

### **DRAFT**

# **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

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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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#### 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

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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.

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Template: Master Report for Remedial Excavation, EDR, July 28, 2016

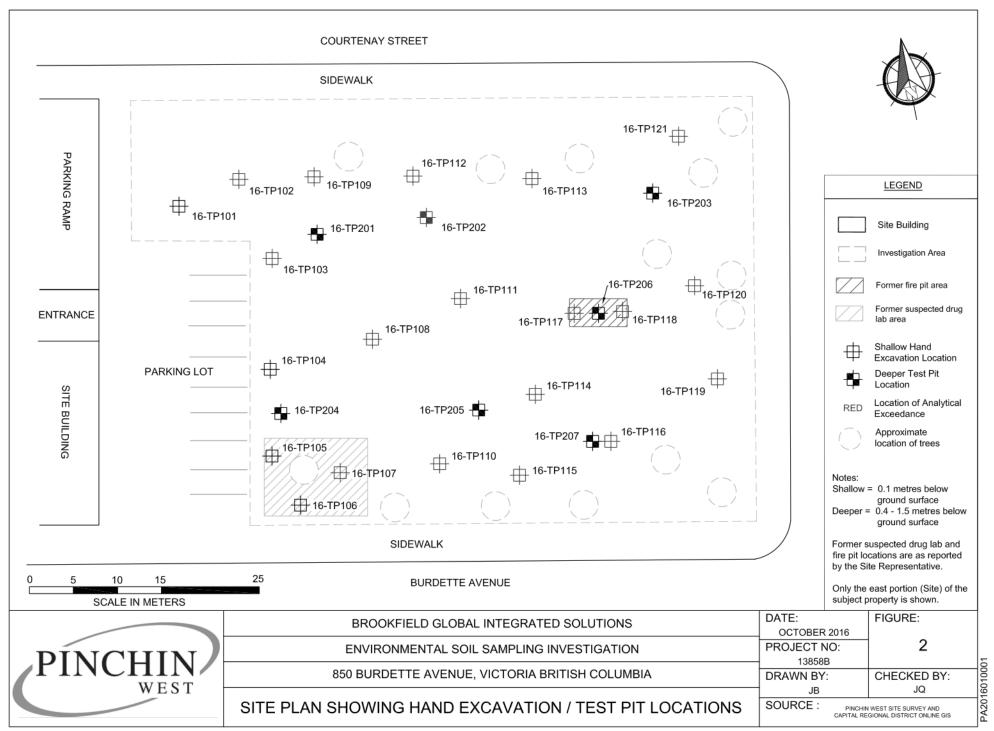


APPENDIX I Figures





CLIENT NA	ME:								
BROOKFIELD GLOBAL INTERGRATED SOLUTIONS									
PROJECT	NAME:								
	ENVIRO	DNMENTAL SOIL SAME	PLING INVE	STIGATIO	N				
LOCATION	:								
	850 BURDETT AVENUE, VICTORIA, BRITISH COLUMBIA								
TITLE:					FIGURE NO.				
		KEY MAP							
DATE: OCT	PROJECT NO.: 13858B	IMAGE SOURCE: OPENSTREETMAPS.ORG	DRAWN BY:	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	Symbol	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
5-			1.50			
		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		SAMPLE			
Depth	Symbol	Description	Depth (m)	Sample Name	Sample Type	Vapour (ppm)	
oft m		Ground Surface	0.00				
		Brown SILTY SAND, trace gravel, loose, dry, no staining, no odours.	0.20				
1-	]:	Brown SAND and GRAVEL, some silt and cobbles, dense, dry, no staining, no odours.					
- - -				0.5	Grab	0.1	
2	1:						
3-							
-1  -  -	•			1.0	Grab	0.0	
4					Grab		
			1.50	1.5		0.0	
5-		End of Test Pit	1.00				
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 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			
- 7 .	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

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-		Park brown SILTY SAND, dry, no staining, no odours.  Yellow brown GRAVELLY SAND, some cobbles, trace silt, loose, dry, no staining, no odours.  Bedrock refusal at 0.6 m	0.30	0.4	Grab	0.0
	• •	Bedrock refusal at 0.6 m				
2-			0.60			
		End of Test Pit				
3-						
1 1						
1 - [ '						
-						
-						
4-						
-						
1 +						
5-						
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1 1						
1 1						
1 1						
6-						
1						
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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			
		Dark brown SANDY SILT, dense, damp, no staining, no odours.	0.15			
1-		Yellow brown GRAVELLY SAND, trace silt, dense, dry, no 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
	$\perp$		1.10			
4 - 5 - 6 - 6 -		End of Test Pit				

Excavated By: Don Mann Excavating

Excavation Method: Track-Mounted Excavator

Excavation Date: 10/11/2016

Logged By: J. Bocskei

**Sheet:** 1 of 1

Checked By: M. Andersen

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Project No.: 13858B

Project: Environmental Soil Sampling Investigation

Client: Brookfield Global Integrated Solutions

Location: 850 Burdett Avenue, Victoria, British Columbia



	SUBSURFACE PROFILE		SAMPLE				
Depth Symbol	Description	Depth (m)	Sample Name	Sample Type	Vapour (ppm)		
0 m	Ground Surface	0.00					
1-	Brown SANDY SILT, some gravel, loose, dry, no staining, no odours.	0.40					
	Yellow brown GRAVELLY SAND, trace silt, trace cobbles,						
	dense, dry, no staining, no odours.		0.5	Grab	0.1		
2-							
3-							
- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1			1.0	Grab	0.0		
4-							
				Grab			
		1.50	1.5		0.0		
5-	End of Test Pit						
-							
-							
-[							
6-							
			<u> </u>				

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			
		Dark brown SILTY SAND, some gravel, loose, dry, no staining, no odours.	0.25			
1-		Yellow brown GRAVELLY SAND, some silt, dense, dry, no staining, no odours.		0.5	Orah	0.0
2				0.5	Grab	0.0
3-				1.0	Grab	0.0
4-			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 Standards**	CSR Soil Relocation	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109
- Turumeter	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  $\mu g/g$  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

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### 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

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HEPHs = Heavy EPH, corrected for PAH

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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 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

Davamatav	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
Total Vulgaria	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

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

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	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  $\mu g/g$  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:

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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 Standards*	CSR Commercial Soil Standards**	CSR Soil Relocation Standards***	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
				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

XXX.XX

= 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 Commercial Soil Standards*	16-TP101	16-TP102	16-TP103	16-TP104	16-TP105	16-TP106	16-TP107	16-TP108	16-TP109	16-TP110
Parameter	CSh Parkianu Son Standarus	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
Farameter	Con Farkiana 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	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-
Parameter	CSR Parkland Soil	CSR Commercial Soil	10-17-111-0.1W	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 Standar

<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



= 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

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

Downwater.	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

	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



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

Victoria BC V8P 2L5

Client Phone: S.22

# **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

Environmental 🔈

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#### ALS ENVIRONMENTAL ANALYTICAL REPORT 19-OCT-16 19:37 (MT) Version: FINAL REV. 2

	Sample ID Description Sampled Date Sampled Time Client ID	L1826440-1 SOIL 07-SEP-16 16-TP101	L1826440-2 SOIL 07-SEP-16	L1826440-3 SOIL 07-SEP-16 16-TP103	L1826440-4 SOIL 07-SEP-16 16-TP104	L1826440-5 SOIL 07-SEP-16
Outside in a						
Grouping	Analyte					
SOIL	M. I (61)					
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
Leachable Anions & 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
.0313	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> 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	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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	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
10013	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.

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### ALS ENVIRONMENTAL ANALYTICAL REPORT

L1826440-16 L1826440-17 L1826440-18 L1826440-19 L1826440-20 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-TP116-0.1M 16-TP117-0.1M 16-TP118-0.1M 16-TP119-0.1M 16-TP120-0.1M Client ID Grouping **Analyte** SOIL Moisture (%) **Physical Tests** 8.07 12.7 11.8 9.38 10.4 pH (1:2 soil:water) (pH) 5.75 5.73 5.89 5.51 5.57 Total Phosphate As P (mg/kg) Leachable Anions 2.34 2.91 2.74 2.20 3.57 & Nutrients **Saturated Paste** Ammonia, Total Leachable (as N) (mg/kg) 0.797 2.13 0.660 2.79 2.62 **Extractables** % Saturation (%) 65.0 72.1 67.4 66.4 67.0 **Bacteriological** E. coli (MPN/g) 4 3 <2 <2 <2 Tests Coliform Bacteria - Fecal (MPN/g) 3 4 <2 <2 <2 Coliform Bacteria - Total (MPN/g) >1775.55 79 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 0.503 0.677 0.554 Chromium (Cr) (mg/kg) 37.1 34.3 39.2 31.4 36.1 Cobalt (Co) (mg/kg) 9.66 6.87 8.30 8.21 9.47 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) 1.01 0.64 0.81 0.86 0.87 Nickel (Ni) (mg/kg) 29.6 23.9 26.3 21.5 18.1 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 0.883 1.12 1.15 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> 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	L1826440-8 SOIL 07-SEP-16 16-TP108	L1826440-9 SOIL 07-SEP-16	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

 $<sup>^{\</sup>star}$  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	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

 $<sup>^{\</sup>star}$  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						
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> 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 trans-1,3-Dichloropropylene (mg/kg) Volatile Organic < 0.050 < 0.050 < 0.050 < 0.050 < 0.050 Compounds 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 (%) 97.4 99.0 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 96.6 111.5 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 Acenaphthene (mg/kg) < 0.050 0.172 < 0.050 < 0.050 < 0.050 **Aromatic Hydrocarbons** 

<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	•					
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	SURF ND 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		

 $<sup>^{\</sup>star}$  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						
Polycyclic Aromatic Hydrocarbons	Acenaphthylene (mg/kg)	<0.050	<0.050	0.208	0.080	<0.050
	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)	0.121	2.23	1.13	0.523	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	0.113	0.097	<0.050	<0.050
	Phenanthrene (mg/kg)	0.058	2.06	0.621	0.300	0.077
	Pyrene (mg/kg)	0.107	1.78	1.15	0.534	0.127
	Surrogate: Acenaphthene d10 (%)	89.7	91.5	94.3	90.0	88.1
	Surrogate: Chrysene d12 (%)	101.5	100.5	103.2	103.7	96.2
	Surrogate: Naphthalene d8 (%)	91.8	93.0	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 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> Please refer to the Reference Information section for an explanation of any qualifiers detected.

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# ALS ENVIRONMENTAL ANALYTICAL REPORT

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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

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# ALS ENVIRONMENTAL ANALYTICAL REPORT

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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				
	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

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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	•					
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				
	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		

# Reference Information

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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)

#### Reference Information

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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

#### Reference Information

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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 Volati

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:** 

### **Reference Information**

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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.



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Client: Pinchin West LTD.

