.1 mbgs									
Acetic Acid	ns	ns	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Butyric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Caproic (Hexanoic) Acid	ns	ns	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Formic Acid	100,000	100,000	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300
Isobutyric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Isovaleric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Propionic Acid	ns	ns	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Valeric Acid	ns	ns	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

#### Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface ns = no standard



= Exceeds Applicable Parkland Soil Standard = Exceeds Applicable Commerical Soil Standard

<sup>\*</sup> Parkland Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

<sup>\*\*</sup> Commercial Land Use standards provided in Schedules 4, 5 and 10 of the B.C. Contaminated Sites Regulation (CSR). Schedule 5 specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants and groundwater used for drinking water.

# Table 9: Illicit Drugs in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110	16-TP111-0.1M
Parameter	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016
	0.1 mbgs										
Methamphetamine	<0.10	<0.10	<0.10	0.15	0.40	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Cocaine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Heroin	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Amphetamine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Pseudoephedrine/ephedrine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MDMA (ecstacy)	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Lysergic acid diethylamide	< 0.10	< 0.10	< 0.10	<0.10	< 0.10	<0.10	< 0.10	<0.10	<0.10	<0.10	< 0.10

#### Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface ns = no standard

XXX.XX

= Concentrations reported above laboratory detection limits

# Table 9: Illicit Drugs in Soil

Job Number: 13858B

Site: 850 Burdett Avenue, Victoria, Britis Client: Brookfield Global Integrated Solu

	1	ı	ı	I	ı						
Parameter	16-TP112-0.1M	16-TP113-0.1M	16-TP114-0.1M	16-TP115-0.1M	16-TP116-0.1M	16-TP117-0.1M	16-TP118-0.1M	16-TP119-0.1M	16-TP120-0.1M	16-TP121-0.1M	16-TP204-0.4M
Parameter	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	9/7/2016	10/11/2016
	0.1 mbgs	0.4 mbgs									
Methamphetamine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Cocaine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-
Heroin	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-
Amphetamine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-
Pseudoephedrine/ephedrine	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-
MDMA (ecstacy)	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-
Lysergic acid diethylamide	< 0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	< 0.10	-

#### Notes:

Values in  $\mu g/g$  unless otherwise stated mbgs = metres below ground surface ns = no standard

XXX.XX

= Concentrations reported above laboratory detection limits

APPENDIX IV

Laboratory Certificates of Analysis



Victoria BC V8P 2L5

Pinchin West LTD. Date Received: 09–SEP–16

ATTN: Joshu Bocskei Report Date: 19-OCT-16 19:37 (MT)

# 300 – 1095 McKenzie Avenue Version: FINAL REV. 2

Client Phone:<sup>\$.22</sup>

# **Certificate of Analysis**

Lab Work Order #: L1826440
Project P.O. #: NOT SUBMITTED

Job Reference: 13858B

C of C Numbers:

Legal Site Desc: 850 BURDETT AVENUE, VICTORIA, BC

Comments: ADDITIONAL 18-OCT-16 14:07 - TCLP Metals has been added to samples 16-TP111-0.1m

and 16-TP120-0.1m.

Please note, ALS Salt Lake City results can be found at the end of this attachment.

Methamphetamine

Cocaine Heroin

**Amphetamine** 

Pseudoephedrine/ephedrine

MDMA(ecstasy)

Lysergic acid diethylamide

Iodine

Selam Worku Account Manager

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

ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700 ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

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L1826440 CONTD.... PAGE 2 of 25

19-OCT-16 19:37 (MT) Version: FINAL REV. 2

	Sample ID Description	L1826440-1 SOIL	L1826440-2 SOIL	L1826440-3 SOIL	L1826440-4 SOIL	L1826440-5 SOIL
	Sampled Date Sampled Time Client ID	07-SEP-16 16-TP101	07-SEP-16 16-TP102	07-SEP-16 16-TP103	07-SEP-16 16-TP104	07-SEP-16 16-TP105
Crouning						
Grouping SOIL	Analyte					
	Malatana (60)					
Physical Tests	Moisture (%)	9.09	12.1	10.4	9.93	11.6
	pH (1:2 soil:water) (pH)	5.46	6.42	5.67	5.34	5.26
& Nutrients	Total Phosphate As P (mg/kg)	14.0	16.8	3.98	3.38	11.5
Saturated Paste Extractables	Ammonia, Total Leachable (as N) (mg/kg)	0.735	2.96	0.711	1.73	16.7
	% Saturation (%)	58.5	82.7	60.5	57.0	80.2
Bacteriological Tests	E. coli (MPN/g)	143	4	<2	1020	>1820.14
	Coliform Bacteria - Fecal (MPN/g)	143	4	<2	1020	>1820.14
	Coliform Bacteria - Total (MPN/g)	>1769.88	>1830.49	247	1790	>1820.14
Metals	Antimony (Sb) (mg/kg)	0.52	0.81	0.84	0.55	0.75
	Arsenic (As) (mg/kg)	3.35	4.07	4.83	4.89	3.39
	Barium (Ba) (mg/kg)	94.4	156	179	126	104
	Beryllium (Be) (mg/kg)	0.32	0.33	0.40	0.36	0.29
	Cadmium (Cd) (mg/kg)	0.236	0.423	0.798	0.545	0.424
	Chromium (Cr) (mg/kg)	28.3	34.1	37.1	41.2	32.8
	Cobalt (Co) (mg/kg)	7.97	9.17	9.88	10.3	7.64
	Copper (Cu) (mg/kg)	32.0	49.9	62.2	43.4	43.3
	Lead (Pb) (mg/kg)	52.6	66.6	200	92.1	79.0
	Mercury (Hg) (mg/kg)	0.067	0.096	0.134	0.097	0.102
	Molybdenum (Mo) (mg/kg)	0.76	0.73	0.59	0.63	1.10
	Nickel (Ni) (mg/kg)	20.4	24.1	25.2	26.3	18.8
	Selenium (Se) (mg/kg)	0.26	0.25	0.30	0.27	<0.20
	Silver (Ag) (mg/kg)	0.11	0.17	0.31	0.21	0.19
	Thallium (TI) (mg/kg)	0.057	0.067	0.074	0.067	0.057
	Tin (Sn) (mg/kg)	2.0	<2.0	2.4	<2.0	<2.0
	Uranium (U) (mg/kg)	0.507	0.604	1.19	1.02	0.576
	Vanadium (V) (mg/kg)	56.1	59.6	68.0	70.1	49.2
	Zinc (Zn) (mg/kg)	83.9	139	119	81.3	96.5
TCLP Metals	1st Preliminary pH (pH)					
	2nd Preliminary pH (pH)					
	Final pH (pH)					
	Extraction Solution Initial pH (pH)					
	Antimony (Sb)-Leachable (ug/L)					
	Arsenic (As)-Leachable (ug/L)					
	Barium (Ba)-Leachable (ug/L)					
	Beryllium (Be)-Leachable (ug/L)					
	Boron (B)-Leachable (ug/L)					

 $<sup>^{\</sup>star}$  Please refer to the Reference Information section for an explanation of any qualifiers detected.

L1826440 CONTD.... PAGE 3 of 25

19-OCT-16 19:37 (MT) Version: FINAL REV. 2

	Sample ID Description Sampled Date Sampled Time Client ID	L1826440-6 SOIL 07-SEP-16 16-TP106	L1826440-7 SOIL 07-SEP-16 16-TP107	L1826440-8 SOIL 07-SEP-16 16-TP108	L1826440-9 SOIL 07-SEP-16 16-TP109	L1826440-10 SOIL 07-SEP-16 16-TP110
Grouping	Analyte					
SOIL	-					
Physical Tests	Moisture (%)	14.6	6.09	8.60	15.3	6.78
	pH (1:2 soil:water) (pH)	5.38	5.53	5.57	5.57	5.31
Leachable Anions & Nutrients	Total Phosphate As P (mg/kg)	17.2	4.82	2.47	2.08	2.74
Saturated Paste Extractables	Ammonia, Total Leachable (as N) (mg/kg)	2.47	1.03	0.624	0.715	0.625
	% Saturation (%)	61.8	55.1	67.6	59.8	53.4
Bacteriological Tests	E. coli (MPN/g)	635	<2	<2	<2	<2
	Coliform Bacteria - Fecal (MPN/g)	635	<2	<2	<2	<2
	Coliform Bacteria - Total (MPN/g)	>1884.07	53	77	15	9
Metals	Antimony (Sb) (mg/kg)	0.85	0.50	0.85	0.56	0.66
	Arsenic (As) (mg/kg)	5.00	4.71	4.91	4.74	4.27
	Barium (Ba) (mg/kg)	134	70.5	102	102	112
	Beryllium (Be) (mg/kg)	0.38	0.31	0.34	0.29	0.31
	Cadmium (Cd) (mg/kg)	0.464	0.466	0.663	0.575	0.411
	Chromium (Cr) (mg/kg)	46.5	33.5	45.8	55.0	36.9
	Cobalt (Co) (mg/kg)	11.3	9.61	9.70	9.61	10.6
	Copper (Cu) (mg/kg)	44.1	31.6	39.5	30.6	30.5
	Lead (Pb) (mg/kg)	75.9	149	128	98.9	130
	Mercury (Hg) (mg/kg)	0.136	0.077	0.125	0.076	0.068
	Molybdenum (Mo) (mg/kg)	1.26	0.44	0.63	0.37	0.43
	Nickel (Ni) (mg/kg)	28.6	26.0	25.5	23.8	25.6
	Selenium (Se) (mg/kg)	0.28	0.21	0.36	0.25	<0.20
	Silver (Ag) (mg/kg)	0.20	0.11	0.26	0.18	0.15
	Thallium (TI) (mg/kg)	0.068	0.067	0.072	0.067	0.071
	Tin (Sn) (mg/kg)	<2.0	<2.0	2.5	<2.0	2.4
	Uranium (U) (mg/kg)	0.742	0.913	1.11	0.972	0.833
	Vanadium (V) (mg/kg)	73.4	66.5	69.7	64.4	77.6
	Zinc (Zn) (mg/kg)	111	68.0	91.5	81.8	83.0
TCLP Metals	1st Preliminary pH (pH)					
	2nd Preliminary pH (pH)					
	Final pH (pH)					
	Extraction Solution Initial pH (pH)					
	Antimony (Sb)-Leachable (ug/L)					
	Arsenic (As)-Leachable (ug/L)					
	Barium (Ba)-Leachable (ug/L)					
	Beryllium (Be)-Leachable (ug/L)					
	Boron (B)-Leachable (ug/L)					

 $<sup>^{\</sup>star}$  Please refer to the Reference Information section for an explanation of any qualifiers detected.

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19-OCT-16 19:37 (MT) Version: FINAL REV. 2

	Sample ID Description Sampled Date Sampled Time Client ID	L1826440-11 SOIL 07-SEP-16 16-TP111-0.1M	L1826440-12 SOIL 07-SEP-16 16-TP112-0.1M	L1826440-13 SOIL 07-SEP-16 16-TP113-0.1M	L1826440-14 SOIL 07-SEP-16 16-TP114-0.1M	L1826440-15 SOIL 07-SEP-16 16-TP115-0.1M
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	9.74	8.84	10.8	11.3	14.4
	pH (1:2 soil:water) (pH)	5.80	5.69	5.49	5.53	5.21
Leachable Anions & Nutrients	Total Phosphate As P (mg/kg)	3.60	4.49	6.59	2.42	4.39
Saturated Paste Extractables	Ammonia, Total Leachable (as N) (mg/kg)	0.493	0.452	0.690	0.787	3.85
	% Saturation (%)	61.5	59.5	65.0	62.4	62.8
Bacteriological Tests	E. coli (MPN/g)	4	<2	4	1810	<2
	Coliform Bacteria - Fecal (MPN/g)	4	<2	4	1810	<2
	Coliform Bacteria - Total (MPN/g)	266	4	608	1810	>1879.67
Metals	Antimony (Sb) (mg/kg)	1.91	1.16	0.55	0.65	0.65
	Arsenic (As) (mg/kg)	5.51	3.88	4.60	4.55	4.56
	Barium (Ba) (mg/kg)	212	133	136	154	158
	Beryllium (Be) (mg/kg)	0.38	0.31	0.36	0.53	0.46
	Cadmium (Cd) (mg/kg)	0.605	0.402	0.388	0.717	0.545
	Chromium (Cr) (mg/kg)	41.1	29.9	37.1	46.7	38.1
	Cobalt (Co) (mg/kg)	10.0	7.99	8.42	10.3	9.88
	Copper (Cu) (mg/kg)	39.6	32.1	31.6	41.3	39.0
	Lead (Pb) (mg/kg)	303	197	177	118	153
	Mercury (Hg) (mg/kg)	0.129	0.150	0.186	0.103	0.128
	Molybdenum (Mo) (mg/kg)	0.75	0.52	0.62	1.67	1.46
	Nickel (Ni) (mg/kg)	27.7	22.6	23.1	28.0	25.4
	Selenium (Se) (mg/kg)	0.26	0.24	0.25	0.27	0.27
	Silver (Ag) (mg/kg)	0.23	0.30	0.18	0.26	0.22
	Thallium (TI) (mg/kg)	0.070	0.068	0.073	0.094	0.083
	Tin (Sn) (mg/kg)	2.7	2.4	<2.0	<2.0	2.2
	Uranium (U) (mg/kg)	1.05	0.854	0.882	1.66	1.41
	Vanadium (V) (mg/kg)	68.9	57.0	59.9	74.6	66.0
	Zinc (Zn) (mg/kg)	152	100	87.4	96.3	97.6
TCLP Metals	1st Preliminary pH (pH)	6.46				
	2nd Preliminary pH (pH)	1.71				
	Final pH (pH)	4.97				
	Extraction Solution Initial pH (pH)	4.95				
	Antimony (Sb)-Leachable (ug/L)	<1000				
	Arsenic (As)-Leachable (ug/L)	<1000				
	Barium (Ba)-Leachable (ug/L)	<2500				
	Beryllium (Be)-Leachable (ug/L)	<25				
	Boron (B)-Leachable (ug/L)	<500				

 $<sup>^{\</sup>star}$  Please refer to the Reference Information section for an explanation of any qualifiers detected.

L1826440 CONTD.... PAGE 5 of 25

19-OCT-16 19:37 (MT) Version: FINAL REV. 2

	Sample ID Description Sampled Date Sampled Time Client ID	L1826440-16 SOIL 07-SEP-16 16-TP116-0.1M	L1826440-17 SOIL 07-SEP-16	L1826440-18 SOIL 07-SEP-16	L1826440-19 SOIL 07-SEP-16 16-TP119-0.1M	L1826440-20 SOIL 07-SEP-16 16-TP120-0.1M
Grouping	Analyte					
SOIL	•					
Physical Tests	Moisture (%)	11.8	9.38	8.07	10.4	12.7
•	pH (1:2 soil:water) (pH)	5.75	5.73	5.89	5.51	5.57
Leachable Anions & Nutrients	Total Phosphate As P (mg/kg)	2.34	2.91	2.74	2.20	3.57
Saturated Paste Extractables	Ammonia, Total Leachable (as N) (mg/kg)	0.797	2.13	0.660	2.79	2.62
	% Saturation (%)	65.0	72.1	67.4	66.4	67.0
Bacteriological Tests	E. coli (MPN/g)	4	3	<2	<2	<2
	Coliform Bacteria - Fecal (MPN/g)	4	3	<2	<2	<2
	Coliform Bacteria - Total (MPN/g)	79	>1775.55	38	268	621
Metals	Antimony (Sb) (mg/kg)	0.57	0.51	0.53	0.59	0.76
	Arsenic (As) (mg/kg)	5.28	4.89	5.51	4.32	4.75
	Barium (Ba) (mg/kg)	249	241	302	134	167
	Beryllium (Be) (mg/kg)	0.41	0.43	0.47	0.27	0.38
	Cadmium (Cd) (mg/kg)	0.526	0.562	0.677	0.503	0.554
	Chromium (Cr) (mg/kg)	37.1	34.3	39.2	31.4	36.1
	Cobalt (Co) (mg/kg)	9.66	8.21	9.47	6.87	8.30
	Copper (Cu) (mg/kg)	32.3	33.2	35.4	27.3	34.4
	Lead (Pb) (mg/kg)	207	133	219	201	241
	Mercury (Hg) (mg/kg)	0.134	0.124	0.175	0.137	0.185
	Molybdenum (Mo) (mg/kg)	0.81	1.01	0.86	0.64	0.87
	Nickel (Ni) (mg/kg)	29.6	23.9	26.3	18.1	21.5
	Selenium (Se) (mg/kg)	0.25	0.24	0.28	0.24	0.32
	Silver (Ag) (mg/kg)	0.19	0.20	0.24	0.18	0.26
	Thallium (TI) (mg/kg)	0.073	0.067	0.073	0.052	0.080
	Tin (Sn) (mg/kg)	<2.0	<2.0	4.7	11.4	3.8
	Uranium (U) (mg/kg)	0.999	1.12	1.15	0.883	1.08
	Vanadium (V) (mg/kg)	67.6	60.1	65.5	52.0	60.5
	Zinc (Zn) (mg/kg)	85.6	82.8	94.6	73.8	105
TCLP Metals	1st Preliminary pH (pH)					6.07
	2nd Preliminary pH (pH)					1.71
	Final pH (pH)					4.98
	Extraction Solution Initial pH (pH)					4.95
	Antimony (Sb)-Leachable (ug/L)					<1000
	Arsenic (As)-Leachable (ug/L)					<1000
	Barium (Ba)-Leachable (ug/L)					<2500
	Beryllium (Be)-Leachable (ug/L)					<25
	Boron (B)-Leachable (ug/L)					<500

 $<sup>^{\</sup>star}$  Please refer to the Reference Information section for an explanation of any qualifiers detected.

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	Sample ID Description Sampled Date	L1826440-21 SOIL 07-SEP-16		
	Sampled Time Client ID	16-TP121-0.1M		
Grouping	Analyte			
SOIL				
Physical Tests	Moisture (%)	10.9		
	pH (1:2 soil:water) (pH)	5.34		
Leachable Anions & Nutrients	Total Phosphate As P (mg/kg)	7.47		
Saturated Paste Extractables	Ammonia, Total Leachable (as N) (mg/kg)	0.626		
	% Saturation (%)	64.3		
Bacteriological Tests	E. coli (MPN/g)	<2		
	Coliform Bacteria - Fecal (MPN/g)	<2		
	Coliform Bacteria - Total (MPN/g)	146		
Metals	Antimony (Sb) (mg/kg)	0.75		
	Arsenic (As) (mg/kg)	4.29		
	Barium (Ba) (mg/kg)	165		
	Beryllium (Be) (mg/kg)	0.36		
	Cadmium (Cd) (mg/kg)	0.377		
	Chromium (Cr) (mg/kg)	30.7		
	Cobalt (Co) (mg/kg)	8.31		
	Copper (Cu) (mg/kg)	36.9		
	Lead (Pb) (mg/kg)	156		
	Mercury (Hg) (mg/kg)	0.170		
	Molybdenum (Mo) (mg/kg)	0.82		
	Nickel (Ni) (mg/kg)	22.1		
	Selenium (Se) (mg/kg)	0.26		
	Silver (Ag) (mg/kg)	0.17		
	Thallium (TI) (mg/kg)	0.066		
	Tin (Sn) (mg/kg)	2.8		
	Uranium (U) (mg/kg)	0.726		
	Vanadium (V) (mg/kg)	58.1		
	Zinc (Zn) (mg/kg)	102		
TCLP Metals	1st Preliminary pH (pH)			
	2nd Preliminary pH (pH)			
	Final pH (pH)			
	Extraction Solution Initial pH (pH)			
	Antimony (Sb)-Leachable (ug/L)			
	Arsenic (As)-Leachable (ug/L)			
	Barium (Ba)-Leachable (ug/L)			
	Beryllium (Be)-Leachable (ug/L)			
	Boron (B)-Leachable (ug/L)			

 $<sup>^{\</sup>star}$  Please refer to the Reference Information section for an explanation of any qualifiers detected.

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	Sample ID Description Sampled Date Sampled Time Client ID	L1826440-1 SOIL 07-SEP-16 16-TP101	L1826440-2 SOIL 07-SEP-16 16-TP102	L1826440-3 SOIL 07-SEP-16 16-TP103	L1826440-4 SOIL 07-SEP-16 16-TP104	L1826440-5 SOIL 07-SEP-16 16-TP105
Grouping	Analyte					
SOIL						
TCLP Metals	Cadmium (Cd)-Leachable (ug/L)					
	Calcium (Ca)-Leachable (ug/L)					
	Chromium (Cr)-Leachable (ug/L)					
	Cobalt (Co)-Leachable (ug/L)					
	Copper (Cu)-Leachable (ug/L)					
	Iron (Fe)-Leachable (ug/L)					
	Lead (Pb)-Leachable (ug/L)					
	Magnesium (Mg)-Leachable (ug/L)					
	Mercury (Hg)-Leachable (ug/L)					
	Nickel (Ni)-Leachable (ug/L)					
	Selenium (Se)-Leachable (ug/L)					
	Silver (Ag)-Leachable (ug/L)					
	Thallium (TI)-Leachable (ug/L)					
	Vanadium (V)-Leachable (ug/L)					
	Zinc (Zn)-Leachable (ug/L)					
Volatile Organic Compounds	Acetone (mg/kg)	<4.0	<4.0	<4.0	<4.0	<4.0
	Benzene (mg/kg)	<0.0050	<0.0050	0.0107	<0.0050	<0.0050
	Bromodichloromethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Bromoform (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Carbon Disulfide (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Carbon Tetrachloride (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Chlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Dibromochloromethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Chloroethane (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	Chloroform (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	Chloromethane (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	1,2-Dichlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,3-Dichlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,4-Dichlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1-Dichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,2-Dichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1-Dichloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	cis-1,2-Dichloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	trans-1,2-Dichloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Dichloromethane (mg/kg)	<0.30	<0.30	<0.30	<0.30	<0.30
	1,2-Dichloropropane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	cis-1,3-Dichloropropylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050

<sup>\*</sup> Please refer to the Reference Information section for an explanation of any qualifiers detected.

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	Sample ID Description Sampled Date Sampled Time Client ID	L1826440-6 SOIL 07-SEP-16 16-TP106	L1826440-7 SOIL 07-SEP-16 16-TP107	L1826440-8 SOIL 07-SEP-16 16-TP108	L1826440-9 SOIL 07-SEP-16 16-TP109	L1826440-10 SOIL 07-SEP-16 16-TP110
Grouping	Analyte					
SOIL	·					
TCLP Metals	Cadmium (Cd)-Leachable (ug/L)					
	Calcium (Ca)-Leachable (ug/L)					
	Chromium (Cr)-Leachable (ug/L)					
	Cobalt (Co)-Leachable (ug/L)					
	Copper (Cu)-Leachable (ug/L)					
	Iron (Fe)-Leachable (ug/L)					
	Lead (Pb)-Leachable (ug/L)					
	Magnesium (Mg)-Leachable (ug/L)					
	Mercury (Hg)-Leachable (ug/L)					
	Nickel (Ni)-Leachable (ug/L)					
	Selenium (Se)-Leachable (ug/L)					
	Silver (Ag)-Leachable (ug/L)					
	Thallium (TI)-Leachable (ug/L)					
	Vanadium (V)-Leachable (ug/L)					
	Zinc (Zn)-Leachable (ug/L)					
Volatile Organic Compounds	Acetone (mg/kg)	<4.0	<4.0	<4.0	<4.0	<4.0
	Benzene (mg/kg)	<0.0050	<0.0050	<0.0050	0.349	<0.0050
	Bromodichloromethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Bromoform (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Carbon Disulfide (mg/kg)	< 0.050	<0.050	<0.050	<0.050	<0.050
	Carbon Tetrachloride (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Chlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Dibromochloromethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Chloroethane (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	Chloroform (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	Chloromethane (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	1,2-Dichlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,3-Dichlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,4-Dichlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1-Dichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,2-Dichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1-Dichloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	cis-1,2-Dichloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	trans-1,2-Dichloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Dichloromethane (mg/kg)	<0.30	<0.30	<0.30	<0.30	<0.30
	1,2-Dichloropropane (mg/kg)	< 0.050	<0.050	<0.050	<0.050	<0.050
	cis-1,3-Dichloropropylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050

<sup>\*</sup> Please refer to the Reference Information section for an explanation of any qualifiers detected.

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	Sample ID Description Sampled Date Sampled Time Client ID	L1826440-11 SOIL 07-SEP-16 16-TP111-0.1M	L1826440-12 SOIL 07-SEP-16 16-TP112-0.1M	L1826440-13 SOIL 07-SEP-16 16-TP113-0.1M	L1826440-14 SOIL 07-SEP-16 16-TP114-0.1M	L1826440-15 SOIL 07-SEP-16 16-TP115-0.1M
Grouping	Analyte					
SOIL						
TCLP Metals	Cadmium (Cd)-Leachable (ug/L)	<50				
	Calcium (Ca)-Leachable (ug/L)	44500				
	Chromium (Cr)-Leachable (ug/L)	<250				
	Cobalt (Co)-Leachable (ug/L)	<50				
	Copper (Cu)-Leachable (ug/L)	<50				
	Iron (Fe)-Leachable (ug/L)	270				
	Lead (Pb)-Leachable (ug/L)	<250				
	Magnesium (Mg)-Leachable (ug/L)	7620				
	Mercury (Hg)-Leachable (ug/L)	<1.0				
	Nickel (Ni)-Leachable (ug/L)	<250				
	Selenium (Se)-Leachable (ug/L)	<1000				
	Silver (Ag)-Leachable (ug/L)	<50				
	Thallium (TI)-Leachable (ug/L)	<1000				
	Vanadium (V)-Leachable (ug/L)	<150				
	Zinc (Zn)-Leachable (ug/L)	<500				
Volatile Organic Compounds	Acetone (mg/kg)	<4.0	<4.0	<4.0	<4.0	<4.0
	Benzene (mg/kg)	0.0084	0.0258	<0.0050	<0.0050	0.0250
	Bromodichloromethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Bromoform (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Carbon Disulfide (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Carbon Tetrachloride (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Chlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Dibromochloromethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Chloroethane (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	Chloroform (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	Chloromethane (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	1,2-Dichlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,3-Dichlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,4-Dichlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1-Dichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,2-Dichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1-Dichloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	cis-1,2-Dichloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	trans-1,2-Dichloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Dichloromethane (mg/kg)	<0.30	<0.30	<0.30	<0.30	<0.30
	1,2-Dichloropropane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	cis-1,3-Dichloropropylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050

<sup>\*</sup> Please refer to the Reference Information section for an explanation of any qualifiers detected.

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	Sample ID Description Sampled Date Sampled Time Client ID	L1826440-16 SOIL 07-SEP-16 16-TP116-0.1M	L1826440-17 SOIL 07-SEP-16 16-TP117-0.1M	L1826440-18 SOIL 07-SEP-16 16-TP118-0.1M	L1826440-19 SOIL 07-SEP-16 16-TP119-0.1M	L1826440-20 SOIL 07-SEP-16 16-TP120-0.1M
Grouping	Analyte					
SOIL						
TCLP Metals	Cadmium (Cd)-Leachable (ug/L)					<50
	Calcium (Ca)-Leachable (ug/L)					46000
	Chromium (Cr)-Leachable (ug/L)					<250
	Cobalt (Co)-Leachable (ug/L)					<50
	Copper (Cu)-Leachable (ug/L)					<50
	Iron (Fe)-Leachable (ug/L)					680
	Lead (Pb)-Leachable (ug/L)					<250
	Magnesium (Mg)-Leachable (ug/L)					8500
	Mercury (Hg)-Leachable (ug/L)					<1.0
	Nickel (Ni)-Leachable (ug/L)					<250
	Selenium (Se)-Leachable (ug/L)					<1000
	Silver (Ag)-Leachable (ug/L)					<50
	Thallium (TI)-Leachable (ug/L)					<1000
	Vanadium (V)-Leachable (ug/L)					<150
	Zinc (Zn)-Leachable (ug/L)					<500
Volatile Organic Compounds	Acetone (mg/kg)	<4.0	<4.0	<4.0	<4.0	<4.0
	Benzene (mg/kg)	0.0724	0.0308	0.0160	0.0072	0.0067
	Bromodichloromethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Bromoform (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Carbon Disulfide (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Carbon Tetrachloride (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Chlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Dibromochloromethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Chloroethane (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	Chloroform (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	Chloromethane (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	1,2-Dichlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,3-Dichlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,4-Dichlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1-Dichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,2-Dichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1-Dichloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	cis-1,2-Dichloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	trans-1,2-Dichloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Dichloromethane (mg/kg)	<0.30	<0.30	<0.30	<0.30	<0.30
	1,2-Dichloropropane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	cis-1,3-Dichloropropylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050

<sup>\*</sup> Please refer to the Reference Information section for an explanation of any qualifiers detected.

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	Sample ID Description Sampled Date Sampled Time Client ID	L1826440-21 SOIL 07-SEP-16 16-TP121-0.1M		
Grouping	Analyte			
SOIL				
TCLP Metals	Cadmium (Cd)-Leachable (ug/L)			
	Calcium (Ca)-Leachable (ug/L)			
	Chromium (Cr)-Leachable (ug/L)			
	Cobalt (Co)-Leachable (ug/L)			
	Copper (Cu)-Leachable (ug/L)			
	Iron (Fe)-Leachable (ug/L)			
	Lead (Pb)-Leachable (ug/L)			
	Magnesium (Mg)-Leachable (ug/L)			
	Mercury (Hg)-Leachable (ug/L)			
	Nickel (Ni)-Leachable (ug/L)			
	Selenium (Se)-Leachable (ug/L)			
	Silver (Ag)-Leachable (ug/L)			
	Thallium (TI)-Leachable (ug/L)			
	Vanadium (V)-Leachable (ug/L)			
	Zinc (Zn)-Leachable (ug/L)			
Volatile Organic Compounds	Acetone (mg/kg)	<4.0		
	Benzene (mg/kg)	<0.0050		
	Bromodichloromethane (mg/kg)	<0.050		
	Bromoform (mg/kg)	<0.050		
	Carbon Disulfide (mg/kg)	<0.050		
	Carbon Tetrachloride (mg/kg)	<0.050		
	Chlorobenzene (mg/kg)	<0.050		
	Dibromochloromethane (mg/kg)	<0.050		
	Chloroethane (mg/kg)	<0.10		
	Chloroform (mg/kg)	<0.10		
	Chloromethane (mg/kg)	<0.10		
	1,2-Dichlorobenzene (mg/kg)	<0.050		
	1,3-Dichlorobenzene (mg/kg)	<0.050		
	1,4-Dichlorobenzene (mg/kg)	<0.050		
	1,1-Dichloroethane (mg/kg)	<0.050		
	1,2-Dichloroethane (mg/kg)	<0.050		
	1,1-Dichloroethylene (mg/kg)	<0.050		
	cis-1,2-Dichloroethylene (mg/kg)	<0.050		
	trans-1,2-Dichloroethylene (mg/kg)	<0.050		
	Dichloromethane (mg/kg)	<0.30		
	1,2-Dichloropropane (mg/kg)	<0.050		
	cis-1,3-Dichloropropylene (mg/kg)	<0.050		

 $<sup>^{\</sup>star}$  Please refer to the Reference Information section for an explanation of any qualifiers detected.

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	Sample ID Description Sampled Date Sampled Time Client ID	L1826440-1 SOIL 07-SEP-16 16-TP101	L1826440-2 SOIL 07-SEP-16 16-TP102	L1826440-3 SOIL 07-SEP-16 16-TP103	L1826440-4 SOIL 07-SEP-16 16-TP104	L1826440-5 SOIL 07-SEP-16 16-TP105
Grouping	Analyte					
SOIL						
Volatile Organic Compounds	trans-1,3-Dichloropropylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Ethyl ether (mg/kg)	<10	<10	<10	<10	<10
	Ethylbenzene (mg/kg)	<0.015	<0.015	<0.015	<0.015	<0.015
	n-Heptane (nC7) (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	2-Hexanone (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Methyl ethyl ketone (MEK) (mg/kg)	<20	<20	<20	<20	<20
	Methyl isobutyl ketone (MIBK) (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Methyl t-butyl ether (MTBE) (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20
	n-Octane (nC8) (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Styrene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1,1,2-Tetrachloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1,2,2-Tetrachloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Tetrachloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Toluene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1,1-Trichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1,2-Trichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Trichloroethylene (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010
	Trichlorofluoromethane (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	Vinyl Chloride (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	ortho-Xylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	meta- & para-Xylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Xylenes (mg/kg)	<0.075	<0.075	<0.075	<0.075	<0.075
	Surrogate: 4-Bromofluorobenzene (%)	99.0	97.4	95.8	95.4	94.5
	Surrogate: 4-Bromofluorobenzene (SS) (%)	96.9	96.5	105.6	99.0	93.0
	Surrogate: 1,2-Dichloroethane d4 (%)	108.0	110.8	112.3	112.9	114.1
	Surrogate: 1,4-Difluorobenzene (SS) (%)	93.9	93.9	111.5	96.6	91.1
	Surrogate: Toluene d8 (%)	98.6	99.9	100.4	101.6	102.0
Hydrocarbons	EPH10-19 (mg/kg)	<200	<200	<200	<200	<200
	EPH19-32 (mg/kg)	<200	<200	<200	<200	260
	LEPH (mg/kg)	<200	<200	<200	<200	<200
	HEPH (mg/kg)	<200	<200	<200	<200	260
	Volatile Hydrocarbons (VH6-10) (mg/kg)	<100	<100	<100	<100	<100
	VPH (C6-C10) (mg/kg)	<100	<100	<100	<100	<100
	Surrogate: 3,4-Dichlorotoluene (SS) (%)	101.0	100.3	120.5	95.4	89.3
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)	<0.050	0.172	<0.050	<0.050	<0.050

 $<sup>^{\</sup>star}$  Please refer to the Reference Information section for an explanation of any qualifiers detected.

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	Sample ID Description Sampled Date Sampled Time Client ID	L1826440-6 SOIL 07-SEP-16 16-TP106	L1826440-7 SOIL 07-SEP-16 16-TP107	L1826440-8 SOIL 07-SEP-16 16-TP108	L1826440-9 SOIL 07-SEP-16 16-TP109	L1826440-10 SOIL 07-SEP-16 16-TP110
Grouping	Analyte					
SOIL						
Volatile Organic Compounds	trans-1,3-Dichloropropylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Ethyl ether (mg/kg)	<10	<10	<10	<10	<10
	Ethylbenzene (mg/kg)	<0.015	<0.015	<0.015	0.087	<0.015
	n-Heptane (nC7) (mg/kg)	<0.050	<0.050	<0.050	0.270	<0.050
	2-Hexanone (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Methyl ethyl ketone (MEK) (mg/kg)	<20	<20	<20	<20	<20
	Methyl isobutyl ketone (MIBK) (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Methyl t-butyl ether (MTBE) (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20
	n-Octane (nC8) (mg/kg)	<0.050	<0.050	<0.050	0.219	<0.050
	Styrene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1,1,2-Tetrachloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1,2,2-Tetrachloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Tetrachloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Toluene (mg/kg)	<0.050	<0.050	<0.050	0.627	<0.050
	1,1,1-Trichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1,2-Trichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Trichloroethylene (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010
	Trichlorofluoromethane (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	Vinyl Chloride (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	ortho-Xylene (mg/kg)	<0.050	<0.050	<0.050	0.419	<0.050
	meta- & para-Xylene (mg/kg)	<0.050	<0.050	<0.050	0.634	<0.050
	Xylenes (mg/kg)	<0.075	<0.075	<0.075	1.05	<0.075
	Surrogate: 4-Bromofluorobenzene (%)	95.1	94.2	95.0	87.9	91.6
	Surrogate: 4-Bromofluorobenzene (SS) (%)	96.0	77.9	85.7	91.4	82.0
	Surrogate: 1,2-Dichloroethane d4 (%)	116.1	116.4	117.5	102.6	118.6
	Surrogate: 1,4-Difluorobenzene (SS) (%)	94.4	74.3	85.4	90.4	80.4
	Surrogate: Toluene d8 (%)	101.1	102.5	102.0	101.2	105.6
Hydrocarbons	EPH10-19 (mg/kg)	<200	<200	<200	<200	<200
	EPH19-32 (mg/kg)	<200	<200	<200	<200	<200
	LEPH (mg/kg)	<200	<200	<200	<200	<200
	HEPH (mg/kg)	<200	<200	<200	<200	<200
	Volatile Hydrocarbons (VH6-10) (mg/kg)	<100	<100	<100	<100	<100
	VPH (C6-C10) (mg/kg)	<100	<100	<100	<100	<100
	Surrogate: 3,4-Dichlorotoluene (SS) (%)	101.2	83.6	85.0	87.6	84.1
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050

 $<sup>^{\</sup>star}$  Please refer to the Reference Information section for an explanation of any qualifiers detected.