# 300 - 1095 McKenzie Avenue

Victoria BC V8P 2L5

Contact: Joshu Bocskei

est	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
LCOHOL-7-CL	Soil							
Batch R3	549865							
WG2390238-2	DUP	L1826440-1						
Ethanol		<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						
Ethanol		<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 Ethanol	LCS		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	LCS							
Ethanol			87.7		%		70-130	16-SEP-16
Isobutanol			90.3		%		70-130	16-SEP-16
Isopropanol			91.8		%		70-130	16-SEP-16
Methanol			93.4		%		70-130	16-SEP-16
Pentanol			88.6		%		70-130	16-SEP-16
n-Butanol			90.0		%		70-130	16-SEP-16
sec-Butanol			90.7		%		70-130	16-SEP-16
<b>WG2390238-1</b> Ethanol	МВ		<10		mg/kg		10	15-SEP-16
Isobutanol			<10		mg/kg		10	15-SEP-16
ioobatanoi			<10		mg/kg		10	13-3EF-16



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Pentano	Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
Methano	ALCOHOL-7-CL		Soil							
Methanol		3549865								
Pentanol		MB			<0.50		mg/kg		0.5	15-SEP-16
New Note	Pentanol									15-SEP-16
Sec Butanol	n-Butanol				<10					15-SEP-16
Ethanol	sec-Butanol				<10				10	15-SEP-16
Sobutanol		МВ			<10		mg/kg		10	15-SEP-16
Sopropanol	Isobutanol				<10					15-SEP-16
Methanol	Isopropanol				<10				10	15-SEP-16
Pentanol					<0.50				0.5	15-SEP-16
No	Pentanol				<10					15-SEP-16
Sec-Butanor   Soil   Soil	n-Butanol				<10		mg/kg		10	15-SEP-16
Batch	sec-Butanol				<10		mg/kg		10	15-SEP-16
WG2385664-1 E. coli         DUP VG2385664-3 E. coli         L1826440-21 143         RPD-NA         MPN/g         N/A         65         09-SEI           WG2385664-2 E. coli         MB E. coli         L1826440-1 143         DUP-H         MPN/g         182         65         09-SEI           WG2385664-2 E. coli         MB E. coli         Soil         V         MPN/g         182         65         09-SEI           Batch         R3549115         Soil         ALS PHC2 RM         BALS PHC2 RM         PH-10-19         BALS PHC2 RM         Soil         PH-10-19         MB         PH-10-19	COLI-COLI-VA		Soil							
Red	Batch R3	3549949								
E. coli 143 7 DUP-H MPN/g 182 65 09-SEI  WG2385664-2 MB E. coli		DUP			<2	RPD-NA	MPN/g	N/A	65	09-SEP-16
E. coli		DUP			7	DUP-H	MPN/g	182	65	09-SEP-16
Batch R3549115         WG2389820-3 EPH10-19       IRM EPH10-19       ALS PHC2 RM FR354911       87.3       %       70-130       17-SEI         EPH19-32       IRM EPH10-19       ALS PHC2 RM FR35491       97.5       %       70-130       17-SEI         EPH19-32       IRM FR35491       ALS PHC2 RM FR35491       97.5       %       70-130       17-SEI         WG2389820-1 EPH10-19       MB       200       mg/kg       200       17-SEI         EPH19-32       MB       200       mg/kg       200       17-SEI         WG2389829-1 EPH10-19       MB       200       mg/kg       200       17-SEI         EPH10-19       200       mg/kg       200       17-SEI         EPH19-32       200       17-SEI		МВ			<2		MPN/g		2	09-SEP-16
Batch R3549115         WG2389820-3   IRM EPH10-19       ALS PHC2 RM EPH10-19       87.3       %       70-130       17-SEI         EPH19-32   EPH10-19   EPH10	PH-TUMB-FID-VA	A	Soil							
EPH10-19       87.3       %       70-130       17-SEI         EPH19-32       98.7       %       70-130       17-SEI         WG2389829-3 IRM       ALS PHC2 RM       97.5       %       70-130       17-SEI         EPH10-19       97.5       %       70-130       17-SEI         EPH19-32       MB       200       17-SEI         EPH19-32       4200       mg/kg       200       17-SEI         WG2389829-1 EPH10-19       4200       mg/kg       200       17-SEI         EPH10-19       4200       mg/kg       200       17-SEI         EPH10-19       4200       mg/kg       200       17-SEI         EPH19-32       4200       mg/kg       200       17-SEI										
EPH19-32       98.7       %       70-130       17-SEI         WG2389829-3       IRM       ALS PHC2 RM       97.5       %       70-130       17-SEI         EPH19-32       108.8       %       70-130       17-SEI         WG2389820-1       MB       200       17-SEI         EPH19-32       200       17-SEI         WG2389829-1       MB       200       17-SEI         EPH10-19       200       mg/kg       200       17-SEI         EPH19-32       200       17-SEI		IRM		ALS PHC2 RN			%		70-130	17-SEP-16
WG2389829-3         IRM         ALS PHC2 RM           EPH10-19         97.5         %         70-130         17-SEI           EPH19-32         108.8         %         70-130         17-SEI           WG2389820-1         MB         200         17-SEI           EPH10-19         <200	EPH19-32				98.7					17-SEP-16
EPH19-32     108.8     %     70-130     17-SEI       WG2389820-1 EPH10-19     MB       EPH19-32     <200		IRM		ALS PHC2 RM	1					
WG2389820-1     MB       EPH10-19     <200										
EPH10-19       <200		MP			100.0		70		70-130	17-SEP-16
WG2389829-1         MB           EPH10-19         <200		MB			<200		mg/kg		200	17-SEP-16
EPH10-19       <200	EPH19-32				<200		mg/kg		200	17-SEP-16
		МВ			<200		mg/kg		200	17-SEP-16
COLI-DRY-MTF-VA Soil	EPH19-32				<200		mg/kg		200	17-SEP-16
	COLI-DRY-MTF-V	/A	Soil							



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		************	L102044		port Bato. 1	0 001 10	rage 3 01 20		
Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed	
FCOLI-DRY-MTF-VA	Soil								
Batch R3549951									
WG2385663-1 DUP		L1826440-21							
Coliform Bacteria - Feca	d	<2	<2	RPD-NA	MPN/g	N/A	65	09-SEP-16	
WG2385663-3 DUP		L1826440-1							
Coliform Bacteria - Feca	ıl	143	7	DUP-H	MPN/g	182	65	09-SEP-16	
WG2385663-2 MB									
Coliform Bacteria - Feca	ll .		<2		MPN/g		2	09-SEP-16	
HG-200.2-CVAF-VA	Soil								
Batch R3550090									
WG2389811-4 CRM		VA-NRC-STSI							
Mercury (Hg)			78.7		%		70-130	16-SEP-16	
WG2389811-2 DUP		L1826440-12			_				
Mercury (Hg)		0.150	0.115		mg/kg	26	40	16-SEP-16	
WG2389811-3 LCS			100.1		0.4				
Mercury (Hg)			106.4		%		70-130	16-SEP-16	
WG2389811-1 MB			0.0050					40.055.40	
Mercury (Hg)			<0.0050		mg/kg		0.005	16-SEP-16	
Batch R3551758									
WG2389830-4 CRM		VA-NRC-STSI			%		70.400	10.050.10	
Mercury (Hg)			99.6		%		70-130	19-SEP-16	
WG2389830-3 LCS Mercury (Hg)			87.9		%		70-130	10 CED 16	
			07.5		76		70-130	19-SEP-16	
WG2389830-1 MB Mercury (Hg)			<0.0050		mg/kg		0.005	19-SEP-16	
			<b>VO.0000</b>		mg/ng		0.003	19-3LF-10	
HG-TCLP-CVAFS-VA	Soil								
Batch R3574890									
WG2412893-1 MB			<0.0010		ma/l		0.004	10 OOT 10	
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	
			<0.0010		mg/L		0.001	19-001-16	
MET-200.2-CCMS-VA	Soil								
Batch R3550352		VA NDO OTO							
WG2389811-4 CRM Antimony (Sb)		VA-NRC-STSI	94.6		%		70-130	16-SEP-16	
Arsenic (As)			83.1		%		70-130	16-SEP-16	
Barium (Ba)			87.9		%		70-130		
Beryllium (Be)			91.8		%			16-SEP-16	
							70-130	16-SEP-16	
Cadmium (Cd)			105.6		%		70-130	16-SEP-16	



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-VA	Soil							
Batch R3550352								
WG2389811-4 CRM		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			
Barium (Ba)			<0.10		mg/kg		0.1	16-SEP-16
Beryllium (Be)			<0.50		mg/kg mg/kg		0.5 0.1	16-SEP-16 16-SEP-16



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MET-200.2-CCMS-VA   Soil   Batch   R3550352   WG2389311-1   MB   Cadmium (Cd)	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MC2389811-1 MB	MET-200.2-CCMS-VA	Soil							
Cadmium (Cd)	Batch R3550352	!							
Chromium (Cr)				0.000					
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         0.5         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           Selenium (Se)         -0.20         mg/kg         0.1         16-SEP-16           Selenium (Se)         -0.20         mg/kg         0.1         16-SEP-16           Thallium (Ti)         -0.050         mg/kg         0.0         16-SEP-16           Tin (Sn)         -2.0         mg/kg         0.05         16-SEP-16           Uranium (U)         -0.050         mg/kg         0.2         16-SEP-16           Uranium (V)         -0.20         mg/kg         0.2         16-SEP-16           WG239811-2         DUP         L1826440-12         Amaidum (Y)         2.0         0.0         16-SEP-16           Arsenic (As)         3.88         3.98         mg/kg         2.5         <									
Copper (Cu)	, ,								
Lead (Pb)									
Molybdenum (Mo)         <0.10         mg/kg         0.1         16-SEP-16           Nickel (Ni)         <0.50									
Nickel (Ni)									
Selenium (Se)         <0.20         mg/kg         0.2         16-SEP-16           Silver (Ag)         <0.10									
Silver (Ag)									16-SEP-16
Thallium (TI)         <0.050         mg/kg         0.05         16-SEP-16           Tin (Sn)         <2.0	, ,					mg/kg			16-SEP-16
Tin (Sn)         <2.0         mg/kg         2         16-SEP-16           Uranium (U)         <0.050	,					mg/kg		0.1	16-SEP-16
Uranium (U)         <0.050         mg/kg         0.05         16-SEP-16           Vanadium (V)         <0.20	Thallium (TI)					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         R3552404         WG2389811-2         DUP         L1826440-12         SURP-16         SURP-16           Arsenic (As)         3.88         3.98         mg/kg         5.1         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           Chomium (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           Molybdenum (Mo)         0.52         0.56         mg/kg         7.4         40         19-SEP-16           Molybdenum (Mo)         0.52         0.56	Tin (Sn)			<2.0		mg/kg		2	16-SEP-16
Batch         R3552404           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           Chomium (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           Selenium (Se)	, ,			<0.050		mg/kg		0.05	16-SEP-16
Batch R3552404           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           Selenium (Se)         0.24	Vanadium (V)			<0.20		mg/kg		0.2	16-SEP-16
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           Selenium (Se)         0.24         0.27         mg/kg	Zinc (Zn)			<2.0		mg/kg		2	16-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         Copper (Cu)       32.1       30.7       mg/kg       8.1       40       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       9.7       30       19-SEP-16         Selenium (Se)       0.24       0.27       mg/kg       6.1       40       19-SEP-16 <td>WG2389811-2 DUP</td> <td></td> <td></td> <td>1.11</td> <td></td> <td>mg/kg</td> <td>5.1</td> <td>30</td> <td>19-SEP-16</td>	WG2389811-2 DUP			1.11		mg/kg	5.1	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 (Tl)       0.068       0.078       mg/kg       13       30       19-SEP-16     <			3.88	3.98					
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 (Tl)       0.068       0.078       mg/kg       13       30       19-SEP-16         Uranium (U)       0.854       0.782       mg/kg       8.8       30       19-SEP-16	Barium (Ba)		133	131					
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       3.2       30       19-SEP-16			0.31	0.29					
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 (Tl)         0.068         0.078         mg/kg         13         30         19-SEP-16           Tin (Sn)         2.4         2.1         mg/kg         8.8         30         19-SEP-16           Uranium (U)         0.854         0.782         mg/kg         8.8         30         19-SEP-16           Vanadi				0.379					
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 (Tl)       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	Chromium (Cr)		29.9	27.8					
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 (Tl)       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	Cobalt (Co)		7.99	8.11			1.5	30	
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 (Tl)       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	Copper (Cu)		32.1	30.7		mg/kg		30	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 (Tl)       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	Lead (Pb)		197	182				40	
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	Molybdenum (Mo)		0.52	0.56			7.4	40	
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 (Tl)       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				22.0					
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									
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	, ,								
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									
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									
Vanadium (V) 57.0 55.2 mg/kg 3.2 30 19-SEP-16	, ,								
	Vanadium (V)								
	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-STS						
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	e		<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	9		< 0.025		mg/L		0.025	19-OCT-16
Boron (B)-Leachable			< 0.50		mg/L		0.5	19-OCT-16
Cadmium (Cd)-Leachabl	е		< 0.050		mg/L		0.05	19-OCT-16
Calcium (Ca)-Leachable			<2.0		mg/L		2	19-OCT-16
Chromium (Cr)-Leachabl	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



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Test 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)-Leachable		<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
WG2412893-4 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		< 0.050		mg/L		0.05	19-OCT-16
Calcium (Ca)-Leachable		<2.0		mg/L		2	19-OCT-16
Chromium (Cr)-Leachable		<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)-Leachable		< 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
MOISTURE-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							