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	Sample ID Description Sampled Date Sampled Time Client ID	L1826440-11 SOIL 07-SEP-16 16-TP111-0.1M	L1826440-12 SOIL 07-SEP-16 16-TP112-0.1M	L1826440-13 SOIL 07-SEP-16 16-TP113-0.1M	L1826440-14 SOIL 07-SEP-16 16-TP114-0.1M	L1826440-15 SOIL 07-SEP-16 16-TP115-0.1M
Grouping	Analyte					
SOIL						
Volatile Organic Compounds	trans-1,3-Dichloropropylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Ethyl ether (mg/kg)	<10	<10	<10	<10	<10
	Ethylbenzene (mg/kg)	<0.015	<0.015	<0.015	<0.015	0.027
	n-Heptane (nC7) (mg/kg)	<0.050	<0.050	<0.050	<0.050	0.058
	2-Hexanone (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Methyl ethyl ketone (MEK) (mg/kg)	<20	<20	<20	<20	<20
	Methyl isobutyl ketone (MIBK) (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Methyl t-butyl ether (MTBE) (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20
	n-Octane (nC8) (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Styrene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1,1,2-Tetrachloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1,2,2-Tetrachloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Tetrachloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Toluene (mg/kg)	<0.050	0.097	<0.050	<0.050	0.185
	1,1,1-Trichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1,2-Trichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Trichloroethylene (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010
	Trichlorofluoromethane (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	Vinyl Chloride (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	ortho-Xylene (mg/kg)	<0.050	0.051	<0.050	<0.050	0.106
	meta- & para-Xylene (mg/kg)	<0.050	0.078	<0.050	<0.050	0.189
	Xylenes (mg/kg)	<0.075	0.129	<0.075	<0.075	0.295
	Surrogate: 4-Bromofluorobenzene (%)	92.6	90.6	87.1	88.9	90.7
	Surrogate: 4-Bromofluorobenzene (SS) (%)	92.4	93.9	95.2	80.1	87.6
	Surrogate: 1,2-Dichloroethane d4 (%)	119.2	121.4	122.3	122.5	123.4
	Surrogate: 1,4-Difluorobenzene (SS) (%)	92.4	92.9	94.1	78.2	91.9
	Surrogate: Toluene d8 (%)	104.2	105.3	107.7	108.0	105.0
Hydrocarbons	EPH10-19 (mg/kg)	<200	<200	<200	<200	<200
	EPH19-32 (mg/kg)	<200	<200	<200	<200	<200
	LEPH (mg/kg)	<200	<200	<200	<200	<200
	HEPH (mg/kg)	<200	<200	<200	<200	<200
	Volatile Hydrocarbons (VH6-10) (mg/kg)	<100	<100	<100	<100	<100
	VPH (C6-C10) (mg/kg)	<100	<100	<100	<100	<100
	Surrogate: 3,4-Dichlorotoluene (SS) (%)	91.7	89.7	100.6	85.4	134.5
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050

 $<sup>^{\</sup>star}$  Please refer to the Reference Information section for an explanation of any qualifiers detected.

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	Sample ID Description Sampled Date Sampled Time Client ID	L1826440-16 SOIL 07-SEP-16 16-TP116-0.1M	L1826440-17 SOIL 07-SEP-16 16-TP117-0.1M	L1826440-18 SOIL 07-SEP-16 16-TP118-0.1M	L1826440-19 SOIL 07-SEP-16 16-TP119-0.1M	L1826440-20 SOIL 07-SEP-16 16-TP120-0.1M
Grouping	Analyte					
SOIL						
Volatile Organic Compounds	trans-1,3-Dichloropropylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Ethyl ether (mg/kg)	<10	<10	<10	<10	<10
	Ethylbenzene (mg/kg)	0.069	0.025	0.031	<0.015	<0.015
	n-Heptane (nC7) (mg/kg)	0.093	<0.050	0.063	<0.050	<0.050
	2-Hexanone (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Methyl ethyl ketone (MEK) (mg/kg)	<20	<20	<20	<20	<20
	Methyl isobutyl ketone (MIBK) (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Methyl t-butyl ether (MTBE) (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20
	n-Octane (nC8) (mg/kg)	0.102	<0.050	0.098	<0.050	<0.050
	Styrene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1,1,2-Tetrachloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1,2,2-Tetrachloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Tetrachloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Toluene (mg/kg)	0.330	0.084	0.087	0.051	<0.050
	1,1,1-Trichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1,2-Trichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Trichloroethylene (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010
	Trichlorofluoromethane (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	Vinyl Chloride (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	ortho-Xylene (mg/kg)	0.361	0.115	0.164	0.076	<0.050
	meta- & para-Xylene (mg/kg)	0.505	0.132	0.175	0.093	<0.050
	Xylenes (mg/kg)	0.866	0.248	0.339	0.169	<0.075
	Surrogate: 4-Bromofluorobenzene (%)	90.8	90.4	90.0	90.6	87.6
	Surrogate: 4-Bromofluorobenzene (SS) (%)	96.4	94.2	93.4	114.3	93.6
	Surrogate: 1,2-Dichloroethane d4 (%)	124.4	124.6	124.5	125.4	125.5
	Surrogate: 1,4-Difluorobenzene (SS) (%)	96.2	96.0	96.4	125.5	101.1
	Surrogate: Toluene d8 (%)	105.0	105.2	104.9	103.4	103.8
Hydrocarbons	EPH10-19 (mg/kg)	<200	<200	<200	<200	<200
	EPH19-32 (mg/kg)	370	350	320	420	<200
	LEPH (mg/kg)	<200	<200	<200	<200	<200
	HEPH (mg/kg)	330	320	290	370	<200
	Volatile Hydrocarbons (VH6-10) (mg/kg)	<100	<100	<100	<100	<100
	VPH (C6-C10) (mg/kg)	<100	<100	<100	<100	<100
	Surrogate: 3,4-Dichlorotoluene (SS) (%)	84.0	86.9	77.3	90.5	108.6
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050

 $<sup>^{\</sup>star}$  Please refer to the Reference Information section for an explanation of any qualifiers detected.

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	Sample ID Description Sampled Date Sampled Time Client ID	L1826440-21 SOIL 07-SEP-16 16-TP121-0.1M		
Grouping	Analyte			
SOIL				
Volatile Organic Compounds	trans-1,3-Dichloropropylene (mg/kg)	<0.050		
	Ethyl ether (mg/kg)	<10		
	Ethylbenzene (mg/kg)	<0.015		
	n-Heptane (nC7) (mg/kg)	<0.050		
	2-Hexanone (mg/kg)	<0.050		
	Methyl ethyl ketone (MEK) (mg/kg)	<20		
	Methyl isobutyl ketone (MIBK) (mg/kg)	<0.050		
	Methyl t-butyl ether (MTBE) (mg/kg)	<0.20		
	n-Octane (nC8) (mg/kg)	<0.050		
	Styrene (mg/kg)	<0.050		
	1,1,1,2-Tetrachloroethane (mg/kg)	<0.050		
	1,1,2,2-Tetrachloroethane (mg/kg)	<0.050		
	Tetrachloroethylene (mg/kg)	<0.050		
	Toluene (mg/kg)	<0.050		
	1,1,1-Trichloroethane (mg/kg)	<0.050		
	1,1,2-Trichloroethane (mg/kg)	<0.050		
	Trichloroethylene (mg/kg)	<0.010		
	Trichlorofluoromethane (mg/kg)	<0.10		
	Vinyl Chloride (mg/kg)	<0.10		
	ortho-Xylene (mg/kg)	<0.050		
	meta- & para-Xylene (mg/kg)	<0.050		
	Xylenes (mg/kg)	<0.075		
	Surrogate: 4-Bromofluorobenzene (%)	87.1		
	Surrogate: 4-Bromofluorobenzene (SS) (%)	80.2		
	Surrogate: 1,2-Dichloroethane d4 (%)	124.6		
	Surrogate: 1,4-Difluorobenzene (SS) (%)	87.6		
	Surrogate: Toluene d8 (%)	108.5		
Hydrocarbons	EPH10-19 (mg/kg)	<200		
	EPH19-32 (mg/kg)	<200		
	LEPH (mg/kg)	<200		
	HEPH (mg/kg)	<200		
	Volatile Hydrocarbons (VH6-10) (mg/kg)	<100		
	VPH (C6-C10) (mg/kg)	<100		
	Surrogate: 3,4-Dichlorotoluene (SS) (%)	79.6		
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)	<0.050		

<sup>\*</sup> Please refer to the Reference Information section for an explanation of any qualifiers detected.

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#### ALS ENVIRONMENTAL ANALYTICAL REPORT

L1826440-1 L1826440-2 L1826440-3 L1826440-4 L1826440-5 Sample ID SOIL SOIL SOIL SOIL SOIL Description 07-SEP-16 07-SEP-16 07-SEP-16 07-SEP-16 07-SEP-16 Sampled Date Sampled Time 16-TP101 16-TP102 16-TP103 16-TP104 16-TP105 Client ID Grouping **Analyte** SOIL Polycyclic Acenaphthylene (mg/kg) < 0.050 < 0.050 0.208 0.080 < 0.050 **Aromatic** Hydrocarbons Anthracene (mg/kg) < 0.050 0.656 0.152 0.055 < 0.050 Benz(a)anthracene (mg/kg) 0.052 0.985 0.557 0.233 0.065 Benzo(a)pyrene (mg/kg) 0.054 0.794 0.771 0.300 0.077 Benzo(b)fluoranthene (mg/kg) 0.099 1.14 1.02 0.453 0.151 Benzo(g,h,i)perylene (mg/kg) < 0.050 0.460 0.577 0.182 0.057 Benzo(k)fluoranthene (mg/kg) < 0.050 0.442 0.371 0.156 0.054 Chrysene (mg/kg) < 0.070 0.872 0.674 0.320 0.090 Dibenz(a,h)anthracene (mg/kg) < 0.050 0.103 0.111 < 0.050 < 0.050 Fluoranthene (mg/kg) 2.23 0.523 0.121 1.13 0.129 Fluorene (mg/kg) < 0.050 0.239 < 0.050 < 0.050 < 0.050 Indeno(1,2,3-c,d)pyrene (mg/kg) < 0.050 0.540 0.666 0.221 0.066 2-Methylnaphthalene (mg/kg) < 0.050 0.066 0.117 < 0.050 < 0.050 Naphthalene (mg/kg) <0.050 < 0.050 0.113 0.097 < 0.050 Phenanthrene (mg/kg) 2.06 0.058 0.621 0.300 0.077 Pyrene (mg/kg) 1.78 0.107 1.15 0.534 0.127 Surrogate: Acenaphthene d10 (%) 89.7 91.5 94.3 90.0 88.1 Surrogate: Chrysene d12 (%) 100.5 101.5 103.2 103.7 96.2 Surrogate: Naphthalene d8 (%) 93.0 91.8 91.6 88.3 86.8 Surrogate: Phenanthrene d10 (%) 100.3 103.8 108.1 102.1 92.4 **Alcohols** sec-Butanol (mg/kg) <10 <10 <10 <10 <10 n-Butanol (mg/kg) <10 <10 <10 <10 <10 Ethanol (mg/kg) <10 <10 <10 <10 <10 Isobutanol (mg/kg) <10 <10 <10 <10 <10 Isopropanol (mg/kg) <10 <10 <10 <10 <10 Methanol (mg/kg) < 0.50 8.07 7.39 2.58 2.22 Pentanol (mg/kg) <10 <10 <10 <10 <10 **Fatty Acids** Acetic Acid (mg/kg) <10 <10 <10 <10 <10 Butyric Acid (mg/kg) <1.0 <1.0 <1.0 <1.0 <1.0 Caproic (Hexanoic) Acid (mg/kg) <2.0 <2.0 <2.0 <2.0 <2.0 Formic Acid (mg/kg) <300 <300 <300 <300 <300 Isobutyric Acid (mg/kg) <1.0 <1.0 <1.0 <1.0 <1.0 Isovaleric Acid (mg/kg) <1.0 <1.0 <1.0 <1.0 <1.0 Propionic Acid (mg/kg) <5.0 <5.0 < 5.0 < 5.0 < 5.0 Valeric Acid (mg/kg) <1.0 <1.0 <1.0 <1.0 <1.0

<sup>\*</sup> Please refer to the Reference Information section for an explanation of any qualifiers detected.

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	Sample ID Description Sampled Date Sampled Time Client ID	L1826440-6 SOIL 07-SEP-16 16-TP106	L1826440-7 SOIL 07-SEP-16 16-TP107	L1826440-8 SOIL 07-SEP-16 16-TP108	L1826440-9 SOIL 07-SEP-16 16-TP109	L1826440-10 SOIL 07-SEP-16 16-TP110
Grouping	Analyte					
SOIL						
Polycyclic Aromatic Hydrocarbons	Acenaphthylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	0.056
	Anthracene (mg/kg)	<0.050	<0.050	0.148	<0.050	0.050
	Benz(a)anthracene (mg/kg)	0.089	0.075	0.374	0.075	0.192
	Benzo(a)pyrene (mg/kg)	0.146	0.077	0.336	0.065	0.186
	Benzo(b)fluoranthene (mg/kg)	0.241	<0.20	0.487	0.100	0.277
	Benzo(g,h,i)perylene (mg/kg)	0.110	<0.050	0.197	<0.050	0.102
	Benzo(k)fluoranthene (mg/kg)	0.101	<0.050	0.195	<0.050	0.120
	Chrysene (mg/kg)	0.119	0.095	0.370	0.083	0.209
	Dibenz(a,h)anthracene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Fluoranthene (mg/kg)	0.145	0.142	0.876	0.156	0.333
	Fluorene (mg/kg)	<0.050	<0.050	0.067	<0.050	<0.050
	Indeno(1,2,3-c,d)pyrene (mg/kg)	0.115	0.058	0.251	<0.050	0.133
	2-Methylnaphthalene (mg/kg)	<0.050	<0.050	0.055	<0.050	<0.050
	Naphthalene (mg/kg)	<0.050	<0.050	0.079	<0.050	0.137
	Phenanthrene (mg/kg)	0.085	0.079	0.631	0.124	0.147
	Pyrene (mg/kg)	0.144	0.143	0.762	0.145	0.333
	Surrogate: Acenaphthene d10 (%)	93.6	88.9	86.4	82.1	92.2
	Surrogate: Chrysene d12 (%)	103.9	97.1	99.6	105.8	103.3
	Surrogate: Naphthalene d8 (%)	93.5	91.6	83.2	83.5	96.1
	Surrogate: Phenanthrene d10 (%)	100.8	100.8	101.8	98.3	104.7
Alcohols	sec-Butanol (mg/kg)	<10	<10	<10	<10	<10
	n-Butanol (mg/kg)	<10	<10	<10	<10	<10
	Ethanol (mg/kg)	<10	<10	<10	<10	<10
	Isobutanol (mg/kg)	<10	<10	<10	<10	<10
	Isopropanol (mg/kg)	<10	<10	<10	<10	<10
	Methanol (mg/kg)	<0.50	1.92	6.70	4.58	3.25
	Pentanol (mg/kg)	<10	<10	<10	<10	<10
Fatty Acids	Acetic Acid (mg/kg)	<10	<10	<10	<10	<10
	Butyric Acid (mg/kg)	<1.0	<1.0	<1.0	<1.0	<1.0
	Caproic (Hexanoic) Acid (mg/kg)	<2.0	<2.0	<2.0	<2.0	<2.0
	Formic Acid (mg/kg)	<300 DLM				
	Isobutyric Acid (mg/kg)	<1.0	<1.0	<1.0	<1.0	<1.0
	Isovaleric Acid (mg/kg)	<1.0	<1.0	<1.0	<1.0	<1.0
	Propionic Acid (mg/kg)	<5.0	<5.0	<5.0	<5.0	<5.0
	Valeric Acid (mg/kg)	<1.0	<1.0	<1.0	<1.0	<1.0

 $<sup>^{\</sup>star}$  Please refer to the Reference Information section for an explanation of any qualifiers detected.

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	Sample ID Description Sampled Date Sampled Time Client ID	L1826440-11 SOIL 07-SEP-16 16-TP111-0.1M	L1826440-12 SOIL 07-SEP-16 16-TP112-0.1M	L1826440-13 SOIL 07-SEP-16 16-TP113-0.1M	L1826440-14 SOIL 07-SEP-16 16-TP114-0.1M	L1826440-15 SOIL 07-SEP-16 16-TP115-0.1M
Grouping	Analyte					
SOIL						
Polycyclic Aromatic Hydrocarbons	Acenaphthylene (mg/kg)	0.403	0.060	0.247	0.074	0.334
	Anthracene (mg/kg)	0.266	0.087	0.220	<0.050	0.218
	Benz(a)anthracene (mg/kg)	1.10	0.314	0.871	0.204	0.805
	Benzo(a)pyrene (mg/kg)	1.19	0.294	0.962	0.219	0.847
	Benzo(b)fluoranthene (mg/kg)	1.53	0.403	1.22	0.295	1.08
	Benzo(g,h,i)perylene (mg/kg)	0.669	0.188	0.533	0.132	0.484
	Benzo(k)fluoranthene (mg/kg)	0.605	0.159	0.465	0.117	0.401
	Chrysene (mg/kg)	1.17	0.372	0.914	0.238	0.854
	Dibenz(a,h)anthracene (mg/kg)	0.192	0.050	0.154	<0.050	0.146
	Fluoranthene (mg/kg)	1.58	0.757	1.36	0.293	1.13
	Fluorene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Indeno(1,2,3-c,d)pyrene (mg/kg)	0.829	0.228	0.668	0.162	0.619
	2-Methylnaphthalene (mg/kg)	0.203	0.076	0.128	<0.050	0.258
	Naphthalene (mg/kg)	0.355	0.089	0.229	0.051	0.868
	Phenanthrene (mg/kg)	0.654	0.407	0.624	0.116	0.504
	Pyrene (mg/kg)	1.62	0.692	1.40	0.324	1.28
	Surrogate: Acenaphthene d10 (%)	94.5	89.9	87.8	83.4	86.7
	Surrogate: Chrysene d12 (%)	105.0	104.6	103.7	99.4	98.7
	Surrogate: Naphthalene d8 (%)	94.5	87.4	85.6	80.4	85.7
	Surrogate: Phenanthrene d10 (%)	105.0	103.6	101.7	96.1	97.6
Alcohols	sec-Butanol (mg/kg)	<10	<10	<10	<10	<10
	n-Butanol (mg/kg)	<10	<10	<10	<10	<10
	Ethanol (mg/kg)	<10	<10	<10	<10	<10
	Isobutanol (mg/kg)	<10	<10	<10	<10	<10
	Isopropanol (mg/kg)	<10	<10	<10	<10	<10
	Methanol (mg/kg)	0.66	0.98	3.97	8.80	11.3
	Pentanol (mg/kg)	<10	<10	<10	<10	<10
Fatty Acids	Acetic Acid (mg/kg)	<10	<10	<10	<10	<10
	Butyric Acid (mg/kg)	<1.0	<1.0	<1.0	<1.0	<1.0
	Caproic (Hexanoic) Acid (mg/kg)	<2.0	<2.0	<2.0	<2.0	<2.0
	Formic Acid (mg/kg)	<300 DLM	<300 DLM	<300 DLM	<300 DLM	<300
	Isobutyric Acid (mg/kg)	<1.0	<1.0	<1.0	<1.0	<1.0
	Isovaleric Acid (mg/kg)	<1.0	<1.0	<1.0	<1.0	<1.0
	Propionic Acid (mg/kg)	<5.0	<5.0	<5.0	<5.0	<5.0
	Valeric Acid (mg/kg)	<1.0	<1.0	<1.0	<1.0	<1.0

 $<sup>^{\</sup>star}$  Please refer to the Reference Information section for an explanation of any qualifiers detected.

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	Sample ID Description Sampled Date Sampled Time Client ID	L1826440-16 SOIL 07-SEP-16 16-TP116-0.1M	L1826440-17 SOIL 07-SEP-16	L1826440-18 SOIL 07-SEP-16	L1826440-19 SOIL 07-SEP-16 16-TP119-0.1M	L1826440-20 SOIL 07-SEP-16 16-TP120-0.1M
Grouping	Analyte					
SOIL						
Polycyclic Aromatic Hydrocarbons	Acenaphthylene (mg/kg)	1.91	2.25	1.82	1.87	0.398
	Anthracene (mg/kg)	1.15	1.26	1.11	1.73	0.237
	Benz(a)anthracene (mg/kg)	4.41	5.00	4.16	6.11	0.919
	Benzo(a)pyrene (mg/kg)	5.65	6.86	5.51	6.55	1.05
	Benzo(b)fluoranthene (mg/kg)	6.98	8.46	6.71	8.21	1.45
	Benzo(g,h,i)perylene (mg/kg)	2.85	3.68	2.81	3.56	0.568
	Benzo(k)fluoranthene (mg/kg)	3.08	3.52	2.73	3.83	0.570
	Chrysene (mg/kg)	4.88	5.81	4.76	6.84	0.964
	Dibenz(a,h)anthracene (mg/kg)	0.824	1.04	0.817	0.965	0.175
	Fluoranthene (mg/kg)	6.88	7.40	6.22	12.3	1.26
	Fluorene (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.050
	Indeno(1,2,3-c,d)pyrene (mg/kg)	3.83	4.90	3.81	4.62	0.762
	2-Methylnaphthalene (mg/kg)	0.975	0.879	1.15	0.342	0.183
	Naphthalene (mg/kg)	2.00	2.20	2.08	0.860	0.395
	Phenanthrene (mg/kg)	2.77	2.91	2.52	5.99	0.520
	Pyrene (mg/kg)	7.71	8.42	7.07	12.6	1.41
	Surrogate: Acenaphthene d10 (%)	79.4	101.6	86.6	89.7	91.1
	Surrogate: Chrysene d12 (%)	84.6	109.9	92.9	99.1	101.9
	Surrogate: Naphthalene d8 (%)	78.1	100.7	85.3	84.0	90.8
	Surrogate: Phenanthrene d10 (%)	88.3	115.7	95.6	101.6	105.2
Alcohols	sec-Butanol (mg/kg)	<10	<10	<10	<10	<10
	n-Butanol (mg/kg)	<10	<10	<10	<10	<10
	Ethanol (mg/kg)	<10	<10	<10	<10	<10
	Isobutanol (mg/kg)	<10	<10	<10	<10	<10
	Isopropanol (mg/kg)	<10	<10	<10	<10	<10
	Methanol (mg/kg)	<0.50	10.2	3.66	4.79	6.73
	Pentanol (mg/kg)	<10	<10	<10	<10	<10
Fatty Acids	Acetic Acid (mg/kg)	<10	<10	<10	<10	<10
	Butyric Acid (mg/kg)	<1.0	<1.0	<1.0	<1.0	<1.0
	Caproic (Hexanoic) Acid (mg/kg)	<2.0	<2.0	<2.0	<2.0	<2.0
	Formic Acid (mg/kg)	<300 DLM	<300 DLM	<300 DLM	<300 DLM	<300
	Isobutyric Acid (mg/kg)	<1.0	<1.0	<1.0	<1.0	<1.0
	Isovaleric Acid (mg/kg)	<1.0	<1.0	<1.0	<1.0	<1.0
	Propionic Acid (mg/kg)	<5.0	<5.0	<5.0	<5.0	<5.0
	Valeric Acid (mg/kg)	<1.0	<1.0	<1.0	<1.0	<1.0

 $<sup>^{\</sup>star}$  Please refer to the Reference Information section for an explanation of any qualifiers detected.

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	Sample ID Description Sampled Date Sampled Time Client ID	L1826440-21 SOIL 07-SEP-16 16-TP121-0.1M		
Grouping	Analyte			
SOIL				
Polycyclic Aromatic Hydrocarbons	Acenaphthylene (mg/kg)	0.385		
-	Anthracene (mg/kg)	0.216		
	Benz(a)anthracene (mg/kg)	0.860		
	Benzo(a)pyrene (mg/kg)	1.09		
	Benzo(b)fluoranthene (mg/kg)	1.48		
	Benzo(g,h,i)perylene (mg/kg)	0.546		
	Benzo(k)fluoranthene (mg/kg)	0.572		
	Chrysene (mg/kg)	0.917		
	Dibenz(a,h)anthracene (mg/kg)	0.179		
	Fluoranthene (mg/kg)	1.19		
	Fluorene (mg/kg)	<0.050		
	Indeno(1,2,3-c,d)pyrene (mg/kg)	0.745		
	2-Methylnaphthalene (mg/kg)	0.136		
	Naphthalene (mg/kg)	0.272		
	Phenanthrene (mg/kg)	0.451		
	Pyrene (mg/kg)	1.33		
	Surrogate: Acenaphthene d10 (%)	87.2		
	Surrogate: Chrysene d12 (%)	99.2		
	Surrogate: Naphthalene d8 (%)	82.3		
	Surrogate: Phenanthrene d10 (%)	101.1		
Alcohols	sec-Butanol (mg/kg)	<10		
	n-Butanol (mg/kg)	<10		
	Ethanol (mg/kg)	<10		
	Isobutanol (mg/kg)	<10		
	Isopropanol (mg/kg)	<10		
	Methanol (mg/kg)	7.18		
	Pentanol (mg/kg)	<10		
Fatty Acids	Acetic Acid (mg/kg)	<10		
	Butyric Acid (mg/kg)	<1.0		
	Caproic (Hexanoic) Acid (mg/kg)	<2.0		
	Formic Acid (mg/kg)	<300 DLM		
	Isobutyric Acid (mg/kg)	<1.0		
	Isovaleric Acid (mg/kg)	<1.0		
	Propionic Acid (mg/kg)	<5.0		
	Valeric Acid (mg/kg)	<1.0		

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Qualifiers for Individual Samples Listed:

Sample Number	Client Sample ID	Qualifier	Description
L1826440-20	16-TP120-0.1M	LTIS	Limited sample was available for TCLP inorganics and semi-volatiles extraction (< 100 grams). Extraction fluid volume and/or other elements of the TCLP method were scaled down proportionately to permit analysis. Test results from modified TCLP procedures may be unsuitable for regulatory purposes.

#### QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Method Blank	Ammonia, Total Leachable (as N)	В	L1826440-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19 -2, -20, -3, -4, -5, -6, -7, -8, -9
Duplicate	E. coli	DUP-H	L1826440-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19 -2, -20, -21, -3, -4, -5, -6, -7, -8, -9
Duplicate	Coliform Bacteria - Fecal	DUP-H	L1826440-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19 -2, -20, -21, -3, -4, -5, -6, -7, -8, -9
Duplicate	Coliform Bacteria - Total	DUP-H	L1826440-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19 -2, -20, -21, -3, -4, -5, -6, -7, -8, -9
Laboratory Control Sample	Bromoform	LCS-ND	L1826440-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Laboratory Control Sample	Bromoform	LCS-ND	L1826440-19, -20, -21
Laboratory Control Sample	cis-1,3-Dichloropropylene	LCS-ND	L1826440-19, -20, -21
Laboratory Control Sample	trans-1,3-Dichloropropylene	LCS-ND	L1826440-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Laboratory Control Sample	trans-1,3-Dichloropropylene	LCS-ND	L1826440-19, -20, -21
Laboratory Control Sample	Acetone	LCS-ND	L1826440-19, -20, -21
Laboratory Control Sample	Methyl ethyl ketone (MEK)	LCS-ND	L1826440-19, -20, -21

#### **Qualifiers for Individual Parameters Listed:**

Qualifier	Description
В	Method Blank exceeds ALS DQO. All associated sample results are at least 5 times greater than blank levels and are considered reliable.
DLCI	Detection Limit Raised: Chromatographic Interference due to co-elution.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DLQ	Detection Limit raised due to co-eluting interference. GCMS qualifier ion ratio did not meet acceptance criteria.
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
LCS-ND	Lab Control Sample recovery was slightly outside ALS DQO. Reported non-detect results for associated samples were unaffected.
SURR-ND	Surrogate recovery marginally exceeded ALS DQO. Reported non-detect results for associated samples were deemed to be unaffected.

#### **Test Method References:**

ALS Test Code	Matrix	Test Description	Method Reference**
ALCOHOL-7-CL	Soil	Alcohol Screen	EPA 3550C. EPA 8015D

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 8015D and 3550C, published by the United States Environmental Protection Agency (EPA). The procedure involves extraction of a subsample of the sediment/soil with de-ionized water, followed by ultrasonic bath. The water extract is then analyzed by GC-FID direct aqueous injection.

ECOLI-COLI-VA Soil E. coli by MPN TMECC 07.00 PATHOGENS

This analysis is carried out using procedures adapted from TMECC 07.00 PATHOGENS. This method describes multiple-tube fermentation technique for the detection and enumeration of Escherichia coli. Serial dilutions of the sample are incubated with the appropriate growth medium, and Escherichia coli are quantified by a statistical estimation of bacteria density (most probable number). The test involves initial 48 hour incubation (presumptive test); positive results are further tested (up to an additional 24 hours) to confirm and quantify Escherichia coli.

EPH-TUMB-FID-VA Soil EPH in Solids by Tumbler and GCFID BC MOE EPH GCFID

Analysis is in accordance with BC MOE Lab Manual method "Extractable Petroleum Hydrocarbons in Solids by GC/FID", v2.1, July 1999. Soil samples are extracted with a 1:1 mixture of hexane and acetone using a rotary extraction technique modified from EPA 3570 prior to gas chromatography with flame ionization detection (GC-FID). EPH results include Polycyclic Aromatic Hydrocarbons (PAH) and are therefore not equivalent to Light and Heavy Extractable Petroleum Hydrocarbons (LEPH/HEPH).

FCOLI-DRY-MTF-VA Soil Fecal coliform by MPN EPA Method 1680

This analysis is carried out using procedures adapted from EPA Method 1680 "Fecal Coliforms in Sewage Sludge (Biosolids) by Multiple Tube Fermentation using Lauryl Tryptose Broth (LTB) and EC medium". Serial dilutions of the sample are incubated with the appropriate growth medium, and fecal coliforms are quantified by a statistical estimation of bacteria density (most probable number). The test involves initial 48 hour incubation (presumptive test), positive results are further tested (up to an additional 24 hours) to confirm and quantify fecal coliforms.

HG-200.2-CVAF-VA Soil Mercury in Soil by CVAFS EPA 200.2/1631E (mod)

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

**HG-TCLP-CVAFS-VA** 

Soil

Mercury by CVAFS (TCLP)

EPA 1311/245.7

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic fluorescence spectrophotometry or atomic absorption spectrophotometry (EPA 245.7).

LEPH/HEPH-CALC-VA

Soil

LEPHs and HEPHs

BC MOE LABORATORY MANUAL (2005)

Light and Heavy Extractable Petroleum Hydrocarbons in Solids. These results are determined according to the British Columbia Ministry of Environment, Lands, and Parks Analytical Method for Contaminated Sites "Calculation of Light and Heavy Extractable Petroleum Hydrocarbons in Solids or Water". According to this method, LEPH and HEPH are calculated

by subtracting selected Polycyclic Aromatic Hydrocarbon results from Extractable Petroleum Hydrocarbon results. To calculate LEPH, the individual results for Naphthalene and Phenanthrene are subtracted from EPH(C10-19). To calculate HEPH, the individual results for Benz(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Dibenz(a,h)anthracene, Indeno(1,2,3-c,d)pyrene, and Pyrene are subtracted from EPH(C19-32). Analysis of Extractable Petroleum Hydrocarbons adheres to all prescribed elements of the BCMELP method "Extractable Petroleum Hydrocarbons in Solids by GC/FID" (Version 2.1, July 20, 1999).

MET-200.2-CCMS-VA

Soil

Metals in Soil by CRC ICPMS

EPA 200.2/6020A (mod)

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

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that may be environmentally available. This method does not dissolve all silicate materials and may result in a partial extraction. depending on the sample matrix, for some metals, including, but not limited to Al, Ba, Be, Cr, Sr, Ti, Tl, and V.

MET-TCLP-ICP-VA

Soil

Metals by ICPOES (TCLP)

EPA 1311/6010B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MOISTURE-VA

Soil

Moisture content

ASTM D2974-00 Method A

This analysis is carried out gravimetrically by drying the sample at 105 C for a minimum of six hours.

NH3-PASTE-F-VA

Soil

Ammonia (as N) in Soil (Paste) by Fluor.

CARTER-CSSS / J. ENVIRON. MONIT., 2005

A soil extract produced by the saturated paste extraction procedure is analyzed for ammonia (as N) by using procedures modified from J. Environ. Monit., 2005, 7, 37 - 42, The Royal Society of Chemistry, "Flow-injection analysis with fluorescence detection for the determination of trace levels of ammonium in seawater". Roslyn J. Waston et al.

PAH-TMB-H/A-MS-VA

Soil

PAH - Rotary Extraction (Hexane/Acetone)

EPA 3570/8270

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Methods 3570 & 8270, published by the United States Environmental Protection Agency (EPA). The procedure uses a mechanical shaking technique to extract a subsample of the sediment/soil with a 1:1 mixture of hexane and acetone. The extract is then solvent exchanged to toluene. The final extract is analysed by capillary column gas chromatography with mass spectrometric detection (GC/MS). Surrogate recoveries may not be reported in cases where interferences from the sample matrix prevent accurate quantitation. Because the two isomers cannot be readily chromatographically separated, benzo(j)fluoranthene is reported as part of the benzo(b)fluoranthene parameter.

PH-1:2-VA

Soil

pH in Soil (1:2 Soil:Water Extraction)

BC WLAP METHOD: PH, ELECTROMETRIC, SOIL

This analysis is carried out in accordance with procedures described in the pH, Electrometric in Soil and Sediment method - Section B Physical/Inorganic and Misc. Constituents, BC Environmental Laboratory Manual 2007. The procedure involves mixing the dried (at <60 C) and sieved (No. 10 / 2mm) sample with deionized/distilled water at a 1:2 ratio of sediment to water. The pH of the solution is then measured using a standard pH probe.

PO4-T-LEACH-COL-VA

Soil

Total PO4 leach (1:10) by Colour

APHA 4500-P PHOSPHOROUS

This analysis is carried out using a leaching procedure which involves the gentle tumbling of the sample in a specified leaching solution (typically deionized water) for a specific length of time. The extract solution is then analyzed using procedures adapted from APHA Method 4500-P "Phosphorus". All forms of phosphate are determined by the ascorbic acid colourimetric method. Dissolved ortho-phosphate (dissolved reactive phosphorous) is determined by direct measurement. Total phosphate (total phosphorous) is determined after persulphate digestion of a sample. Total dissolved phosphate (total dissolved phosphorous) is determined by filtering a sample through a 0.45 micron membrane filter followed by persulfate digestion of the filtrate.

SAT-PCNT-VA

Soil

Saturation Percentage

Carter-CSSS

Saturation Percentage (SP) is the total volume of water present in a saturated paste (in mL) divided by the dry weight of the sample (in grams), expressed as a percentage, as described in "Soil Sampling and Methods of Analysis" by M. Carter.

TCOLI-DRY-MTF-VA

Soil

Total coliform by MPN

TMECC 07.00 PATHOGENS

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This analysis is carried out using procedures adapted from TMECC 07.00 PATHOGENS. This method describes multiple-tube fermentation technique for the detection and enumeration of total coliforms. Serial dilutions of the sample are incubated with the appropriate growth medium, and total coliforms are quantified by a statistical estimation of bacteria density (most probable number). The test involves initial 48 hour incubation (presumptive test); positive results do not require further testing for confirmation of total coliforms.

VFA-WP

Soil

Volatile fatty/carboxylic acids

EPA 8260B, 1996

In the field, water and soil samples are collected in certified clean glass jars. In the laboratory, water samples are filtered and transferred to an autosampler vial for analysis. Soil samples are extracted with water and an aliquot of water is filtered. All extracts have internal standard added prior to injection. Analysis is performed by GC/MS in the selected ion monitoring (SIM) mode.

VH-HSFID-VA

Soil

VH in soil by Headspace GCFID

BC Env. Lab Manual (VH in Solids)

This analysis involves the extraction of a subsample of the sediment/soil with methanol. Aliquots of the methanol extract are then added to water and reagents, then heated in a sealed vial to equilibrium. The headspace from the vial is analyzed for Volatile Hydrocarbons (VH) by capillary column gas chromatography with flame-ionization detection (GC/FID). The methanol extraction and VH analysis are carried out in accordance with the British Columbia Ministry of Environment, Lands and Parks (BCMELP) Analytical Method for Contaminated Sites "Volatile Hydrocarbons in Solids by GC/FID" (Version 2.1 July 1999).

VH-SURR-FID-VA Soil VH Surrogates for Soils BC Env. Lab Manual (VH in Solids)

VOC-HSMS-VA Soil VOCs in soil by Headspace GCMS EPA 5035A/5021A/8260C

The soil methanol extract is added to water and reagents, then heated in a sealed vial to equilibrium. The headspace from the vial is transferred into a gas chromatograph. Target compound concentrations are measured using mass spectrometry detection.

VOC-M2-HSMS-VA

Soil

Misc VOCs in soil by Headspace GCMS

EPA 5035A/5021A/8260C

The soil methanol extract is added to water and reagents, then heated in a sealed vial to equilibrium. The headspace from the vial is transferred into a gas chromatograph. Target compound concentrations are measured using mass spectrometry detection.

VOC-SOLVENTS-CL

Soil

Volatile Solvent Screen

SW 846 5021/8260-Headspace GC/MS

Samples are stored with no headspace under refrigeration. Each sample (or sample extract) is transferred to a 10 mL CombiPal vial and sealed with a Teflon-lined silicon septa cap. The volatile compounds are then heated in an incubator and a portion of headspace is drawn up and injected onto the GC/MS. The solvents are identified and calculated from the MSD data.

VOC7-L-HSMS-VA

Soil

VOCs in soil by Headspace GCMS

EPA 5035A/5021A/8260C

The soil methanol extract is added to water and reagents, then heated in a sealed vial to equilibrium. The headspace from the vial is transferred into a gas chromatograph. Target compound concentrations are measured using mass spectrometry detection.

VOC7/VOC-SURR-MS-VA Soil

VOC7 and/or VOC Surrogates for Soils

EPA 5035A/5021A/8260C

VPH-CALC-VA

Soil

VPH is VH minus select aromatics

BC MOE LABORATORY MANUAL (2005)

These results are determined according to the British Columbia Ministry of Environment, Lands, and Parks Analytical Method for Contaminated Sites "Calculation of Volatile Petroleum Hydrocarbons in Solids or Water" (Version 2.1, July 20, 1999). According to this method, the concentrations of specific Monocyclic Aromatic Hydrocarbons (Benzene, Toluene, Ethylbenzene, Xylenes and Styrene) are subtracted from the collective concentration of Volatile Hydrocarbons (VH) that elute between n-hexane (nC6) and n-decane (nC10). Analysis of Volatile Hydrocarbons adheres to all prescribed elements of BCMELP method "Volatile Hydrocarbons in Solids by GC/FID" (Version 2.1, July 20, 1999).

XYLENES-CALC-VA

Soil

Sum of Xylene Isomer Concentrations

EPA 8260B & 524.2

Calculation of Total Xylenes

Total Xylenes is the sum of the concentrations of the ortho, meta, and para Xylene isomers. Results below detection limit (DL) are treated as zero. The DL for Total Xylenes is set to a value no less than the square root of the sum of the squares of the DLs of the individual Xylenes.

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

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

<b>Laboratory Definition Code</b>	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
CL	ALS ENVIRONMENTAL - CALGARY, ALBERTA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

#### **Chain of Custody Numbers:**

L1826440 CONTD....
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19-OCT-16 19:37 (MT)
Version: FINAL REV. 2

#### **GLOSSARY OF REPORT TERMS**

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

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg wwt - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

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

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Workorder: L1826440 Report Date: 19-OCT-16 Page 1 of 26

Client: Pinchin West LTD.

# 300 - 1095 McKenzie Avenue

Victoria BC V8P 2L5

Contact: Joshu Bocskei

est	М	atrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
LCOHOL-7-CL	S	oil							
	549865								
WG2390238-2 Ethanol	DUP		<b>L1826440-1</b> <10	<10	RPD-NA	mg/kg	N/A	30	15-SEP-16
Isobutanol			<10	<10	RPD-NA	mg/kg	N/A	30	15-SEP-16
Isopropanol			<10	<10	RPD-NA	mg/kg	N/A	30	15-SEP-16
Methanol			<0.50	<0.50	RPD-NA	mg/kg	N/A	30	15-SEP-16
Pentanol			<10	<10	RPD-NA	mg/kg	N/A	30	15-SEP-16
n-Butanol			<10	<10	RPD-NA	mg/kg	N/A	30	15-SEP-16
sec-Butanol			<10	<10	RPD-NA	mg/kg	N/A	30	15-SEP-16
WG2390238-9	DUP		L1826440-21	110	HI-D-NA	mg/kg	IN/A	30	13-3EF-10
Ethanol	DOP		<10	<10	RPD-NA	mg/kg	N/A	30	16-SEP-16
Isobutanol			<10	<10	RPD-NA	mg/kg	N/A	30	16-SEP-16
Isopropanol			<10	<10	RPD-NA	mg/kg	N/A	30	16-SEP-16
Methanol			7.18	5.65		mg/kg	24	30	16-SEP-16
Pentanol			<10	<10	RPD-NA	mg/kg	N/A	30	16-SEP-16
n-Butanol			<10	<10	RPD-NA	mg/kg	N/A	30	16-SEP-16
sec-Butanol			<10	<10	RPD-NA	mg/kg	N/A	30	16-SEP-16
WG2390238-3	LCS								
Ethanol				94.9		%		70-130	16-SEP-16
Isobutanol				97.1		%		70-130	16-SEP-16
Isopropanol				97.7		%		70-130	16-SEP-16
Methanol				98.8		%		70-130	16-SEP-16
Pentanol				95.5		%		70-130	16-SEP-16
n-Butanol				96.8		%		70-130	16-SEP-16
sec-Butanol				97.3		%		70-130	16-SEP-16
WG2390238-7 Ethanol	LCS			87.7		%		70-130	16-SEP-16
Isobutanol				90.3		%		70-130 70-130	
Isopropanol				91.8		%			16-SEP-16
Methanol				93.4		%		70-130 70-130	16-SEP-16
Pentanol				88.6		%		70-130 70-130	16-SEP-16
n-Butanol				90.0		%		70-130 70-130	16-SEP-16
sec-Butanol				90.7		%		70-130	16-SEP-16
WG2390238-1	МВ			50.7		/0		70-130	10-355-10
Ethanol	IVID			<10		mg/kg		10	15-SEP-16
Isobutanol				<10		mg/kg		10	15-SEP-16
Isopropanol				<10		mg/kg		10	15-SEP-16



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Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ALCOHOL-7-CL		Soil							
Batch R3	3549865								
WG2390238-1	MB								
Methanol				<0.50		mg/kg		0.5	15-SEP-16
Pentanol				<10		mg/kg		10	15-SEP-16
n-Butanol				<10		mg/kg		10	15-SEP-16
sec-Butanol				<10		mg/kg		10	15-SEP-16
WG2390238-5 Ethanol	МВ			<10		mg/kg		10	15-SEP-16
Isobutanol				<10		mg/kg		10	15-SEP-16
Isopropanol				<10		mg/kg		10	15-SEP-16
Methanol				<0.50		mg/kg		0.5	15-SEP-16
Pentanol				<10		mg/kg		10	15-SEP-16
n-Butanol				<10		mg/kg		10	15-SEP-16
sec-Butanol				<10		mg/kg		10	15-SEP-16
ECOLI-COLI-VA		Soil							
Batch R3	3549949								
<b>WG2385664-1</b> E. coli	DUP		<b>L1826440-21</b> <2	<2	RPD-NA	MPN/g	N/A	65	09-SEP-16
<b>WG2385664-3</b> E. coli	DUP		<b>L1826440-1</b> 143	7	DUP-H	MPN/g	182	65	09-SEP-16
<b>WG2385664-2</b> E. coli	МВ			<2		MPN/g		2	09-SEP-16
EPH-TUMB-FID-VA	A	Soil							
Batch R3	8549115								
<b>WG2389820-3</b> EPH10-19	IRM		ALS PHC2 RM	l 87.3		%		70-130	17-SEP-16
EPH19-32				98.7		%		70-130	17-SEP-16
WG2389829-3	IRM		ALS PHC2 RM			70		70-130	17-327-10
EPH10-19	ILIM		ALS PHO2 NW	97.5		%		70-130	17-SEP-16
EPH19-32				108.8		%		70-130	17-SEP-16
<b>WG2389820-1</b> EPH10-19	МВ			<200		mg/kg		200	17-SEP-16
EPH19-32				<200		mg/kg		200	17-SEP-16 17-SEP-16
WG2389829-1	МВ					99		200	17-3LF-10
EPH10-19				<200		mg/kg		200	17-SEP-16
EPH19-32				<200		mg/kg		200	17-SEP-16
FCOLI-DRY-MTF-V	/A	Soil							



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N/A 182 26	65 65 2 70-130 40 70-130	09-SEP-16 09-SEP-16 09-SEP-16 16-SEP-16
182	65 2 70-130 40	09-SEP-16 09-SEP-16 16-SEP-16
	70-130 40	09-SEP-16 16-SEP-16
	70-130 40	09-SEP-16 16-SEP-16
26	70-130 40	16-SEP-16
26	70-130 40	16-SEP-16
26	40	
26	40	
26	40	
26	40	
26		16-SEP-16
26		16-SEP-16
	70-130	
	/()=1:301	10 CED 10
	70-100	16-SEP-16
	0.005	16-SEP-16
	0.005	10-SEF-16
	70-130	19-SEP-16
	70-130	19-3EF-10
	70-130	19-SEP-16
	70 100	10 021 10
	0.005	19-SEP-16
	0.001	19-OCT-16
	0.001	10 001 10
	0.001	19-OCT-16
	70-130	16-SEP-16
	70-130	16-SEP-16
		0.001 0.001 70-130



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-VA	Soil							
Batch R355035	2							
WG2389811-4 CRM	I	VA-NRC-STS						
Chromium (Cr)			92.2		%		70-130	16-SEP-16
Cobalt (Co)			91.7		%		70-130	16-SEP-16
Copper (Cu)			87.5		%		70-130	16-SEP-16
Lead (Pb)			94.6		%		70-130	16-SEP-16
Molybdenum (Mo)			94.5		%		70-130	16-SEP-16
Nickel (Ni)			86.8		%		70-130	16-SEP-16
Selenium (Se)			96.1		%		70-130	16-SEP-16
Thallium (TI)			95.2		%		70-130	16-SEP-16
Uranium (U)			94.4		%		70-130	16-SEP-16
Vanadium (V)			92.0		%		70-130	16-SEP-16
Zinc (Zn)			87.2		%		70-130	16-SEP-16
WG2389811-3 LCS								
Antimony (Sb)			104.3		%		80-120	16-SEP-16
Arsenic (As)			105.7		%		80-120	16-SEP-16
Barium (Ba)			104.1		%		80-120	16-SEP-16
Beryllium (Be)			102.1		%		80-120	16-SEP-16
Cadmium (Cd)			103.1		%		80-120	16-SEP-16
Chromium (Cr)			104.5		%		80-120	16-SEP-16
Cobalt (Co)			103.9		%		80-120	16-SEP-16
Copper (Cu)			100.7		%		80-120	16-SEP-16
Lead (Pb)			102.8		%		80-120	16-SEP-16
Molybdenum (Mo)			107.8		%		80-120	16-SEP-16
Nickel (Ni)			102.9		%		80-120	16-SEP-16
Selenium (Se)			101.4		%		80-120	16-SEP-16
Silver (Ag)			104.2		%		80-120	16-SEP-16
Thallium (TI)			104.2		%		80-120	16-SEP-16
Tin (Sn)			104.1		%		80-120	16-SEP-16
Uranium (U)			106.8		%		80-120	16-SEP-16
Vanadium (V)			106.6		%		80-120	16-SEP-16
Zinc (Zn)			98.0		%		80-120	16-SEP-16
WG2389811-1 MB Antimony (Sb)			<0.10		mg/kg		0.1	16-SEP-16
Arsenic (As)			<0.10		mg/kg		0.1	16-SEP-16
Barium (Ba)			<0.50		mg/kg		0.5	16-SEP-16
Beryllium (Be)			<0.10		mg/kg		0.1	16-SEP-16
Dorymani (De)			<b>\0.10</b>		mg/kg		0.1	10-SEF-10



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-VA	Soil							
Batch R355035	2							
WG2389811-1 MB								
Cadmium (Cd)			<0.020		mg/kg		0.02	16-SEP-16
Chromium (Cr)			<0.50		mg/kg		0.5	16-SEP-16
Cobalt (Co)			<0.10		mg/kg		0.1	16-SEP-16
Copper (Cu)			<0.50		mg/kg		0.5	16-SEP-16
Lead (Pb)			<0.50		mg/kg		0.5	16-SEP-16
Molybdenum (Mo)			<0.10		mg/kg		0.1	16-SEP-16
Nickel (Ni)			<0.50		mg/kg		0.5	16-SEP-16
Selenium (Se)			<0.20		mg/kg		0.2	16-SEP-16
Silver (Ag)			<0.10		mg/kg		0.1	16-SEP-16
Thallium (TI)			<0.050		mg/kg		0.05	16-SEP-16
Tin (Sn)			<2.0		mg/kg		2	16-SEP-16
Uranium (U)			< 0.050		mg/kg		0.05	16-SEP-16
Vanadium (V)			<0.20		mg/kg		0.2	16-SEP-16
Zinc (Zn)			<2.0		mg/kg		2	16-SEP-16
Batch R355240	4							
WG2389811-2 DUP		L1826440-12						
Antimony (Sb)		1.16	1.11		mg/kg	5.1	30	19-SEP-16
Arsenic (As)		3.88	3.98		mg/kg	2.5	30	19-SEP-16
Barium (Ba)		133	131		mg/kg	2.0	40	19-SEP-16
Beryllium (Be)		0.31	0.29		mg/kg	6.9	30	19-SEP-16
Cadmium (Cd)		0.402	0.379		mg/kg	6.0	30	19-SEP-16
Chromium (Cr)		29.9	27.8		mg/kg	7.2	30	19-SEP-16
Cobalt (Co)		7.99	8.11		mg/kg	1.5	30	19-SEP-16
Copper (Cu)		32.1	30.7		mg/kg	4.4	30	19-SEP-16
Lead (Pb)		197	182		mg/kg	8.1	40	19-SEP-16
Molybdenum (Mo)		0.52	0.56		mg/kg	7.4	40	19-SEP-16
Nickel (Ni)		22.6	22.0		mg/kg	2.9	30	19-SEP-16
Selenium (Se)		0.24	0.27		mg/kg	9.7	30	19-SEP-16
Silver (Ag)		0.30	0.28		mg/kg	6.1	40	19-SEP-16
Thallium (TI)		0.068	0.078		mg/kg	13	30	19-SEP-16
Tin (Sn)		2.4	2.1		mg/kg	14	40	19-SEP-16
Uranium (U)		0.854	0.782		mg/kg	8.8	30	19-SEP-16
Vanadium (V)		57.0	55.2		mg/kg	3.2	30	19-SEP-16
Zinc (Zn)		100	96.6		mg/kg	3.4	30	19-SEP-16
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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-VA	Soil							
Batch R3552613								
WG2389830-4 CRM		VA-NRC-ST						
Antimony (Sb)			104.5		%		70-130	19-SEP-16
Arsenic (As)			87.0		%		70-130	19-SEP-16
Barium (Ba)			91.8		%		70-130	19-SEP-16
Beryllium (Be)			97.1		%		70-130	19-SEP-16
Cadmium (Cd)			106.0		%		70-130	19-SEP-16
Chromium (Cr)			94.3		%		70-130	19-SEP-16
Cobalt (Co)			92.1		%		70-130	19-SEP-16
Copper (Cu)			89.9		%		70-130	19-SEP-16
Lead (Pb)			99.3		%		70-130	19-SEP-16
Molybdenum (Mo)			99.8		%		70-130	19-SEP-16
Nickel (Ni)			85.8		%		70-130	19-SEP-16
Selenium (Se)			93.6		%		70-130	19-SEP-16
Thallium (TI)			96.2		%		70-130	19-SEP-16
Uranium (U)			99.8		%		70-130	19-SEP-16
Vanadium (V)			91.8		%		70-130	19-SEP-16
Zinc (Zn)			87.8		%		70-130	19-SEP-16
WG2389830-3 LCS								
Antimony (Sb)			101.1		%		80-120	19-SEP-16
Arsenic (As)			101.1		%		80-120	19-SEP-16
Barium (Ba)			97.1		%		80-120	19-SEP-16
Beryllium (Be)			97.4		%		80-120	19-SEP-16
Cadmium (Cd)			97.1		%		80-120	19-SEP-16
Chromium (Cr)			98.4		%		80-120	19-SEP-16
Cobalt (Co)			95.7		%		80-120	19-SEP-16
Copper (Cu)			94.6		%		80-120	19-SEP-16
Lead (Pb)			97.8		%		80-120	19-SEP-16
Molybdenum (Mo)			104.9		%		80-120	19-SEP-16
Nickel (Ni)			93.4		%		80-120	19-SEP-16
Selenium (Se)			98.0		%		80-120	19-SEP-16
Silver (Ag)			99.1		%		80-120	19-SEP-16
Thallium (TI)			98.7		%		80-120	19-SEP-16
Tin (Sn)			96.6		%		80-120	19-SEP-16
Uranium (U)			98.7		%		80-120	19-SEP-16
Vanadium (V)			99.9		%		80-120	19-SEP-16



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-VA	Soil							
Batch R3552613								
WG2389830-3 LCS								
Zinc (Zn)			92.8		%		80-120	19-SEP-16
WG2389830-1 MB Antimony (Sb)			<0.10		mg/kg		0.1	19-SEP-16
Arsenic (As)			<0.10		mg/kg		0.1	19-SEP-16
Barium (Ba)			<0.50		mg/kg		0.5	19-SEP-16
Beryllium (Be)			<0.10		mg/kg		0.1	19-SEP-16
Cadmium (Cd)			<0.020		mg/kg		0.02	19-SEP-16
Chromium (Cr)			<0.50		mg/kg		0.5	19-SEP-16
Cobalt (Co)			<0.10		mg/kg		0.1	19-SEP-16
Copper (Cu)			<0.50		mg/kg		0.5	19-SEP-16
Lead (Pb)			<0.50		mg/kg		0.5	19-SEP-16
Molybdenum (Mo)			<0.10		mg/kg		0.1	19-SEP-16
Nickel (Ni)			<0.50		mg/kg		0.5	19-SEP-16
Selenium (Se)			<0.20		mg/kg		0.2	19-SEP-16
Silver (Ag)			<0.10		mg/kg		0.1	19-SEP-16
Thallium (TI)			< 0.050		mg/kg		0.05	19-SEP-16
Tin (Sn)			<2.0		mg/kg		2	19-SEP-16
Uranium (U)			< 0.050		mg/kg		0.05	19-SEP-16
Vanadium (V)			<0.20		mg/kg		0.2	19-SEP-16
Zinc (Zn)			<2.0		mg/kg		2	19-SEP-16
MET-TCLP-ICP-VA	Soil							
Batch R3575007								
WG2412893-1 MB								
Antimony (Sb)-Leachable	,		<1.0		mg/L		1	19-OCT-16
Arsenic (As)-Leachable			<1.0		mg/L		1	19-OCT-16
Barium (Ba)-Leachable			<2.5		mg/L		2.5	19-OCT-16
Beryllium (Be)-Leachable			< 0.025		mg/L		0.025	19-OCT-16
Boron (B)-Leachable			< 0.50		mg/L		0.5	19-OCT-16
Cadmium (Cd)-Leachable	Э		< 0.050		mg/L		0.05	19-OCT-16
Calcium (Ca)-Leachable			<2.0		mg/L		2	19-OCT-16
Chromium (Cr)-Leachable	е		<0.25		mg/L		0.25	19-OCT-16
Cobalt (Co)-Leachable			< 0.050		mg/L		0.05	19-OCT-16
Copper (Cu)-Leachable			< 0.050		mg/L		0.05	19-OCT-16
Iron (Fe)-Leachable			<0.15		mg/L		0.15	19-OCT-16



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Гest	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-ICP-VA	Soil							
Batch R3575007								
WG2412893-1 MB								
Lead (Pb)-Leachable			<0.25		mg/L		0.25	19-OCT-16
Magnesium (Mg)-Leacha	able		<0.50		mg/L		0.5	19-OCT-16
Nickel (Ni)-Leachable			<0.25		mg/L		0.25	19-OCT-16
Selenium (Se)-Leachabl	е		<1.0		mg/L		1	19-OCT-16
Silver (Ag)-Leachable			< 0.050		mg/L		0.05	19-OCT-16
Thallium (TI)-Leachable			<1.0		mg/L		1	19-OCT-16
Vanadium (V)-Leachable	)		<0.15		mg/L		0.15	19-OCT-16
Zinc (Zn)-Leachable			< 0.50		mg/L		0.5	19-OCT-16
WG2412893-4 MB								
Antimony (Sb)-Leachabl	е		<1.0		mg/L		1	19-OCT-16
Arsenic (As)-Leachable			<1.0		mg/L		1	19-OCT-16
Barium (Ba)-Leachable			<2.5		mg/L		2.5	19-OCT-16
Beryllium (Be)-Leachable	Э		< 0.025		mg/L		0.025	19-OCT-16
Boron (B)-Leachable			< 0.50		mg/L		0.5	19-OCT-16
Cadmium (Cd)-Leachab	е		< 0.050		mg/L		0.05	19-OCT-16
Calcium (Ca)-Leachable			<2.0		mg/L		2	19-OCT-16
Chromium (Cr)-Leachab	le		<0.25		mg/L		0.25	19-OCT-16
Cobalt (Co)-Leachable			< 0.050		mg/L		0.05	19-OCT-16
Copper (Cu)-Leachable			< 0.050		mg/L		0.05	19-OCT-16
Iron (Fe)-Leachable			<0.15		mg/L		0.15	19-OCT-16
Lead (Pb)-Leachable			< 0.25		mg/L		0.25	19-OCT-16
Magnesium (Mg)-Leacha	able		< 0.50		mg/L		0.5	19-OCT-16
Nickel (Ni)-Leachable			< 0.25		mg/L		0.25	19-OCT-16
Selenium (Se)-Leachabl	е		<1.0		mg/L		1	19-OCT-16
Silver (Ag)-Leachable			< 0.050		mg/L		0.05	19-OCT-16
Thallium (TI)-Leachable			<1.0		mg/L		1	19-OCT-16
Vanadium (V)-Leachable	)		<0.15		mg/L		0.15	19-OCT-16
Zinc (Zn)-Leachable			<0.50		mg/L		0.5	19-OCT-16
IOISTURE-VA	Soil				-			
Batch R3549427								
WG2389793-2 LCS								
Moisture			99.7		%		90-110	15-SEP-16
WG2389793-6 LCS Moisture			100.1		%		90-110	15-SEP-16
WG2389793-1 MB							55 110	.5 520



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									O
Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-VA		Soil							
Batch R3	3549427								
WG2389793-1	MB								
Moisture				<0.25		%		0.25	15-SEP-16
WG2389793-5	MB			0.05		0/			
Moisture				<0.25		%		0.25	15-SEP-16
	3549440								
WG2389722-2 Moisture	LCS			99.7		%		90-110	15-SEP-16
WG2389722-6	LCS			55.7		70		90-110	13-3EF-16
Moisture	LUS			100.1		%		90-110	15-SEP-16
WG2389722-1	МВ								
Moisture				<0.25		%		0.25	15-SEP-16
WG2389722-5	МВ								
Moisture				<0.25		%		0.25	15-SEP-16
NH3-PASTE-F-VA		Soil							
Batch R3	3554832								
WG2389515-1	МВ								
Ammonia, Tota	al Leachal	ble (as N)		0.065	В	mg/L		0.01	22-SEP-16
WG2389549-1	MB								
Ammonia, Tota	al Leachai	ble (as N)		<0.010		mg/L		0.01	22-SEP-16
PAH-TMB-H/A-MS	-VA	Soil							
Batch R3	3550065								
WG2389820-2	LCS			00.05		0/			
Acenaphthene	_			99.95		%		60-130	19-SEP-16
Acenaphthylen	е			96.9		%		60-130	19-SEP-16
Anthracene				94.2		%		60-130	19-SEP-16
Benz(a)anthrac				106.9		%		60-130	19-SEP-16
Benzo(a)pyrend				105.5		%		60-130	19-SEP-16
Benzo(b)fluora				106.8		%		60-130	19-SEP-16
Benzo(g,h,i)per	-			99.6		%		60-130	19-SEP-16
Benzo(k)fluora	ntnene			100.4		%		60-130	19-SEP-16
Chrysene				102.9		%		60-130	19-SEP-16
Dibenz(a,h)ant	nracene			98.8		%		60-130	19-SEP-16
Fluoranthene				103.2		%		60-130	19-SEP-16
Fluorene				96.6		%		60-130	19-SEP-16
Indeno(1,2,3-c,				97.9		%		60-130	19-SEP-16
2-Methylnaphth	nalene			85.8		%		60-130	19-SEP-16



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PAH-TMB-H/A-MS-VA   Soil   Salch   R350005   R350005		Workerder	. 1020440	•	rioport Bato. 1	3-001-10	Га	.ge 10 01 20
Maghathane   98.6   %   50-130   19-SEP-16     Phenanthrene   99.2   %   60-130   19-SEP-16     Phenanthrene   99.2   %   60-130   19-SEP-16     Pyrene   10.3   %   60-130   19-SEP-16     Pyrene   0.0050   mg/kg   0.005   19-SEP-16     Acenaphthene   <0.0050   mg/kg   0.005   19-SEP-16     Acenaphthene   <0.0050   mg/kg   0.005   19-SEP-16     Acenaphthyene   <0.0040   mg/kg   0.001   19-SEP-16     Benz(a)anthracene   <0.0040   mg/kg   0.01   19-SEP-16     Benz(a)ipyrene   <0.010   mg/kg   0.01   19-SEP-16     Benz(a)ipyrene   <0.010   mg/kg   0.01   19-SEP-16     Benz(b)illuoranthene   <0.010   mg/kg   0.01   19-SEP-16     Dibenz(a,h)anthracene   <0.0050   mg/kg   0.01   19-SEP-16     Dibenz(a,h)anthracene   <0.010   mg/kg   0.01   19-SEP-16     Fluoranthene   <0.010   mg/kg   0.01   19-SEP-16     Fluoranthene   <0.010   mg/kg   0.01   19-SEP-16     Fluoranthene   <0.010   mg/kg   0.01   19-SEP-16     Dibenz(a,h)anthracene   <0.010   mg/kg   0.01   19-SEP-16     Fluoranthene   <0.010   mg/kg   0.01   19-SEP-16     Fluoranthene   <0.010   mg/kg   0.01   19-SEP-16     Polenanthrene   <0.010   mg/kg   0.01   19-SEP-16     SeP-16   SeP-16	Test Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
Naphthalene	PAH-TMB-H/A-MS-VA Soil							
Naphthalene         98.6         %         50-130         19-SEP-16           Phenanthrene         99.2         %         60-130         19-SEP-16           Pyrene         103.5         %         60-130         19-SEP-16           WG2389820-1         MB	Batch R3550065							
Phenanthrene         99.2         %         60-130         19-SEP-16           Pyrene         103.5         %         60-130         19-SEP-16           WG2399320-1         MB         Accenaphthylene         40.0050         mg/kg         0.005         19-SEP-16           Acenaphthylene         40.0050         mg/kg         0.004         19-SEP-16           Anthracene         40.010         mg/kg         0.01         19-SEP-16           Benzo(a)pyrene         40.010         mg/kg         0.01         19-SEP-16           Benzo(b)fluoranthene         40.010         mg/kg         0.01         19-SEP-16           Benzo(k)fluoranthene         40.010         mg/kg         0.01         19-SEP-16           Benzo(k)fluoranthene         40.010         mg/kg         0.01         19-SEP-16           Benzo(k)fluoranthene         40.010         mg/kg         0.01         19-SEP-16           Chrysene         40.010         mg/kg         0.01         19-SEP-16           Chrysene         40.010         mg/kg         0.01         19-SEP-16           Fluoranthene         40.010         mg/kg         0.01         19-SEP-16           Fluoranthene         40.010         mg/kg								
Pyrene	•						50-130	19-SEP-16
WG2398e20-1 MB         Acenaphthene         <0.0050         mg/kg         0.005         19-SEP-16           Acenaphthylene         <0.0050							60-130	19-SEP-16
Acenaphthene         <0.0050         mg/kg         0.005         19-SEP-16           Acenaphthylene         <0.0050	Pyrene		103.5		%		60-130	19-SEP-16
Acenaphthylene			<0.0050		ma/ka		0.005	19-SEP-16
Anthracene								
Benz(a)anrithracene         <0.010								
Benzo(a)pyrene         <0.010								
Benzo(b)fluoranthene         <0.010								
Benzo(g,h,l)perylene         <0.010         mg/kg         0.01         19-SEP-16           Benzo(k)fluoranthene         <0.010								
Benzo(k)fluoranthene         <0.010								
Chrysene         <0.010         mg/kg         0.01         19-SEP-16           Dibenz(a,h)anthracene         <0.0050								
Dibenz(a,h)anthracene         <0.0050         mg/kg         0.005         19-SEP-16           Fluoranthene         <0.010								
Fluoranthene         <0.010	-							
Fluorene	·							
Indeno(1,2,3-c,d)pyrene         <0.010         mg/kg         0.01         19-SEP-16           2-Methylnaphthalene         <0.010								
2-Methylnaphthalene         <0.010								
Naphthalene         <0.010								
Phenanthrene         <0.010	, ,							
Pyrene         <0.010         mg/kg         0.01         19-SEP-16           Surrogate: Naphthalene d8         90.1         %         50-130         19-SEP-16           Surrogate: Acenaphthene d10         86.3         %         60-130         19-SEP-16           Surrogate: Phenanthrene d10         87.6         %         60-130         19-SEP-16           Surrogate: Chrysene d12         101.0         %         60-130         19-SEP-16           Batch         R3552006	·							
Surrogate: Naphthalene d8       90.1       %       50-130       19-SEP-16         Surrogate: Acenaphthene d10       86.3       %       60-130       19-SEP-16         Surrogate: Phenanthrene d10       87.6       %       60-130       19-SEP-16         Surrogate: Chrysene d12       101.0       %       60-130       19-SEP-16         Batch       R3552006       R3552006 <td< td=""><td>Pyrene</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	Pyrene							
Surrogate: Acenaphthene d10       86.3       %       60-130       19-SEP-16         Surrogate: Phenanthrene d10       87.6       %       60-130       19-SEP-16         Surrogate: Chrysene d12       101.0       %       60-130       19-SEP-16         Batch R3552006         WG2389829-2 LCS       Saccenaphthene       97.9       %       60-130       19-SEP-16         Acenaphthylene       93.7       %       60-130       19-SEP-16         Anthracene       93.7       %       60-130       19-SEP-16         Benz(a)anthracene       111.7       %       60-130       19-SEP-16         Benzo(a)pyrene       99.8       %       60-130       19-SEP-16         Benzo(b)fluoranthene       109.4       %       60-130       19-SEP-16         Benzo(g,h,i)perylene       90.3       %       60-130       19-SEP-16	•							
Surrogate: Phenanthrene d10       87.6       %       60-130       19-SEP-16         Surrogate: Chrysene d12       101.0       %       60-130       19-SEP-16         Batch R3552006         WG2389829-2 LCS       VS       Control of the control of								
Surrogate: Chrysene d12       101.0       %       60-130       19-SEP-16         Batch R3552006         WG2389829-2 LCS       4       60-130       19-SEP-16         Acenaphthene       97.9       %       60-130       19-SEP-16         Acenaphthylene       93.7       %       60-130       19-SEP-16         Anthracene       93.7       %       60-130       19-SEP-16         Benz(a)anthracene       111.7       %       60-130       19-SEP-16         Benzo(a)pyrene       99.8       %       60-130       19-SEP-16         Benzo(b)fluoranthene       109.4       %       60-130       19-SEP-16         Benzo(g,h,i)perylene       90.3       %       60-130       19-SEP-16	,		87.6		%			
Batch R3552006         WG2389829-2 LCS         Acenaphthene       97.9       %       60-130       19-SEP-16         Acenaphthylene       93.7       %       60-130       19-SEP-16         Anthracene       93.7       %       60-130       19-SEP-16         Benz(a)anthracene       111.7       %       60-130       19-SEP-16         Benzo(a)pyrene       99.8       %       60-130       19-SEP-16         Benzo(b)fluoranthene       109.4       %       60-130       19-SEP-16         Benzo(g,h,i)perylene       90.3       %       60-130       19-SEP-16	Surrogate: Chrysene d12		101.0		%			
WG2389829-2       LCS         Acenaphthene       97.9       %       60-130       19-SEP-16         Acenaphthylene       93.7       %       60-130       19-SEP-16         Anthracene       93.7       %       60-130       19-SEP-16         Benz(a)anthracene       111.7       %       60-130       19-SEP-16         Benzo(a)pyrene       99.8       %       60-130       19-SEP-16         Benzo(b)fluoranthene       109.4       %       60-130       19-SEP-16         Benzo(g,h,i)perylene       90.3       %       60-130       19-SEP-16	Ratch R3552006							
Acenaphthylene       93.7       %       60-130       19-SEP-16         Anthracene       93.7       %       60-130       19-SEP-16         Benz(a)anthracene       111.7       %       60-130       19-SEP-16         Benzo(a)pyrene       99.8       %       60-130       19-SEP-16         Benzo(b)fluoranthene       109.4       %       60-130       19-SEP-16         Benzo(g,h,i)perylene       90.3       %       60-130       19-SEP-16								
Anthracene       93.7       %       60-130       19-SEP-16         Benz(a)anthracene       111.7       %       60-130       19-SEP-16         Benzo(a)pyrene       99.8       %       60-130       19-SEP-16         Benzo(b)fluoranthene       109.4       %       60-130       19-SEP-16         Benzo(g,h,i)perylene       90.3       %       60-130       19-SEP-16	Acenaphthene		97.9		%		60-130	19-SEP-16
Benz(a)anthracene       111.7       %       60-130       19-SEP-16         Benzo(a)pyrene       99.8       %       60-130       19-SEP-16         Benzo(b)fluoranthene       109.4       %       60-130       19-SEP-16         Benzo(g,h,i)perylene       90.3       %       60-130       19-SEP-16	Acenaphthylene		93.7		%		60-130	19-SEP-16
Benzo(a)pyrene       99.8       %       60-130       19-SEP-16         Benzo(b)fluoranthene       109.4       %       60-130       19-SEP-16         Benzo(g,h,i)perylene       90.3       %       60-130       19-SEP-16	Anthracene		93.7		%		60-130	19-SEP-16
Benzo(b)fluoranthene       109.4       %       60-130       19-SEP-16         Benzo(g,h,i)perylene       90.3       %       60-130       19-SEP-16	Benz(a)anthracene		111.7		%		60-130	19-SEP-16
Benzo(g,h,i)perylene 90.3 % 60-130 19-SEP-16	Benzo(a)pyrene		99.8		%		60-130	19-SEP-16
	Benzo(b)fluoranthene		109.4		%		60-130	19-SEP-16
Benzo(k)fluoranthene 108.9 % 60-130 19-SEP-16	Benzo(g,h,i)perylene		90.3		%		60-130	19-SEP-16
	Benzo(k)fluoranthene		108.9		%		60-130	19-SEP-16



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est N	//atrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
AH-TMB-H/A-MS-VA	Soil							
Batch R3552006								
WG2389829-2 LCS			100.0		9/		00.100	10.055.11
Chrysene			109.9		%		60-130	19-SEP-16
Dibenz(a,h)anthracene Fluoranthene			96.7		%		60-130	19-SEP-16
Fluorantnene			102.7		%		60-130	19-SEP-16
			97.8		%		60-130	19-SEP-16
Indeno(1,2,3-c,d)pyrene			95.8		%		60-130	19-SEP-16
2-Methylnaphthalene			82.1		%		60-130	19-SEP-16
Naphthalene			94.1		%		50-130	19-SEP-16
Phenanthrene			98.0		%		60-130	19-SEP-16
Pyrene			103.9		%		60-130	19-SEP-16
WG2389829-1 MB Acenaphthene			<0.0050		mg/kg		0.005	19-SEP-16
Acenaphthylene			<0.0050		mg/kg		0.005	19-SEP-16
Anthracene			<0.0040		mg/kg		0.004	19-SEP-16
Benz(a)anthracene			<0.010		mg/kg		0.01	19-SEP-16
Benzo(a)pyrene			< 0.010		mg/kg		0.01	19-SEP-16
Benzo(b)fluoranthene			<0.010		mg/kg		0.01	19-SEP-16
Benzo(g,h,i)perylene			<0.010		mg/kg		0.01	19-SEP-16
Benzo(k)fluoranthene			<0.010		mg/kg		0.01	19-SEP-16
Chrysene			<0.010		mg/kg		0.01	19-SEP-16
Dibenz(a,h)anthracene			<0.0050		mg/kg		0.005	19-SEP-16
Fluoranthene			<0.010		mg/kg		0.01	19-SEP-16
Fluorene			<0.010		mg/kg		0.01	19-SEP-16
Indeno(1,2,3-c,d)pyrene			<0.010		mg/kg		0.01	19-SEP-16
2-Methylnaphthalene			<0.010		mg/kg		0.01	19-SEP-16
Naphthalene			<0.010		mg/kg		0.01	19-SEP-16
Phenanthrene			<0.010		mg/kg		0.01	19-SEP-16
Pyrene			<0.010		mg/kg		0.01	19-SEP-16
Surrogate: Naphthalene d8	3		89.1		%		50-130	19-SEP-16
Surrogate: Acenaphthene of	d10		89.1		%		60-130	19-SEP-16
Surrogate: Phenanthrene d	110		91.9		%		60-130	19-SEP-16
Surrogate: Chrysene d12			103.5		%		60-130	19-SEP-16

PH-1:2-VA Soil



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		Workdradi.		•	ricport Bate.	0 001 10	Fage 12 01 20		
Test Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed	
PH-1:2-VA <b>Batch R3550910 WG2389811-2 DUP</b> pH (1:2 soil:water)	Soil	<b>L1826440-12</b> 5.69	5.72	J	рН	0.03	0.2	18-SEP-16	
PO4-T-LEACH-COL-VA	Soil								
Batch R3551942 WG2391234-4 DUP Total Phosphate As P		<b>L1826440-17</b> 2.91	3.21		mg/kg	9.8	30	20-SEP-16	
WG2390711-1 MB Total Phosphate As P			<0.020		mg/kg		0.02	20-SEP-16	
WG2391234-1 MB Total Phosphate As P			<0.020		mg/kg		0.02	20-SEP-16	
Batch R3553243 WG2390711-4 DUP Total Phosphate As P		<b>L1826440-1</b> 14.0	15.6		mg/kg	11	30	21-SEP-16	
AT-PCNT-VA	Soil								
Batch R3550085 WG2389515-3 IRM % Saturation		VA-ALP-SRS1	96.3		%		80-120	16-SEP-16	
Batch R3550832 WG2389549-3 IRM % Saturation		VA-ALP-SRS1	1 <b>507</b> 104.0		%		80-120	17-SEP-16	
COLI-DRY-MTF-VA	Soil								
Batch R3549957 WG2385661-1 DUP Coliform Bacteria - Tota	ıl	<b>L1826440-21</b> 146	27	DUP-H	MPN/g	138	65	09-SEP-16	
WG2385661-3 DUP WG2385661-2 MB Coliform Bacteria - Tota	ıl	L1826440-1	<2		MPN/g		2	09-SEP-16	
/FA-WP	Soil						_	00 021 10	
Batch R3551463									
WG2390164-3 DUP Formic Acid		<b>L1826440-1</b> <300	<300	RPD-N	A mg/kg	N/A	30	16-SEP-16	
Acetic Acid		<10	<10	RPD-N		N/A	30	16-SEP-16	
Propionic Acid		<5.0	<5.0	RPD-N					
i Topionio Adia		<b>\0.0</b>	<b>\0.0</b>	NFD-N	A 1119/N9	N/A	30	16-SEP-16	