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-VA	Soil							
Batch R3549427								
WG2389793-1 MB Moisture			<0.25		%		0.25	15-SEP-16
WG2389793-5 MB Moisture			<0.25		%		0.25	15-SEP-16
Batch R3549440								
WG2389722-2 LCS Moisture			99.7		%		90-110	15-SEP-16
WG2389722-6 LCS Moisture			100.1		%		90-110	15-SEP-16
WG2389722-1 MB Moisture			<0.25		%		0.25	15-SEP-16
WG2389722-5 MB Moisture			<0.25		%		0.25	15-SEP-16
NH3-PASTE-F-VA	Soil							
Batch R3554832								
WG2389515-1 MB Ammonia, Total Leachabl	le (as N)		0.065	В	mg/L		0.01	22-SEP-16
WG2389549-1 MB								
Ammonia, Total Leachable	le (as N)		< 0.010		mg/L		0.01	22-SEP-16
PAH-TMB-H/A-MS-VA	Soil							
Batch R3550065								
WG2389820-2 LCS								
Acenaphthene			99.95		%		60-130	19-SEP-16
Acenaphthylene			96.9		%		60-130	19-SEP-16
Anthracene			94.2		%		60-130	19-SEP-16
Benz(a)anthracene			106.9		%		60-130	19-SEP-16
Benzo(a)pyrene			105.5		%		60-130	19-SEP-16
Benzo(b)fluoranthene			106.8		%		60-130	19-SEP-16
Benzo(g,h,i)perylene			99.6		%		60-130	19-SEP-16
Benzo(k)fluoranthene			100.4		%		60-130	19-SEP-16
Chrysene			102.9		%		60-130	19-SEP-16
Dibenz(a,h)anthracene			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,d)pyrene			97.9		%		60-130	19-SEP-16
2-Methylnaphthalene			85.8		%		60-130	19-SEP-16



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								igo 10 01 20
Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TMB-H/A-MS-VA	Soil							
Batch R3550065								
WG2389820-2 LCS								
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 Acenaphthene			<0.0050		ma/ka		0.005	10 CED 10
Acenaphthylene			<0.0050		mg/kg		0.005	19-SEP-16
					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 d	8		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								
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
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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		************	***ONOIGO: E1020440			3-001-10	rage 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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		Workerder.	Troport Bate. 19-001-10					rage 13 of 20		
est	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed		
/FA-WP	Soil									
Batch R355146	3									
WG2390164-3 DUP		L1826440-1								
Butyric Acid		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	16-SEP-16		
Isobutyric Acid		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	16-SEP-16		
Valeric Acid		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	16-SEP-16		
Isovaleric Acid		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	16-SEP-16		
Caproic (Hexanoic) Ac	cid	<2.0	<2.0	RPD-NA	mg/kg	N/A	30	16-SEP-16		
WG2390164-7 DUP Formic Acid		<b>L1826440-21</b> <300	<300	RPD-NA	mg/kg	N/A	30	16-SEP-16		
Acetic Acid		<10	<10	RPD-NA	mg/kg	N/A	30	16-SEP-16		
Propionic Acid		<5.0	<5.0	RPD-NA	mg/kg	N/A	30	16-SEP-16		
Butyric Acid		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	16-SEP-16		
Isobutyric Acid		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	16-SEP-16		
Valeric Acid		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	16-SEP-16		
Isovaleric Acid		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	16-SEP-16		
Caproic (Hexanoic) Ad	cid	<2.0	<2.0	RPD-NA	mg/kg	N/A	30	16-SEP-16		
WG2390164-2 LCS										
Formic Acid			127.4		%		70-130	17-SEP-16		
Acetic Acid			115.4		%		70-130	17-SEP-16		
Propionic Acid			95.8		%		70-130	17-SEP-16		
Butyric Acid			96.3		%		70-130	17-SEP-16		
Isobutyric Acid			95.9		%		70-130	17-SEP-16		
Valeric Acid			90.9		%		70-130	17-SEP-16		
Isovaleric Acid			92.1		%		70-130	17-SEP-16		
Caproic (Hexanoic) Ad	cid		88.9		%		70-130	17-SEP-16		
WG2390164-6 LCS										
Formic Acid			95.1		%		70-130	16-SEP-16		
Acetic Acid			117.4		%		70-130	16-SEP-16		
Propionic Acid			77.1		%		70-130	16-SEP-16		
Butyric Acid			75.6		%		70-130	16-SEP-16		
Isobutyric Acid			83.1		%		70-130	16-SEP-16		
Valeric Acid			72.6		%		70-130	16-SEP-16		
Isovaleric Acid			75.5		%		70-130	16-SEP-16		
Caproic (Hexanoic) Ad	cid		78.4		%		70-130	16-SEP-16		
WG2390164-1 MB			-20		ma/ke		00	10.055.45		
Formic Acid			<30		mg/kg		30	16-SEP-16		
Acetic Acid			<10		mg/kg		10	16-SEP-16		



VH-HSFID-VA

Soil

# **Quality Control Report**

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est		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
FA-WP		Soil							
Batch	R3551463								
WG2390164-									
Propionic Aci	id			<5.0		mg/kg		5	16-SEP-16
Butyric Acid				<1.0		mg/kg		1	16-SEP-16
Isobutyric Ac	id			<1.0		mg/kg		1	16-SEP-16
Valeric Acid				<1.0		mg/kg		1	16-SEP-16
Isovaleric Ac	id			<1.0		mg/kg		1	16-SEP-16
Caproic (Hex	(anoic) Acid			<2.0		mg/kg		2	16-SEP-16
WG2390164-9 Formic Acid	5 MB			<30		mg/kg		30	16 CED 16
Acetic Acid				<10		mg/kg		10	16-SEP-16
Propionic Acid	id			<5.0					16-SEP-16
•	iu			<1.0		mg/kg		5	16-SEP-16
Butyric Acid	id					mg/kg		1	16-SEP-16
Isobutyric Ac Valeric Acid	ila			<1.0		mg/kg		1	16-SEP-16
Isovaleric Acid	:			<1.0		mg/kg		1	16-SEP-16
				<1.0		mg/kg		1	16-SEP-16
Caproic (Hex				<2.0		mg/kg		2	16-SEP-16
WG2390164-4 Formic Acid	4 MS		L1826440-2	117.6		%		70-130	18-SEP-16
Acetic Acid				122.8		%		70-130	18-SEP-16
Propionic Aci	id			118.1		%		70-130	18-SEP-16
Butyric Acid				124.1		%		70-130	18-SEP-16
Isobutyric Ac	id			125.9		%		70-130	18-SEP-16
Valeric Acid				128.8		%		70-130	18-SEP-16
Isovaleric Ac	id			125.9		%		70-130	18-SEP-16
Caproic (Hex	(anoic) Acid			123.8		%		70-130	18-SEP-16
WG2390164-	,		L1826440-21					70.00	10 021 10
Formic Acid			21020410 21	124.1		%		70-130	18-SEP-16
Acetic Acid				117.2		%		70-130	18-SEP-16
Propionic Aci	id			102.5		%		70-130	18-SEP-16
Butyric Acid				118.6		%		70-130	18-SEP-16
Isobutyric Ac	id			117.6		%		70-130	18-SEP-16
Valeric Acid				112.7		%		70-130	18-SEP-16
Isovaleric Aci	id			107.4		%		70-130	18-SEP-16
Caproic (Hex	(anoic) Acid			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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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-HSMS-VA	Soil							
Batch R35	549065							
WG2390654-2	LCS							
Bromodichlorom	iethane		83.8		%		70-130	18-SEP-16
Bromoform			65.2	LCS-ND	%		70-130	18-SEP-16
Carbon Tetrachl	oride		102.5		%		70-130	18-SEP-16
Chlorobenzene			99.8		%		70-130	18-SEP-16
Dibromochlorom	nethane		82.4		%		70-130	18-SEP-16
Chloroethane			80.8		%		60-140	18-SEP-16
Chloroform			102.6		%		70-130	18-SEP-16
Chloromethane			67.4		%		60-140	18-SEP-16
1,2-Dichlorobena	zene		99.4		%		70-130	18-SEP-16
1,3-Dichlorobena	zene		96.9		%		70-130	18-SEP-16
1,4-Dichlorobena	zene		95.3		%		70-140	18-SEP-16
1,1-Dichloroetha	ane		95.4		%		70-130	18-SEP-16
1,2-Dichloroetha	ane		99.8		%		70-130	18-SEP-16
1,1-Dichloroethy	lene		96.7		%		70-130	18-SEP-16
cis-1,2-Dichloroe	ethylene		98.7		%		70-130	18-SEP-16
trans-1,2-Dichlor	roethylene		91.0		%		70-130	18-SEP-16
Dichloromethane	е		98.7		%		60-140	18-SEP-16
1,2-Dichloroprop	pane		90.8		%		70-130	18-SEP-16
cis-1,3-Dichlorop	oropylene		50.1	LCS-ND	%		70-130	18-SEP-16
trans-1,3-Dichlor	ropropylene		38.6	LCS-ND	%		70-130	18-SEP-16
1,1,1,2-Tetrachlo	oroethane		92.1		%		70-130	18-SEP-16
1,1,2,2-Tetrachlo	oroethane		84.3		%		70-130	18-SEP-16
Tetrachloroethyl	ene		109.0		%		70-130	18-SEP-16
1,1,1-Trichloroet	thane		97.3		%		70-130	18-SEP-16
1,1,2-Trichloroet	thane		94.0		%		70-130	18-SEP-16
Trichloroethylene	е		101.4		%		70-130	18-SEP-16
Trichlorofluorom	ethane		105.8		%		60-140	18-SEP-16
Vinyl Chloride			70.9		%		60-140	18-SEP-16
WG2389563-1 Bromodichlorom	MB nethane		<0.050		mg/kg		0.05	16-SEP-16
Bromoform			< 0.050		mg/kg		0.05	16-SEP-16
Carbon Tetrachl	oride		<0.050		mg/kg		0.05	16-SEP-16
Chlorobenzene			<0.050		mg/kg		0.05	16-SEP-16
Dibromochlorom	nethane		<0.050		mg/kg		0.05	
DIDIOITIOCITIOIOIII	ion and		\0.030		mg/kg		0.05	16-SEP-16



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-HSMS-VA	Soil							
Batch R35490	65							
WG2389563-1 MB								
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-Dichlorobenzene			<0.050		mg/kg		0.05	16-SEP-16
1,3-Dichlorobenzene			<0.050		mg/kg		0.05	16-SEP-16
1,4-Dichlorobenzene			<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-Dichloroethylene			< 0.050		mg/kg		0.05	16-SEP-16
cis-1,2-Dichloroethyle	ene		< 0.050		mg/kg		0.05	16-SEP-16
trans-1,2-Dichloroeth	ylene		< 0.050		mg/kg		0.05	16-SEP-16
Dichloromethane			< 0.30		mg/kg		0.3	16-SEP-16
1,2-Dichloropropane			< 0.050		mg/kg		0.05	16-SEP-16
cis-1,3-Dichloropropy	rlene		< 0.050		mg/kg		0.05	16-SEP-16
trans-1,3-Dichloropro	pylene		< 0.050		mg/kg		0.05	16-SEP-16
1,1,1,2-Tetrachloroet	hane		< 0.050		mg/kg		0.05	16-SEP-16
1,1,2,2-Tetrachloroet	hane		< 0.050		mg/kg		0.05	16-SEP-16
Tetrachloroethylene			< 0.050		mg/kg		0.05	16-SEP-16
1,1,1-Trichloroethane	•		< 0.050		mg/kg		0.05	16-SEP-16
1,1,2-Trichloroethane	)		< 0.050		mg/kg		0.05	16-SEP-16
Trichloroethylene			< 0.010		mg/kg		0.01	16-SEP-16
Trichlorofluorometha	ne		<0.10		mg/kg		0.1	16-SEP-16
Vinyl Chloride			<0.10		mg/kg		0.1	16-SEP-16
WG2390654-1 MB								
Bromodichlorometha	ne		< 0.050		mg/kg		0.05	18-SEP-16
Bromoform			< 0.050		mg/kg		0.05	18-SEP-16
Carbon Tetrachloride	•		< 0.050		mg/kg		0.05	18-SEP-16
Chlorobenzene			< 0.050		mg/kg		0.05	18-SEP-16
Dibromochlorometha	ne		< 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-Dichlorobenzene			< 0.050		mg/kg		0.05	18-SEP-16
1,3-Dichlorobenzene			< 0.050		mg/kg		0.05	18-SEP-16