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Isobutyric Acid	est	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MG2390164-3   DUP	FA-WP	Soil							
Butyric Acid	Batch R355	51463							
Isobutyric Acid		DUP	L1826440-1						
Valeric Acid	-		<1.0		RPD-NA	mg/kg	N/A	30	16-SEP-16
Isovaleric Acid   <1.0	Isobutyric Acid		<1.0		RPD-NA	mg/kg	N/A	30	16-SEP-16
Caproic (Hexanoic) Acid	Valeric Acid		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	16-SEP-16
MG2390164-7   DUP			<1.0	<1.0	RPD-NA	mg/kg	N/A	30	16-SEP-16
Formic Acid	Caproic (Hexanoi	c) Acid	<2.0	<2.0	RPD-NA	mg/kg	N/A	30	16-SEP-16
Propionic Acid         <5.0         <5.0         RPD-NA         mg/kg         N/A         30         16           Butyric Acid         <1.0		DUP			RPD-NA	mg/kg	N/A	30	16-SEP-16
Butyric Acid	Acetic Acid		<10	<10	RPD-NA	mg/kg	N/A	30	16-SEP-16
Isobutyric Acid	Propionic Acid		<5.0	<5.0	RPD-NA	mg/kg	N/A	30	16-SEP-16
Valeric Acid         <1.0	Butyric Acid		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	16-SEP-16
Isovaleric Acid	Isobutyric Acid		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	16-SEP-16
Caproic (Hexanoic) Acid	Valeric Acid		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	16-SEP-16
WG2390164-2         LCS           Formic Acid         127.4         %         70-130         17           Acetic Acid         115.4         %         70-130         17           Propionic Acid         95.8         %         70-130         17           Butyric Acid         96.3         %         70-130         17           Isobutyric Acid         95.9         %         70-130         17           Valeric Acid         90.9         %         70-130         17           Isovaleric Acid         92.1         %         70-130         17           Caproic (Hexanoic) Acid         88.9         %         70-130         16           Acetic Acid         95.1         %         70-130         16           Acetic Acid         117.4         %         70-130         16           Propionic Acid         77.1         %         70-130         16           Butyric Acid         75.6         %         70-130         16           Isobutyric Acid         72.6         %         70-130         16           Isovaleric Acid         75.5         %         70-130         16           Caproic (Hexanoic) Acid         78.4	Isovaleric Acid		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	16-SEP-16
Formic Acid         127.4         %         70-130         17           Acetic Acid         115.4         %         70-130         17           Propionic Acid         95.8         %         70-130         17           Butyric Acid         96.3         %         70-130         17           Isobutyric Acid         95.9         %         70-130         17           Valeric Acid         90.9         %         70-130         17           Isovaleric Acid         92.1         %         70-130         17           Caproic (Hexanoic) Acid         88.9         %         70-130         17           WG2390164-6         LCS         LCS         Formic Acid         95.1         %         70-130         16           Acetic Acid         117.4         %         70-130         16           Propionic Acid         75.6         %         70-130         16           Isobutyric Acid         83.1         %         70-130         16           Valeric Acid         75.5         %         70-130         16           Isovaleric Acid         75.5         %         70-130         16           Caproic (Hexanoic) Acid         78.4	Caproic (Hexanoi	c) Acid	<2.0	<2.0	RPD-NA	mg/kg	N/A	30	16-SEP-16
Acetic Acid 115.4 % 70-130 17 Propionic Acid 95.8 % 70-130 17 Butyric Acid 96.3 % 70-130 17 Isobutyric Acid 95.9 % 70-130 17 Valeric Acid 90.9 % 70-130 17 Isovaleric Acid 92.1 % 70-130 17 Caproic (Hexanoic) Acid 88.9 % 70-130 17 WG2390164-6 LCS Formic Acid 95.1 % 70-130 16 Acetic Acid 95.1 % 70-130 16 Propionic Acid 95.1 % 70-130 16 Butyric Acid 77.1 % 70-130 16 Butyric Acid 77.1 % 70-130 16 Isobutyric Acid 83.1 % 70-130 16 Isobutyric Acid 72.6 % 70-130 16 Isovaleric Acid 75.5 % 70-130 16 Caproic (Hexanoic) Acid 78.4 % 70-130 16 Caproic (Hexanoic) Acid 78.4 % 70-130 16	WG2390164-2	LCS							
Propionic Acid         95.8         %         70-130         17           Butyric Acid         96.3         %         70-130         17           Isobutyric Acid         95.9         %         70-130         17           Valeric Acid         90.9         %         70-130         17           Isovaleric Acid         92.1         %         70-130         17           Caproic (Hexanoic) Acid         88.9         %         70-130         17           WG2390164-6         LCS         LCS         Formic Acid         95.1         %         70-130         16           Acetic Acid         117.4         %         70-130         16           Propionic Acid         77.1         %         70-130         16           Butyric Acid         75.6         %         70-130         16           Isobutyric Acid         83.1         %         70-130         16           Valeric Acid         72.6         %         70-130         16           Isovaleric Acid         75.5         %         70-130         16           Caproic (Hexanoic) Acid         78.4         %         70-130         16           WG2390164-1         MB	Formic Acid			127.4				70-130	17-SEP-16
Butyric Acid 96.3 % 70-130 17 Isobutyric Acid 95.9 % 70-130 17 Valeric Acid 90.9 % 70-130 17 Isovaleric Acid 92.1 % 70-130 17 Caproic (Hexanoic) Acid 88.9 % 70-130 17 WG2390164-6 LCS Formic Acid 95.1 % 70-130 16 Acetic Acid 117.4 % 70-130 16 Butyric Acid 77.1 % 70-130 16 Isobutyric Acid 75.6 % 70-130 16 Isobutyric Acid 72.6 % 70-130 16 Isovaleric Acid 72.6 % 70-130 16 Caproic (Hexanoic) Acid 75.5 % 70-130 16 Caproic (Hexanoic) Acid 75.5 % 70-130 16 Caproic (Hexanoic) Acid 78.4 % 70-130 16	Acetic Acid					%		70-130	17-SEP-16
Isobutyric Acid   95.9   %   70-130   17     Valeric Acid   90.9   %   70-130   17     Isovaleric Acid   92.1   %   70-130   17     Caproic (Hexanoic) Acid   88.9   %   70-130   17     WG2390164-6   LCS   Formic Acid   95.1   %   70-130   16     Acetic Acid   117.4   %   70-130   16     Propionic Acid   77.1   %   70-130   16     Butyric Acid   75.6   %   70-130   16     Isobutyric Acid   83.1   %   70-130   16     Valeric Acid   72.6   %   70-130   16     Isovaleric Acid   75.5   %   70-130   16     Caproic (Hexanoic) Acid   78.4   %   70-130   16     WG2390164-1   MB	Propionic Acid			95.8		%		70-130	17-SEP-16
Valeric Acid       90.9       %       70-130       17         Isovaleric Acid       92.1       %       70-130       17         Caproic (Hexanoic) Acid       88.9       %       70-130       17         WG2390164-6 LCS       Ecs       Valetic Acid       95.1       %       70-130       16         Acetic Acid       117.4       %       70-130       16         Propionic Acid       77.1       %       70-130       16         Butyric Acid       75.6       %       70-130       16         Isobutyric Acid       83.1       %       70-130       16         Valeric Acid       72.6       %       70-130       16         Isovaleric Acid       75.5       %       70-130       16         Caproic (Hexanoic) Acid       78.4       %       70-130       16         WG2390164-1       MB       M	Butyric Acid			96.3		%		70-130	17-SEP-16
Isovaleric Acid   92.1   %   70-130   17	Isobutyric Acid			95.9		%		70-130	17-SEP-16
Caproic (Hexanoic) Acid       88.9       %       70-130       17         WG2390164-6 LCS       LCS       Valeric Acid       95.1       %       70-130       16         Acetic Acid       117.4       %       70-130       16         Propionic Acid       77.1       %       70-130       16         Butyric Acid       75.6       %       70-130       16         Isobutyric Acid       83.1       %       70-130       16         Valeric Acid       72.6       %       70-130       16         Isovaleric Acid       75.5       %       70-130       16         Caproic (Hexanoic) Acid       78.4       %       70-130       16         WG2390164-1       MB	Valeric Acid			90.9		%		70-130	17-SEP-16
WG2390164-6 LCS         LCS           Formic Acid         95.1         %         70-130         16           Acetic Acid         117.4         %         70-130         16           Propionic Acid         77.1         %         70-130         16           Butyric Acid         75.6         %         70-130         16           Isobutyric Acid         83.1         %         70-130         16           Valeric Acid         72.6         %         70-130         16           Isovaleric Acid         75.5         %         70-130         16           Caproic (Hexanoic) Acid         78.4         %         70-130         16           WG2390164-1         MB	Isovaleric Acid			92.1		%		70-130	17-SEP-16
Formic Acid       95.1       %       70-130       16         Acetic Acid       117.4       %       70-130       16         Propionic Acid       77.1       %       70-130       16         Butyric Acid       75.6       %       70-130       16         Isobutyric Acid       83.1       %       70-130       16         Valeric Acid       72.6       %       70-130       16         Isovaleric Acid       75.5       %       70-130       16         Caproic (Hexanoic) Acid       78.4       %       70-130       16         WG2390164-1       MB	Caproic (Hexanoi	c) Acid		88.9		%		70-130	17-SEP-16
Propionic Acid       77.1       %       70-130       16         Butyric Acid       75.6       %       70-130       16         Isobutyric Acid       83.1       %       70-130       16         Valeric Acid       72.6       %       70-130       16         Isovaleric Acid       75.5       %       70-130       16         Caproic (Hexanoic) Acid       78.4       %       70-130       16         WG2390164-1       MB		LCS		95.1		%		70-130	16-SEP-16
Butyric Acid       75.6       %       70-130       16         Isobutyric Acid       83.1       %       70-130       16         Valeric Acid       72.6       %       70-130       16         Isovaleric Acid       75.5       %       70-130       16         Caproic (Hexanoic) Acid       78.4       %       70-130       16         WG2390164-1       MB	Acetic Acid			117.4		%		70-130	16-SEP-16
Isobutyric Acid     83.1     %     70-130     16       Valeric Acid     72.6     %     70-130     16       Isovaleric Acid     75.5     %     70-130     16       Caproic (Hexanoic) Acid     78.4     %     70-130     16       WG2390164-1     MB	Propionic Acid			77.1		%		70-130	16-SEP-16
Isobutyric Acid     83.1     %     70-130     16       Valeric Acid     72.6     %     70-130     16       Isovaleric Acid     75.5     %     70-130     16       Caproic (Hexanoic) Acid     78.4     %     70-130     16       WG2390164-1     MB	Butyric Acid			75.6		%			16-SEP-16
Valeric Acid       72.6       %       70-130       16         Isovaleric Acid       75.5       %       70-130       16         Caproic (Hexanoic) Acid       78.4       %       70-130       16         WG2390164-1       MB	Isobutyric Acid			83.1		%		70-130	16-SEP-16
Caproic (Hexanoic) Acid 78.4 % 70-130 16  WG2390164-1 MB	Valeric Acid			72.6		%			16-SEP-16
WG2390164-1 MB	Isovaleric Acid			75.5		%		70-130	16-SEP-16
	Caproic (Hexanoi	c) Acid		78.4		%		70-130	16-SEP-16
		МВ		<30		mg/ka		30	16-SEP-16
									16-SEP-16



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est		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
/FA-WP		Soil							
Batch R35	551463								
WG2390164-1	MB								
Propionic Acid				<5.0		mg/kg		5	16-SEP-16
Butyric Acid				<1.0		mg/kg		1	16-SEP-16
Isobutyric Acid				<1.0		mg/kg		1	16-SEP-16
Valeric Acid				<1.0		mg/kg		1	16-SEP-16
Isovaleric Acid				<1.0		mg/kg		1	16-SEP-16
Caproic (Hexand	oic) Acid			<2.0		mg/kg		2	16-SEP-16
WG2390164-5 Formic Acid	МВ			<30		mg/kg		30	16-SEP-16
Acetic Acid				<10		mg/kg		10	16-SEP-16
Propionic Acid				<5.0		mg/kg		5	16-SEP-16
Butyric Acid				<1.0		mg/kg		1	16-SEP-16
Isobutyric Acid				<1.0		mg/kg		1	16-SEP-16
Valeric Acid				<1.0		mg/kg		1	16-SEP-16
Isovaleric Acid				<1.0		mg/kg		1	16-SEP-16
Caproic (Hexand	oic) Acid			<2.0		mg/kg		2	16-SEP-16
WG2390164-4	MS		L1826440-2	447.0					
Formic Acid				117.6		%		70-130	18-SEP-16
Acetic Acid				122.8		%		70-130	18-SEP-16
Propionic Acid				118.1		%		70-130	18-SEP-16
Butyric Acid				124.1		%		70-130	18-SEP-16
Isobutyric Acid				125.9		%		70-130	18-SEP-16
Valeric Acid				128.8		%		70-130	18-SEP-16
Isovaleric Acid				125.9		%		70-130	18-SEP-16
Caproic (Hexand	oic) Acid			123.8		%		70-130	18-SEP-16
WG2390164-8 Formic Acid	MS		L1826440-21	124.1		%		70-130	18-SEP-16
Acetic Acid				117.2		%		70-130	18-SEP-16
Propionic Acid				102.5		%		70-130	18-SEP-16
Butyric Acid				118.6		%		70-130	18-SEP-16
Isobutyric Acid				117.6		%		70-130	18-SEP-16
Valeric Acid				112.7		%		70-130	18-SEP-16
Isovaleric Acid				107.4		%		70-130	18-SEP-16
				107.1		%		70-130	18-SEP-16

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VH-HSFID-VA	Soil							
Batch R354	9977							
WG2389563-3 E Volatile Hydrocarb	OUP ons (VH6-10)	<b>L1826440-18</b> <100	<100	RPD-NA	mg/kg	N/A	40	16-SEP-16
WG2389563-2 L Volatile Hydrocarb	ons (VH6-10)		109.8		%		70-130	16-SEP-16
WG2390654-2 L Volatile Hydrocarb	ons (VH6-10)		102.4		%		70-130	18-SEP-16
WG2389563-1 N Volatile Hydrocarb	<b>MB</b> ons (VH6-10)		<100		mg/kg		100	16-SEP-16
WG2390654-1 N Volatile Hydrocarb	<b>MB</b> ons (VH6-10)		<100		mg/kg		100	18-SEP-16
VOC-HSMS-VA	Soil							
Batch R354	9065							
	DUP	L1826440-18						
Bromodichloromet	thane	<0.050	< 0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
Bromoform		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
Carbon Tetrachlor	ide	<0.050	< 0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
Chlorobenzene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
Dibromochloromet	thane	<0.050	< 0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
Chloroethane		<0.10	<0.10	RPD-NA	mg/kg	N/A	50	16-SEP-16
Chloroform		<0.10	<0.10	RPD-NA	mg/kg	N/A	50	16-SEP-16
Chloromethane		<0.10	<0.10	RPD-NA	mg/kg	N/A	50	16-SEP-16
1,2-Dichlorobenze	ne	<0.050	< 0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
1,3-Dichlorobenze	ne	<0.050	< 0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
1,4-Dichlorobenze	ne	<0.050	< 0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
1,1-Dichloroethane	е	<0.050	< 0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
1,2-Dichloroethane	е	<0.050	< 0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
1,1-Dichloroethyle	ne	<0.050	< 0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
cis-1,2-Dichloroeth	nylene	<0.050	< 0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
trans-1,2-Dichloro	ethylene	<0.050	< 0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
Dichloromethane		<0.30	< 0.30	RPD-NA	mg/kg	N/A	50	16-SEP-16
1,2-Dichloropropa	ne	<0.050	< 0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
cis-1,3-Dichloropro	opylene	<0.050	< 0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
trans-1,3-Dichloro	propylene	<0.050	< 0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
1,1,1,2-Tetrachlor		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
1,1,2,2-Tetrachlor		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
Tetrachloroethyler		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
1 of domorood lyler		30.000	\0.000	INFD-INA	mg/ng	IN/A	50	10-3EF-10



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Test I	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-HSMS-VA	Soil							
Batch R3549065								
WG2389563-3 DUP		L1826440-18						
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16
Trichloroethylene		<0.010	<0.010	RPD-NA	mg/kg	N/A	50	16-SEP-16
Trichlorofluoromethane		<0.10	<0.10	RPD-NA	mg/kg	N/A	50	16-SEP-16
Vinyl Chloride		<0.10	<0.10	RPD-NA	mg/kg	N/A	50	16-SEP-16
WG2389563-2 LCS Bromodichloromethane			79.2		%		70-130	16-SEP-16
Bromoform			67.4	LCS-ND	%		70-130	16-SEP-16
Carbon Tetrachloride			89.1		%		70-130	16-SEP-16
Chlorobenzene			96.6		%		70-130	16-SEP-16
Dibromochloromethane			78.4		%		70-130	16-SEP-16
Chloroethane			78.4		%		60-140	16-SEP-16
Chloroform			92.1		%		70-130	16-SEP-16
Chloromethane			66.9		%		60-140	16-SEP-16
1,2-Dichlorobenzene			97.7		%		70-130	16-SEP-16
1,3-Dichlorobenzene			97.0		%		70-130	16-SEP-16
1,4-Dichlorobenzene			98.8		%		70-140	16-SEP-16
1,1-Dichloroethane			88.2		%		70-130	16-SEP-16
1,2-Dichloroethane			91.3		%		70-130	16-SEP-16
1,1-Dichloroethylene			87.5		%		70-130	16-SEP-16
cis-1,2-Dichloroethylene			93.8		%		70-130	16-SEP-16
trans-1,2-Dichloroethylene	)		90.8		%		70-130	16-SEP-16
Dichloromethane			92.7		%		60-140	16-SEP-16
1,2-Dichloropropane			89.0		%		70-130	16-SEP-16
cis-1,3-Dichloropropylene			77.3		%		70-130	16-SEP-16
trans-1,3-Dichloropropyler	ne		69.4	LCS-ND	%		70-130	16-SEP-16
1,1,1,2-Tetrachloroethane			85.1		%		70-130	16-SEP-16
1,1,2,2-Tetrachloroethane			82.3		%		70-130	16-SEP-16
Tetrachloroethylene			103.0		%		70-130	16-SEP-16
1,1,1-Trichloroethane			88.8		%		70-130	16-SEP-16
1,1,2-Trichloroethane			90.6		%		70-130	16-SEP-16
Trichloroethylene			98.2		%		70-130	16-SEP-16
Trichlorofluoromethane			91.0		%		60-140	16-SEP-16
Vinyl Chloride			69.7		%		60-140	16-SEP-16
WG2390654-2								



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						. 13-001-10		rage 17 01 20	
Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed	
VOC-HSMS-VA	Soil								
Batch R354906	5								
WG2390654-2 LCS									
Bromodichloromethan	е		83.8		%		70-130	18-SEP-16	
Bromoform			65.2	LCS-ND	%		70-130	18-SEP-16	
Carbon Tetrachloride			102.5		%		70-130	18-SEP-16	
Chlorobenzene			99.8		%		70-130	18-SEP-16	
Dibromochloromethan	е		82.4		%		70-130	18-SEP-16	
Chloroethane			8.08		%		60-140	18-SEP-16	
Chloroform			102.6		%		70-130	18-SEP-16	
Chloromethane			67.4		%		60-140	18-SEP-16	
1,2-Dichlorobenzene			99.4		%		70-130	18-SEP-16	
1,3-Dichlorobenzene			96.9		%		70-130	18-SEP-16	
1,4-Dichlorobenzene			95.3		%		70-140	18-SEP-16	
1,1-Dichloroethane			95.4		%		70-130	18-SEP-16	
1,2-Dichloroethane			99.8		%		70-130	18-SEP-16	
1,1-Dichloroethylene			96.7		%		70-130	18-SEP-16	
cis-1,2-Dichloroethyler	ne		98.7		%		70-130	18-SEP-16	
trans-1,2-Dichloroethy	lene		91.0		%		70-130	18-SEP-16	
Dichloromethane			98.7		%		60-140	18-SEP-16	
1,2-Dichloropropane			90.8		%		70-130	18-SEP-16	
cis-1,3-Dichloropropyle	ene		50.1	LCS-ND	%		70-130	18-SEP-16	
trans-1,3-Dichloroprop	ylene		38.6	LCS-ND	%		70-130	18-SEP-16	
1,1,1,2-Tetrachloroeth	ane		92.1		%		70-130	18-SEP-16	
1,1,2,2-Tetrachloroeth	ane		84.3		%		70-130	18-SEP-16	
Tetrachloroethylene			109.0		%		70-130	18-SEP-16	
1,1,1-Trichloroethane			97.3		%		70-130	18-SEP-16	
1,1,2-Trichloroethane			94.0		%		70-130	18-SEP-16	
Trichloroethylene			101.4		%		70-130	18-SEP-16	
Trichlorofluoromethan	е		105.8		%		60-140	18-SEP-16	
Vinyl Chloride			70.9		%		60-140	18-SEP-16	
WG2389563-1 MB			. 5.0				00-140	10-021-10	
Bromodichloromethan	е		< 0.050		mg/kg		0.05	16-SEP-16	
Bromoform			< 0.050		mg/kg		0.05	16-SEP-16	
Carbon Tetrachloride			< 0.050		mg/kg		0.05	16-SEP-16	
Chlorobenzene			< 0.050		mg/kg		0.05	16-SEP-16	
Dibromochloromethan	0		<0.050		mg/kg		0.05	16-SEP-16	



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								ago 10 01 20	
est	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed	
OC-HSMS-VA	Soil								
Batch R3549	065								
WG2389563-1 M	В		0.10						
Chloroethane			<0.10		mg/kg		0.1	16-SEP-16	
Chloroform			<0.10		mg/kg		0.1	16-SEP-16	
Chloromethane			<0.10		mg/kg		0.1	16-SEP-16	
1,2-Dichlorobenzen			<0.050		mg/kg		0.05	16-SEP-16	
1,3-Dichlorobenzen			< 0.050		mg/kg		0.05	16-SEP-16	
1,4-Dichlorobenzen	е		< 0.050		mg/kg		0.05	16-SEP-16	
1,1-Dichloroethane			< 0.050		mg/kg		0.05	16-SEP-16	
1,2-Dichloroethane			< 0.050		mg/kg		0.05	16-SEP-16	
1,1-Dichloroethylen	е		< 0.050		mg/kg		0.05	16-SEP-16	
cis-1,2-Dichloroethy	/lene		< 0.050		mg/kg		0.05	16-SEP-16	
trans-1,2-Dichloroe	thylene		< 0.050		mg/kg		0.05	16-SEP-16	
Dichloromethane			< 0.30		mg/kg		0.3	16-SEP-16	
1,2-Dichloropropan	е		< 0.050		mg/kg		0.05	16-SEP-16	
cis-1,3-Dichloroprop	oylene		< 0.050		mg/kg		0.05	16-SEP-16	
trans-1,3-Dichlorop	ropylene		< 0.050		mg/kg		0.05	16-SEP-16	
1,1,1,2-Tetrachloro	ethane		< 0.050		mg/kg		0.05	16-SEP-16	
1,1,2,2-Tetrachloro	ethane		< 0.050		mg/kg		0.05	16-SEP-16	
Tetrachloroethylene	•		< 0.050		mg/kg		0.05	16-SEP-16	
1,1,1-Trichloroethar	ne		< 0.050		mg/kg		0.05	16-SEP-16	
1,1,2-Trichloroethar	ne		< 0.050		mg/kg		0.05	16-SEP-16	
Trichloroethylene			< 0.010		mg/kg		0.01	16-SEP-16	
Trichlorofluorometh	ane		<0.10		mg/kg		0.1	16-SEP-16	
Vinyl Chloride			<0.10		mg/kg		0.1	16-SEP-16	
WG2390654-1 M	В								
Bromodichlorometh	ane		< 0.050		mg/kg		0.05	18-SEP-16	
Bromoform			< 0.050		mg/kg		0.05	18-SEP-16	
Carbon Tetrachloric	de		< 0.050		mg/kg		0.05	18-SEP-16	
Chlorobenzene			< 0.050		mg/kg		0.05	18-SEP-16	
Dibromochlorometh	nane		< 0.050		mg/kg		0.05	18-SEP-16	
Chloroethane			<0.10		mg/kg		0.1	18-SEP-16	
Chloroform			< 0.10		mg/kg		0.1	18-SEP-16	
Chloromethane			< 0.10		mg/kg		0.1	18-SEP-16	
1,2-Dichlorobenzen	е		< 0.050		mg/kg		0.05	18-SEP-16	
1,3-Dichlorobenzen	е		< 0.050		mg/kg		0.05	18-SEP-16	



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							1 ago 10 of 20		
est	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed	
/OC-HSMS-VA	Soil								
Batch R354906	65								
WG2390654-1 MB									
1,4-Dichlorobenzene			<0.050		mg/kg		0.05	18-SEP-16	
1,1-Dichloroethane			<0.050		mg/kg		0.05	18-SEP-16	
1,2-Dichloroethane			<0.050		mg/kg		0.05	18-SEP-16	
1,1-Dichloroethylene			<0.050		mg/kg		0.05	18-SEP-16	
cis-1,2-Dichloroethyle	ene		< 0.050		mg/kg		0.05	18-SEP-16	
trans-1,2-Dichloroeth	ylene		< 0.050		mg/kg		0.05	18-SEP-16	
Dichloromethane			< 0.30		mg/kg		0.3	18-SEP-16	
1,2-Dichloropropane			< 0.050		mg/kg		0.05	18-SEP-16	
cis-1,3-Dichloropropy	rlene		< 0.050		mg/kg		0.05	18-SEP-16	
trans-1,3-Dichloropro	pylene		< 0.050		mg/kg		0.05	18-SEP-16	
1,1,1,2-Tetrachloroetl	hane		< 0.050		mg/kg		0.05	18-SEP-16	
1,1,2,2-Tetrachloroet	hane		< 0.050		mg/kg		0.05	18-SEP-16	
Tetrachloroethylene			< 0.050		mg/kg		0.05	18-SEP-16	
1,1,1-Trichloroethane	•		< 0.050		mg/kg		0.05	18-SEP-16	
1,1,2-Trichloroethane	)		< 0.050		mg/kg		0.05	18-SEP-16	
Trichloroethylene			< 0.010		mg/kg		0.01	18-SEP-16	
Trichlorofluoromethar	ne		<0.10		mg/kg		0.1	18-SEP-16	
Vinyl Chloride			<0.10		mg/kg		0.1	18-SEP-16	
OC-M2-HSMS-VA	Soil								
Batch R354906	65								
WG2389563-3 DUF	P	L1826440-18	4.0						
Acetone		<4.0	<4.0	RPD-NA	mg/kg	N/A	50	16-SEP-16	
Carbon Disulfide		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16	
2-Hexanone		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16	
Methyl ethyl ketone (N	,	<20	<20	RPD-NA	mg/kg	N/A	50	16-SEP-16	
Methyl isobutyl ketone	e (MIBK)	<0.050	<0.050	RPD-NA	mg/kg	N/A	50	16-SEP-16	
n-Heptane (nC7)		0.063	0.063		mg/kg	0.1	50	16-SEP-16	
n-Octane (nC8)		0.098	0.101		mg/kg	2.6	50	16-SEP-16	
WG2389563-2 LCS Acetone	3		72.5		%		70-130	16-SEP-16	
			71.2		%		70-130	16-SEP-16	
Carbon Disulfide									
Carbon Disulfide 2-Hexanone			87.9		%		70-130	16-SEP-16	
	MEK)		87.9 87.2		%		70-130 70-130	16-SEP-16 16-SEP-16	



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				'		1 ago 20 01 .		
Test Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed	
VOC-M2-HSMS-VA Soil								
Batch R3549065								
WG2389563-2 LCS								
n-Heptane (nC7)		84.4		%		70-130	16-SEP-16	
n-Octane (nC8)		86.5		%		70-130	16-SEP-16	
WG2390654-2 LCS Acetone		25.4	LCS-ND	%		70-130	18-SEP-16	
Carbon Disulfide		91.4		%		70-130	19-SEP-16	
2-Hexanone		100.3		%		70-130	19-SEP-16	
Methyl ethyl ketone (MEK)		2.2	LCS-ND	%		70-130	18-SEP-16	
Methyl isobutyl ketone (MIBK)		111.5		%		70-130	19-SEP-16	
n-Heptane (nC7)		101.3		%		70-130	19-SEP-16	
n-Octane (nC8)		97.7		%		70-130	19-SEP-16	
WG2389563-1 MB								
Acetone		<4.0		mg/kg		4	16-SEP-16	
Carbon Disulfide		< 0.050		mg/kg		0.05	16-SEP-16	
2-Hexanone		< 0.050		mg/kg		0.05	16-SEP-16	
Methyl ethyl ketone (MEK)		<20		mg/kg		20	16-SEP-16	
Methyl isobutyl ketone (MIBK)		< 0.050		mg/kg		0.05	16-SEP-16	
n-Heptane (nC7)		< 0.050		mg/kg		0.05	16-SEP-16	
n-Octane (nC8)		< 0.050		mg/kg		0.05	16-SEP-16	
WG2390654-1 MB								
Acetone		<4.0		mg/kg		4	18-SEP-16	
Carbon Disulfide		< 0.050		mg/kg		0.05	18-SEP-16	
2-Hexanone		< 0.050		mg/kg		0.05	18-SEP-16	
Methyl ethyl ketone (MEK)		<20		mg/kg		20	18-SEP-16	
Methyl isobutyl ketone (MIBK)		< 0.050		mg/kg		0.05	18-SEP-16	
n-Heptane (nC7)		< 0.050		mg/kg		0.05	18-SEP-16	
n-Octane (nC8)		< 0.050		mg/kg		0.05	18-SEP-16	
VOC-SOLVENTS-CL Soil								
Batch R3549777								
WG2389093-2 DUP Ethyl ether	<b>L1826440-1</b> <10	<10	RPD-NA	mg/kg	N/A	50	15-SEP-16	
WG2389093-5 DUP Ethyl ether	<b>L1826440-21</b> <10	<10	RPD-NA	mg/kg	N/A	50	16-SEP-16	
WG2389093-3 LCS Ethyl ether		122.6	2	%		50-150	15-SEP-16	
-		122.0		/0		50-150	10-3EF-10	
WG2389093-6 LCS								



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Test Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-SOLVENTS-CL Soil							
Batch R3549777							
WG2389093-6 LCS							
Ethyl ether		123.7		%		50-150	16-SEP-16
WG2389093-1 MB							
Ethyl ether		<10		mg/kg		10	15-SEP-16
Surrogate: 1,2-Dichloroethane d4	<b>!</b>	106.3		%		70-130	15-SEP-16
Surrogate: Toluene d8		100.3		%		70-130	15-SEP-16
Surrogate: 4-Bromofluorobenzen	е	99.1		%		70-130	15-SEP-16
WG2389093-4 MB							
Ethyl ether		<10		mg/kg		10	15-SEP-16
Surrogate: 1,2-Dichloroethane d4	1	121.4		%		70-130	15-SEP-16
Surrogate: Toluene d8		103.8		%		70-130	15-SEP-16
Surrogate: 4-Bromofluorobenzen	е	92.2		%		70-130	15-SEP-16
VOC7-L-HSMS-VA Soil							
Batch R3549065							
WG2389563-3 DUP	L1826440-18						
Benzene	0.0160	0.0181		mg/kg	12	40	16-SEP-16
Ethylbenzene	0.031	0.032		mg/kg	2.0	40	16-SEP-16
Methyl t-butyl ether (MTBE)	<0.20	<0.20	RPD-NA	mg/kg	N/A	40	16-SEP-16
Styrene	<0.050	< 0.050	RPD-NA	mg/kg	N/A	40	16-SEP-16
Toluene	0.087	0.090		mg/kg	4.2	40	16-SEP-16
meta- & para-Xylene	0.175	0.180		mg/kg	2.6	40	16-SEP-16
ortho-Xylene	0.164	0.172		mg/kg	4.7	40	16-SEP-16
WG2389563-2 LCS							
Benzene		93.5		%		70-130	16-SEP-16
Ethylbenzene		94.6		%		70-130	16-SEP-16
Methyl t-butyl ether (MTBE)		96.2		%		70-130	16-SEP-16
Styrene		88.9		%		70-130	16-SEP-16
Toluene		95.1		%		70-130	16-SEP-16
meta- & para-Xylene		95.9		%		70-130	16-SEP-16
ortho-Xylene		93.8		%		70-130	16-SEP-16
WG2390654-2 LCS							
Benzene		98.6		%		70-130	18-SEP-16
Ethylbenzene		95.3		%		70-130	18-SEP-16
Methyl t-butyl ether (MTBE)		97.0		%		70-130	18-SEP-16
Styrene		84.3		%		70-130	18-SEP-16
Toluene		96.6		%		70-130	18-SEP-16



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC7-L-HSMS-VA	Soil							
Batch R3549065								
WG2390654-2 LCS								
meta- & para-Xylene			98.1		%		70-130	18-SEP-16
ortho-Xylene			94.1		%		70-130	18-SEP-16
WG2389563-1 MB								
Benzene			<0.0050		mg/kg		0.005	16-SEP-16
Ethylbenzene			<0.015		mg/kg		0.015	16-SEP-16
Methyl t-butyl ether (MTB	BE)		<0.20		mg/kg		0.2	16-SEP-16
Styrene			< 0.050		mg/kg		0.05	16-SEP-16
Toluene			< 0.050		mg/kg		0.05	16-SEP-16
meta- & para-Xylene			< 0.050		mg/kg		0.05	16-SEP-16
ortho-Xylene			< 0.050		mg/kg		0.05	16-SEP-16
WG2390654-1 MB								
Benzene			<0.0050		mg/kg		0.005	18-SEP-16
Ethylbenzene			< 0.015		mg/kg		0.015	18-SEP-16
Methyl t-butyl ether (MTB	BE)		<0.20		mg/kg		0.2	18-SEP-16
Styrene			< 0.050		mg/kg		0.05	18-SEP-16
Toluene			< 0.050		mg/kg		0.05	18-SEP-16
meta- & para-Xylene			< 0.050		mg/kg		0.05	18-SEP-16
ortho-Xylene			< 0.050		mg/kg		0.05	18-SEP-16

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#### Legend:

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

#### Sample Parameter Qualifier Definitions:

Qualifier	Description
В	Method Blank exceeds ALS DQO. All associated sample results are at least 5 times greater than blank levels and are considered reliable.
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
J	Duplicate results and limits are expressed in terms of absolute difference.
LCS-ND	Lab Control Sample recovery was slightly outside ALS DQO. Reported non-detect results for associated samples were unaffected.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

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**Hold Time Exceedances:** 

Hold Time Exceedances:							
	Sample	0		Dec III	Actual III	Halla	0
ALS Product Description	ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Saturated Paste Extractable							
Ammonia (as N) in Soil (Pa							
	1	07-SEP-16	15-SEP-16 13:30	3	8	days	EHTL
	2 3	07-SEP-16	15-SEP-16 13:30	3 3	8 8	days	EHTL EHTL
	4	07-SEP-16 07-SEP-16	15-SEP-16 13:30 15-SEP-16 13:30	3	8	days days	EHTL
	5	07-SEP-16	15-SEP-16 13:30	3	8	days	EHTL
	6	07-SEP-16	15-SEP-16 13:30	3	8	days	EHTL
	7	07-SEP-16	15-SEP-16 13:30	3	8	days	EHTL
	8	07-SEP-16	15-SEP-16 13:30	3	8	days	EHTL
	9	07-SEP-16	15-SEP-16 13:30	3	8	days	EHTL
	10	07-SEP-16	15-SEP-16 13:30	3	8	days	EHTL
	11	07-SEP-16	15-SEP-16 13:30	3	8	days	EHTL
	12	07-SEP-16	15-SEP-16 13:30	3	8	days	EHTL
	13	07-SEP-16	15-SEP-16 13:30	3	8	days	EHTL
	14	07-SEP-16	15-SEP-16 13:30	3	8	days	EHTL
	15	07-SEP-16	15-SEP-16 13:30	3	8	days	EHTL
	16	07-SEP-16	15-SEP-16 13:30	3	8	days	EHTL
	17	07-SEP-16	15-SEP-16 13:30	3	8	days	EHTL
	18 19	07-SEP-16 07-SEP-16	15-SEP-16 13:30 15-SEP-16 13:30	3 3	8 8	days	EHTL EHTL
	20	07-SEP-16	15-SEP-16 13:30	3	8	days days	EHTL
	21	07-SEP-16	15-SEP-16 15:10	3	8	days	EHTL
Bacteriological Tests	21	07-OEI -10	10-021-10-10.10	J	Ö	days	22
E. coli by MPN							
E. COII BY WII 14	1	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
		07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	2 3	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	4	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
		07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	5 6	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	7	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	8	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	9	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	10	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	11	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	12	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	13	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	14	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	15 16	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	16 17	07-SEP-16 07-SEP-16	09-SEP-16 15:45 09-SEP-16 15:45	48 48	52 52	hours hours	EHTR EHTR
	18	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	19	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	20	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	21	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
Fecal coliform by MPN							
r coar comorni by ivii iv	1	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
		07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	3	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	2 3 4	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	5	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	6	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	7	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	8	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	9	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	10	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	11	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	12	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR

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#### Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifie
•		Jumpining Dute	Date 1 10000000		- 10100011111	J	Guunite
Bacteriological Tests							
Fecal coliform by MPN							
	13	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	14	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	15	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	16	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	17	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	18	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	19	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	20	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	21	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
Total coliform by MPN							
•	1	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
		07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	2 3	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	4	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	5	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	6	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	7	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	8	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	9	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	10	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	11	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	12	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	13	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	14	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	15	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	16	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	17	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	18	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	19	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	20	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
	21	07-SEP-16	09-SEP-16 15:45	48	52	hours	EHTR
CLP Metals							
Mercury by CVAFS (TCLP)							
, , , , , , , , , , , , , , , , , , , ,	11	07-SEP-16	18-OCT-16 17:27	28	41	days	EHT
	20	07-SEP-16	18-OCT-16 17:27	28	41	days	EHT

#### Legend & Qualifier Definitions:

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

EHTR: Exceeded ALS recommended hold time prior to sample receipt.

EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.

EHT: Exceeded ALS recommended hold time prior to analysis.

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

#### Notes\*:

Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes. Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L1826440 were received on 09-SEP-16 12:50.

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

Workorder: L1826440 Report Date: 19-OCT-16 Page 26 of 26

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

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



#### **Quality Control Sample Batch Report**

#### **Analysis Information**

Workorder: 1626358

Limits: Historical/Performance Preparation: NA Analysis: Illicit Drugs by LC/MS Batch: LCMS/4606 (HBN: 177031) Basis: ALS Laboratory Group Batch: NA

Prepared By: NA Analyzed By: Thomas Bosch

#### Blank

LMB: 519225

Analyzed: 09/21/2016 00:00

Units: ug/sample

Result	MDL	RL
ND	0.03	0.100
ND	0.03	0.100
ND	0.039	0.100
ND	0.033	0.100
ND	NA	0.100
ND	0.03	0.100
ND	0.032	0.100
	ND ND ND ND	ND         0.03           ND         0.03           ND         0.039           ND         0.033           ND         NA           ND         0.033

LMB: 519228

Analyzed: 09/21/2016 00:00

Units: ug/sample

Analyte	Result	MDL	RL
Methamphetamine	ND	0.03	0.100
Cocaine	ND	0.03	0.100
Heroin	ND	0.039	0.100
Amphetamine	ND	0.033	0.100
pseudoephedrine/ephedrine	ND	NA	0.100
MDMA(ecstasy)	ND	0.03	0.100
Lysergic acid diethylamide	ND	0.032	0.100

#### **Laboratory Control Sample - Laboratory Control Sample Duplicate**

LCS: 519226 LCSD: 519227

Analyzed: 09/21/2016 00:00 Analyzed: 09/21/2016 00:00

Dilution: 1 Dilution: 1

Units: ug/sample Units: ug/sample

				e i i i gi e i i i pi e						
Analyte	Result	Target	% Rec	QC Limits		QC Limits Result		RPD	QC L	imits
Methamphetamine	10.8	10.0	108	85.4	120.1	10.7	107	1.49	0.0	20.0
Cocaine	10.8	10.0	108	100.2	121.8	10.9	109	1.01	0.0	20.0
Heroin	10.7	10.0	107	80.8	116.3	10.5	105	2.45	0.0	20.0
Amphetamine	11.3	10.0	* 113	98.0	111.6	10.8	108	4.28	0.0	20.0
pseudoephedrine/ephedrine	11.5	10.0	115	80.0	120.0	10.9	109	4.86	0.0	20.0
MDMA(ecstasy)	11.0	10.0	110	92.4	121.6	11.1	111	0.389	0.0	20.0
Lysergic acid diethylamide	10.6	10.0	106	80.0	120.0	10.4	104	2.06	0.0	20.0

LCS: 519229 LCSD: 519230

Analyzed: 09/21/2016 00:00 Analyzed: 09/21/2016 00:00

Dilution: 1 Dilution: 1

Units: ug/sample Units: ug/sample

omiter agreement					omitor agreempro					
Analyte	Result	Target	% Rec	QC L	imits	Result	% Rec	RPD	QC Limits	
Methamphetamine	10.3	10.0	103	85.4	120.1	10.3	103	0.349	0.0	20.0



# Quality Control Sample Batch Report

### **Analysis Information**

Workorder: 1626358

Limits: Historical/Performance Preparation: NA Analysis: Illicit Drugs by LC/MS
Basis: ALS Laboratory Group Batch: NA Batch: LCMS/4606 (HBN: 177031)

Prepared By: NA Analyzed By: Thomas Bosch

#### **Laboratory Control Sample - Laboratory Control Sample Duplicate**

LCS: 519229 LCSD: 519230

Analyzed: 09/21/2016 00:00 Analyzed: 09/21/2016 00:00

Dilution: 1 Dilution: 1

Units: ug/sample Units: ug/sample

Units: ug/sample					Units: u	ig/sample				
Analyte	Result	Target	% Rec	QC L	imits	Result	% Rec	RPD	QC L	imits
Cocaine	10.8	10.0	108	100.2	121.8	10.7	107	0.158	0.0	20.0
Heroin	11.0	10.0	110	80.8	116.3	10.6	106	3.58	0.0	20.0
Amphetamine	10.3	10.0	103	98.0	111.6	10.2	102	0.322	0.0	20.0
pseudoephedrine/ephedrine	10.6	10.0	106	80.0	120.0	10.7	107	0.667	0.0	20.0
MDMA(ecstasy)	10.5	10.0	105	92.4	121.6	10.7	107	1.95	0.0	20.0
Lysergic acid diethylamide	10.6	10.0	106	80.0	120.0	11.0	110	4.38	0.0	20.0

#### Comments

The recovery for Amphetamine (519226) was outside of QC acceptance limits (biased high). As there were no positive results for this analyte, no further action was taken.

### QC Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Analyst	Peer Review
/S/ Thomas Bosch	/S/ Christopher Winter
09/22/2016 14:20	09/23/2016 00:09

#### Symbols and Definitions

\* - Analyte above reporting limit or outside of control limits

▲ - Sample result is greater than 4 times the spike added

Sample and Matrix Duplicate less than 5 times the reporting limit

Result is above the calibration range

RPD - Relative % Difference (Spike / Spike Duplicate)

ND - Not Detected (U - Qualifier also flags analyte as not detected)

NA - Not Applicable

QC results are not adjusted for moisture correction, where applicable



Selam Worku

Suite 100

CANADA

ALS Laboratory Group 8081 Lougheed Hwy

Burnaby, BC V5A 1W9

### **ANALYTICAL REPORT**

Report Date: September 23, 2016

Phone: (604) 253-4188

E-mail: selam.worku@ALSGlobal.com

Workorder: **34-1626359** Project ID: L1826440 091616

Purchase Order: L1826440

Project Manager Jessica Helland

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
16-TP101	1626359001	09/07/16	09/16/16	L1826440
16-TP102	1626359002	09/07/16	09/16/16	L1826440
16-TP103	1626359003	09/07/16	09/16/16	L1826440
16-TP104	1626359004	09/07/16	09/16/16	L1826440
16-TP105	1626359005	09/07/16	09/16/16	L1826440
16-TP106	1626359006	09/07/16	09/16/16	L1826440
16-TP107	1626359007	09/07/16	09/16/16	L1826440
16-TP108	1626359008	09/07/16	09/16/16	L1826440
16-TP109	1626359009	09/07/16	09/16/16	L1826440
16-TP110	1626359010	09/07/16	09/16/16	L1826440
16-TP111-0.1M	1626359011	09/07/16	09/16/16	L1826440
16-TP112-0.1M	1626359012	09/07/16	09/16/16	L1826440
16-TP113-0.1M	1626359013	09/07/16	09/16/16	L1826440
16-TP114-0.1M	1626359014	09/07/16	09/16/16	L1826440
16-TP115-0.1M	1626359015	09/07/16	09/16/16	L1826440
16-TP116-0.1M	1626359016	09/07/16	09/16/16	L1826440
16-TP117-0.1M	1626359017	09/07/16	09/16/16	L1826440
16-TP118-0.1M	1626359018	09/07/16	09/16/16	L1826440
16-TP119-0.1M	1626359019	09/07/16	09/16/16	L1826440
16-TP120-0.1M	1626359020	09/07/16	09/16/16	L1826440
16-TP121-0.1M	1626359021	09/07/16	09/16/16	L1826440

ADDRESS 960 West LeVoy Drive, Salt Lake City, Utah, 84123 USA | PHONE +1 801 266 7700 | FAX +1 801 268 9992 ALS GROUP USA, CORP. An ALS Limited Company

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Workorder: 34-1626359

Client: ALS Environmental

Project Manager: Jessica Helland

### **Analytical Results**

Sample ID: **16-TP101** Sampling Site: L1826440 Collected: 09/07/2016

Lab ID: 1626359001 Media: Bulk Received: 09/16/2016

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056 Analysis: EPA 300.0/SW 9056, Soil Preparation: EPA 300.0/SW 9056, Soil Prep Weight/Volume Instrument ID: IC06 Batch: EIC/1713 (HBN: 177091) Initial: 1.0101 grams Batch: EIC/1715 (HBN: 177097) Percent Solid: 88.6 Prepared: 09/22/2016 Final: 10 mL Analyzed: 09/22/2016 23:11 Report Basis: Dry Result (ug/g) Analyte Dilution Qual RL (ug/g) lodide <5.6 5.6 1

 Sample ID: 16-TP102
 Sampling Site: L1826440
 Collected: 09/07/2016

 Lab ID: 1626359002
 Media: Bulk
 Received: 09/16/2016

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056

 Preparation:
 EPA 300.0/SW 9056, Soil
 Weight/Volume
 Analysis:
 EPA 300.0/SW 9056, Soil
 Instrument ID:
 IC06

 Batch:
 EIC/1713 (HBN: 177091)
 Initial:
 1.0339 grams
 Batch:
 EIC/1715 (HBN: 177097)
 Percent Solid:
 88.8

 Prepared:
 09/22/2016
 Final:
 10 mL
 Analyzed:
 09/22/2016 23:38
 Report Basis:
 Dry

Analyte Result (ug/g) RL (ug/g) Dilution Qual lodide <5.6 5.6 1

<5.8

Sample ID: 16-TP103 Sampling Site: L1826440 Collected: 09/07/2016

Lab ID: 1626359003 Media: Bulk Received: 09/16/2016

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

 Analysis Method - EPA 300.0/SW 9056

 Preparation:
 EPA 300.0/SW 9056, Soil Prep Batch:
 Weight/Volume Initial:
 Analysis:
 EPA 300.0/SW 9056, Soil Instrument ID:
 Instrument ID:
 IC06

 Batch:
 EIC/1713 (HBN: 177091)
 Batch:
 EIC/1715 (HBN: 177097)
 Percent Solid: 85.5

 Prepared:
 09/22/2016
 Final:
 10 mL
 Analyzed:
 09/23/2016 00:05
 Report Basis:
 Dry

Analyte Result (ug/g) RL (ug/g) Dilution Qual

Sample ID: **16-TP104** Sampling Site: L1826440 Collected: 09/07/2016
Lab ID: 1626359004 Media: Bulk Received: 09/16/2016

5.8

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056

lodide

 Preparation:
 EPA 300.0/SW 9056, Soil
 Weight/Volume
 Analysis:
 EPA 300.0/SW 9056, Soil
 Instrument ID:
 IC06

 Batch:
 EIC/1713 (HBN: 177091)
 Initial:
 1.0357 grams
 Batch:
 EIC/1715 (HBN: 177097)
 Percent Solid:
 89.2

 Prepared:
 09/22/2016
 Final:
 10 mL
 Analyzed:
 09/23/2016 00:32
 Report Basis:
 Dry

Analyte Result (ug/g) RL (ug/g) Dilution Qual lodide <5.6 5.6 1

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Workorder: 34-1626359

Client: ALS Environmental Project Manager: Jessica Helland

Analytical Results

Sampling Site: L1826440 Sample ID: 16-TP105 Collected: 09/07/2016

Received: 09/16/2016 Lab ID: 1626359005 Media: Bulk

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056 Analysis: EPA 300.0/SW 9056, Soil Preparation: EPA 300.0/SW 9056, Soil Prep Weight/Volume Instrument ID: IC06 Batch: EIC/1713 (HBN: 177091) Initial: 1.0027 grams Batch: EIC/1715 (HBN: 177097) Percent Solid: 87.6 Prepared: 09/22/2016 Final: 10 mL Analyzed: 09/23/2016 00:59 Report Basis: Dry Result (ug/g) Analyte Dilution Qual RL (ug/g) lodide <5.7 5.7 1

Sample ID: 16-TP106 Sampling Site: L1826440 Collected: 09/07/2016 Lab ID: 1626359006 Media: Bulk Received: 09/16/2016

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056

Analysis: EPA 300.0/SW 9056, Soil Preparation: EPA 300.0/SW 9056, Soil Prep Weight/Volume Instrument ID: IC06 Batch: EIC/1713 (HBN: 177091) Initial: 1.1658 grams Batch: EIC/1715 (HBN: 177097) Percent Solid: 87.1 Analyzed: 09/23/2016 02:19 Prepared: 09/22/2016 Final: 10 mL Report Basis: Dry

Analyte Dilution Result (ug/g) RL (ug/g) Qual lodide <5.7 5.7 1

Sample ID: 16-TP107 Sampling Site: L1826440 Collected: 09/07/2016

Received: 09/16/2016 Lab ID: 1626359007 Media: Bulk

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056 Analysis: EPA 300.0/SW 9056, Soil Instrument ID: IC06 Preparation: EPA 300.0/SW 9056, Soil Prep Weight/Volume Initial: 1.1375 grams Batch: EIC/1713 (HBN: 177091) Batch: EIC/1715 (HBN: 177097) Percent Solid: 91.6 Prepared: 09/22/2016 Final: 10 mL Analyzed: 09/23/2016 02:46 Report Basis: Dry

Dilution Analyte Result (ug/g) RL (ug/g) Qual

lodide <5.5 5.5

Sampling Site: L1826440 Collected: 09/07/2016 Sample ID: 16-TP108 Received: 09/16/2016 Lab ID: 1626359008 Media: Bulk

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056

Instrument ID: IC06 Preparation: EPA 300.0/SW 9056, Soil Prep Weight/Volume Analysis: EPA 300.0/SW 9056, Soil Batch: EIC/1713 (HBN: 177091) Batch: EIC/1715 (HBN: 177097) Initial: 1.0348 grams Percent Solid: 85.6 Prepared: 09/22/2016 Final: 10 mL Analyzed: 09/23/2016 03:13 Report Basis: Dry

Analyte RL (ug/g) Dilution Qual Result (ug/g) lodide <5.8



Workorder: 34-1626359

Client: ALS Environmental Project Manager: Jessica Helland

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Analytical Results

Sampling Site: L1826440 Sample ID: 16-TP109 Collected: 09/07/2016

Received: 09/16/2016 Lab ID: 1626359009 Media: Bulk

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056 Analysis: EPA 300.0/SW 9056, Soil Preparation: EPA 300.0/SW 9056, Soil Prep Weight/Volume Instrument ID: IC06 Batch: EIC/1713 (HBN: 177091) Initial: 1.1674 grams Batch: EIC/1715 (HBN: 177097) Percent Solid: 92 Prepared: 09/22/2016 Final: 10 mL Analyzed: 09/23/2016 03:40 Report Basis: Dry Result (ug/g) Analyte Dilution Qual RL (ug/g) lodide < 5.4 5.4 1

Sample ID: 16-TP110 Sampling Site: L1826440 Collected: 09/07/2016 Lab ID: 1626359010 Media: Bulk Received: 09/16/2016

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056

Analysis: EPA 300.0/SW 9056, Soil Preparation: EPA 300.0/SW 9056, Soil Prep Weight/Volume Instrument ID: IC06 Batch: EIC/1713 (HBN: 177091) Initial: 1.1879 grams Batch: EIC/1715 (HBN: 177097) Percent Solid: 90 Analyzed: 09/23/2016 04:07 Prepared: 09/22/2016 Final: 10 mL Report Basis: Dry

Analyte Dilution Qual Result (ug/g) RL (ug/g) lodide <5.6 5.6 1

Sampling Site: L1826440 Sample ID: 16-TP111-0.1M Collected: 09/07/2016

Received: 09/16/2016 Lab ID: 1626359011 Media: Bulk

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056 Preparation: EPA 300.0/SW 9056, Soil Prep Analysis: EPA 300.0/SW 9056, Soil Instrument ID: IC06 Weight/Volume Batch: EIC/1713 (HBN: 177091) Initial: 1.0415 grams Batch: EIC/1715 (HBN: 177097) Percent Solid: 91.5

Prepared: 09/22/2016 Final: 10 mL Analyzed: 09/23/2016 04:33 Report Basis: Dry

Dilution Analyte Result (ug/g) RL (ug/g) Qual lodide <5.5 5.5

Sampling Site: L1826440 Collected: 09/07/2016 Sample ID: 16-TP112-0.1M Received: 09/16/2016 Lab ID: 1626359012 Media: Bulk

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056

Instrument ID: IC06 Preparation: EPA 300.0/SW 9056, Soil Prep Analysis: EPA 300.0/SW 9056, Soil Weight/Volume Batch: EIC/1713 (HBN: 177091) Initial: 1.1108 grams Batch: EIC/1715 (HBN: 177097) Percent Solid: 89.6 Prepared: 09/22/2016 Final: 10 mL Analyzed: 09/23/2016 05:00 Report Basis: Dry

Analyte RL (ug/g) Dilution Qual Result (ug/g) lodide <5.6



Workorder: 34-1626359

Client: ALS Environmental Project Manager: Jessica Helland

Analytical Results

Sampling Site: L1826440 Sample ID: 16-TP113-0.1M Collected: 09/07/2016

Received: 09/16/2016 Lab ID: 1626359013 Media: Bulk

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056 Analysis: EPA 300.0/SW 9056, Soil Preparation: EPA 300.0/SW 9056, Soil Prep Weight/Volume Instrument ID: IC06 Batch: EIC/1713 (HBN: 177091) Initial: 1.0867 grams Batch: EIC/1715 (HBN: 177097) Percent Solid: 86.9 Prepared: 09/22/2016 Final: 10 mL Analyzed: 09/23/2016 05:27 Report Basis: Dry Result (ug/g) Analyte Dilution Qual RL (ug/g) lodide <5.8 5.8 1

Sample ID: 16-TP114-0.1M Sampling Site: L1826440 Collected: 09/07/2016 Lab ID: 1626359014 Media: Bulk Received: 09/16/2016

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056

Analysis: EPA 300.0/SW 9056, Soil Preparation: EPA 300.0/SW 9056, Soil Prep Weight/Volume Instrument ID: IC06 Batch: EIC/1713 (HBN: 177091) Initial: 1.0279 grams Batch: EIC/1715 (HBN: 177097) Percent Solid: 84.2 Analyzed: 09/23/2016 05:54 Prepared: 09/22/2016 Final: 10 mL Report Basis: Dry

Analyte Dilution Result (ug/g) RL (ug/g) Qual lodide <5.9 5.9 1

Sampling Site: L1826440 Sample ID: 16-TP115-0.1M Collected: 09/07/2016

Received: 09/16/2016 Lab ID: 1626359015 Media: Bulk

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056

Preparation: EPA 300.0/SW 9056, Soil Prep Analysis: EPA 300.0/SW 9056, Soil Instrument ID: IC06 Weight/Volume Batch: EIC/1713 (HBN: 177091) Initial: 1.1227 grams Batch: EIC/1715 (HBN: 177097) Percent Solid: 85.8 Prepared: 09/22/2016 Final: 10 mL Analyzed: 09/23/2016 06:21 Report Basis: Dry

Dilution Analyte Result (ug/g) RL (ug/g) Qual

lodide <5.8 5.8

Sampling Site: L1826440 Collected: 09/07/2016 Sample ID: 16-TP116-0.1M Received: 09/16/2016 Lab ID: 1626359016 Media: Bulk

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056

Instrument ID: IC06 Preparation: EPA 300.0/SW 9056, Soil Prep Analysis: EPA 300.0/SW 9056, Soil Weight/Volume Batch: EIC/1713 (HBN: 177091) Initial: 1.1123 grams Batch: EIC/1715 (HBN: 177097) Percent Solid: 91.6 Prepared: 09/22/2016 Final: 10 mL Analyzed: 09/23/2016 07:41 Report Basis: Dry

Analyte RL (ug/g) Dilution Qual Result (ug/g) lodide <5.5



Workorder: 34-1626359

Client: ALS Environmental

Project Manager: Jessica Helland

#### **Analytical Results**

Sample ID: **16-TP117-0.1M** Sampling Site: L1826440 Collected: 09/07/2016

Lab ID: 1626359017 Media: Bulk Received: 09/16/2016

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056 Analysis: EPA 300.0/SW 9056, Soil Preparation: EPA 300.0/SW 9056, Soil Prep Weight/Volume Instrument ID: IC06 Batch: EIC/1713 (HBN: 177091) Initial: 1.0343 grams Batch: EIC/1715 (HBN: 177097) Percent Solid: 89.5 Prepared: 09/22/2016 Final: 10 mL Analyzed: 09/23/2016 08:08 Report Basis: Dry Result (ug/g) Analyte Dilution Qual RL (ug/g) lodide <5.6 5.6 1

 Sample ID: 16-TP118-0.1M
 Sampling Site: L1826440
 Collected: 09/07/2016

 Lab ID: 1626359018
 Media: Bulk
 Received: 09/16/2016

 Matrix: 0.01/0.01/d/0.o1/d/0

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056 Analysis: EPA 300.0/SW 9056, Soil Preparation: EPA 300.0/SW 9056, Soil Prep Weight/Volume Instrument ID: IC06 Batch: EIC/1713 (HBN: 177091) Initial: 1.0091 grams Batch: EIC/1715 (HBN: 177097) Percent Solid: 89.7 Analyzed: 09/23/2016 08:35 Prepared: 09/22/2016 Final: 10 mL Report Basis: Dry Analyte Dilution Result (ug/g) RL (ug/g) Qual lodide <5.6 5.6 1

 Sample ID: 16-TP119-0.1M
 Sampling Site: L1826440
 Collected: 09/07/2016

 Lab ID: 1626359019
 Media: Bulk
 Received: 09/16/2016

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056 Preparation: EPA 300.0/SW 9056, Soil Prep Weight/Volume Analysis: EPA 300.0/SW 9056, Soil Instrument ID: IC06 Batch: EIC/1713 (HBN: 177091) Initial: 1.031 grams Batch: EIC/1715 (HBN: 177097) Percent Solid: 85.1 Prepared: 09/22/2016 Final: 10 mL Analyzed: 09/23/2016 09:02 Report Basis: Dry Dilution Analyte Result (ug/g) RL (ug/g) Qual 5.9 lodide <5.9

 Sample ID: 16-TP120-0.1M
 Sampling Site: L1826440
 Collected: 09/07/2016

 Lab ID: 1626359020
 Media: Bulk
 Received: 09/16/2016

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056

 Preparation:
 EPA 300.0/SW 9056, Soil Prep Batch:
 Weight/Volume Initial:
 Analysis:
 EPA 300.0/SW 9056, Soil Prep Prepared:
 Instrument ID:
 IC06 Prepared:
 Batch:
 EIC/1713 (HBN: 177097)
 Percent Solid:
 88.9 Prepared:
 O9/22/2016
 Prepared:
 O9/22/2016
 Prepared:
 O9/23/2016
 OP/23/2016
 OP/

 Analyte
 Result (ug/g)
 RL (ug/g)
 Dilution
 Qual

 lodide
 <5.6</td>
 5.6
 1



Workorder: 34-1626359

Client: ALS Environmental

Project Manager: Jessica Helland

### **Analytical Results**

Sampling Site: L1826440 Sample ID: 16-TP121-0.1M Collected: 09/07/2016

Received: 09/16/2016 Lab ID: 1626359021 Media: Bulk

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - EPA 300.0/SW 9056

Analysis: EPA 300.0/SW 9056, Soil Preparation: EPA 300.0/SW 9056, Soil Prep Weight/Volume Instrument ID: IC06 Batch: EIC/1713 (HBN: 177091) Initial: 1.1214 grams Batch: EIC/1715 (HBN: 177097) Percent Solid: 87.1

Prepared: 09/22/2016 Final: 10 mL Analyzed: 09/23/2016 09:56 Report Basis: Dry

Result (ug/g) Analyte RL (ug/g) Dilution Qual lodide <5.7 5.7 1

#### Comments

Page 7 of 8

Quality Control: EPA 300.0/SW 9056 - (HBN: 177097)

MS/MSD recoveries for iodide were above the standard limit of 120% due to positive matrix interference.

### Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method	Analyst	Peer Review
EPA 300.0/SW 9056	/S/ Nadjla Borges 09/23/2016 16:29	/S/ Thomas T. McKay 09/23/2016 16:57
Solids/Moisture Determination	/S/ Ilse J. Ovalle 09/22/2016 05:54	/S/ Jeff Ward 09/22/2016 11:31

### **Laboratory Contact Information**

ALS Environmental Phone: (801) 266-7700

960 W Levoy Drive Email: alslt.lab@ALSGlobal.com

Salt Lake City, Utah 84123 Web: www.alsslc.com

Fri, 09/23/16 5:10 PM



Workorder: 34-1626359

Client: ALS Environmental

Project Manager: Jessica Helland

#### General Lab Comments

The results provided in this report relate only to the items tested.

Samples were received in acceptable condition unless otherwise noted.

Samples have not been blank corrected unless otherwise noted.

This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ANAB (DoD ELAP)	ADE-1420	http://www.anab.org/accredited-organizations/
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
	Washington	C596-16	http://www.ecy.wa.gov/programs/eap/labs/index.html
	Kansas	E-10416	http://www.kdheks.gov/lipo/index.html
Industrial Hygiene	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
	Washington	C596-16	http://www.ecy.wa.gov/programs/eap/labs/index.html
Lead Testing:			
CPSC	ANAB (ISO 17025, CPSC)	ADE-1420	http://www.anab.org/accredited-organizations/
Soil, Dust, Paint ,Air	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

#### **Result Symbol Definitions**

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.

RL = Reporting Limit, a verified value of method/media/instrument sensitivity.

CRDL = Contract Required Detection Limit

Reg. Limit = Regulatory Limit.

ND = Not Detected, testing result not detected above the MDL or RL.

- < This testing result is less than the numerical value.
- \*\* No result could be reported, see sample comments for details.

### Qualifier Symbol Definitions

- U = Qualifier indicates that the analyte was not detected above the MDL.
- J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
- B = Qualifier indicates that the analyte was detected in the blank.
- E = Qualifier indicates that the analyte result exceeds calibration range.
- P = Qualifier indicates that the RPD between the two columns is greater than 40%.



Report Date: September 23, 2016

Phone: (604) 253-4188

E-mail: selam.worku@ALSGlobal.com

Selam Worku ALS Laboratory Group 8081 Lougheed Hwy Suite 100 Burnaby, BC V5A 1W9 CANADA

Workorder: 34-1626358

Client Project ID: L1826440 091616

Purchase Order: L1826440

Project Manager: Jessica Helland

#### **Analytical Results**

, many trous recounts			
Sample ID: 16-TP101			Collected: 09/07/2016
Lab ID: 1626358001	Samp	Received: 09/16/2016	
Method: Illicit Drugs by LC/MS	Sampli	Media: Bulk ng Parameter: Volume Not Provided	<b>Analyzed:</b> 09/21/2016
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	

Sample ID: <b>16-TP102</b>	0	lier Leastier Laggard	Collected: 09/07/2016
Lab ID: 1626358002	Samp	oling Location: L1826440	Received: 09/16/2016
Method: Illicit Drugs by LC/MS	Sampli	Media: Bulking Parameter: Volume Not Provided	Analyzed: 09/21/2016
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	

ADDRESS 960 West LeVoy Drive, Salt Lake City, Utah, 84123 USA | PHONE +1 801 266 7700 | FAX +1 801 268 9992 ALS GROUP USA, CORP. An ALS Limited Company

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Workorder: **34-1626358** Client Project ID: L1826440 091616 Purchase Order: L1826440

Project Manager: Jessica Helland

•			
Sample ID: 16-TP103			Collected: 09/07/2016
Lab ID: 1626358003	Samp	Received: 09/16/2016	
Method: Illicit Drugs by LC/MS	Sampli	Media: Bulk ng Parameter: Volume Not Provided	<b>Analyzed</b> : 09/21/2016
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	

Sample ID: 16-TP104			Collected: 09/07/2016
Lab ID: 1626358004	Samp	oling Location: L1826440	Received: 09/16/2016
Method: Illicit Drugs by LC/MS	Media: Bulk Sampling Parameter: Volume Not Provided		Analyzed: 09/21/2016
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	0.15	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	

Sample ID: <b>16-TP105</b>			Collected: 09/07/2016
Lab ID: 1626358005	Samp	oling Location: L1826440	Received: 09/16/2016
Method: Illicit Drugs by LC/MS	Media: Bulk Sampling Parameter: Volume Not Provided		Analyzed: 09/21/2016
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	0.40	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	



Workorder: **34-1626358**Client Project ID: L1826440 091616
Purchase Order: L1826440

Project Manager: Jessica Helland

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Sample ID: 16-TP106			Collected: 09/07/2016
Lab ID: 1626358006	Samı	Received: 09/16/2016	
Method: Illicit Drugs by LC/MS	Sampl	Media: Bulk ing Parameter: Volume Not Provided	Analyzed: 09/21/2016
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	

Sample ID: 16-TP107			Collected: 09/07/2016
Lab ID: 1626358007	Samp	oling Location: L1826440	Received: 09/16/2016
Method: Illicit Drugs by LC/MS	Sampli	Media: Bulk ng Parameter: Volume Not Provided	Analyzed: 09/21/2016
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	

Sample ID: <b>16-TP108</b>			Collected: 09/07/2016
Lab ID: 1626358008	Samp	oling Location: L1826440	Received: 09/16/2016
Method: Illicit Drugs by LC/MS	Sampli	Media: Bulk ng Parameter: Volume Not Pre	Analyzed: 09/21/2016 ovided
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	



Workorder: **34-1626358**Client Project ID: L1826440 091616
Purchase Order: L1826440

Project Manager: Jessica Helland

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Sample ID: 16-TP109			Collected: 09/07/2016
Lab ID: 1626358009	Samp	oling Location: L1826440	Received: 09/16/2016
Method: Illicit Drugs by LC/MS	Sampli	Media: Bulk ng Parameter: Volume Not Provided	<b>Analyzed</b> : 09/21/2016
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	

Sample ID: 16-TP110			Collected: 09/07/2016
Lab ID: 1626358010	Sampling Location: L1826440		Received: 09/16/2016
Method: Illicit Drugs by LC/MS	Sampli	Media: Bulk ng Parameter: Volume Not Provided	Analyzed: 09/21/2016
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	

Sample ID: <b>16-TP111-0.1M</b> Lab ID: 1626358011	Samp	oling Location: L1826440	Collected: 09/07/2016 Received: 09/16/2016
Method: Illicit Drugs by LC/MS	Sampli	Media: Bulk ng Parameter: Volume Not P	Analyzed: 09/21/2016 rovided
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	_



Workorder: **34-1626358**Client Project ID: L1826440 091616
Purchase Order: L1826440

Purchase Order: L1826440
Project Manager: Jessica Helland

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Sample ID: <b>16-TP112-0.1M</b>			Collected: 09/07/2016
Lab ID: 1626358012	Samp	oling Location: L1826440	Received: 09/16/2016
Method: Illicit Drugs by LC/MS		Media: Bulk	Analyzed: 09/21/2016
	Sampli	ng Parameter: Volume Not Provide	ed
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	

Sample ID: 16-TP113-0.1M			Collected: 09/07/2016
Lab ID: 1626358013	Samp	oling Location: L1826440	Received: 09/16/2016
Method: Illicit Drugs by LC/MS		Media: Bulk	Analyzed: 09/21/2016
	Sampli	ng Parameter: Volume Not Provided	
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	

Sample ID: <b>16-TP114-0.1M</b>			Collected: 09/07/2016
Lab ID: 1626358014	Samp	oling Location: L1826440	Received: 09/16/2016
Method: Illicit Drugs by LC/MS	Sampli	Media: Bulk ng Parameter: Volume Not Pro	Analyzed: 09/21/2016 ovided
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	



Workorder: **34-1626358** Client Project ID: L1826440 091616 Purchase Order: L1826440

Project Manager: Jessica Helland

## **Analytical Results**

Sample ID: <b>16-TP115-0.1M</b>			Collected: 09/07/2016
Lab ID: 1626358015	Sampling Location: L1826440		Received: 09/16/2016
Method: Illicit Drugs by LC/MS	Sampli	Media: Bulk ng Parameter: Volume Not Pi	Analyzed: 09/21/2016 ovided
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	

Sample ID: <b>16-TP116-0.1M</b>			Collected: 09/07/2016
Lab ID: 1626358016	Samp	oling Location: L1826440	Received: 09/16/2016
Method: Illicit Drugs by LC/MS	Sampli	Media: Bulk ng Parameter: Volume Not Provided	Analyzed: 09/21/2016
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	

Sample ID: <b>16-TP117-0.1M</b> Lab ID: <b>1626358017</b>	Samp	oling Location: L1826440	Collected: 09/07/2016 Received: 09/16/2016
Method: Illicit Drugs by LC/MS	Media: Bulk Sampling Parameter: Volume Not Provided		Analyzed: 09/21/2016 Provided
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	

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Workorder: **34-1626358**Client Project ID: L1826440 091616
Purchase Order: L1826440

Project Manager: Jessica Helland

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Sample ID: <b>16-TP118-0.1M</b>			Collected: 09/07/2016
Lab ID: 1626358018	Sampling Location: L1826440		Received: 09/16/2016
Method: Illicit Drugs by LC/MS	Sampl	Media: Bulk ing Parameter: Volume Not Provided	Analyzed: 09/21/2016
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	

Sample ID: 16-TP119-0.1M	0	alian Lagation I 4000440	Collected: 09/07/2016
Lab ID: 1626358019	Samp	oling Location: L1826440	Received: 09/16/2016
Method: Illicit Drugs by LC/MS		Media: Bulk	Analyzed: 09/21/2016
	Sampli	ng Parameter: Volume Not Provided	
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	

Sample ID: <b>16-TP120-0.1M</b>			Collected: 09/07/2016
Lab ID: 1626358020	Samp	oling Location: L1826440	Received: 09/16/2016
Method: Illicit Drugs by LC/MS	Sampli	Media: Bulk ng Parameter: Volume Not Pr	Analyzed: 09/21/2016 ovided
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	



Workorder: **34-1626358**Client Project ID: L1826440 091616

Purchase Order: L1826440 Project Manager: Jessica Helland

### **Analytical Results**

Sample ID: 16-TP121-0.1M			Collected: 09/07/2016
Lab ID: 1626358021	Samp	oling Location: L1826440	Received: 09/16/2016
Method: Illicit Drugs by LC/MS	Sampli	Media: Bulk ng Parameter: Volume Not Provided	<b>Analyzed</b> : 09/21/2016
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	0.10	
Cocaine	<0.10	0.10	
Heroin	<0.10	0.10	
Amphetamine	<0.10	0.10	
pseudoephedrine/ephedrine	<0.10	0.10	
MDMA(ecstasy)	<0.10	0.10	
Lysergic acid diethylamide	<0.10	0.10	

#### Comments

#### Quality Control: Illicit Drugs by LC/MS - (HBN: 177031)

The recovery for Amphetamine (519226) was outside of QC acceptance limits (biased high). As there were no positive results for this analyte, no further action was taken.

### Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method	Analyst	Peer Review
Illinit Durana har I C/MC	/S/ Thomas Bosch	/S/ Christopher Winter
Illicit Drugs by LC/MS	09/22/2016 14:20	09/23/2016 00:09

### **Laboratory Contact Information**

ALS Environmental 960 W Levoy Drive

Phone: (801) 266-7700 Email: alslt.lab@ALSGlobal.com

Salt Lake City, Utah 84123 Web: www.alsslc.com

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Workorder: **34-1626358** Client Project ID: L1826440 091616

Purchase Order: L1826440 Project Manager: Jessica Helland

#### **General Lab Comments**

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Samples have not been blank corrected unless otherwise noted.

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Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ANAB (DoD ELAP)	ADE-1420	http://www.anab.org/accredited-organizations/
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
	Washington	C596-16	http://www.ecy.wa.gov/programs/eap/labs/index.html
	Kansas	E-10416	http://www.kdheks.gov/lipo/index.html
70	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
	Washington	C596-16	http://www.ecy.wa.gov/programs/eap/labs/index.html
Lead Testing:			
CPSC	ANAB (ISO 17025, CPSC)	ADE-1420	http://www.anab.org/accredited-organizations/
Soil, Dust, Paint ,Air	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

#### **Definitions**

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.

LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.

ND = Not Detected, Testing result not detected above the LOD or LOQ.