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		Workerder.			port Date.	0 001 10	1 6	ige 13 of 20
Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-HSMS-VA	Soil							
Batch R3549065	5							
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-Dichloroethylen	е		< 0.050		mg/kg		0.05	18-SEP-16
trans-1,2-Dichloroethyle	ene		< 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-Dichloropropyle	ne		< 0.050		mg/kg		0.05	18-SEP-16
trans-1,3-Dichloropropy	ylene		< 0.050		mg/kg		0.05	18-SEP-16
1,1,1,2-Tetrachloroetha	ane		< 0.050		mg/kg		0.05	18-SEP-16
1,1,2,2-Tetrachloroetha	ane		< 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
Trichlorofluoromethane			<0.10		mg/kg		0.1	18-SEP-16
Vinyl Chloride			<0.10		mg/kg		0.1	18-SEP-16
VOC-M2-HSMS-VA	Soil							
Batch R3549065	5							
WG2389563-3 DUP		L1826440-18						
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 (Mi		<20	<20	RPD-NA	mg/kg	N/A	50	16-SEP-16
Methyl isobutyl ketone	(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			72.5		%		70-130	16-SEP-16
Carbon Disulfide			71.2		%		70-130	16-SEP-16
6.11			87.9		%		70-130	16-SEP-16
2-Hexanone			07.3		70		70 100	10 021 10
2-Hexanone Methyl ethyl ketone (Mi	EK)		87.2		%		70-130	16-SEP-16



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Test N	Matrix Referen	ce 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 (MIB	BK)	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 (MI	BK)	< 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 (MI	BK)	< 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>L18264</b> <10	<b>40-1</b> <10	RPD-NA	mg/kg	N/A	50	15-SEP-16
WG2389093-5 DUP Ethyl ether	<b>L18264</b>	<b>40-21</b> <10	RPD-NA	mg/kg	N/A	50	16-SEP-16
WG2389093-3 LCS Ethyl ether	1.0	122.6	5	%			
-		122.0		/0		50-150	15-SEP-16
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		106.3		%		70-130	15-SEP-16
Surrogate: Toluene d8		100.3		%		70-130	15-SEP-16
Surrogate: 4-Bromofluorobenzene		99.1		%		70-130	15-SEP-16
WG2389093-4 MB		40					
Ethyl ether		<10		mg/kg		10	15-SEP-16
Surrogate: 1,2-Dichloroethane d4		121.4		%		70-130	15-SEP-16
Surrogate: Toluene d8		103.8		%		70-130	15-SEP-16
Surrogate: 4-Bromofluorobenzene		92.2		%		70-130	15-SEP-16
VOC7-L-HSMS-VA Soil							
Batch R3549065							
WG2389563-3 DUP	L1826440-18	0.0404					
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	
Methyl t-butyl ether (MTBE)		96.2		%		70-130	16-SEP-16
Styrene		88.9		%			16-SEP-16
Toluene		95.1		%		70-130	16-SEP-16
meta- & para-Xylene		95.9		%		70-130	16-SEP-16 16-SEP-16
ortho-Xylene		93.8		%		70-130	
•		33.0		/0		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
•		96.6				, 5 100	.0 021 10



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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.

Workorder: L1826440 Report Date: 19-OCT-16

ALS Product Description   In   Sampling Date   Date Processed   Rec. HT   Actual HT   Units   Qualific Staturated Paste Extractables	Hold Time Exceedances:	0						
Ammonia (as N) in Soil (Paste) by Fluor.	ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
1	•		, ,					
1	Ammonia (as N) in Soil (Pa	ste) by Fluor.						
2	, , ,			15-SEP-16 13:30	3	8	days	EHTL
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Workorder: L1826440 Report Date: 19-OCT-16 Page 25 of 26

#### Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifie
	טו	Sampling Date	Date Processed	nec. mi	Actual H1	UIIIIS	Quanne
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
	2	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
	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
Basis: ALS Laboratory Group Batch: NA Batch: LCMS/4606 (HBN: 177031)

Prepared By: NA Analyzed By: Thomas Bosch

#### Blank

LMB: 519225

Analyzed: 09/21/2016 00:00

Units: ug/sample

3 7			
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

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

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Analyte	Result	Target	% Rec	QC L	imits	Result	% Rec	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 Units: ug/sample

Analyte	Result	Target	% Rec	QC L	imits	Result	% Rec	RPD	QC Li	imits
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

Analysis: Illicit Drugs by LC/MS Limits: Historical/Performance Preparation: NA 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: u	g/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



Report Date: September 23, 2016

Phone: (604) 253-4188

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Selam Worku

CANADA

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

Purchase Order: L1826440

Project Manager Jessica Helland

Client Sample ID	Lab ID	Collect Date	Receive Date	Campling Cita
Client Sample ID				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

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ENVREP-V4.4



Workorder: 34-1626359

Client: ALS Environmental

Project Manager: Jessica Helland

### Analytical Results

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

Received: 09/16/2016 Lab ID: 1626359001 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: 1.0101 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 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: 1.0339 grams Batch: EIC/1715 (HBN: 177097) Percent Solid: 88.8 Analyzed: 09/22/2016 23:38 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-TP103 Sampling Site: L1826440 Collected: 09/07/2016

Received: 09/16/2016 Lab ID: 1626359003 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: 1.1363 grams 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

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

Sampling Site: L1826440 Collected: 09/07/2016 Sample ID: 16-TP104 Received: 09/16/2016 Lab ID: 1626359004 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) 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 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-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 Qual

Result (ug/g) RL (ug/g) 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 Batch: EIC/1713 (HBN: 177091) Initial: 1.1375 grams 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

#### 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

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Fri, 09/23/16 5:10 PM



Workorder: 34-1626359

Client: ALS Environmental

Project Manager: Jessica Helland

#### **Analytical Results**

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

Lab ID: 1626359013 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: 1.0867 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

 Preparation: EPA 300.0/SW 9056, Soil Prep Batch: EIC/1713 (HBN: 177091)
 Weight/Volume Initial: 1.0279 grams
 Analysis: EPA 300.0/SW 9056, Soil Batch: EIC/1715 (HBN: 177097)
 Instrument ID: IC06 Batch: EIC/1715 (HBN: 177097)

 Prepared: 09/22/2016
 Final: 10 mL
 Analyzed: 09/23/2016 05:54
 Report Basis: Dry

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

lodide <5.9 5.9 1

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

Lab ID: 1626359015 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)
 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

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

 lodide
 <5.8</td>
 5.8
 1

 Sample ID: 16-TP116-0.1M
 Sampling Site: L1826440
 Collected: 09/07/2016

 Lab ID: 1626359016
 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: 1.1123 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
 Result (ug/g)
 RL (ug/g)
 Dilution
 Qual

 lodide
 <5.5</td>
 5.5
 1



Workorder: 34-1626359

Client: ALS Environmental

Project Manager: Jessica Helland

#### **Analytical Results**

lodide

lodide

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

Lab ID: 1626359018

Matrix: Soil/Solid/Sediment

Sampling Site: L1826440

Media: Bulk

Sampling Parameter: NA

Collected: 09/07/2016

Received: 09/16/2016

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

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

Matrix: Soil/Solid/Sediment Sampling Parameter: NA

<5.6

<5.9

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

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

 Batch:
 EIC/1713 (HBN: 177091)
 Initial:
 1.0057 grams
 Batch:
 EIC/1715 (HBN: 177097)
 Percent Solid:
 88.9

 Prepared:
 09/22/2016
 Final:
 10 mL
 Analyzed:
 09/23/2016 09:29
 Report Basis:
 Dry

 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**

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

Lab ID: 1626359021 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:
 1.1214 grams
 Batch:
 EIC/1715 (HBN: 177097)
 Percent Solid:
 87.1

Prepared: 09/22/2016 Final: 10 mL Batch: EIC/1/15 (HBN: 17/097) Percent Solid: 87.1 Analyzed: 09/23/2016 09:56 Report Basis: Dry

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

 lodide
 <5.7</td>
 5.7
 1

#### Comments

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



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

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Selam Worku

Workorder: 34-1626358

Client Project ID: L1826440 091616

Purchase Order: L1826440

Project Manager: Jessica Helland

#### **Analytical Results**

<b>,</b>			
Sample ID: 16-TP101			Collected: 09/07/2016
Lab ID: 1626358001	Sampling Location: L1826440		Received: 09/16/2016
Method: Illicit Drugs by LC/MS	Media: Bulk Sampling 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-TP102			Collected: 09/07/2016
Lab ID: 1626358002	Sampling 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	<0.10	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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IHREP-V12.3



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	Sampling Location: L1826440		Received: 09/16/2016
Method: Illicit Drugs by LC/MS	od: Illicit Drugs by LC/MS  Media: Bulk Sampling Parameter: Volume Not Provided		Analyzed: 09/21/2016
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	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	Sampling 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

Purchase Order: L1826440
Project Manager: Jessica Helland

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Sample ID: 16-TP106			Collected: 09/07/2016
Lab ID: 1626358006	Sampling Location: L1826440		Received: 09/16/2016
Method: Illicit Drugs by LC/MS	Media: Bulk Sampling 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-TP107			Collected: 09/07/2016
Lab ID: 1626358007	Sampling Location: L1826440		Received: 09/16/2016
Method: Illicit Drugs by LC/MS	Media: Bulk Sampling 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-TP108</b>			Collected: 09/07/2016
Lab ID: 1626358008	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 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	



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	Sampling Location: L1826440		Received: 09/16/2016
Method: Illicit Drugs by LC/MS	lethod: Illicit Drugs by LC/MS  Media: Bulk Sampling Parameter: Volume Not Provided		Analyzed: 09/21/2016
Analyte	Result (ug/g)	RL (ug/g)	
Methamphetamine	<0.10	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	Media: Bulk Sampling 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>			Collected: 09/07/2016
Lab ID: 1626358011	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 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

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 Sampling Parameter: Volume Not Provided		Analyzed: 09/21/2016 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> Lab ID: 1626358014	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 I	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	



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-TP115-0.1M</b>			Collected: 09/07/2016
Lab ID: 1626358015	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	<0.10	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	<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-TP117-0.1M</b> Lab ID: 1626358017	Samp	oling Location: L1826440	Collected: 09/07/2016 Received: 09/16/2016
Method: Illicit Drugs by LC/MS	Sampli	Media: Bulk ing Parameter: Volume Not	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	



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

Project Manager: Jessica Helland

Allary tious i teodito			
Sample ID: <b>16-TP118-0.1M</b>			Collected: 09/07/2016
Lab ID: 1626358018	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: 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: <b>16-TP121-0.1M</b>			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 Provide	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	

#### 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
	/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 Phone: (801) 266-7700

960 W Levoy Drive 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**

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

#### **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.

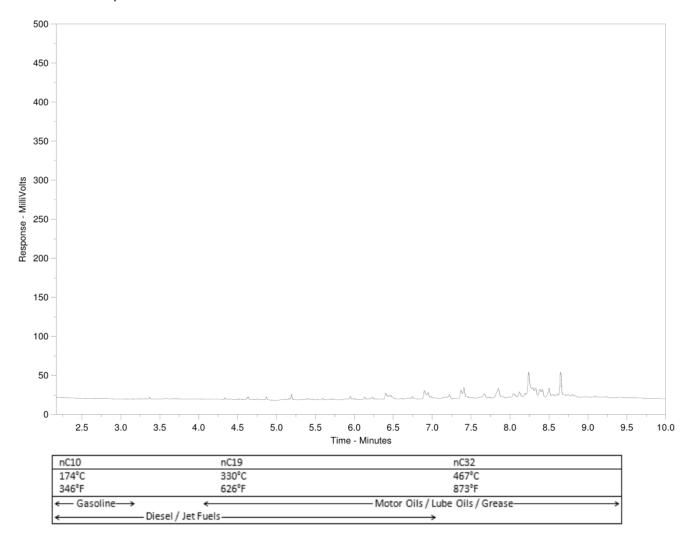
NA = Not Applicable.

- < 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



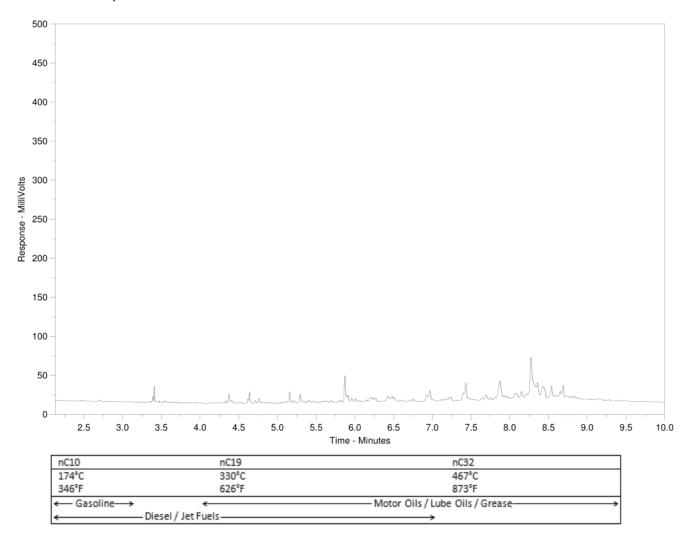
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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



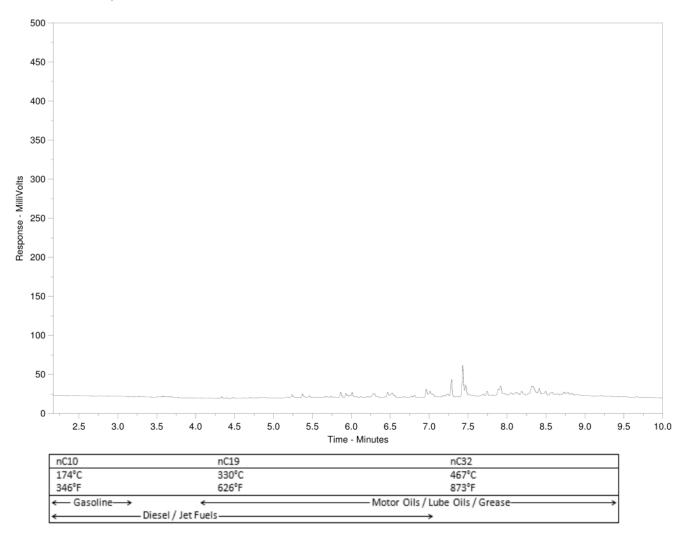
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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



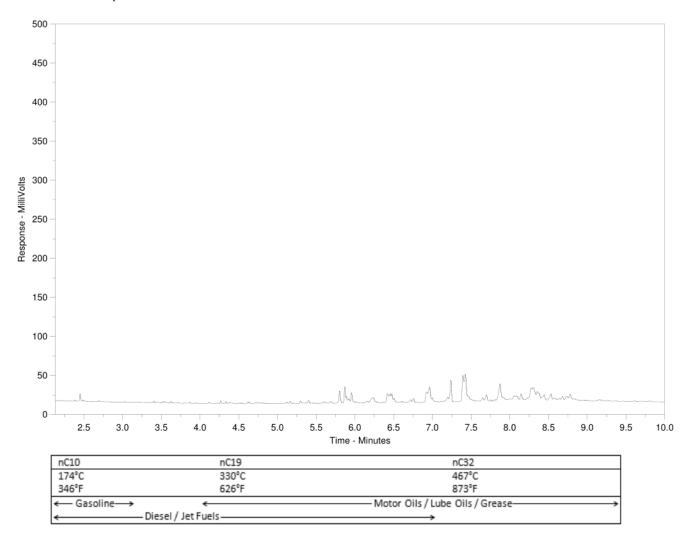
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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



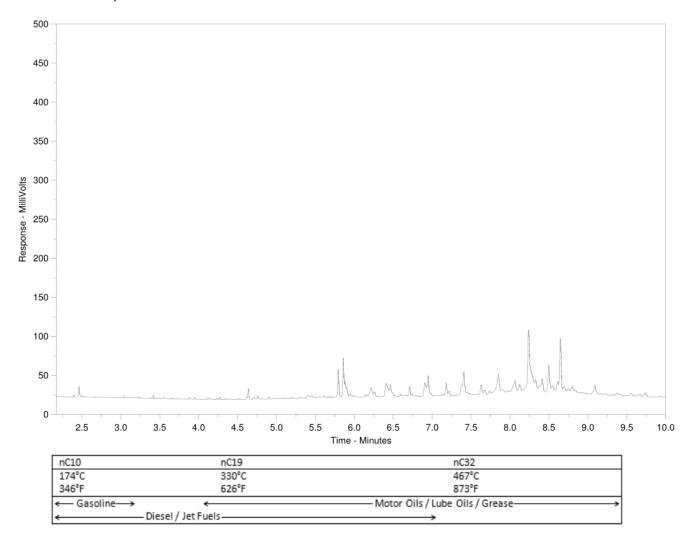
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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



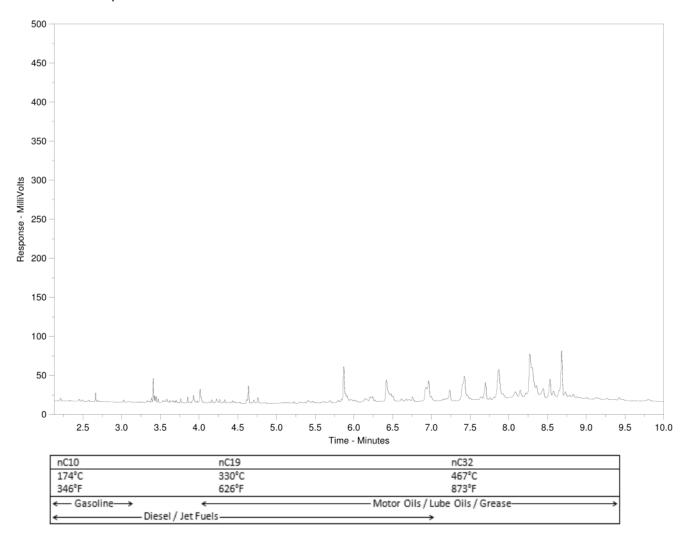
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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: L1826440-6 Client Sample ID: 16-TP106



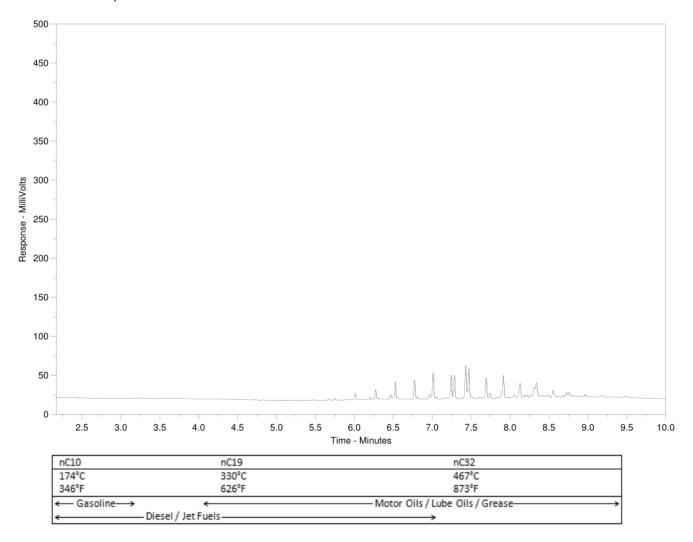
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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: L1826440-7 Client Sample ID: 16-TP107



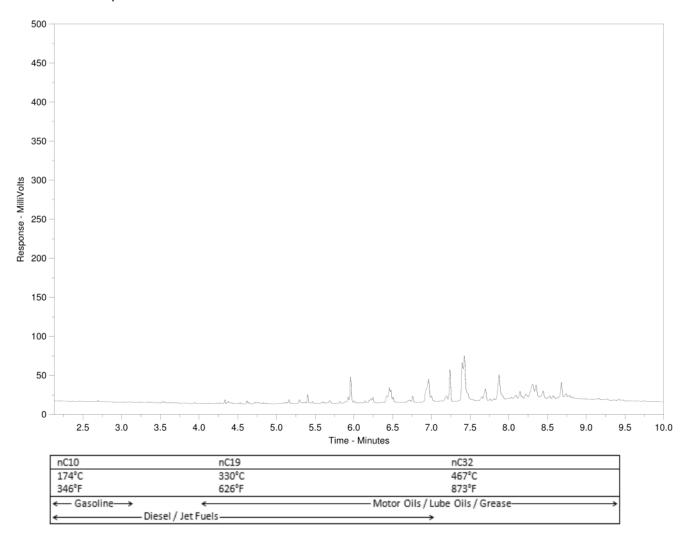
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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: L1826440-8 Client Sample ID: 16-TP108



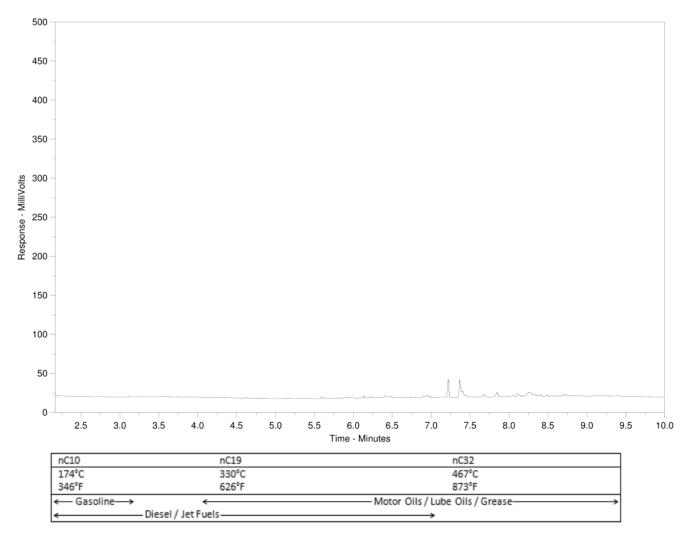
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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: L1826440-9 Client Sample ID: 16-TP109



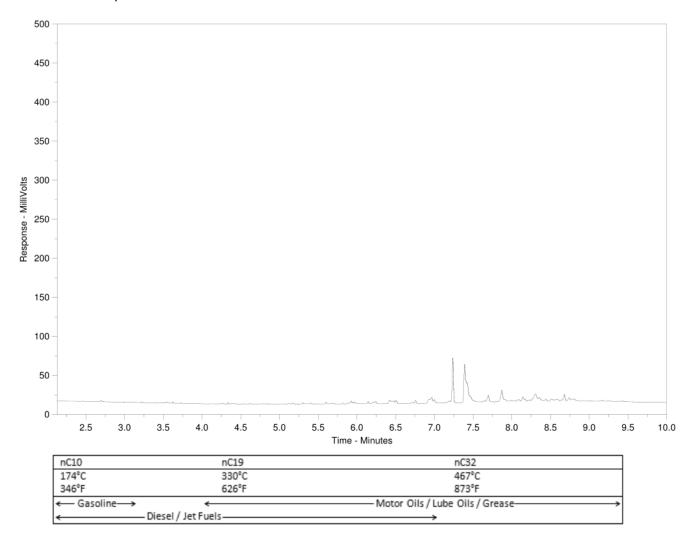
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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: L1826440-10 Client Sample ID: 16-TP110



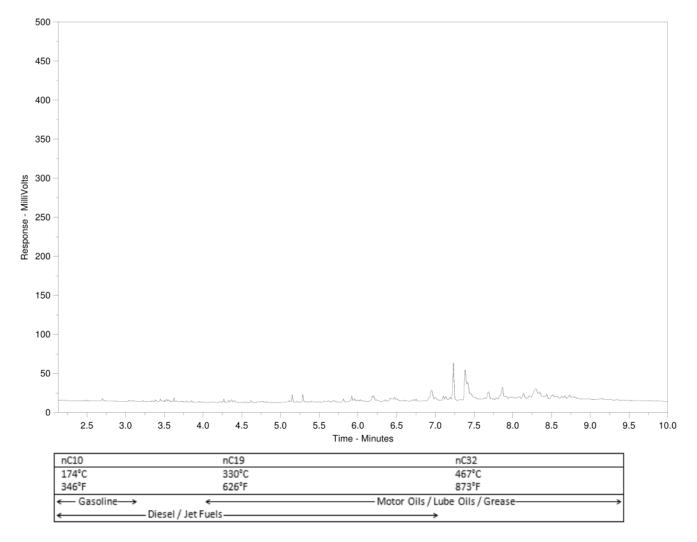
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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: L1826440-11 Client Sample ID: 16-TP111-0.1M