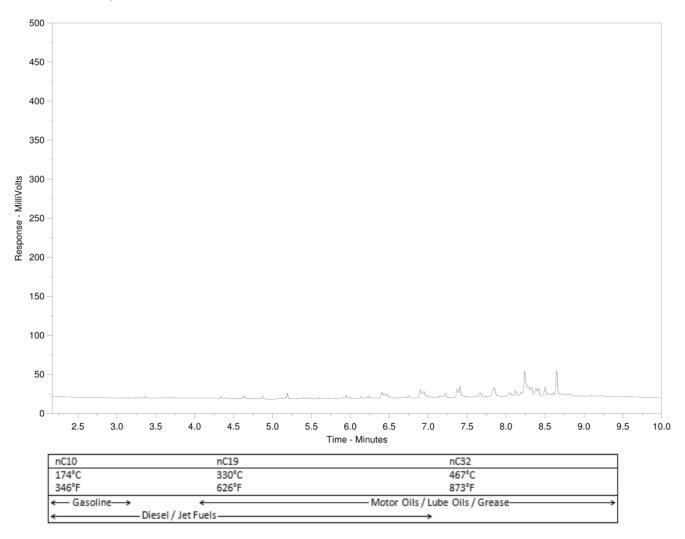
NA = Not Applicable.

- < This testing result is less than the numerical value.
- () This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.

<sup>\*\*</sup> No result could be reported, see sample comments for details.



ALS Sample ID: L1826440-1 Client Sample ID: 16-TP101



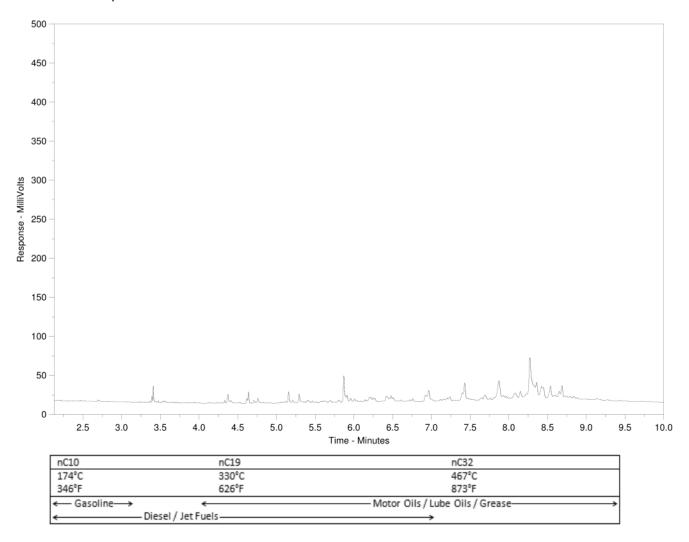
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

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



ALS Sample ID: L1826440-2 Client Sample ID: 16-TP102



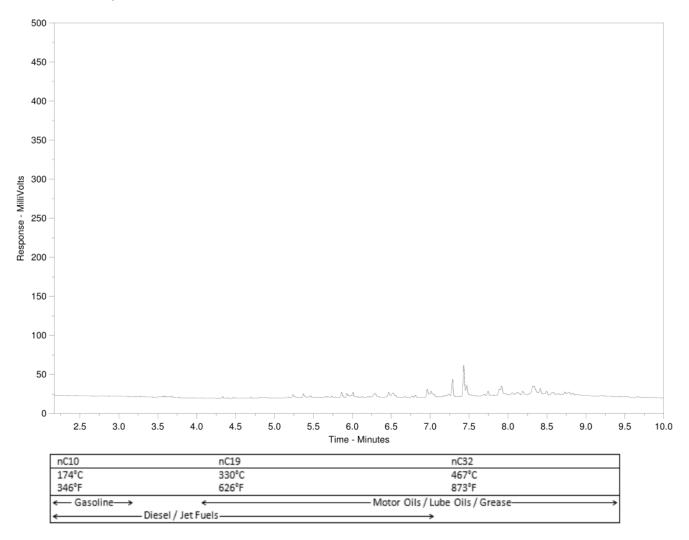
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

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



ALS Sample ID: L1826440-3 Client Sample ID: 16-TP103



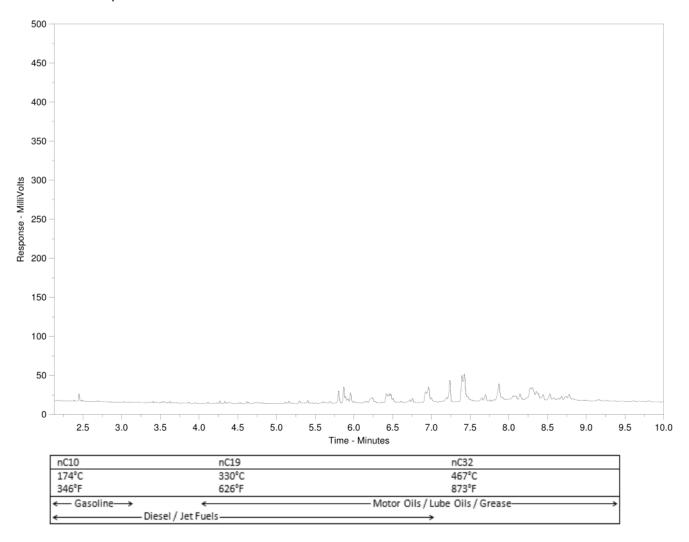
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

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



ALS Sample ID: L1826440-4 Client Sample ID: 16-TP104



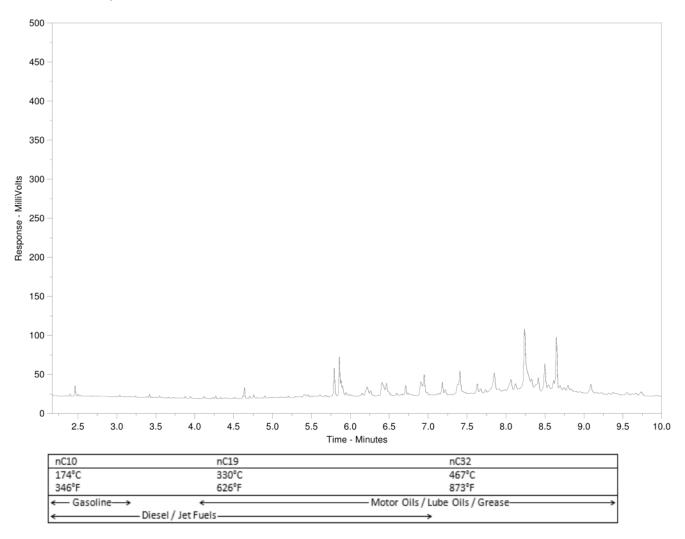
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

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



ALS Sample ID: L1826440-5 Client Sample ID: 16-TP105



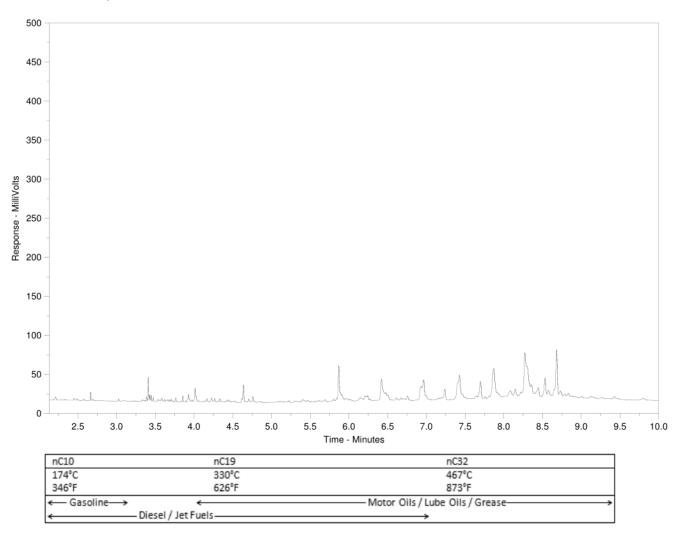
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ALS Sample ID: L1826440-6 Client Sample ID: 16-TP106



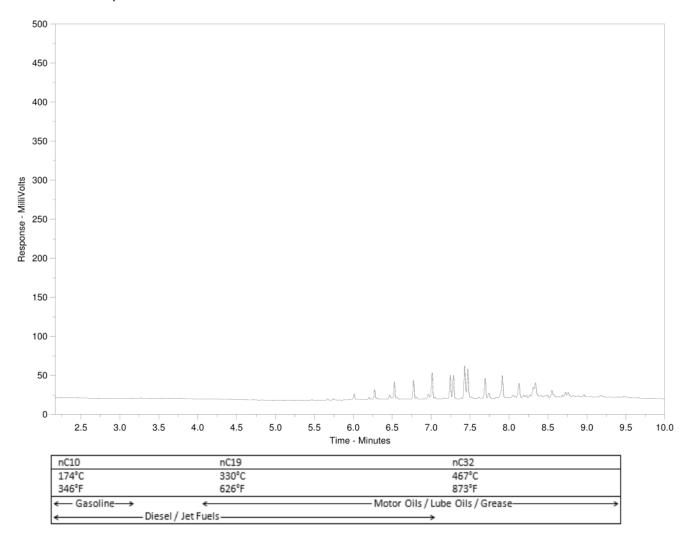
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Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.



ALS Sample ID: L1826440-7 Client Sample ID: 16-TP107



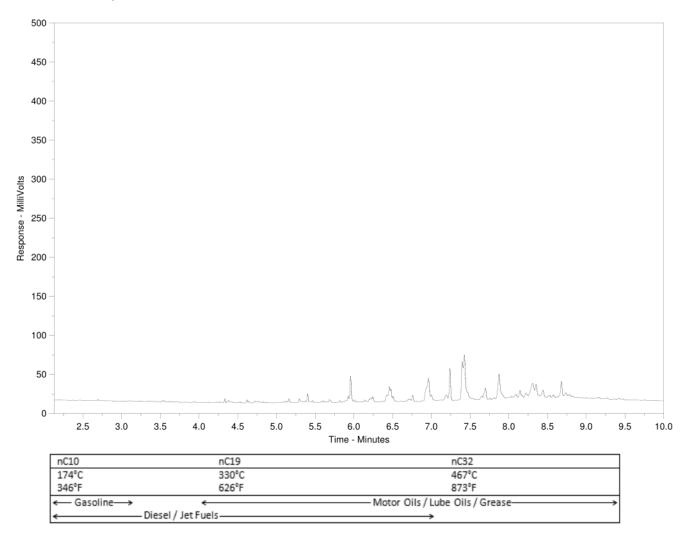
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Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.



ALS Sample ID: L1826440-8 Client Sample ID: 16-TP108



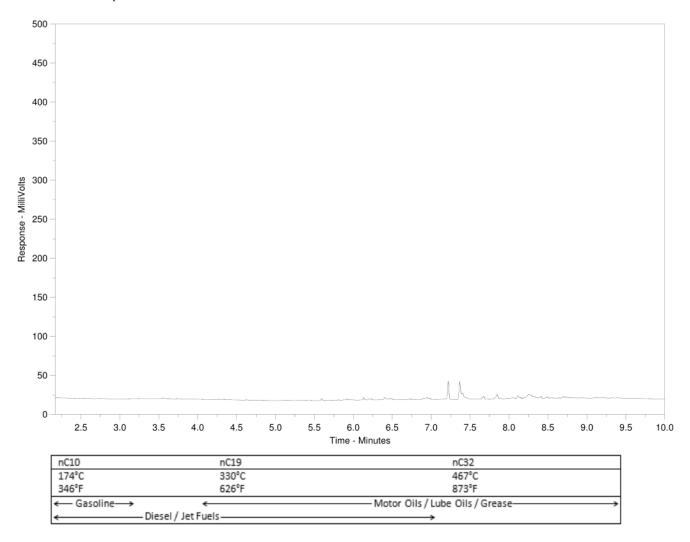
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Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.



ALS Sample ID: L1826440-9 Client Sample ID: 16-TP109



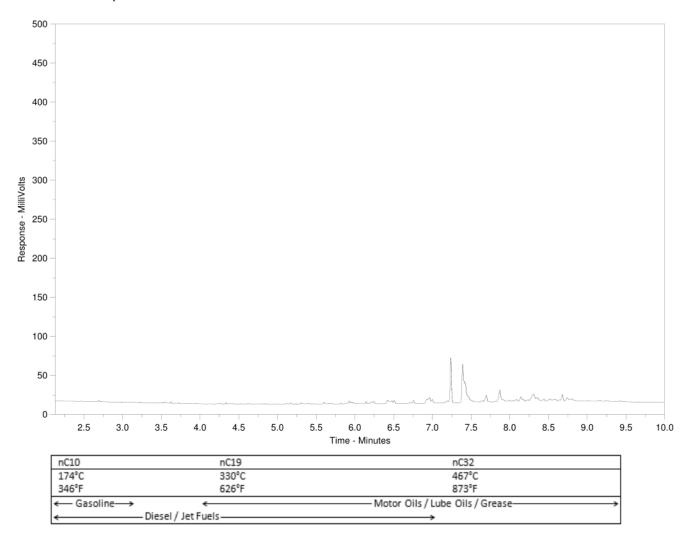
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Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.



ALS Sample ID: L1826440-10 Client Sample ID: 16-TP110



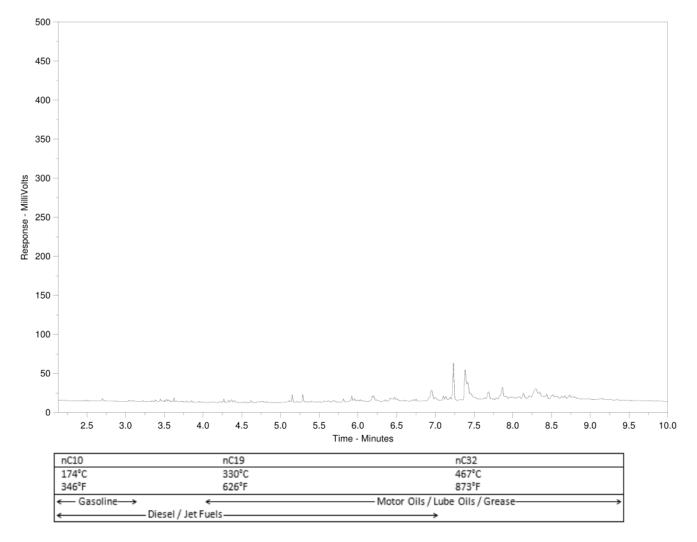
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Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.



ALS Sample ID: L1826440-11 Client Sample ID: 16-TP111-0.1M



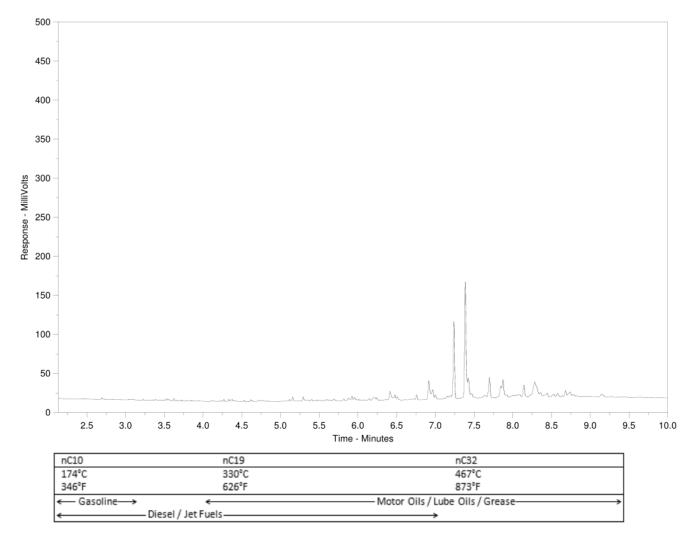
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Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.



ALS Sample ID: L1826440-12 Client Sample ID: 16-TP112-0.1M



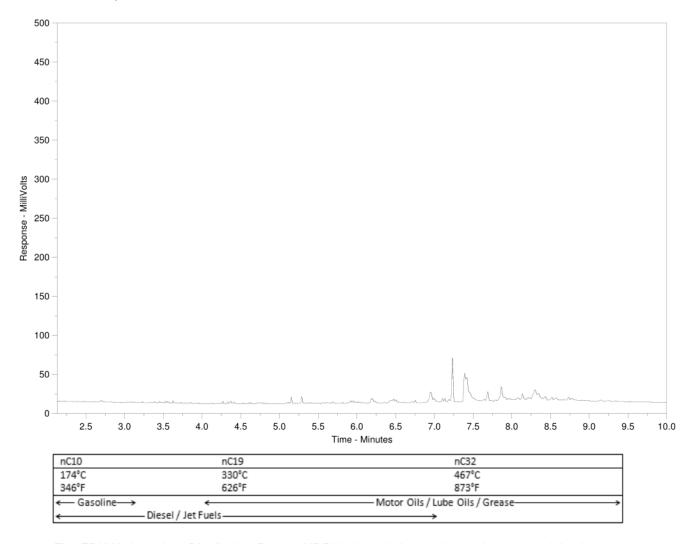
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Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.



ALS Sample ID: L1826440-13 Client Sample ID: 16-TP113-0.1M



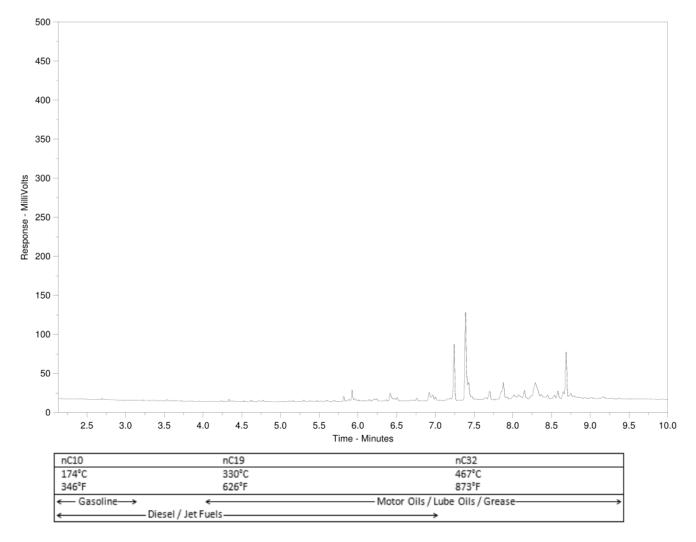
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Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.



ALS Sample ID: L1826440-14 Client Sample ID: 16-TP114-0.1M



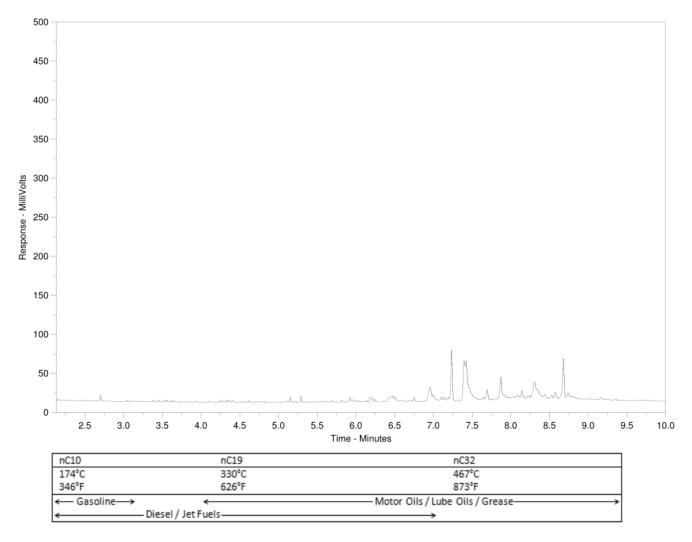
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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



ALS Sample ID: L1826440-15 Client Sample ID: 16-TP115-0.1M



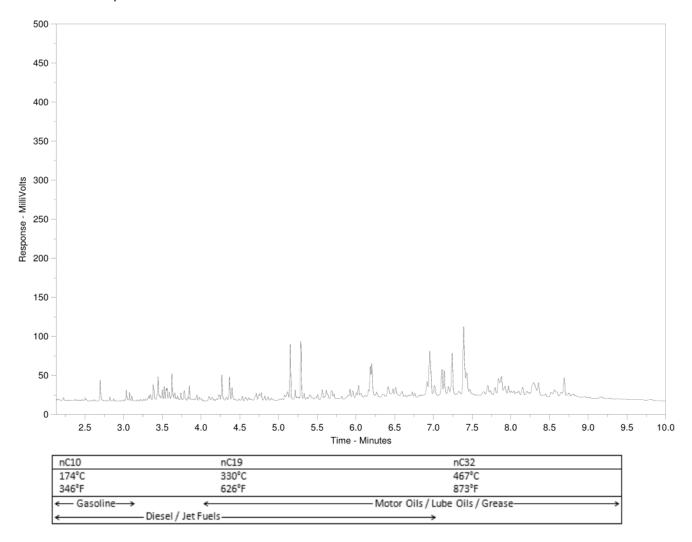
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Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.



ALS Sample ID: L1826440-16
Client Sample ID: 16-TP116-0.1M



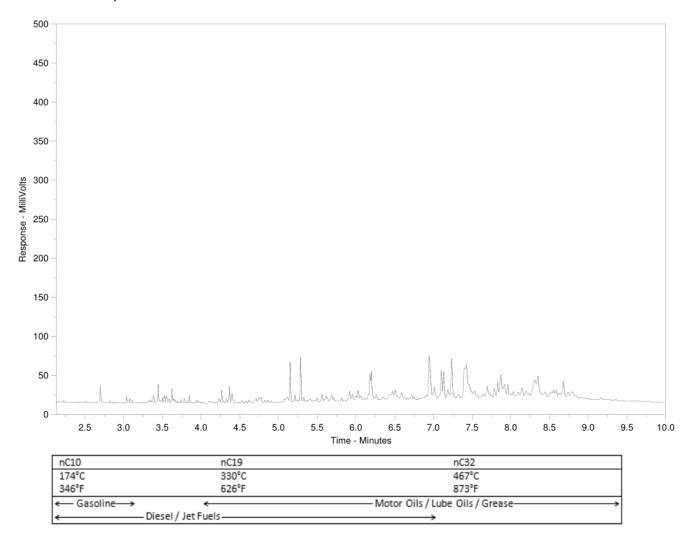
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Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.



ALS Sample ID: L1826440-17 Client Sample ID: 16-TP117-0.1M



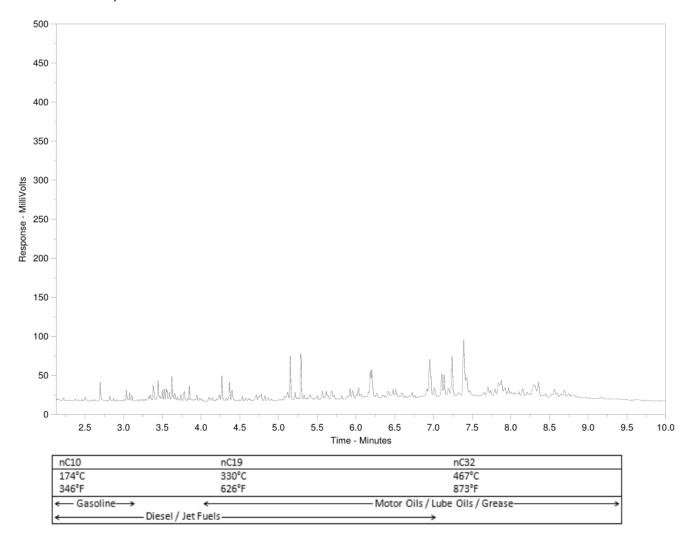
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ALS Sample ID: L1826440-18
Client Sample ID: 16-TP118-0.1M



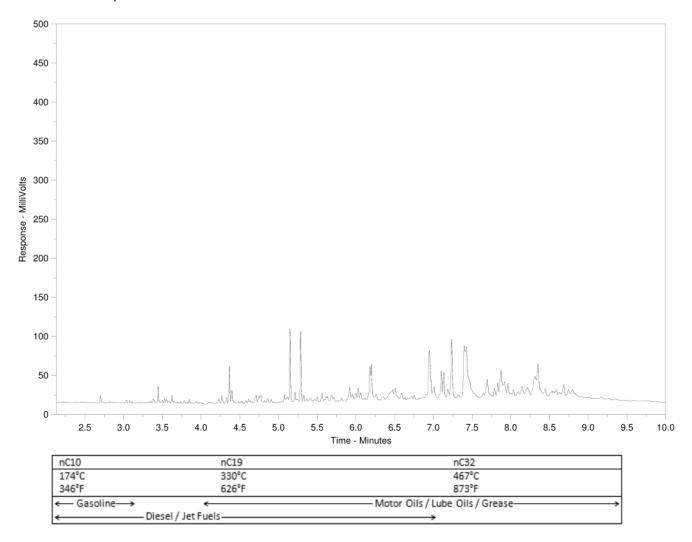
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ALS Sample ID: L1826440-19 Client Sample ID: 16-TP119-0.1M



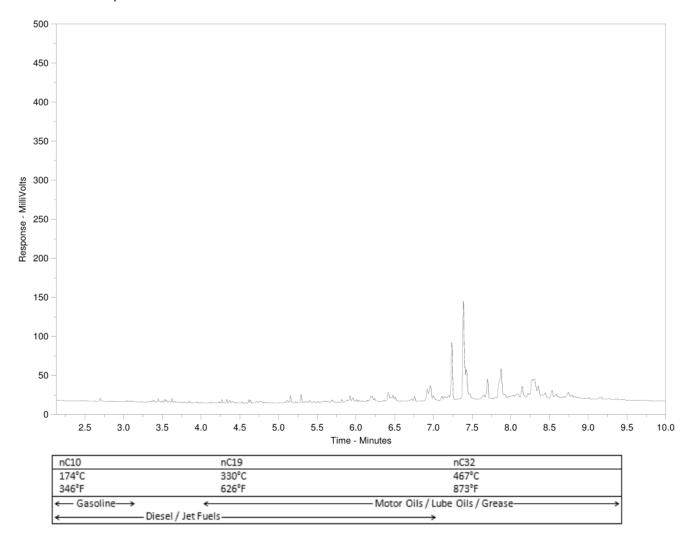
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ALS Sample ID: L1826440-20 Client Sample ID: 16-TP120-0.1M



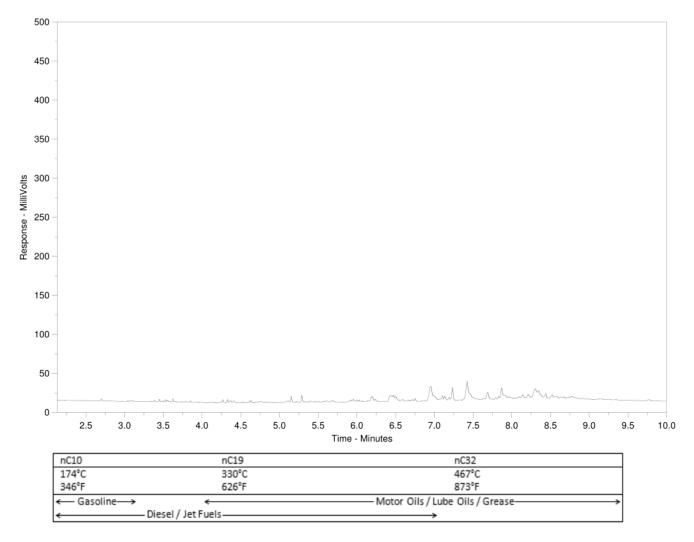
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ALS Sample ID: L1826440-21 Client Sample ID: 16-TP121-0.1M



The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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

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Released by:

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Date (dd.mmm-yy) Time (hh-mm) Received by:

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#### Chain of Custody / Analytical Request Form Canada Toll Free: 1 800 668 9878

COC#

www.alsglobal.com Report Format / Distribution Service Requested (Rush for routine analysis subject to availability) Report To Ground Other Regular (Standard Turnaround Times - Business Days) Standard Pinchin West Ltd Company: Excel Dioital □ Fax O Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT 🕖 POF Joshu Bocskei Contact: 329-1095 McKenzie Ave, Victoria, BC O Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT Address Email 1: jbocskei@pinchinwest.com Same Day or Weekend Emergency - Contact ALS to Confirm TAT Email 2: jquamme@pinchinwest.com s.22 Fax: **Analysis Request** Email 3: Phone: □ No Please indicate below Filtered. Preserved or both (F, P, F/P) Same as Report? Yes Client / Project Information Invoice To No Yes 13858B Job #: Hardcopy of Invoice with Report? PO / AFE: chloroform, dichloromethan coliforms Company: SD 850 Burdett Avenue, Victoria, BC Contact: Address total Fax: Quote #: Phone Lab\_Work Order\_#J ALS of Containers selam Sampler: joshu bocskei Contact: (lab use only) Sample Identification Sample 1 Date Time Sample Type (hh:mm) (dd-mmm-yy) (This description will appear on the report) LEPH, 6-TP101 07-Sep-16 soil 6-TP102 16-TP103 X 16-TP104 L1826440-COFC 16-TP105 16-TP106 16-TP107 16-TP108 Short Holding Time 16-TP109 16-TP110 Rush Processing Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc)/Hazardous Details CSR RL Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. No the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab. Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses SHIPMENT RECEPTION (lab use only) SHIPMENT VERIFICATION (lab use only) 嚴重進變症 Dage P - 9 7 Time: 1 lemperature. age King of 200 Tobservations

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Chain of Custody / Analytical Request Form Canada Toll Free: 1 800 668 9878 www.alsqlobal.com

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Victoria BC V8P 2L5

Pinchin West LTD. Date Received: 12–0CT–16

ATTN: Joshu Bocskei Report Date: 26-OCT-16 11:20 (MT)

# 300 – 1095 McKenzie Avenue Version: FINAL

Client Phone: 250-886-4862

## Certificate of Analysis

**Lab Work Order #: L1842325**Project P.O. #: NOT SUBMITTED

Job Reference: 13858B

C of C Numbers:

Legal Site Desc: 850 BURDETT AVENUE, VICTORIA, BC

**Comments:** Result for methamphetamine analysis attached at the end of this report.

Selam Worku Account Manager

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

ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700 ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

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L1842325 CONTD.... PAGE 2 of 11 26-OCT-16 11:20 (MT)

Version: FINAL

	Sample ID Description Sampled Date Sampled Time Client ID	L1842325-1 SOIL 11-OCT-16 16-TP201-0.6M	L1842325-3 SOIL 11-OCT-16 16-TP202-0.5M	L1842325-4 SOIL 11-OCT-16 16-TP202-1.0M	L1842325-5 SOIL 11-OCT-16 16-TP202-1.5M	L1842325-6 SOIL 11-OCT-16 16-TP203-0.5M
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	6.19	5.92			6.33
	pH (1:2 soil:water) (pH)	7.56	6.55	7.50	7.59	7.89
Metals	Antimony (Sb) (mg/kg)	0.41	0.68	0.46	0.24	0.52
	Arsenic (As) (mg/kg)	4.61	6.05	5.32	4.47	4.44
	Barium (Ba) (mg/kg)	166	262	228	79.6	117
	Beryllium (Be) (mg/kg)	0.35	0.43	0.40	0.32	0.25
	Cadmium (Cd) (mg/kg)	0.208	0.238	0.247	0.070	0.174
	Chromium (Cr) (mg/kg)	29.4	30.9	27.3	29.6	20.0
	Cobalt (Co) (mg/kg)	10.2	10.8	10.5	10.5	7.58
	Copper (Cu) (mg/kg)	34.7	35.6	29.1	26.7	21.6
	Lead (Pb) (mg/kg)	127	198	100	7.37	62.6
	Mercury (Hg) (mg/kg)	0.172	0.198	0.102	<0.050	0.065
	Molybdenum (Mo) (mg/kg)	0.45	0.59	0.56	0.40	0.35
	Nickel (Ni) (mg/kg)	24.4	28.4	26.8	24.9	18.6
	Selenium (Se) (mg/kg)	0.23	0.26	<0.20	<0.20	<0.20
	Silver (Ag) (mg/kg)	0.14	0.16	0.11	<0.10	<0.10
	Thallium (TI) (mg/kg)	0.057	0.078	0.071	0.066	<0.050
	Tin (Sn) (mg/kg)	2.3	2.4	<2.0	<2.0	<2.0
	Uranium (U) (mg/kg)	0.380	0.510	0.444	0.382	0.347
	Vanadium (V) (mg/kg)	69.5	68.1	70.4	64.1	47.7
	Zinc (Zn) (mg/kg)	77.7	93.4	75.0	40.2	62.2
TCLP Metals	1st Preliminary pH (pH)	7.97	7.17			
	2nd Preliminary pH (pH)	1.67	1.60			
	Final pH (pH)	5.02	4.99			
	Extraction Solution Initial pH (pH)	4.95	4.95			
	Antimony (Sb)-Leachable (ug/L)	<1000	<1000			
	Arsenic (As)-Leachable (ug/L)	<1000	<1000			
	Barium (Ba)-Leachable (ug/L)	<2500	<2500			
	Beryllium (Be)-Leachable (ug/L)	<25	<25			
	Boron (B)-Leachable (ug/L)	<500	<500			
	Cadmium (Cd)-Leachable (ug/L)	<50	<50			
	Calcium (Ca)-Leachable (ug/L)	82900	55400			
	Chromium (Cr)-Leachable (ug/L)	<250	<250			
	Cobalt (Co)-Leachable (ug/L)	<50	<50			
	Copper (Cu)-Leachable (ug/L)	<50	<50			
	Iron (Fe)-Leachable (ug/L)	<150	<150			
	Lead (Pb)-Leachable (ug/L)	<250	<250			

**FINAL** 

Version:

	Sample ID Description Sampled Date Sampled Time Client ID	L1842325-9 SOIL 11-OCT-16 16-TP204-0.4M	L1842325-10 SOIL 11-OCT-16 16-TP205-0.4M	L1842325-12 SOIL 11-OCT-16 16-TP206-0.5M	L1842325-15 SOIL 11-OCT-16 16-TP107-0.5M	
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	3.22	3.17	7.67	3.70	
	pH (1:2 soil:water) (pH)	6.60	6.72	7.60	6.61	
Metals	Antimony (Sb) (mg/kg)	1.37	0.14	0.24	0.14	
	Arsenic (As) (mg/kg)	5.48	4.17	3.55	3.89	
	Barium (Ba) (mg/kg)	57.7	57.2	182	68.5	
	Beryllium (Be) (mg/kg)	0.32	0.28	0.34	0.28	
	Cadmium (Cd) (mg/kg)	0.697	0.078	0.129	0.080	
	Chromium (Cr) (mg/kg)	27.1	19.0	27.9	21.3	
	Cobalt (Co) (mg/kg)	10.1	9.34	8.78	7.77	
	Copper (Cu) (mg/kg)	32.6	25.7	14.0	19.9	
	Lead (Pb) (mg/kg)	13.5	3.46	47.4	17.1	
	Mercury (Hg) (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Molybdenum (Mo) (mg/kg)	0.54	0.18	0.30	0.26	
	Nickel (Ni) (mg/kg)	27.5	21.4	20.7	19.6	
	Selenium (Se) (mg/kg)	<0.20	<0.20	0.22	<0.20	
	Silver (Ag) (mg/kg)	<0.10	<0.10	<0.10	<0.10	
	Thallium (TI) (mg/kg)	0.077	0.068	0.073	0.062	
	Tin (Sn) (mg/kg)	<2.0	<2.0	<2.0	<2.0	
	Uranium (U) (mg/kg)	0.388	0.238	0.403	0.350	
	Vanadium (V) (mg/kg)	71.6	56.4	56.4	58.8	
	Zinc (Zn) (mg/kg)	44.8	40.4	95.9	36.4	
TCLP Metals	1st Preliminary pH (pH)					
	2nd Preliminary pH (pH)					
	Final pH (pH)					
	Extraction Solution Initial pH (pH)					
	Antimony (Sb)-Leachable (ug/L)					
	Arsenic (As)-Leachable (ug/L)					
	Barium (Ba)-Leachable (ug/L)					
	Beryllium (Be)-Leachable (ug/L)					
	Boron (B)-Leachable (ug/L)					
	Cadmium (Cd)-Leachable (ug/L)					
	Calcium (Ca)-Leachable (ug/L)					
	Chromium (Cr)-Leachable (ug/L)					
	Cobalt (Co)-Leachable (ug/L)					
	Copper (Cu)-Leachable (ug/L)					
	Iron (Fe)-Leachable (ug/L)					
	Lead (Pb)-Leachable (ug/L)					

### ALS ENVIRONMENTAL ANALYTICAL REPORT

Version: FINAL

	Sample ID Description Sampled Date Sampled Time Client ID	L1842325-1 SOIL 11-OCT-16 16-TP201-0.6M	L1842325-3 SOIL 11-OCT-16 16-TP202-0.5M	L1842325-4 SOIL 11-OCT-16 16-TP202-1.0M	L1842325-5 SOIL 11-OCT-16 16-TP202-1.5M	L1842325-6 SOIL 11-OCT-16 16-TP203-0.5M
Grouping	Analyte					
SOIL						
TCLP Metals	Magnesium (Mg)-Leachable (ug/L)	2990	4490			
	Mercury (Hg)-Leachable (ug/L)	<1.0	<1.0			
	Nickel (Ni)-Leachable (ug/L)	<250	<250			
	Selenium (Se)-Leachable (ug/L)	<1000	<1000			
	Silver (Ag)-Leachable (ug/L)	<50	<50			
	Thallium (TI)-Leachable (ug/L)	<1000	<1000			
	Vanadium (V)-Leachable (ug/L)	<150	<150			
	Zinc (Zn)-Leachable (ug/L)	<500	<500			
Volatile Organic Compounds	VOC Sample Container	Field MeOH	Field MeOH			Field MeOH
	Benzene (mg/kg)	0.0169	0.0168			<0.0050
	Bromodichloromethane (mg/kg)	<0.050	<0.050			<0.050
	Bromoform (mg/kg)	<0.050	<0.050			<0.050
	Carbon Tetrachloride (mg/kg)	<0.050	<0.050			<0.050
	Chlorobenzene (mg/kg)	<0.050	<0.050			<0.050
	Dibromochloromethane (mg/kg)	<0.050	<0.050			<0.050
	Chloroethane (mg/kg)	<0.10	<0.10			<0.10
	Chloroform (mg/kg)	<0.10	<0.10			<0.10
	Chloromethane (mg/kg)	<0.10	<0.10			<0.10
	1,2-Dichlorobenzene (mg/kg)	<0.050	<0.050			<0.050
	1,3-Dichlorobenzene (mg/kg)	<0.050	<0.050			<0.050
	1,4-Dichlorobenzene (mg/kg)	<0.050	<0.050			<0.050
	1,1-Dichloroethane (mg/kg)	<0.050	<0.050			<0.050
	1,2-Dichloroethane (mg/kg)	<0.050	<0.050			<0.050
	1,1-Dichloroethylene (mg/kg)	<0.050	<0.050			<0.050
	cis-1,2-Dichloroethylene (mg/kg)	<0.050	<0.050			<0.050
	trans-1,2-Dichloroethylene (mg/kg)	<0.050	<0.050			<0.050
	Dichloromethane (mg/kg)	<0.30	<0.30			<0.30
	1,2-Dichloropropane (mg/kg)	<0.050	<0.050			<0.050
	cis-1,3-Dichloropropylene (mg/kg)	<0.050	<0.050			<0.050
	trans-1,3-Dichloropropylene (mg/kg)	<0.050	<0.050			<0.050
	Ethylbenzene (mg/kg)	0.018	0.024			<0.015
	Methyl t-butyl ether (MTBE) (mg/kg)	<0.20	<0.20			<0.20
	Styrene (mg/kg)	<0.050	<0.050			<0.050
	1,1,1,2-Tetrachloroethane (mg/kg)	<0.050	<0.050			<0.050
	1,1,2,2-Tetrachloroethane (mg/kg)	<0.050	<0.050			<0.050
	Tetrachloroethylene (mg/kg)	<0.050	<0.050			<0.050
	Toluene (mg/kg)	0.077	0.075			<0.050

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	Sample ID Description Sampled Date Sampled Time Client ID	L1842325-9 SOIL 11-OCT-16 16-TP204-0.4M	L1842325-10 SOIL 11-OCT-16 16-TP205-0.4M	L1842325-12 SOIL 11-OCT-16 16-TP206-0.5M	L1842325-15 SOIL 11-OCT-16 16-TP107-0.5M	
Grouping	Analyte					
SOIL						
TCLP Metals	Magnesium (Mg)-Leachable (ug/L)					
	Mercury (Hg)-Leachable (ug/L)					
	Nickel (Ni)-Leachable (ug/L)					
	Selenium (Se)-Leachable (ug/L)					
	Silver (Ag)-Leachable (ug/L)					
	Thallium (TI)-Leachable (ug/L)					
	Vanadium (V)-Leachable (ug/L)					
	Zinc (Zn)-Leachable (ug/L)					
Volatile Organic Compounds	VOC Sample Container	Field MeOH	Field MeOH	Field MeOH	Field MeOH	
	Benzene (mg/kg)	<0.0050	<0.0050	<0.0050	<0.0050	
	Bromodichloromethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Bromoform (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Carbon Tetrachloride (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Chlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Dibromochloromethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Chloroethane (mg/kg)	<0.10	<0.10	<0.10	<0.10	
	Chloroform (mg/kg)	<0.10	<0.10	<0.10	<0.10	
	Chloromethane (mg/kg)	<0.10	<0.10	<0.10	<0.10	
	1,2-Dichlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	1,3-Dichlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	1,4-Dichlorobenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	1,1-Dichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	1,2-Dichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	1,1-Dichloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	cis-1,2-Dichloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	trans-1,2-Dichloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Dichloromethane (mg/kg)	<0.30	<0.30	<0.30	<0.30	
	1,2-Dichloropropane (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	cis-1,3-Dichloropropylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	trans-1,3-Dichloropropylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Ethylbenzene (mg/kg)	<0.015	<0.015	<0.015	<0.015	
	Methyl t-butyl ether (MTBE) (mg/kg)	<0.20	<0.20	<0.20	<0.20	
	Styrene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	1,1,1,2-Tetrachloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	1,1,2,2-Tetrachloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Tetrachloroethylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Toluene (mg/kg)	<0.050	<0.050	<0.050	<0.050	

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	Sample ID Description Sampled Date Sampled Time Client ID	L1842325-1 SOIL 11-OCT-16 16-TP201-0.6M	L1842325-3 SOIL 11-OCT-16 16-TP202-0.5M	L1842325-4 SOIL 11-OCT-16 16-TP202-1.0M	L1842325-5 SOIL 11-OCT-16 16-TP202-1.5M	L1842325-6 SOIL 11-OCT-16 16-TP203-0.5M
Grouping	Analyte					
SOIL						
Volatile Organic Compounds	1,1,1-Trichloroethane (mg/kg)	<0.050	<0.050			<0.050
	1,1,2-Trichloroethane (mg/kg)	<0.050	<0.050			<0.050
	Trichloroethylene (mg/kg)	<0.010	<0.010			<0.010
	Trichlorofluoromethane (mg/kg)	<0.10	<0.10			<0.10
	Vinyl Chloride (mg/kg)	<0.10	<0.10			<0.10
	ortho-Xylene (mg/kg)	0.083	0.110			<0.050
	meta- & para-Xylene (mg/kg)	0.107	0.116			<0.050
	Xylenes (mg/kg)	0.190	0.225			<0.075
	Surrogate: 4-Bromofluorobenzene (SS) (%)	89.6	93.6			84.6
	Surrogate: 1,4-Difluorobenzene (SS) (%)	95.6	98.7			90.1
Hydrocarbons	EPH10-19 (mg/kg)	<200	<200			<200
	EPH19-32 (mg/kg)	<200	<200			<200
	LEPH (mg/kg)	<200	<200			<200
	HEPH (mg/kg)	<200	<200			<200
	Volatile Hydrocarbons (VH6-10) (mg/kg)	<100	<100			<100
	VPH (C6-C10) (mg/kg)	<100	<100			<100
	Surrogate: 3,4-Dichlorotoluene (SS) (%)	86.2	97.2			89.5
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)	<0.050	<0.050			<0.050
	Acenaphthylene (mg/kg)	<0.050	0.749			0.056
	Anthracene (mg/kg)	<0.050	0.407			<0.050
	Benz(a)anthracene (mg/kg)	0.155	1.74			0.121
	Benzo(a)pyrene (mg/kg)	0.168	2.28			0.171
	Benzo(b)fluoranthene (mg/kg)	0.246	2.96			0.205
	Benzo(g,h,i)perylene (mg/kg)	0.091	1.32			0.088
	Benzo(k)fluoranthene (mg/kg)	0.089	1.18			0.085
	Chrysene (mg/kg)	0.189	1.88			0.125
	Dibenz(a,h)anthracene (mg/kg)	<0.050	0.386			<0.050
	Fluoranthene (mg/kg)	0.335	2.58			0.184
	Fluorene (mg/kg)	<0.050	<0.050			<0.050
	Indeno(1,2,3-c,d)pyrene (mg/kg)	0.122	1.93			0.113
	2-Methylnaphthalene (mg/kg)	0.211	0.513			0.075
	Naphthalene (mg/kg)	0.130	0.726			0.074
	Phenanthrene (mg/kg)	0.215	1.10			0.112
	Pyrene (mg/kg)	0.333	2.78			0.206
	Surrogate: Acenaphthene d10 (%)	93.5	87.8			92.0
	Surrogate: Chrysene d12 (%)	103.7	92.9			103.1

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	Sample ID Description Sampled Date Sampled Time Client ID	L1842325-9 SOIL 11-OCT-16 16-TP204-0.4M	L1842325-10 SOIL 11-OCT-16 16-TP205-0.4M	L1842325-12 SOIL 11-OCT-16 16-TP206-0.5M	L1842325-15 SOIL 11-OCT-16 16-TP107-0.5M	
Grouping	Analyte					
SOIL						
Volatile Organic Compounds	1,1,1-Trichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	1,1,2-Trichloroethane (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Trichloroethylene (mg/kg)	<0.010	<0.010	<0.010	<0.010	
	Trichlorofluoromethane (mg/kg)	<0.10	<0.10	<0.10	<0.10	
	Vinyl Chloride (mg/kg)	<0.10	<0.10	<0.10	<0.10	
	ortho-Xylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	meta- & para-Xylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Xylenes (mg/kg)	<0.075	<0.075	<0.075	<0.075	
	Surrogate: 4-Bromofluorobenzene (SS) (%)	88.5	88.6	89.9	96.8	
	Surrogate: 1,4-Difluorobenzene (SS) (%)	94.1	95.9	95.0	103.5	
Hydrocarbons	EPH10-19 (mg/kg)	<200	<200	<200	<200	
	EPH19-32 (mg/kg)	<200	<200	<200	<200	
	LEPH (mg/kg)	<200	<200	<200	<200	
	HEPH (mg/kg)	<200	<200	<200	<200	
	Volatile Hydrocarbons (VH6-10) (mg/kg)	<100	<100	<100	<100	
	VPH (C6-C10) (mg/kg)	<100	<100	<100	<100	
	Surrogate: 3,4-Dichlorotoluene (SS) (%)	90.1	91.0	95.4	101.8	
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Acenaphthylene (mg/kg)	<0.050	<0.050	<0.050	0.070	
	Anthracene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Benz(a)anthracene (mg/kg)	<0.050	<0.050	<0.050	0.168	
	Benzo(a)pyrene (mg/kg)	<0.050	<0.050	<0.050	0.233	
	Benzo(b)fluoranthene (mg/kg)	<0.050	<0.050	<0.050	0.274	
	Benzo(g,h,i)perylene (mg/kg)	<0.050	<0.050	<0.050	0.107	
	Benzo(k)fluoranthene (mg/kg)	<0.050	<0.050	<0.050	0.118	
	Chrysene (mg/kg)	<0.050	<0.050	<0.050	0.162	
	Dibenz(a,h)anthracene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Fluoranthene (mg/kg)	<0.050	<0.050	<0.050	0.258	
	Fluorene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Indeno(1,2,3-c,d)pyrene (mg/kg)	<0.050	<0.050	<0.050	0.145	
	2-Methylnaphthalene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Naphthalene (mg/kg)	<0.050	<0.050	<0.050	0.109	
	Phenanthrene (mg/kg)	<0.050	<0.050	<0.050	0.117	
	Pyrene (mg/kg)	<0.050	<0.050	<0.050	0.290	
	Surrogate: Acenaphthene d10 (%)	87.1	88.5	86.3	86.4	
	Surrogate: Chrysene d12 (%)	100.4	94.7	92.7	90.4	

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	Sample ID Description Sampled Date Sampled Time Client ID	L1842325-1 SOIL 11-OCT-16 16-TP201-0.6M	L1842325-3 SOIL 11-OCT-16 16-TP202-0.5M	L1842325-4 SOIL 11-OCT-16 16-TP202-1.0M	L1842325-5 SOIL 11-OCT-16 16-TP202-1.5M	L1842325-6 SOIL 11-OCT-16 16-TP203-0.5M
Grouping	Analyte					
SOIL						
Polycyclic Aromatic Hydrocarbons	Surrogate: Naphthalene d8 (%)	85.5	79.6			87.1
	Surrogate: Phenanthrene d10 (%)	103.8	97.9			102.0

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	Sample ID Description	L1842325-9 SOIL	L1842325-10 SOIL	L1842325-12 SOIL	L1842325-15 SOIL	
	Sampled Date Sampled Time	11-OCT-16	11-OCT-16	11-OCT-16	11-OCT-16	
	Client ID	16-TP204-0.4M	16-TP205-0.4M	16-TP206-0.5M	16-TP107-0.5M	
Grouping	Analyte					
SOIL						
Polycyclic Aromatic Hydrocarbons	Surrogate: Naphthalene d8 (%)	85.6	87.3	85.7	83.8	
	Surrogate: Phenanthrene d10 (%)	96.7	94.1	93.9	92.8	

### Reference Information

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QC Samples with Qualifiers & Comments:

QC Type Description Parameter Qualifier Applies to Sample Number(s)

Test Method References:

ALS Test Code Matrix Test Description Method Reference\*\*

EPH-TUMB-FID-VA Soil EPH in Solids by Tumbler and GCFID BC MOE EPH GCFID

Analysis is in accordance with BC MOE Lab Manual method "Extractable Petroleum Hydrocarbons in Solids by GC/FID", v2.1, July 1999. Soil samples are extracted with a 1:1 mixture of hexane and acetone using a rotary extraction technique modified from EPA 3570 prior to gas chromatography with flame ionization detection (GC-FID). EPH results include Polycyclic Aromatic Hydrocarbons (PAH) and are therefore not equivalent to Light and Heavy Extractable Petroleum Hydrocarbons (LEPH/HEPH).

HG-200.2-CVAF-VA Soil Mercury in Soil by CVAFS EPA 200.2/1631E (mod)

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

HG-TCLP-CVAFS-VA Soil Mercury by CVAFS (TCLP) EPA 1311/245.7

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic fluorescence spectrophotometry or atomic absorption spectrophotometry (EPA 245.7).

LEPH/HEPH-CALC-VA Soil LEPHs and HEPHs BC MOE LABORATORY MANUAL (2005)

Light and Heavy Extractable Petroleum Hydrocarbons in Solids. These results are determined according to the British Columbia Ministry of Environment, Lands, and Parks Analytical Method for Contaminated Sites "Calculation of Light and Heavy Extractable Petroleum Hydrocarbons in Solids or Water". According to this method, LEPH and HEPH are calculated

by subtracting selected Polycyclic Aromatic Hydrocarbon results from Extractable Petroleum Hydrocarbon results. To calculate LEPH, the individual results for Naphthalene and Phenanthrene are subtracted from EPH(C10-19). To calculate HEPH, the individual results for Benz(a)anthracene, Benzo(b)fluoranthene, Benzo(a)pyrene, Dibenz(a,h)anthracene, Indeno(1,2,3-c,d)pyrene, and Pyrene are subtracted from EPH(C19-32). Analysis of Extractable Petroleum Hydrocarbons adheres to all prescribed elements of the BCMELP method "Extractable Petroleum Hydrocarbons in Solids by GC/FID" (Version 2.1, July 20, 1999).

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

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

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that may be environmentally available. This method does not dissolve all silicate materials and may result in a partial extraction. depending on the sample matrix, for some metals, including, but not limited to Al, Ba, Be, Cr, Sr, Ti, Tl, and V.

MET-TCLP-ICP-VA Soil Metals by ICPOES (TCLP) EPA 1311/6010B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MOISTURE-VA Soil Moisture content ASTM D2974-00 Method A

This analysis is carried out gravimetrically by drying the sample at 105 C for a minimum of six hours.

PAH-TMB-H/A-MS-VA Soil PAH - Rotary Extraction (Hexane/Acetone) EPA 3570/8270

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Methods 3570 & 8270, published by the United States Environmental Protection Agency (EPA). The procedure uses a mechanical shaking technique to extract a subsample of the sediment/soil with a 1:1 mixture of hexane and acetone. The extract is then solvent exchanged to toluene. The final extract is analysed by capillary column gas chromatography with mass spectrometric detection (GC/MS). Surrogate recoveries may not be reported in cases where interferences from the sample matrix prevent accurate quantitation. Because the two isomers cannot be readily chromatographically separated, benzo(j)fluoranthene is reported as part of the benzo(b)fluoranthene parameter.

PH-1:2-VA Soil pH in Soil (1:2 Soil:Water Extraction) BC WLAP METHOD: PH, ELECTROMETRIC, SOIL

This analysis is carried out in accordance with procedures described in the pH, Electrometric in Soil and Sediment method - Section B Physical/Inorganic and Misc. Constituents, BC Environmental Laboratory Manual 2007. The procedure involves mixing the dried (at <60 C) and sieved (No. 10 / 2mm) sample with deionized/distilled water at a 1:2 ratio of sediment to water. The pH of the solution is then measured using a standard pH probe.

VH-HSFID-VA Soil VH in soil by Headspace GCFID BC Env. Lab Manual (VH in Solids)

This analysis involves the extraction of a subsample of the sediment/soil with methanol. Aliquots of the methanol extract are then added to water and reagents, then heated in a sealed vial to equilibrium. The headspace from the vial is analyzed for Volatile Hydrocarbons (VH) by capillary column gas chromatography with flame-ionization detection (GC/FID). The methanol extraction and VH analysis are carried out in accordance with the British Columbia Ministry of Environment, Lands and Parks (BCMELP) Analytical Method for Contaminated Sites "Volatile Hydrocarbons in Solids by GC/FID" (Version 2.1 July 1999).

VH-SURR-FID-VA Soil VH Surrogates for Soils BC Env. Lab Manual (VH in Solids)

VOC-HSMS-VA Soil VOCs in soil by Headspace GCMS EPA 5035A/5021A/8260C

#### Reference Information

L1842325 CONTD....

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26-OCT-16 11:20 (MT)

Version: FINAL

The soil methanol extract is added to water and reagents, then heated in a sealed vial to equilibrium. The headspace from the vial is transferred into a gas chromatograph. Target compound concentrations are measured using mass spectrometry detection.

VOC7-L-HSMS-VA

Soil

VOCs in soil by Headspace GCMS

EPA 5035A/5021A/8260C

The soil methanol extract is added to water and reagents, then heated in a sealed vial to equilibrium. The headspace from the vial is transferred into a gas chromatograph. Target compound concentrations are measured using mass spectrometry detection.

VOC7/VOC-SURR-MS-VA Soil

VOC7 and/or VOC Surrogates for Soils

EPA 5035A/5021A/8260C

VPH-CALC-VA

Soil

VPH is VH minus select aromatics

BC MOE LABORATORY MANUAL (2005)

These results are determined according to the British Columbia Ministry of Environment, Lands, and Parks Analytical Method for Contaminated Sites "Calculation of Volatile Petroleum Hydrocarbons in Solids or Water" (Version 2.1, July 20, 1999). According to this method, the concentrations of specific Monocyclic Aromatic Hydrocarbons (Benzene, Toluene, Ethylbenzene, Xylenes and Styrene) are subtracted from the collective concentration of Volatile Hydrocarbons (VH) that elute between n-hexane (nC6) and n-decane (nC10). Analysis of Volatile Hydrocarbons adheres to all prescribed elements of BCMELP method "Volatile Hydrocarbons in Solids by GC/FID" (Version 2.1, July 20, 1999).

XYLENES-CALC-VA

Soil

Sum of Xylene Isomer Concentrations

EPA 8260B & 524.2

Calculation of Total Xylenes

Total Xylenes is the sum of the concentrations of the ortho, meta, and para Xylene isomers. Results below detection limit (DL) are treated as zero. The DL for Total Xylenes is set to a value no less than the square root of the sum of the squares of the DLs of the individual Xylenes.

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

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

**Laboratory Definition Code** 

**Laboratory Location** 

VA

ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

#### Chain of Custody Numbers:

#### **GLOSSARY OF REPORT TERMS**

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

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg wwt - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

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

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Workorder: L1842325 Report Date: 26-OCT-16 Page 1 of 12

Client: Pinchin West LTD.

# 300 - 1095 McKenzie Avenue

Victoria BC V8P 2L5

Contact: Joshu Bocskei

est	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
EPH-TUMB-FID-VA	Soil							
Batch R3573053								
WG2410134-3 IRM		ALS PHC2 R			0/			
EPH10-19			80.2		%		70-130	18-OCT-16
EPH19-32			91.7		%		70-130	18-OCT-16
<b>WG2410134-1 MB</b> EPH10-19			<200		mg/kg		200	18-OCT-16
EPH19-32			<200		mg/kg		200	18-OCT-16
IG-200.2-CVAF-VA	Soil							
Batch R3571365								
WG2410132-4 CRM Mercury (Hg)		VA-NRC-STS	SD-3 110.4		%		70-130	14-OCT-16
WG2410132-3 LCS Mercury (Hg)			102.2		%		70-130	14-OCT-16
WG2410132-1 MB Mercury (Hg)			<0.0050		mg/kg		0.005	14-OCT-16
Batch R3574890								
WG2413085-4 CRM Mercury (Hg)		VA-NRC-STS	SD-3 101.3		%		70-130	19-OCT-16
WG2413085-3 LCS							70 100	10 001 10
Mercury (Hg)			110.3		%		70-130	19-OCT-16
WG2413085-1 MB Mercury (Hg)			<0.0050		mg/kg		0.005	19-OCT-16
G-TCLP-CVAFS-VA	Soil							
Batch R3574890								
WG2412893-1 MB Mercury (Hg)-Leachable			<0.0010		mg/L		0.001	19-OCT-16
WG2412893-4 MB Mercury (Hg)-Leachable			<0.0010		mg/L		0.001	19-OCT-16
WG2412893-2 MS Mercury (Hg)-Leachable		L1842325-3	99.2		%		50-140	19-OCT-16
IET-200.2-CCMS-VA	Soil						00 110	10 001 10
Batch R3572959								
WG2410132-4 CRM Antimony (Sb)		VA-NRC-STS	SD-3 108.5		%		70-130	14-OCT-16
Arsenic (As)			95.2		%		70-130	14-OCT-16
Barium (Ba)			104.6		%			14-OCT-16
Beryllium (Be)			104.0		%		70-130	
							70-130	14-OCT-16
Cadmium (Cd)			114.9		%		70-130	14-OCT



Workorder: L1842325 Report Date: 26-OCT-16

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-VA	Soil							
Batch R3572959	ı							
WG2410132-4 CRM		VA-NRC-STS						
Chromium (Cr)			102.7		%		70-130	14-OCT-16
Cobalt (Co)			104.4		%		70-130	14-OCT-16
Copper (Cu)			97.9		%		70-130	14-OCT-16
Lead (Pb)			106.1		%		70-130	14-OCT-16
Molybdenum (Mo)			104.9		%		70-130	14-OCT-16
Nickel (Ni)			97.5		%		70-130	14-OCT-16
Selenium (Se)			104.0		%		70-130	14-OCT-16
Thallium (TI)			106.1		%		70-130	14-OCT-16
Uranium (U)			108.4		%		70-130	14-OCT-16
Vanadium (V)			104.7		%		70-130	14-OCT-16
Zinc (Zn)			100.4		%		70-130	14-OCT-16
WG2410132-3 LCS Antimony (Sb)			99.3		%		80-120	14-OCT-16
Arsenic (As)			99.6		%		80-120	14-OCT-16
Barium (Ba)			95.8		%		80-120	14-OCT-16
Beryllium (Be)			89.2		%		80-120	14-OCT-16
Cadmium (Cd)			93.1		%		80-120	14-OCT-16
Chromium (Cr)			89.6		%		80-120	14-OCT-16
Cobalt (Co)			89.4		%		80-120	14-OCT-16
Copper (Cu)			86.6		%		80-120	14-OCT-16
Lead (Pb)			89.4		%		80-120	14-OCT-16
Molybdenum (Mo)			100.8		%		80-120	14-OCT-16
Nickel (Ni)			88.9		%		80-120	14-OCT-16
Selenium (Se)			101.9		%		80-120	14-OCT-16
Silver (Ag)			90.5		%		80-120	14-OCT-16
Thallium (TI)			90.6		%		80-120	14-OCT-16
Tin (Sn)			96.4		%		80-120	14-OCT-16
Uranium (U)			91.5		%		80-120	14-OCT-16
Vanadium (V)			92.0		%		80-120	14-OCT-16
Zinc (Zn)			87.5		%		80-120	14-OCT-16
WG2410132-1 MB Antimony (Sb)			<0.10		mg/kg		0.1	14-OCT-16
Arsenic (As)			<0.10		mg/kg			
Barium (Ba)			<0.10		mg/kg		0.1	14-OCT-16
Beryllium (Be)			<0.50				0.5	14-OCT-16
Derymuni (De)			<0.10		mg/kg		0.1	14-OCT-16

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Report Date: 26-OCT-16 Page 3 of 12 Workorder: L1842325

Test .	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-VA	Soil							
Batch R3572959								
WG2410132-1 MB								
Cadmium (Cd)			<0.020		mg/kg		0.02	14-OCT-16
Chromium (Cr)			<0.50		mg/kg		0.5	14-OCT-16
Cobalt (Co)			<0.10		mg/kg		0.1	14-OCT-16
Copper (Cu)			<0.50		mg/kg		0.5	14-OCT-16
Lead (Pb)			<0.50		mg/kg		0.5	14-OCT-16
Molybdenum (Mo)			<0.10		mg/kg		0.1	14-OCT-16
Nickel (Ni)			<0.50		mg/kg		0.5	14-OCT-16
Selenium (Se)			<0.20		mg/kg		0.2	14-OCT-16
Silver (Ag)			<0.10		mg/kg		0.1	14-OCT-16
Thallium (TI)			< 0.050		mg/kg		0.05	14-OCT-16
Tin (Sn)			<2.0		mg/kg		2	14-OCT-16
Uranium (U)			< 0.050		mg/kg		0.05	14-OCT-16
Vanadium (V)			<0.20		mg/kg		0.2	14-OCT-16
Zinc (Zn)			<2.0		mg/kg		2	14-OCT-16
Batch R3574978								
WG2413085-4 CRM		VA-NRC-STS			0/			
Antimony (Sb)			101.8		%		70-130	19-OCT-16
Arsenic (As)			87.0		%		70-130	19-OCT-16
Barium (Ba)			94.7		%		70-130	19-OCT-16
Beryllium (Be)			99.2		%		70-130	19-OCT-16
Cadmium (Cd)			104.3		%		70-130	19-OCT-16
Chromium (Cr)			99.0		%		70-130	19-OCT-16
Cobalt (Co)			96.5		%		70-130	19-OCT-16
Copper (Cu)			92.1		%		70-130	19-OCT-16
Lead (Pb)			97.1		%		70-130	19-OCT-16
Molybdenum (Mo)			99.1		%		70-130	19-OCT-16
Nickel (Ni)			92.1		%		70-130	19-OCT-16
Selenium (Se)			96.2		%		70-130	19-OCT-16
Silver (Ag)			94.8		%		70-130	19-OCT-16
Thallium (TI)			97.3		%		70-130	19-OCT-16
Uranium (U)			96.6		%		70-130	19-OCT-16
Vanadium (V)			99.3		%		70-130	19-OCT-16
Zinc (Zn)			93.7		%		70-130	19-OCT-16
WG2413085-3 LCS Antimony (Sb)			91.8		%		80-120	19-OCT-16



Workorder: L1842325 Report Date: 26-OCT-16 Page 4 of 12

MET-2002-CCMS-VA   Soil	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
WG2413085-3         LCS           Arsenic (As)         92.5         %         80.120         19-OCT-16           Barlium (Ba)         101.3         %         80.120         19-OCT-16           Beryllium (Be)         97.4         %         80.120         19-OCT-16           Cadmium (Cd)         97.6         %         80.120         19-OCT-16           Chromium (Cr)         99.9         %         80.120         19-OCT-16           Cobalt (Co)         96.6         %         80.120         19-OCT-16           Copper (Cu)         95.3         %         80.120         19-OCT-16           Molybdenum (Mo)         94.5         %         80.120         19-OCT-16           Molybdenum (Mo)         94.5         %         80.120         19-OCT-16           Selenium (Se)         87.4         %         80.120         19-OCT-16           Selenium (Se)         87.4         %         80.120         19-OCT-16           Thallium (Tl)         96.5         %         80.120         19-OCT-16           Thallium (Tl)         96.5         %         80.120         19-OCT-16           Uranium (U)         98.8         %         80.120         19-OCT-16	MET-200.2-CCMS-VA	Soil							
Arsenic (As)         92.5         %         80-120         19-OCT-16           Barium (Ba)         101.3         %         80-120         19-OCT-16           Beryllium (Be)         97.4         %         80-120         19-OCT-16           Cadmium (Cd)         97.6         %         80-120         19-OCT-16           Croball (Co)         96.6         %         80-120         19-OCT-16           Coball (Co)         95.3         %         80-120         19-OCT-16           Lead (Pb)         97.4         %         80-120         19-OCT-16           Molydehrum (Mo)         94.5         %         80-120         19-OCT-16           Molydehrum (Se)         87.4         %         80-120         19-OCT-16           Silver (Ag)         99.9         %         80-120         19-OCT-16           Silver (Ag)         99.9         %         80-120         19-OCT-16           Tin (Sn)         90.6         %         80-120         19-OCT-16           Uranium (U)         98.8         %         80-120         19-OCT-16           Uranium (V)         98.8         %         80-120         19-OCT-16           WG2413085-1         MB      <	Batch R3574978	1							
Barium (Ba)         101.3         %         80-120         19-OCT-16           Beryllum (Be)         97.4         %         80-120         19-OCT-16           Cadmium (Cd)         97.6         %         80-120         19-OCT-16           Chromium (Cr)         99.9         %         80-120         19-OCT-16           Cobalt (Co)         96.6         %         80-120         19-OCT-16           Copper (Cu)         95.3         %         80-120         19-OCT-16           Lead (Pb)         97.4         %         80-120         19-OCT-16           Molybdenum (Mo)         94.5         %         80-120         19-OCT-16           Nickel (Ni)         97.5         %         80-120         19-OCT-16           Selenium (Se)         87.4         %         80-120         19-OCT-16           Silver (Ag)         99.9         %         80-120         19-OCT-16           Thallium (Tl)         96.5         %         80-120         19-OCT-16           Thallium (Tl)         98.8         %         80-120         19-OCT-16           Uranium (U)         98.8         %         80-120         19-OCT-16           Valoadium (V)         10.1				00.5		•			
Beryillum (Be)         97.4         %         80-120         19-OCT-16           Cadmium (Cd)         97.6         %         80-120         19-OCT-16           Chromium (Cr)         99.9         %         80-120         19-OCT-16           Cobalt (Co)         96.6         %         80-120         19-OCT-16           Copper (Cu)         95.3         %         80-120         19-OCT-16           Lead (Pb)         97.4         %         80-120         19-OCT-16           Molybdenum (Mo)         94.5         %         80-120         19-OCT-16           Nickel (Ni)         97.5         %         80-120         19-OCT-16           Nickel (Ni)         97.5         %         80-120         19-OCT-16           Silver (Ag)         99.9         %         80-120         19-OCT-16           Silver (Ag)         99.9         %         80-120         19-OCT-16           Thallum (Ti)         96.5         %         80-120         19-OCT-16           Tin (Sn)         90.6         %         80-120         19-OCT-16           Uranium (U)         98.8         %         80-120         19-OCT-16           Vanadium (V)         101.4         % <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
Cadmium (Cd)         97.6         %         80-120         19-OCT-16           Chromium (Cr)         99.9         %         80-120         19-OCT-16           Cobalt (Co)         96.6         %         80-120         19-OCT-16           Copper (Cu)         95.3         %         80-120         19-OCT-16           Molybdenum (Mo)         94.5         %         80-120         19-OCT-16           Nickel (Ni)         97.5         %         80-120         19-OCT-16           Silver (Ag)         99.9         %         80-120         19-OCT-16           Silver (Ag)         99.9         %         80-120         19-OCT-16           Thallium (TI)         96.5         %         80-120         19-OCT-16           Thallium (TI)         96.5         %         80-120         19-OCT-16           Tin (Sn)         90.6         %         80-120         19-OCT-16           Vanadium (V)         101.4         %         80-120         19-OCT-16           Zinc (Zn)         92.7         %         80-120         19-OCT-16           WG2413085-1         MB         Antimony (Sb)         0.1         19-OCT-16           Arsenic (As)         0.0         <									
Chromium (Cr) 99.9 % 80.120 19-OCT-16 Cobalt (Co) 96.6 % 80-120 19-OCT-16 Copalt (Co) 95.3 % 80-120 19-OCT-16 Lead (Pb) 97.4 % 80-120 19-OCT-16 Molybdenum (Mo) 94.5 % 80-120 19-OCT-16 Nickel (Ni) 97.5 % 80-120 19-OCT-16 Selenium (Se) 87.4 % 80-120 19-OCT-16 Silver (Ag) 99.9 % 80-120 19-OCT-16 Thallium (TI) 96.5 % 80-120 19-OCT-16 Uranium (U) 98.8 % 80-120 19-OCT-16 Uranium (V) 101.4 % 80-120 19-OCT-16 Uranium (V) 101.4 % 80-120 19-OCT-16 Zinc (Zn) 92.7 % 80-120 19-OCT-16 Arsenic (As) -0.10 mg/kg 0.1 19-OCT-16 Barium (Ba) -0.50 mg/kg 0.5 19-OCT-16 Cadmium (Cd) -0.020 mg/kg 0.1 19-OCT-16 Cadmium (Cd) -0.020 mg/kg 0.5 19-OCT-16 Coper (Cu) -0.50 mg/kg 0.5 19-OCT-16 Coper (Cu) -0.50 mg/kg 0.5 19-OCT-16 Molybdenum (Mo) -0.50 mg/kg 0.5 19-OCT-16 Lead (Pb) -0.50 mg/kg 0.5 19-OCT-16 Molybdenum (Mo) -0.50 mg/kg 0.5 19-OCT-16 Molybdenum (Mo) -0.50 mg/kg 0.5 19-OCT-16 Selenium (Se) -0.50 mg/kg 0.5 19-OCT-16 Coper (Cu) -0.50 mg/kg 0.5 19-OCT-16 Coper (Cu) -0.50 mg/kg 0.5 19-OCT-16 Selenium (Se) -0.50 mg/kg 0.5 19-OCT-16									
Cobalt (Co)         96.6         %         80-120         19-OCT-16           Copper (Cu)         95.3         %         80-120         19-OCT-16           Lead (Pb)         97.4         %         80-120         19-OCT-16           Molybdenum (Mo)         94.5         %         80-120         19-OCT-16           Nickel (Ni)         97.5         %         80-120         19-OCT-16           Selenium (Se)         87.4         %         80-120         19-OCT-16           Silver (Ag)         99.9         %         80-120         19-OCT-16           Silver (Ag)         99.9         %         80-120         19-OCT-16           Tin (Sn)         90.6         %         80-120         19-OCT-16           Uranium (U)         98.8         %         80-120         19-OCT-16           Vanadium (V)         101.4         %         80-120         19-OCT-16           Zinc (Zn)         92.7         %         80-120         19-OCT-16           WG2413085-1         MB         Antimony (Sb)         0.1         19-OCT-16           Arsenic (As)         0.010         mg/kg         0.1         19-OCT-16           Barium (Ba)         0.050									
Copper (Cu)         95.3         %         80.120         19-OCT-16           Lead (Pb)         97.4         %         80.120         19-OCT-16           Molybdenum (Mo)         94.5         %         80.120         19-OCT-16           Nickel (Ni)         97.5         %         80.120         19-OCT-16           Selenium (Se)         87.4         %         80.120         19-OCT-16           Silver (Ag)         99.9         %         80.120         19-OCT-16           Thallium (TI)         96.5         %         80.120         19-OCT-16           Tin (Sn)         90.6         %         80.120         19-OCT-16           Uranium (U)         98.8         %         80.120         19-OCT-16           Vanadium (V)         101.4         %         80.120         19-OCT-16           Zinc (Zn)         92.7         %         80.120         19-OCT-16           WG2413085-1         MB         Antimony (Sb)          0.1         19-OCT-16           Arsenic (As)           0.1         19-OCT-16           Barium (Ba)           0.0         mg/kg         0.1         19-OCT-16           Beryll	, ,							80-120	19-OCT-16
Lead (Pb)         97.4         %         80-120         19-OCT-16           Molybdenum (Mo)         94.5         %         80-120         19-OCT-16           Nickel (Ni)         97.5         %         80-120         19-OCT-16           Selenium (Se)         87.4         %         80-120         19-OCT-16           Silver (Ag)         99.9         %         80-120         19-OCT-16           Thallium (TI)         96.5         %         80-120         19-OCT-16           Tin (Sn)         90.6         %         80-120         19-OCT-16           Uranium (U)         98.8         %         80-120         19-OCT-16           Vanadium (V)         101.4         %         80-120         19-OCT-16           Vanadium (V)         101.4         %         80-120         19-OCT-16           WG2413085-1         MB         Antimony (Sb)         <0.10								80-120	
Molybdenum (Mo)         94.5         %         80-120         19-OCT-16           Nickel (Ni)         97.5         %         80-120         19-OCT-16           Selenium (Se)         87.4         %         80-120         19-OCT-16           Silver (Ag)         99.9         %         80-120         19-OCT-16           Thallium (TI)         96.5         %         80-120         19-OCT-16           Tin (Sn)         90.6         %         80-120         19-OCT-16           Uranium (U)         98.8         %         80-120         19-OCT-16           Vanadium (V)         101.4         %         80-120         19-OCT-16           Vanadium (V)         101.4         %         80-120         19-OCT-16           WG2413085-1         MB         N         80-120         19-OCT-16           WG2413085-1         MB         Antimory (Sb)         <0.10								80-120	19-OCT-16
Nickel (Ni)         97.5         %         80-120         19-OCT-16           Selenium (Se)         87.4         %         80-120         19-OCT-16           Silver (Ag)         99.9         %         80-120         19-OCT-16           Thallium (TI)         96.5         %         80-120         19-OCT-16           Tin (Sn)         90.6         %         80-120         19-OCT-16           Uranium (U)         98.8         %         80-120         19-OCT-16           Vanadum (V)         101.4         %         80-120         19-OCT-16           Zinc (Zn)         92.7         %         80-120         19-OCT-16           WG2413085-1         MB         Value         80-120         19-OCT-16           WG2413085-1         MB         Value         80-120         19-OCT-16           WG2413085-1         MB         Value         80-120         19-OCT-16           Arsenic (As)         40.10         mg/kg         0.1         19-OCT-16           Arsenic (As)         40.10         mg/kg         0.5         19-OCT-16           Beryllium (Be)         40.50         mg/kg         0.5         19-OCT-16           Cadmium (Cd)         40.020	• •							80-120	19-OCT-16
Selenium (Se)       87.4       %       80.120       19-OCT-16         Silver (Ag)       99.9       %       80.120       19-OCT-16         Thallium (TI)       96.5       %       80-120       19-OCT-16         Tin (Sn)       90.6       %       80-120       19-OCT-16         Uranium (U)       98.8       %       80-120       19-OCT-16         Vanadium (V)       101.4       %       80-120       19-OCT-16         Zinc (Zn)       92.7       %       80-120       19-OCT-16         WG2413085-1       MB       MB       No.120       19-OCT-16         Artsenic (As)       <0.10	Molybdenum (Mo)			94.5		%		80-120	19-OCT-16
Silver (Ag)       99.9       %       80.120       19-OCT-16         Thallium (TI)       96.5       %       80.120       19-OCT-16         Tin (Sn)       90.6       %       80-120       19-OCT-16         Uranium (U)       98.8       %       80-120       19-OCT-16         Vanadium (V)       101.4       %       80-120       19-OCT-16         Zinc (Zn)       92.7       %       80-120       19-OCT-16         WG2413085-1       MB       MB       NB       NB<	Nickel (Ni)			97.5		%		80-120	19-OCT-16
Thallium (TI)         96.5         %         80-120         19-OCT-16           Tin (Sn)         90.6         %         80-120         19-OCT-16           Uranium (U)         98.8         %         80-120         19-OCT-16           Vanadium (V)         101.4         %         80-120         19-OCT-16           Zinc (Zn)         92.7         %         80-120         19-OCT-16           WG2413085-1         MB           Antimony (Sb)         <0.10	Selenium (Se)			87.4		%		80-120	19-OCT-16
Tin (Sn)         90.6         %         80-120         19-OCT-16           Uranium (U)         98.8         %         80-120         19-OCT-16           Vanadium (V)         101.4         %         80-120         19-OCT-16           Zinc (Zn)         92.7         %         80-120         19-OCT-16           WG2413085-1         MB         Natimony (Sb)         0.1         19-OCT-16           Arsenic (As)         <0.10	Silver (Ag)			99.9		%		80-120	19-OCT-16
Uranium (U)         98.8         %         80-120         19-OCT-16           Vanadium (V)         101.4         %         80-120         19-OCT-16           Zinc (Zn)         92.7         %         80-120         19-OCT-16           WG2413085-1 MB         MB         Sextence (As)         0.10         mg/kg         0.1         19-OCT-16           Arsenic (As)         <0.10	Thallium (TI)			96.5		%		80-120	19-OCT-16
Vanadium (V)         101.4         %         80-120         19-OCT-16           Zinc (Zn)         92.7         %         80-120         19-OCT-16           WG2413085-1         MB         MB         MB         MB           Antimony (Sb)         <0.10	Tin (Sn)			90.6		%		80-120	19-OCT-16
Zinc (Zn)         92.7         %         80-120         19-OCT-16           WG2413085-1 MB Antimony (Sb)         MB Antimony (Sb)         <0.10         mg/kg         0.1         19-OCT-16           Arsenic (As)         <0.10         mg/kg         0.1         19-OCT-16           Barium (Ba)         <0.50         mg/kg         0.1         19-OCT-16           Beryllium (Be)         <0.10         mg/kg         0.1         19-OCT-16           Cadmium (Cd)         <0.020         mg/kg         0.5         19-OCT-16           Chromium (Cr)         <0.50         mg/kg         0.5         19-OCT-16           Cobalt (Co)         <0.10         mg/kg         0.5         19-OCT-16           Copper (Cu)         <0.50         mg/kg         0.5         19-OCT-16           Lead (Pb)         <0.50         mg/kg         0.5         19-OCT-16           Molybdenum (Mo)         <0.10         mg/kg         0.5         19-OCT-16           Nickel (Ni)         <0.50         mg/kg         0.5         19-OCT-16           Selenium (Se)         <0.20         mg/kg         0.1         19-OCT-16           Silver (Ag)         <0.10         mg/kg         0.05         19-OCT-16 </td <td>Uranium (U)</td> <td></td> <td></td> <td>98.8</td> <td></td> <td>%</td> <td></td> <td>80-120</td> <td>19-OCT-16</td>	Uranium (U)			98.8		%		80-120	19-OCT-16
WG2413085-1 Antimony (Sb)         MB           Antimony (Sb)         <0.10	Vanadium (V)			101.4		%		80-120	19-OCT-16
Antimony (Sb)       <0.10	Zinc (Zn)			92.7		%		80-120	19-OCT-16
Arsenic (As)	WG2413085-1 MB								
Barium (Ba)       <0.50	Antimony (Sb)			<0.10		mg/kg		0.1	19-OCT-16
Beryllium (Be)       <0.10	Arsenic (As)			<0.10		mg/kg		0.1	19-OCT-16
Cadmium (Cd)       <0.020	• •			< 0.50		mg/kg		0.5	19-OCT-16
Chromium (Cr)       <0.50	Beryllium (Be)			<0.10		mg/kg		0.1	19-OCT-16
Cobalt (Co)       <0.10	Cadmium (Cd)			<0.020		mg/kg		0.02	19-OCT-16
Copper (Cu)       <0.50	Chromium (Cr)			<0.50		mg/kg		0.5	19-OCT-16
Lead (Pb)       <0.50	Cobalt (Co)			<0.10		mg/kg		0.1	19-OCT-16
Molybdenum (Mo)       <0.10	Copper (Cu)			< 0.50		mg/kg		0.5	19-OCT-16
Nickel (Ni)       <0.50	Lead (Pb)			< 0.50		mg/kg		0.5	19-OCT-16
Selenium (Se)       <0.20	Molybdenum (Mo)			<0.10		mg/kg		0.1	19-OCT-16
Silver (Ag)       <0.10	Nickel (Ni)			<0.50		mg/kg		0.5	19-OCT-16
Thallium (TI)       <0.050	Selenium (Se)			<0.20		mg/kg		0.2	19-OCT-16
Tin (Sn) <2.0 mg/kg 2 19-OCT-16	Silver (Ag)			<0.10		mg/kg		0.1	19-OCT-16
Tin (Sn) <2.0 mg/kg 2 19-OCT-16	Thallium (TI)			< 0.050		mg/kg		0.05	19-OCT-16
	Tin (Sn)			<2.0		mg/kg		2	
	Uranium (U)			< 0.050		mg/kg			