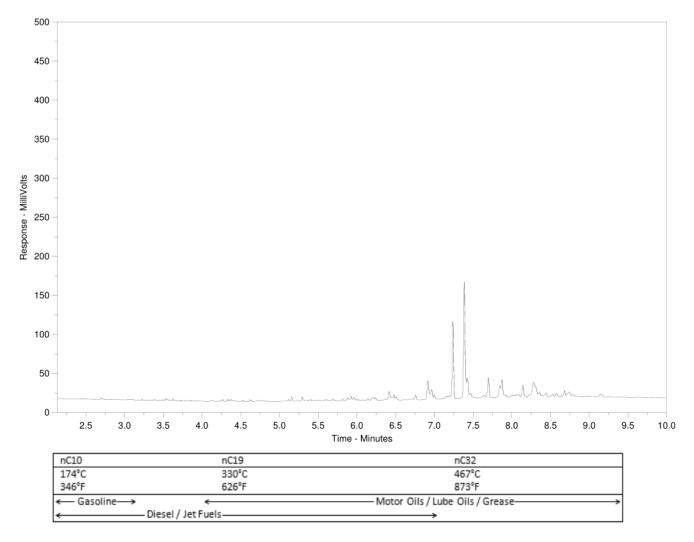
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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: L1826440-12 Client Sample ID: 16-TP112-0.1M



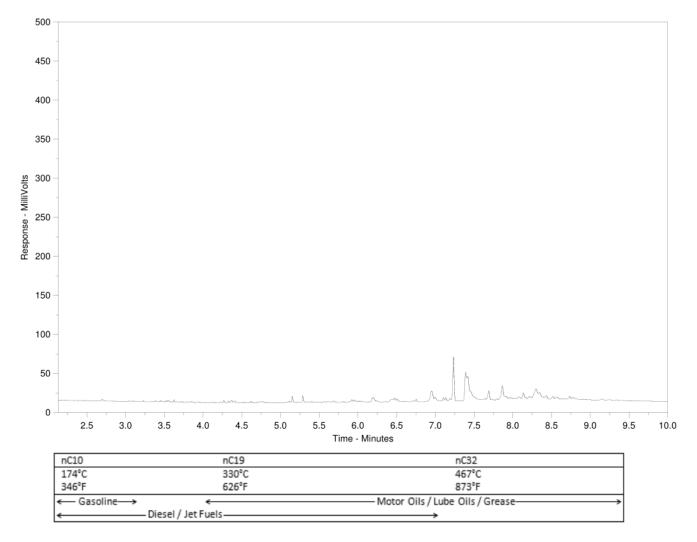
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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: L1826440-13 Client Sample ID: 16-TP113-0.1M



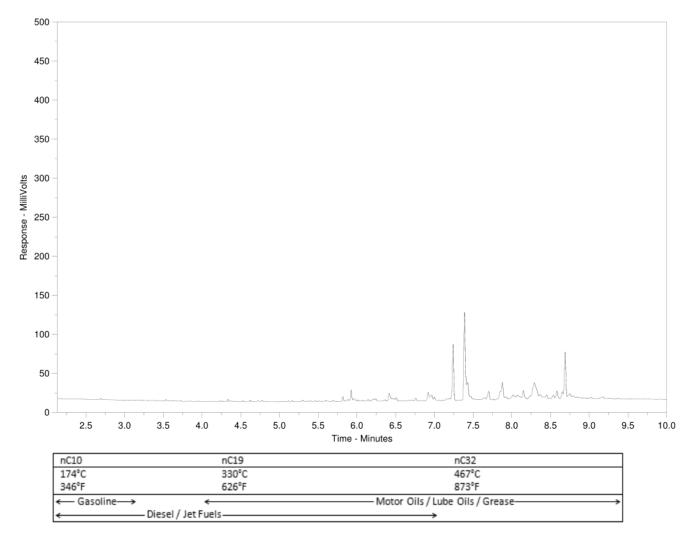
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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: L1826440-14 Client Sample ID: 16-TP114-0.1M



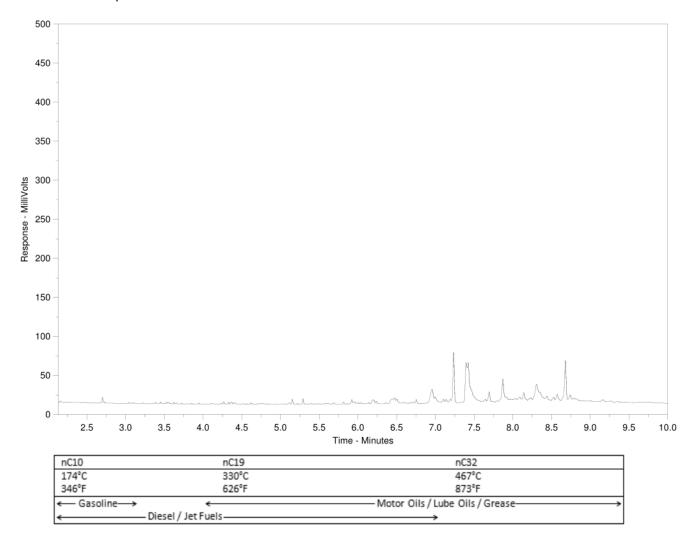
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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: L1826440-15 Client Sample ID: 16-TP115-0.1M



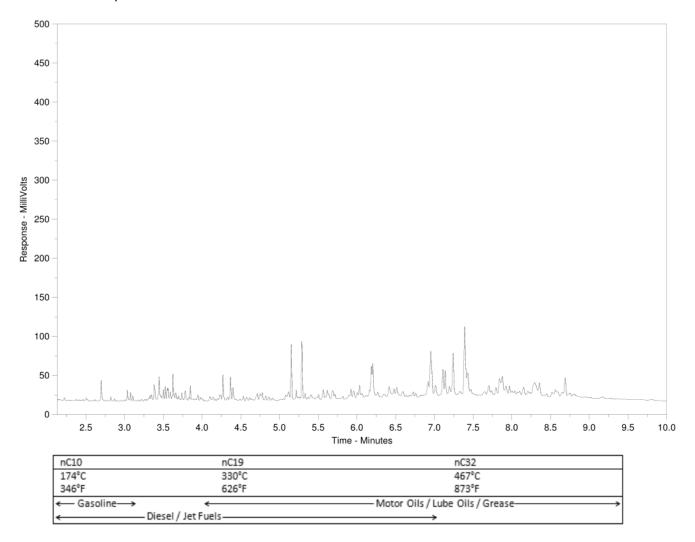
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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: L1826440-16
Client Sample ID: 16-TP116-0.1M



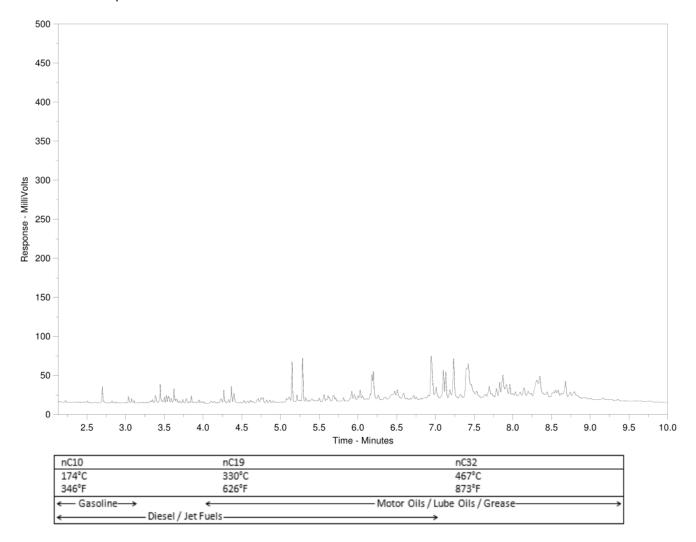
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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: L1826440-17 Client Sample ID: 16-TP117-0.1M



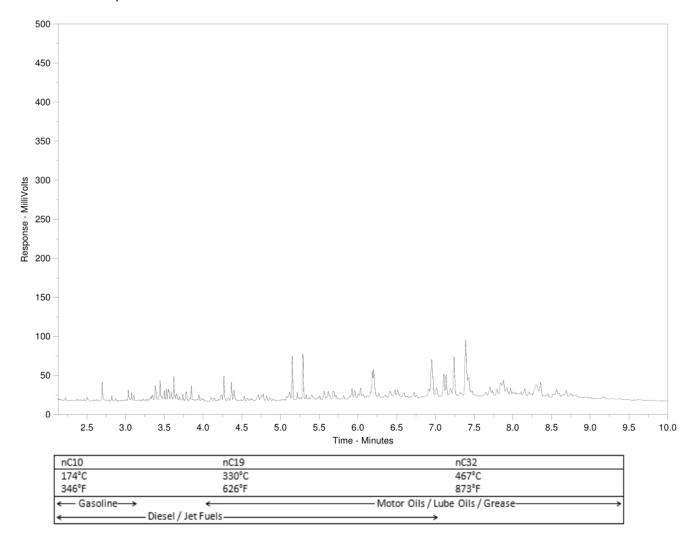
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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: L1826440-18 Client Sample ID: 16-TP118-0.1M



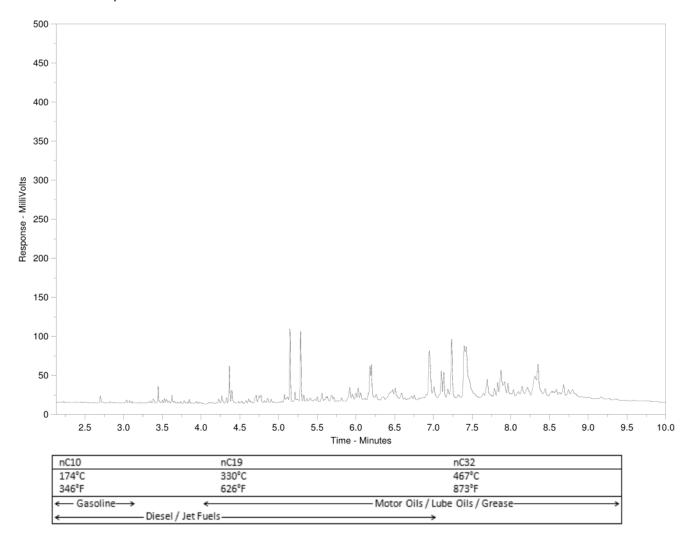
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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: L1826440-19 Client Sample ID: 16-TP119-0.1M



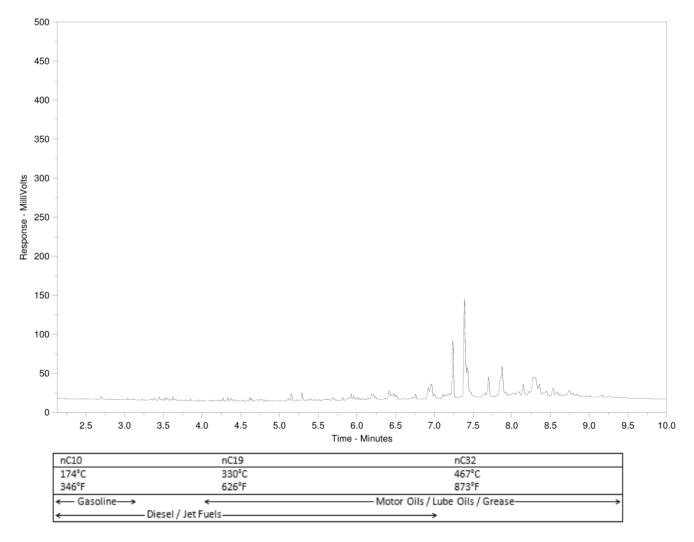
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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: L1826440-20 Client Sample ID: 16-TP120-0.1M



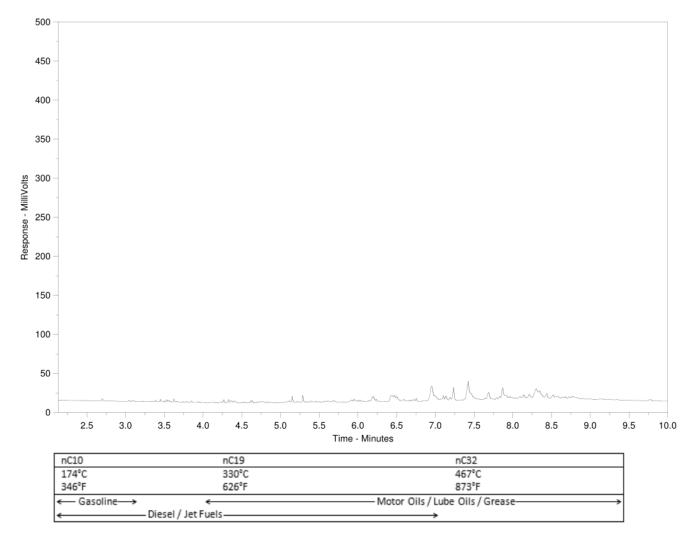
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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: L1826440-21 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.