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-VA	A Soil							
Batch R357	74978							
	МВ		-0.00					10 OOT 10
Vanadium (V)			<0.20		mg/kg		0.2	19-OCT-16
Zinc (Zn)			<2.0		mg/kg		2	19-OCT-16
MET-TCLP-ICP-VA	Soil							
	75007							
WG2412893-1 Antimony (Sb)-Le	MB achable		<1.0		mg/L		4	19-OCT-16
Arsenic (As)-Lead			<1.0		mg/L		1	
Barium (Ba)-Lead			<2.5		mg/L		2.5	19-OCT-16 19-OCT-16
Beryllium (Be)-Lea			<0.025		mg/L		0.025	19-OCT-16
Boron (B)-Leacha			<0.50		mg/L		0.025	19-OCT-16
Cadmium (Cd)-Le			<0.050		mg/L		0.05	19-OCT-16
Calcium (Ca)-Lea			<2.0		mg/L		2	19-OCT-16
Chromium (Cr)-Le			<0.25		mg/L		0.25	19-OCT-16
Cobalt (Co)-Leach			<0.050		mg/L		0.05	19-OCT-16
Copper (Cu)-Lead			<0.050		mg/L		0.05	19-OCT-16
Iron (Fe)-Leachab			<0.15		mg/L		0.15	19-OCT-16
Lead (Pb)-Leacha			<0.25		mg/L		0.25	19-OCT-16
Magnesium (Mg)-			<0.50		mg/L		0.5	19-OCT-16
Nickel (Ni)-Leach			<0.25		mg/L		0.25	19-OCT-16
Selenium (Se)-Le			<1.0		mg/L		1	19-OCT-16
Silver (Ag)-Leach			< 0.050		mg/L		0.05	19-OCT-16
Thallium (TI)-Lead			<1.0		mg/L		1	19-OCT-16
Vanadium (V)-Lea			<0.15		mg/L		0.15	19-OCT-16
Zinc (Zn)-Leachal	ble		<0.50		mg/L		0.5	19-OCT-16
WG2412893-4	МВ							
Antimony (Sb)-Le	achable		<1.0		mg/L		1	19-OCT-16
Arsenic (As)-Lead	chable		<1.0		mg/L		1	19-OCT-16
Barium (Ba)-Leac	chable		<2.5		mg/L		2.5	19-OCT-16
Beryllium (Be)-Le	achable		< 0.025		mg/L		0.025	19-OCT-16
Boron (B)-Leacha	able		<0.50		mg/L		0.5	19-OCT-16
Cadmium (Cd)-Le	eachable		< 0.050		mg/L		0.05	19-OCT-16
Calcium (Ca)-Lea	chable		<2.0		mg/L		2	19-OCT-16
Chromium (Cr)-Le	eachable		<0.25		mg/L		0.25	19-OCT-16
Cobalt (Co)-Leach	hable		< 0.050		mg/L		0.05	19-OCT-16



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-ICP-VA	Soil							
Batch R3575007								
WG2412893-4 MB			0.050					
Copper (Cu)-Leachable			<0.050		mg/L		0.05	19-OCT-16
Iron (Fe)-Leachable			<0.15		mg/L		0.15	19-OCT-16
Lead (Pb)-Leachable			<0.25		mg/L		0.25	19-OCT-16
Magnesium (Mg)-Leachab	ole		<0.50		mg/L		0.5	19-OCT-16
Nickel (Ni)-Leachable			<0.25		mg/L		0.25	19-OCT-16
Selenium (Se)-Leachable			<1.0		mg/L		1	19-OCT-16
Silver (Ag)-Leachable			<0.050		mg/L		0.05	19-OCT-16
Thallium (TI)-Leachable			<1.0		mg/L		1	19-OCT-16
Vanadium (V)-Leachable			<0.15		mg/L		0.15	19-OCT-16
Zinc (Zn)-Leachable			< 0.50		mg/L		0.5	19-OCT-16
WG2412893-2 MS		L1842325-3						
Antimony (Sb)-Leachable			107.1		%		50-140	19-OCT-16
Arsenic (As)-Leachable			104.8		%		50-140	19-OCT-16
Barium (Ba)-Leachable			111.8		%		50-140	19-OCT-16
Beryllium (Be)-Leachable			102.7		%		50-140	19-OCT-16
Boron (B)-Leachable			104.7		%		50-140	19-OCT-16
Cadmium (Cd)-Leachable	•		98.1		%		50-140	19-OCT-16
Calcium (Ca)-Leachable			104.4		%		50-140	19-OCT-16
Chromium (Cr)-Leachable	•		99.2		%		50-140	19-OCT-16
Cobalt (Co)-Leachable			103.5		%		50-140	19-OCT-16
Copper (Cu)-Leachable			104.4		%		50-140	19-OCT-16
Iron (Fe)-Leachable			99.2		%		50-140	19-OCT-16
Lead (Pb)-Leachable			99.1		%		50-140	19-OCT-16
Magnesium (Mg)-Leachab	ole		106.6		%		50-140	19-OCT-16
Nickel (Ni)-Leachable			99.8		%		50-140	19-OCT-16
Selenium (Se)-Leachable			107.4		%		50-140	19-OCT-16
Silver (Ag)-Leachable			106.7		%		50-140	19-OCT-16
Thallium (TI)-Leachable			100.3		%		50-140	19-OCT-16
Vanadium (V)-Leachable			108.7		%		50-140	19-OCT-16
Zinc (Zn)-Leachable			99.4		%		50-140	19-OCT-16
IOISTURE-VA	Soil							
Batch R3570637								
WG2410130-2 LCS								
Moisture			99.0		%		90-110	13-OCT-16
WG2410130-1 MB								



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Test Test	Matrix	Reference	Result C	Qualifier Units	RPD	Limit	Analyzed
MOISTURE-VA	Soil						
Batch R3570637 WG2410130-1 MB Moisture			<0.25	%		0.25	13-OCT-16
PAH-TMB-H/A-MS-VA	Soil						
Batch R3571825							
WG2410134-2 LCS Acenaphthene			89.4	%		60-130	18-OCT-16
Acenaphthylene			84.2	%		60-130	18-OCT-16
Anthracene			76.2	%		60-130	18-OCT-16
Benz(a)anthracene			86.9	%		60-130	18-OCT-16
Benzo(a)pyrene			100.1	%		60-130	18-OCT-16
Benzo(b)fluoranthene			91.8	%		60-130	18-OCT-16
Benzo(g,h,i)perylene			76.6	%		60-130	18-OCT-16
Benzo(k)fluoranthene			96.0	%		60-130	18-OCT-16
Chrysene			98.3	%		60-130	18-OCT-16
Dibenz(a,h)anthracene			85.5	%		60-130	18-OCT-16
Fluoranthene			91.8	%		60-130	18-OCT-16
Fluorene			83.6	%		60-130	18-OCT-16
Indeno(1,2,3-c,d)pyrene			82.3	%		60-130	18-OCT-16
2-Methylnaphthalene			76.4	%		60-130	18-OCT-16
Naphthalene			85.5	%		50-130	18-OCT-16
Phenanthrene			88.4	%		60-130	18-OCT-16
Pyrene			93.1	%		60-130	18-OCT-16
WG2410134-1 MB							
Acenaphthene			<0.0050	mg/kg		0.005	18-OCT-16
Acenaphthylene			< 0.0050	mg/kg		0.005	18-OCT-16
Anthracene			<0.0040	mg/kg		0.004	18-OCT-16
Benz(a)anthracene			<0.010	mg/kg		0.01	18-OCT-16
Benzo(a)pyrene			<0.010	mg/kg		0.01	18-OCT-16
Benzo(b)fluoranthene			< 0.010	mg/kg		0.01	18-OCT-16
Benzo(g,h,i)perylene			<0.010	mg/kg		0.01	18-OCT-16
Benzo(k)fluoranthene			<0.010	mg/kg		0.01	18-OCT-16
Chrysene			<0.010	mg/kg		0.01	18-OCT-16
Dibenz(a,h)anthracene			<0.0050	mg/kg		0.005	18-OCT-16
Fluoranthene			<0.010	mg/kg		0.01	18-OCT-16
Fluorene			< 0.010	mg/kg		0.01	18-OCT-16



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Test I	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TMB-H/A-MS-VA	Soil							
Batch R3571825								
WG2410134-1 MB								
Indeno(1,2,3-c,d)pyrene			<0.010		mg/kg		0.01	18-OCT-16
2-Methylnaphthalene			<0.010		mg/kg		0.01	18-OCT-16
Naphthalene			<0.010		mg/kg		0.01	18-OCT-16
Phenanthrene			<0.010		mg/kg		0.01	18-OCT-16
Pyrene			<0.010		mg/kg		0.01	18-OCT-16
Surrogate: Naphthalene da	В		88.2		%		50-130	18-OCT-16
Surrogate: Acenaphthene	d10		88.4		%		60-130	18-OCT-16
Surrogate: Phenanthrene	d10		88.9		%		60-130	18-OCT-16
Surrogate: Chrysene d12			103.3		%		60-130	18-OCT-16
VH-HSFID-VA	Soil							
Batch R3570411								
WG2411082-3 DUP		L1842325-15						
Volatile Hydrocarbons (VH	l6-10)	<100	<100	RPD-NA	mg/kg	N/A	40	17-OCT-16
WG2411082-2 LCS Volatile Hydrocarbons (VH	16-10)		119.6		%		70-130	17-OCT-16
WG2411082-1 MB Volatile Hydrocarbons (VH	16-10)		<100		mg/kg		100	17-OCT-16
VOC-HSMS-VA	Soil							
Batch R3569528								
WG2411082-3 DUP		L1842325-15	-0.050	DDD 114	ma/lea	<b>N</b> 1/ <b>A</b>	50	45 OOT 40
Bromodichloromethane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
Bromoform		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
Carbon Tetrachloride		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
Chlorobenzene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
Dibromochloromethane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
Chloroethane		<0.10	<0.10	RPD-NA	mg/kg	N/A	50	15-OCT-16
Chloroform		<0.10	<0.10	RPD-NA	mg/kg	N/A	50	15-OCT-16
Chloromethane		<0.10	<0.10	RPD-NA	mg/kg	N/A	50	15-OCT-16
1,2-Dichlorobenzene		<0.050	< 0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
1,1-Dichloroethane		<0.050	< 0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
1,2-Dichloroethane		<0.050	< 0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
1,1-Dichloroethylene		<0.050	< 0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
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est	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-HSMS-VA	Soil							
Batch R3569528								
WG2411082-3 DUP		L1842325-15						
trans-1,2-Dichloroethylene	9	<0.050	<0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
Dichloromethane		<0.30	<0.30	RPD-NA	mg/kg	N/A	50	15-OCT-16
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
cis-1,3-Dichloropropylene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
trans-1,3-Dichloropropyler	ne	<0.050	< 0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
1,1,1,2-Tetrachloroethane		< 0.050	< 0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
1,1,2,2-Tetrachloroethane		< 0.050	< 0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
Tetrachloroethylene		< 0.050	< 0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
1,1,1-Trichloroethane		< 0.050	< 0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
1,1,2-Trichloroethane		< 0.050	< 0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
Trichloroethylene		< 0.010	< 0.010	RPD-NA	mg/kg	N/A	50	15-OCT-16
Trichlorofluoromethane		<0.10	<0.10	RPD-NA	mg/kg	N/A	50	15-OCT-16
Vinyl Chloride		<0.10	<0.10	RPD-NA	mg/kg	N/A	50	15-OCT-16
WG2411082-2 LCS Bromodichloromethane			100.0		9/		70.400	45 OOT 40
			108.2		%		70-130	15-OCT-16
Bromoform			111.4				70-130	15-OCT-16
Carbon Tetrachloride			114.6		%		70-130	15-OCT-16
Chlorobenzene			109.5		%		70-130	15-OCT-16
Dibromochloromethane			112.1		%		70-130	15-OCT-16
Chloroethane			90.8		%		60-140	15-OCT-16
Chloroform			112.5		%		70-130	15-OCT-16
Chloromethane			72.9		%		60-140	15-OCT-16
1,2-Dichlorobenzene			108.9		%		70-130	15-OCT-16
1,3-Dichlorobenzene			108.6		%		70-130	15-OCT-16
1,4-Dichlorobenzene			109.4		%		70-140	15-OCT-16
1,1-Dichloroethane			106.7		%		70-130	15-OCT-16
1,2-Dichloroethane			107.6		%		70-130	15-OCT-16
1,1-Dichloroethylene			102.2		%		70-130	15-OCT-16
cis-1,2-Dichloroethylene			105.0		%		70-130	15-OCT-16
trans-1,2-Dichloroethylene	)		105.1		%		70-130	15-OCT-16
Dichloromethane			103.0		%		60-140	15-OCT-16
1,2-Dichloropropane			106.4		%		70-130	15-OCT-16
cis-1,3-Dichloropropylene			96.8		%		70-130	15-OCT-16
trans-1,3-Dichloropropyler	ne		98.2		%		70-130	15-OCT-16



Workorder: L1842325 Report Date: 26-OCT-16 Page 10 of 12

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-HSMS-VA	Soil							
Batch R35695	528							
WG2411082-2 LC	_							
1,1,1,2-Tetrachloroe			112.5		%		70-130	15-OCT-16
1,1,2,2-Tetrachloroe	thane		105.6		%		70-130	15-OCT-16
Tetrachloroethylene			109.0		%		70-130	15-OCT-16
1,1,1-Trichloroethan			114.7		%		70-130	15-OCT-16
1,1,2-Trichloroethan	е		104.9		%		70-130	15-OCT-16
Trichloroethylene			107.9		%		70-130	15-OCT-16
Trichlorofluorometha	ine		105.2		%		60-140	15-OCT-16
Vinyl Chloride			76.7		%		60-140	15-OCT-16
WG2411082-1 MB Bromodichlorometha			<0.050		ma/ka		0.05	45 OOT 40
Bromoform	arie		<0.050		mg/kg		0.05	15-OCT-16
Carbon Tetrachloride	_				mg/kg		0.05	15-OCT-16
	3		<0.050		mg/kg		0.05	15-OCT-16
Chlorobenzene			<0.050		mg/kg		0.05	15-OCT-16
Dibromochlorometha	ane		<0.050		mg/kg		0.05	15-OCT-16
Chloroethane			<0.10		mg/kg		0.1	15-OCT-16
Chloroform			<0.10		mg/kg		0.1	15-OCT-16
Chloromethane			<0.10		mg/kg		0.1	15-OCT-16
1,2-Dichlorobenzene			<0.050		mg/kg		0.05	15-OCT-16
1,3-Dichlorobenzene			<0.050		mg/kg		0.05	15-OCT-16
1,4-Dichlorobenzene	)		<0.050		mg/kg		0.05	15-OCT-16
1,1-Dichloroethane			<0.050		mg/kg		0.05	15-OCT-16
1,2-Dichloroethane			<0.050		mg/kg		0.05	15-OCT-16
1,1-Dichloroethylene			<0.050		mg/kg		0.05	15-OCT-16
cis-1,2-Dichloroethyl			<0.050		mg/kg		0.05	15-OCT-16
trans-1,2-Dichloroeth	nylene		<0.050		mg/kg		0.05	15-OCT-16
Dichloromethane			<0.30		mg/kg		0.3	15-OCT-16
1,2-Dichloropropane			<0.050		mg/kg		0.05	15-OCT-16
cis-1,3-Dichloroprop			< 0.050		mg/kg		0.05	15-OCT-16
trans-1,3-Dichloropro			< 0.050		mg/kg		0.05	15-OCT-16
1,1,1,2-Tetrachloroe	thane		< 0.050		mg/kg		0.05	15-OCT-16
1,1,2,2-Tetrachloroe	thane		< 0.050		mg/kg		0.05	15-OCT-16
Tetrachloroethylene			< 0.050		mg/kg		0.05	15-OCT-16
1,1,1-Trichloroethan	е		< 0.050		mg/kg		0.05	15-OCT-16
1,1,2-Trichloroethan	е		< 0.050		mg/kg		0.05	15-OCT-16



Workorder: L1842325 Report Date: 26-OCT-16

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-HSMS-VA	Soil							
Batch R35695								
WG2411082-1 MB Trichloroethylene	}		<0.010		mg/kg		0.01	15-OCT-16
Trichlorofluorometha	ine		<0.10		mg/kg		0.1	15-OCT-16
Vinyl Chloride			<0.10		mg/kg		0.1	15-OCT-16
VOC7-L-HSMS-VA	Soil						0.1	10 001 10
Batch R35695								
WG2411082-3 DU		L1842325-15						
Benzene		<0.0050	<0.0050	RPD-NA	mg/kg	N/A	40	15-OCT-16
Ethylbenzene		<0.015	< 0.015	RPD-NA	mg/kg	N/A	40	15-OCT-16
Methyl t-butyl ether (	MTBE)	<0.20	<0.20	RPD-NA	mg/kg	N/A	40	15-OCT-16
Styrene		< 0.050	< 0.050	RPD-NA	mg/kg	N/A	40	15-OCT-16
Toluene		< 0.050	< 0.050	RPD-NA	mg/kg	N/A	40	15-OCT-16
meta- & para-Xylene	•	< 0.050	<0.050	RPD-NA	mg/kg	N/A	40	15-OCT-16
ortho-Xylene		<0.050	< 0.050	RPD-NA	mg/kg	N/A	40	15-OCT-16
WG2411082-2 LC	s		107.7		%		70-130	15-OCT-16
Ethylbenzene			111.8		%		70-130	15-OCT-16
Methyl t-butyl ether (	MTDE\		107.6		%		70-130	
Styrene	WITBL)		112.0		%			15-OCT-16
Toluene			109.4		%		70-130 70-130	15-OCT-16
meta- & para-Xylene			115.0		%			15-OCT-16
ortho-Xylene	•		112.8		%		70-130	15-OCT-16
•			112.0		/0		70-130	15-OCT-16
WG2411082-1 MB Benzene	•		< 0.0050		mg/kg		0.005	15-OCT-16
Ethylbenzene			< 0.015		mg/kg		0.015	15-OCT-16
Methyl t-butyl ether (	MTBE)		<0.20		mg/kg		0.2	15-OCT-16
Styrene	,		< 0.050		mg/kg		0.05	15-OCT-16
Toluene			< 0.050		mg/kg		0.05	15-OCT-16
meta- & para-Xylene			< 0.050		mg/kg		0.05	15-OCT-16
ortho-Xylene			<0.050		mg/kg		0.05	15-OCT-16
5.110 /1/10110			10.000		9/119		0.00	13-001-10

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Workorder: L1842325 Report Date: 26-OCT-16 Page 12 of 12

#### Legend:

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

#### Sample Parameter Qualifier Definitions:

LCSD Laboratory Control Sample Duplicate

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

#### **Hold Time Exceedances:**

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

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

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

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



#### ANALYTICAL REPORT

Report Date: October 24, 2016

Phone: (604) 253-4188

E-mail: selam.worku@ALSGlobal.com

ALS Laboratory Group 8081 Lougheed Hwy Suite 100 Burnaby, BC V5A 1W9 CANADA

Selam Worku

Workorder: **34-1629157**Client Project ID: L1842325 101716

Purchase Order: L1842325 Project Manager: Paul Pope

#### **Analytical Results**

Sample ID: 16-TP204-0.4M			Collected: 10/11/2016
Lab ID: 1629157001	Samp	Received: 10/17/2016	
Method: Illicit Drugs by LC/MS		Media: Bulk	Analyzed: 10/20/2016
	Sampli	ing Parameter: Volume Not Provide	d
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	ND	0.10	

#### Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method	Analyst	Peer Review
Illiait Down by LC/MC	/S/ Trenton Stewart	/S/ Thomas Bosch
Illicit Drugs by LC/MS	10/24/2016 13:16	10/24/2016 14:19

#### **Laboratory Contact Information**

ALS Environmental 960 W Levoy Drive

Salt Lake City, Utah 84123

Phone: (801) 266-7700

Email: alslt.lab@ALSGlobal.com

Web: www.alsslc.com

ADDRESS 960 West LeVoy Drive, Salt Lake City, Utah, 84123 USA | PHONE +1 801 266 7700 | FAX +1 801 268 9992 ALS GROUP USA, CORP. An ALS Limited Company

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#### ANALYTICAL REPORT

Workorder: **34-1629157** Client Project ID: L1842325 101716

Purchase Order: L1842325 Project Manager: Paul Pope

#### **General Lab Comments**

The results provided in this report relate only to the items tested.

Samples were received in acceptable condition unless otherwise noted.

Samples have not been blank corrected unless otherwise noted.

This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ANAB (DoD ELAP)	ADE-1420	http://www.anab.org/accredited-organizations/
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
ndustrial Hygiene	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
	Washington	C596-16	http://www.ecy.wa.gov/programs/eap/labs/index.html
	Kansas	E-10416	http://www.kdheks.gov/lipo/index.html
Industrial Hygiene	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
	Washington	C596-16	http://www.ecy.wa.gov/programs/eap/labs/index.html
Lead Testing:			
CPSC	ANAB (ISO 17025, CPSC)	ADE-1420	http://www.anab.org/accredited-organizations/
Soil, Dust, Paint ,Air	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

#### **Definitions**

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.

LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.

ND = Not Detected, Testing result not detected above the LOD or LOQ.

NA = Not Applicable.

- < This testing result is less than the numerical value.
- () This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.

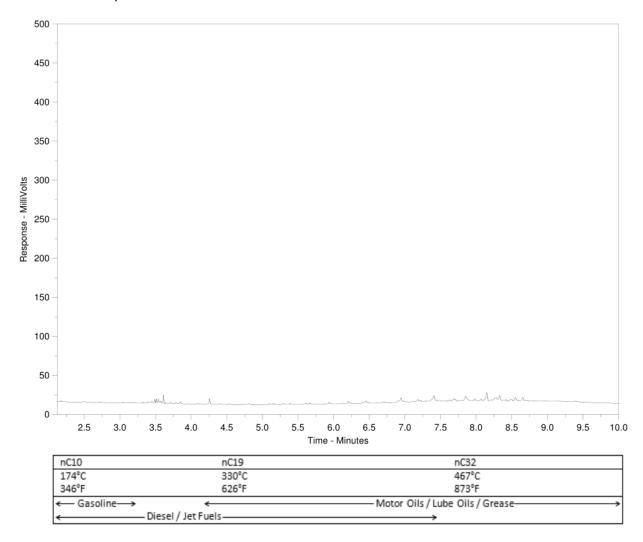
Page 2 of 2 Page 246 of 255 CTZ-2017-70351

Mon, 10/24/16 2:25 PM IHREP-V12.3

<sup>\*\*</sup> No result could be reported, see sample comments for details.



ALS Sample ID: L1842325-1 Client Sample ID: 16-TP201-0.6M



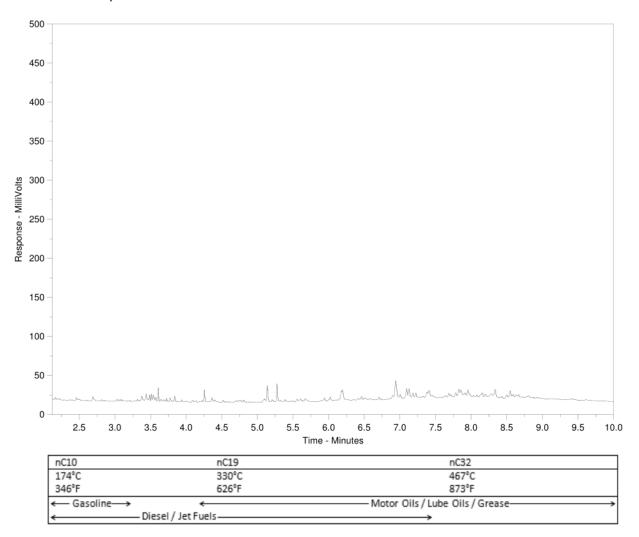
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

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



ALS Sample ID: L1842325-3 Client Sample ID: 16-TP202-0.5M



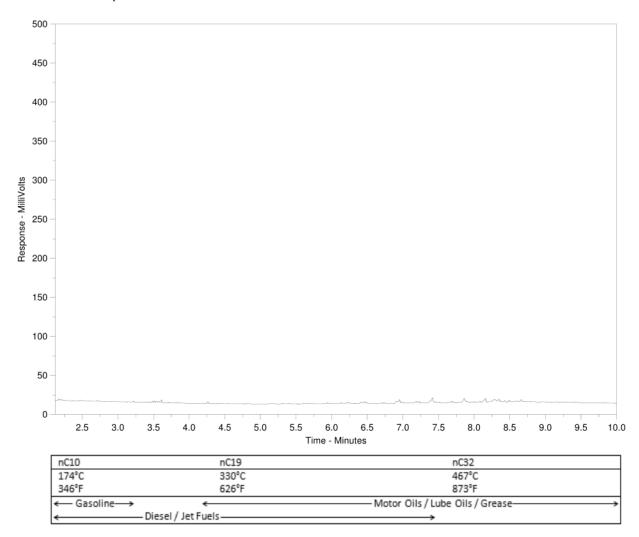
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

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



ALS Sample ID: L1842325-6 Client Sample ID: 16-TP203-0.5M



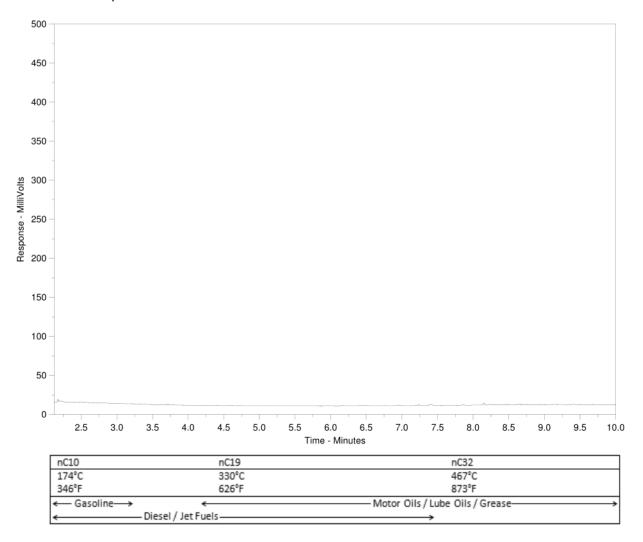
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

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



ALS Sample ID: L1842325-9 Client Sample ID: 16-TP204-0.4M



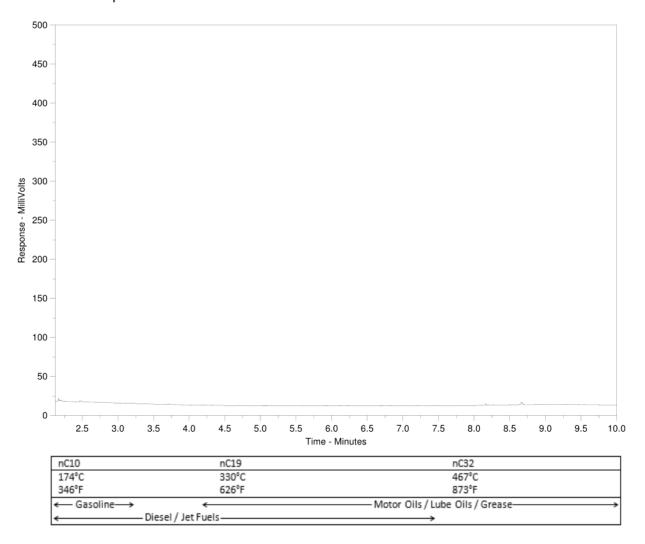
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

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



ALS Sample ID: L1842325-10 Client Sample ID: 16-TP205-0.4M



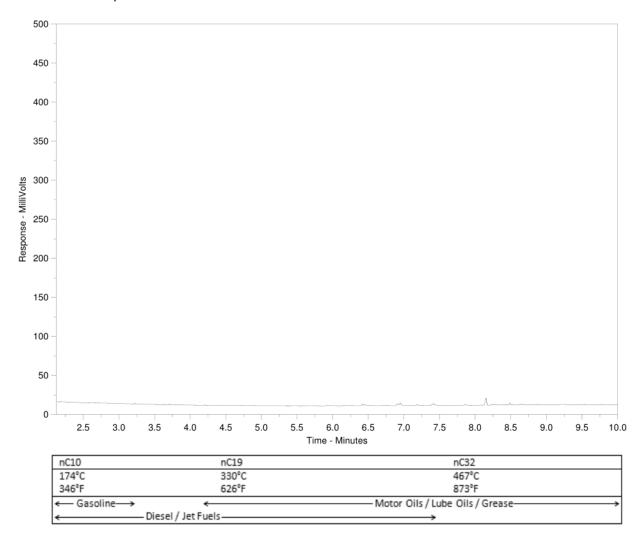
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

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



ALS Sample ID: L1842325-12 Client Sample ID: 16-TP206-0.5M



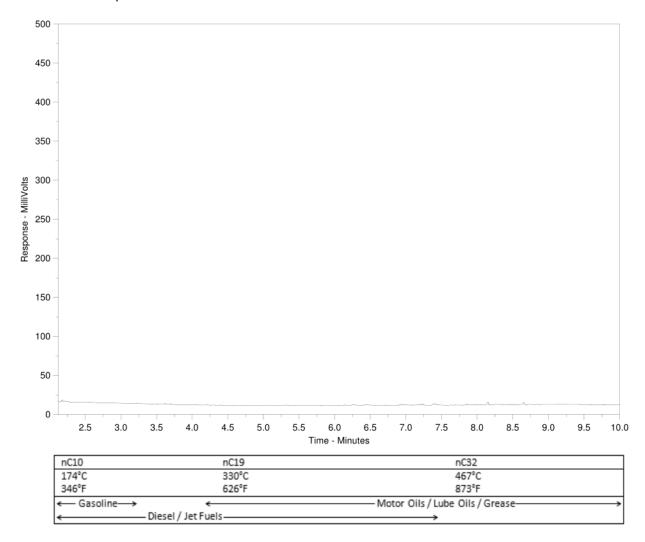
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

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



ALS Sample ID: L1842325-15 Client Sample ID: 16-TP107-0.5M



The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

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

# ALS) Environmental

#### Chain of Custody / Analytical Request Form Canada Toll Free: 1 800 668 9878 www.alsglobal.com

COC#				
	Page	<u>·1</u>	of	2

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Contact:	Joshu Bocskei	Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT																	
Address:	329-1095 McKenzie Av	re, Victoria, BC		Email 1: jbocskei@pinchinwest.com © Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TA													AT .		
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# ALS Environmental

#### Chain of Custody / Analytical Request Form Canada Toll Free: 1 800 668 9878 www.alsglobal.com

COC#	

Page 2 of 2

Report To	port To				Report Format / Distribution					Service Requested (Rush for routine analysis subject to availability)										
Company:	npany: Pinchin West Ltd.				Standard Other					Regular (Standard Turnaround Times - Business Days)										
Contact:	Joshu Bocskei			✓ PDF Excel Digital Fax O Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT																
Address:	329-1095 McKenzie A	ve, Victoria, Bo	<u> </u>	Email 1:	Email 1: <u>(bocskel@pinchinwest.com</u>								Confirm	TAT						
					jquamme@ping	hinwest.com		O Same Day or Weekend Emergency - Contact ALS to Confirm TAT											⅃	
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