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 Environ

# Charge

#### Chain of Custody / Analytical Request Form Canada Toll Free: 1 800 668 9878 www.alsglobal.com

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Address:	329-1095 McKenzie Ave, Victoria, BC Email 1: jbocskei@pinchinwest.com										O Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT								
	Email 2: jquamme@pinchinwest.com										Same Day or Weekend Emergency - Contact ALS to Confirm TAT								
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# Short Holding Time

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Pinchin West LTD. Date Received: 12–0CT–16

ATTN: Joshu Bocskei Report Date: 26-OCT-16 11:20 (MT)

Version: FINAL

Victoria BC V8P 2L5

#300 - 1095 McKenzie Avenue

Client Phone: s.22

### **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

### ALS ENVIRONMENTAL ANALYTICAL REPORT

	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	<u> </u> 				
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			

L1842325 CONTD.... PAGE 3 of 11 26-OCT-16 11:20 (MT)

Version: FINAL

### ALS ENVIRONMENTAL ANALYTICAL REPORT

	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)					

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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						
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	L1842325-12 SOIL 11-OCT-16	L1842325-15 SOIL 11-OCT-16 16-TP107-0.5M	
Oi						
Grouping SOIL	Analyte					
	d d d Triabless atheres (see flee)					
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	11-OCT-16	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	1				
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 Benzo(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 AI, Ba, Be, Cr, Sr, Ti, TI, 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

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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 Xvlene 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
PH-TUMB-FID-VA	Soil							
Batch R35730	)53							
WG2410134-3 IRI	М	ALS PHC2 RI						
EPH10-19			80.2		%		70-130	18-OCT-16
EPH19-32			91.7		%		70-130	18-OCT-16
WG2410134-1 ME	3				_			
EPH10-19			<200		mg/kg		200	18-OCT-16
EPH19-32			<200		mg/kg		200	18-OCT-16
G-200.2-CVAF-VA	Soil							
Batch R35713	365							
WG2410132-4 CF	M	VA-NRC-STS	D-3					
Mercury (Hg)			110.4		%		70-130	14-OCT-16
WG2410132-3 LC	S							
Mercury (Hg)			102.2		%		70-130	14-OCT-16
WG2410132-1 ME	3		-0.0050		ma or /!		0.625	
Mercury (Hg)			<0.0050		mg/kg		0.005	14-OCT-16
Batch R35748								
WG2413085-4 CF	M	VA-NRC-STS			0/		70.400	40 OOT 40
Mercury (Hg)	_		101.3		%		70-130	19-OCT-16
WG2413085-3 LC Mercury (Hg)	S		110.3		%		70-130	10 OOT 10
			110.5		76		70-130	19-OCT-16
WG2413085-1 ME Mercury (Hg)	5		<0.0050		mg/kg		0.005	19-OCT-16
			10.0000		9/9		0.000	19-001-10
G-TCLP-CVAFS-VA	Soil							
Batch R35748								
WG2412893-1 ME Mercury (Hg)-Leach			<0.0010		mg/L		0.001	10 OOT 10
			<0.0010		mg/L		0.001	19-OCT-16
WG2412893-4 ME Mercury (Hg)-Leach			< 0.0010		mg/L		0.001	19-OCT-16
WG2412893-2 MS		1.4040005.0	<b>40.0010</b>		g/ E		0.001	19-001-10
Mercury (Hg)-Leach		L1842325-3	99.2		%		50-140	19-OCT-16
							00 140	10 001 10
ET-200.2-CCMS-VA	Soil							
Batch R35729								
WG2410132-4 CF Antimony (Sb)	IM	VA-NRC-STS	<b>D-3</b> 108.5		%		70.120	14 OCT 16
Arsenic (As)			95.2		%		70-130	14-OCT-16
							70-130	14-OCT-16
Barium (Ba)			104.6		%		70-130	14-OCT-16
Beryllium (Be)			104.0		%		70-130	14-OCT-16
Cadmium (Cd)			114.9		%		70-130	14-OCT-16



Workorder: L1842325 Report Date

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-VA	Soil							
Batch R3572959	9							
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		0.1	14-OCT-16
Barium (Ba)			<0.50		mg/kg		0.5	14-OCT-16
Beryllium (Be)			<0.10		mg/kg		0.1	14-OCT-16



Workorder: L1842325

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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	SD-3					
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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-VA	Soil							
Batch R3574978	3							
WG2413085-3 LCS								
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
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 (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		mg/kg		0.1	19-OCT-16
Arsenic (As)			<0.10		mg/kg		0.1	19-OCT-16
Barium (Ba)			<0.50		mg/kg		0.5	19-OCT-16
Beryllium (Be)			<0.10		mg/kg		0.1	19-OCT-16
Cadmium (Cd)			<0.020		mg/kg		0.02	19-OCT-16
Chromium (Cr)			< 0.50		mg/kg		0.5	19-OCT-16
Cobalt (Co)			<0.10		mg/kg		0.1	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		0.1	19-OCT-16
Nickel (Ni)			<0.50		mg/kg		0.5	19-OCT-16
Selenium (Se)			<0.20		mg/kg		0.2	19-OCT-16
Silver (Ag)			< 0.10		mg/kg		0.1	19-OCT-16
Thallium (TI)			< 0.050		mg/kg		0.05	19-OCT-16
Tin (Sn)			<2.0		mg/kg		2	19-OCT-16
Uranium (U)			< 0.050		mg/kg		0.05	19-OCT-16



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-VA	Soil							
Batch R3574978								
WG2413085-1 MB			<0.20		ma/ka		0.0	10 OOT 10
Vanadium (V)			<0.20 <2.0		mg/kg		0.2	19-OCT-16
Zinc (Zn)			<2.0		mg/kg		2	19-OCT-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	e		<0.050		mg/L		0.05	19-OCT-16
Calcium (Ca)-Leachable			<2.0		mg/L		2	19-OCT-16
Chromium (Cr)-Leachabl	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
Lead (Pb)-Leachable			<0.25		mg/L		0.25	19-OCT-16
Magnesium (Mg)-Leacha	ble		< 0.50		mg/L		0.5	19-OCT-16
Nickel (Ni)-Leachable			<0.25		mg/L		0.25	19-OCT-16
Selenium (Se)-Leachable	e		<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)-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	е		< 0.050		mg/L		0.05	19-OCT-16
Calcium (Ca)-Leachable			<2.0		mg/L		2	19-OCT-16
Chromium (Cr)-Leachabl	е		<0.25		mg/L		0.25	19-OCT-16
Cobalt (Co)-Leachable			< 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 R357500 WG2412893-4 MB	7							
Copper (Cu)-Leachab	le		< 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)-Lea	chable		<0.50		mg/L		0.5	19-OCT-16
Nickel (Ni)-Leachable			<0.25		mg/L		0.25	19-OCT-16
Selenium (Se)-Leacha	able		<1.0		mg/L		1	19-OCT-16
Silver (Ag)-Leachable			< 0.050		mg/L		0.05	19-OCT-16
Thallium (TI)-Leachab	ole		<1.0		mg/L		1	19-OCT-16
Vanadium (V)-Leacha	ble		<0.15		mg/L		0.15	19-OCT-16
Zinc (Zn)-Leachable			<0.50		mg/L		0.5	19-OCT-16
WG2412893-2 MS Antimony (Sb)-Leacha	able	L1842325-3	107.1		%		50-140	19-OCT-16
Arsenic (As)-Leachab			104.8		%		50-140	19-OCT-16
Barium (Ba)-Leachabl			111.8		%		50-140	19-OCT-16
Beryllium (Be)-Leacha			102.7		%		50-140	19-OCT-16
Boron (B)-Leachable			104.7		%		50-140	19-OCT-16
Cadmium (Cd)-Leach	able		98.1		%		50-140	19-OCT-16
Calcium (Ca)-Leachal			104.4		%		50-140	19-OCT-16
Chromium (Cr)-Leach			99.2		%		50-140	19-OCT-16
Cobalt (Co)-Leachable			103.5		%		50-140	19-OCT-16
Copper (Cu)-Leachab			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)-Lea	chable		106.6		%		50-140	19-OCT-16
Nickel (Ni)-Leachable			99.8		%		50-140	19-OCT-16
Selenium (Se)-Leacha			107.4		%		50-140	19-OCT-16
Silver (Ag)-Leachable			106.7		%		50-140	19-OCT-16
Thallium (TI)-Leachab			100.3		%		50-140	19-OCT-16
Vanadium (V)-Leacha			108.7		%		50-140	19-OCT-16
Zinc (Zn)-Leachable			99.4		%		50-140	19-OCT-16
MOISTURE-VA	Soil						00 110	10 001 10
Batch R357063								
WG2410130-2 LCS Moisture			99.0		%		90-110	13-OCT-16
WG2410130-1 MB			00.0		,•		30-110	10-001-10
** GZ-10130-1 WID								



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est	Matrix	Reference	Result Qualifi	er Units	RPD	Limit	Analyzed
MOISTURE-VA	Soil						
Batch R3570637							
WG2410130-1 MB			0.05	0/			
Moisture			<0.25	%		0.25	13-OCT-16
PAH-TMB-H/A-MS-VA	Soil						
Batch R3571825							
WG2410134-2 LCS			89.4	%		60.100	10 OOT 10
Acenaphthene Acenaphthylene			84.2	%		60-130	18-OCT-16
Anthracene			76.2	%		60-130	18-OCT-16
			86.9	%		60-130	18-OCT-16
Benz(a)anthracene Benzo(a)pyrene			100.1	%		60-130	18-OCT-16
						60-130	18-OCT-16
Benzo(b)fluoranthene			91.8 76.6	%		60-130	18-OCT-16
Benzo(g,h,i)perylene			96.0	%		60-130	18-OCT-16
Benzo(k)fluoranthene			98.3	%		60-130	18-OCT-16
Chrysene Dibenz(a,h)anthracene			98.3 85.5	%		60-130	18-OCT-16
Fluoranthene			91.8	%		60-130	18-OCT-16
Fluorene			83.6	%		60-130	18-OCT-16
			82.3	%		60-130	18-OCT-16
Indeno(1,2,3-c,d)pyrene			76.4	%		60-130	18-OCT-16
2-Methylnaphthalene Naphthalene			85.5	%		60-130	18-OCT-16
Phenanthrene			88.4	%		50-130	18-OCT-16
Pyrene			93.1	%		60-130	18-OCT-16
•			93.1	70		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 d	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	l6-10)		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 Bromodichloromethane		<b>L1842325-15</b> < 0.050	<0.050	RPD-NA	mg/kg	N/A	50	15-OCT-16
Bromoform		<0.050	<0.050	RPD-NA		N/A N/A		
Carbon Tetrachloride		<0.050	<0.050		mg/kg		50	15-OCT-16
Carbon retrachionde				RPD-NA	mg/kg	N/A	50	15-OCT-16
		<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



Workorder: L1842325 Report Date: 26-OCT-16 Page 9 of 12

Test Mat	trix Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-HSMS-VA Soi	il						
Batch R3569528							
WG2411082-3 DUP	L1842325-15						
trans-1,2-Dichloroethylene	<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-Dichloropropylene	<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		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-Dichloropropylene		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
	8		<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



ortho-Xylene

## **Quality Control Report**

Workorder: L1842325 Report Date: 26-OCT-16

Page 11 of 12 Test Matrix Reference Result Qualifier Units RPD Limit Analyzed VOC-HSMS-VA Soil Batch R3569528 WG2411082-1 MB Trichloroethylene < 0.010 mg/kg 0.01 15-OCT-16 Trichlorofluoromethane < 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 Batch R3569528 WG2411082-3 DUP L1842325-15 Benzene < 0.0050 < 0.0050 RPD-NA mg/kg N/A 40 15-OCT-16 Ethylbenzene < 0.015 < 0.015 mg/kg RPD-NA 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 40 15-OCT-16 N/A Toluene < 0.050 < 0.050 mg/kg RPD-NA 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 LCS % Benzene 107.7 70-130 15-OCT-16 Ethylbenzene % 111.8 70-130 15-OCT-16 Methyl t-butyl ether (MTBE) 107.6 % 70-130 15-OCT-16 Styrene 112.0 % 70-130 15-OCT-16 Toluene 109.4 % 70-130 15-OCT-16 meta- & para-Xylene % 115.0 15-OCT-16 70-130 ortho-Xylene 112.8 % 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

< 0.050

mg/kg

15-OCT-16

0.05

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
Lab ID: 1629157001
Sampling Location: L1842325
Received: 10/17/2016

Method: Illicit Drugs by LC/MS
Media: Bulk
Sampling Parameter: Volume Not Provided

Analyte
Result (ug/g)
Methamphetamine
ND
0.10

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

Method	Analyst	Peer Review
Illicit Daving by L C/MS	/S/ Trenton Stewart	/S/ Thomas Bosch
Illicit Drugs by LC/MS	10/24/2016 13:16	10/24/2016 14:19

#### **Laboratory Contact Information**

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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
	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.

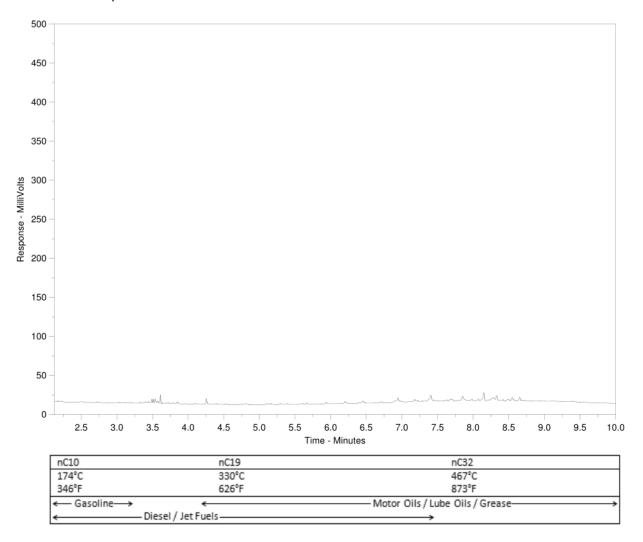
- < This testing result is less than the numerical value.
- ( ) This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.

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<sup>\*\*</sup> No result could be reported, see sample comments for details.



ALS Sample ID: L1842325-1 Client Sample ID: 16-TP201-0.6M



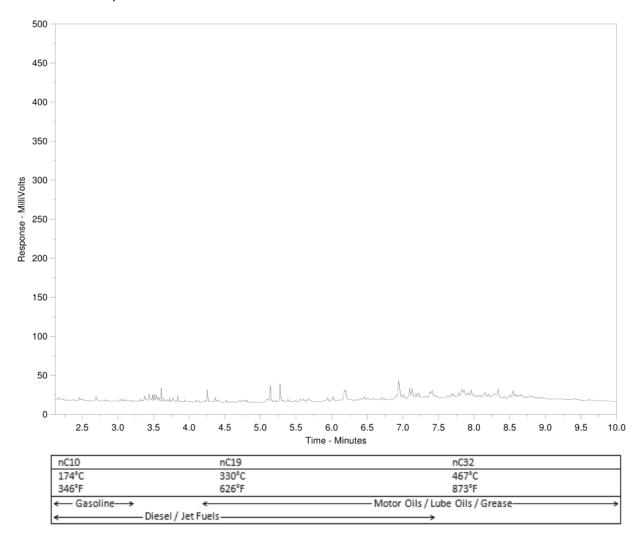
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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



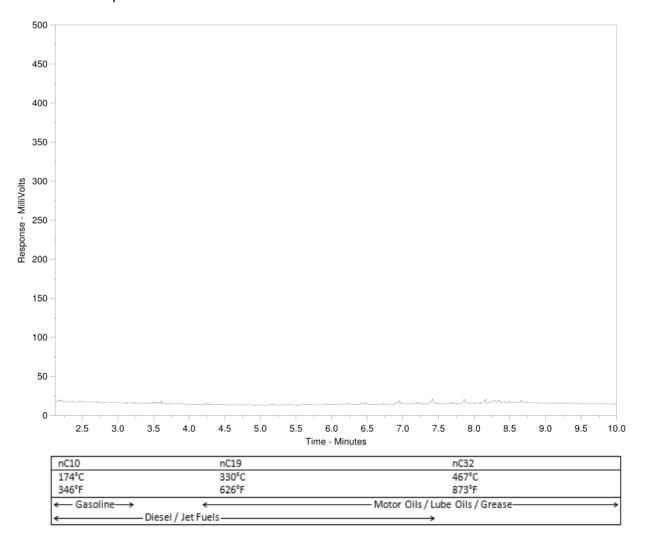
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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



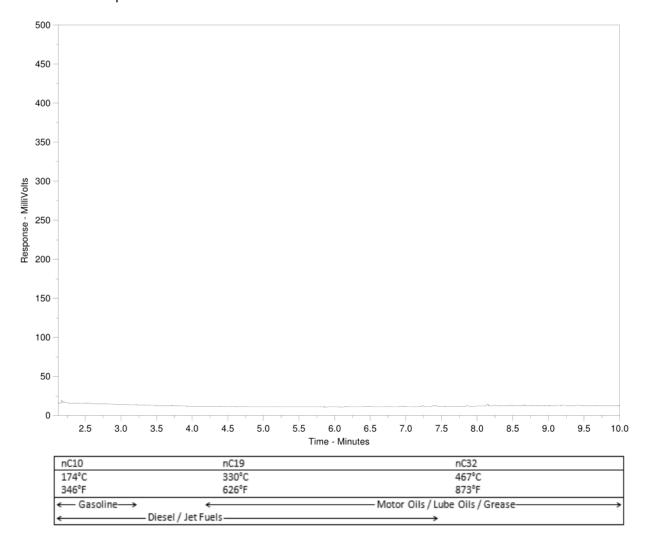
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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



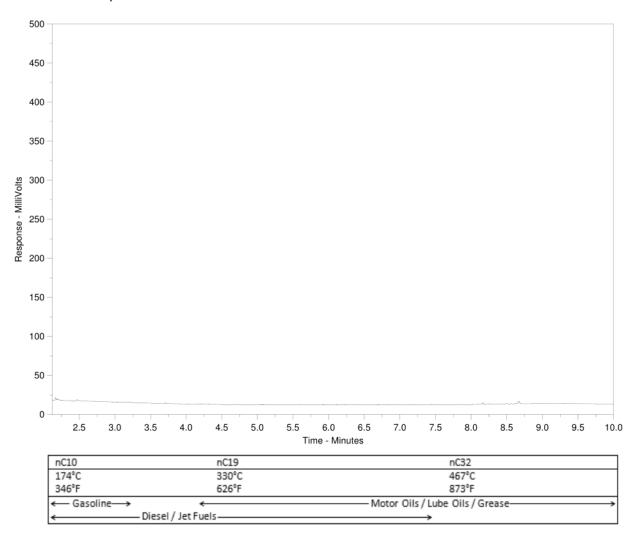
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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



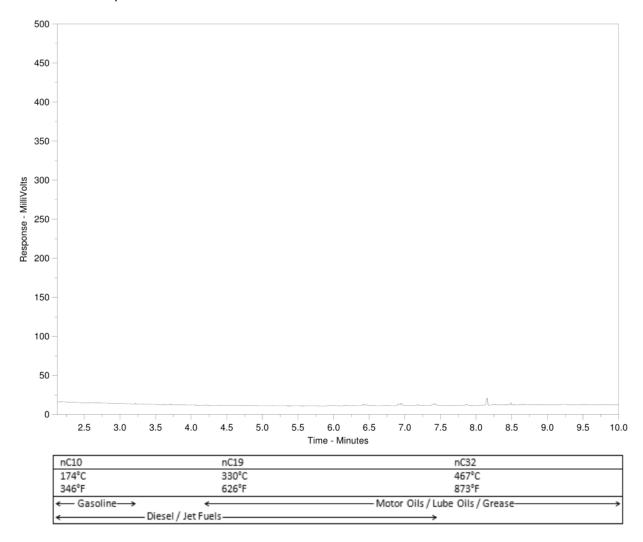
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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



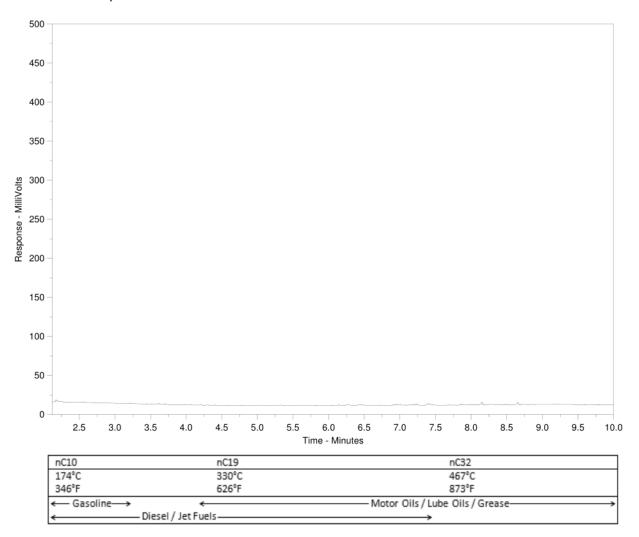
The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

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.

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#### Instructions to Bidders

Project Address: 850 Burdett Avenue, Victoria, British Columbia

Project Name: Green Space Remediation

Date: November 23, 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 concentration 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.



November 23, 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.

#### 4.0 SCOPE OF WORK

PINCHIN

The scope of work includes the excavation, transportation and disposal of approximately 1,432 cubic meters (m³) of soil impacted with either lead 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 will be via the parking area located to the west of the Site, designated as "Parking Lot" on Figure 2;
- 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 during the duration of the project, while leaving access routes and emergency exits of the Courthouse Building unobstructed;
- 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;

- 4.7 Retain the services of a certified arborist to assess the trees and vegetation on-Site and provide guidance and direction towards protecting the vegetation which the Contractor must follow. 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; In the event tree removal is required please provide a cost in the bid form under the additions and deletions section.
- 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) 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
  - f) Excavated material will be removed off-Site and disposed of at an approved disposal facility with the most cost-effective rate appropriate based on the analytical results. For the purposes of this tender the soil is assumed non-hazardous. For bid form comparison purposes a cost for 2,126 tonnes of 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 <RL soil is requested under the additions and deletions section;
- 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. Turnaround 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.

November 23, 2016

PWL File: 13858C

- 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
- 4.12 Backfill materials will consist of free draining material and will meet urban park land use standards. The Contractor is responsible for verifying the quality of backfill prior to shipment and for ensuring that utilities are not damaged during backfilling or compaction activities. 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 of the last lift will be a minimum 100 mm of a top soil appropriate for sod and/or landscaping.
- 4.14 Final reinstatement landscaping will consist of a sod where appropriate in order to return the Site to pre-"shelter/civil action camp" conditions.

#### 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 604.238.2916. Inquiries will be accepted until December 08, 2016 at 17:00 PST. As part of the IB, submissions of the following are mandatory requirements:

- A 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; and
- Any applicable value added services.

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 09, 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 adapted or qualified may not be accepted. The Contractor will be retained through PWL's Standing Agreement for Sub-Contracting Services.

November 23, 2016

PWL File: 13858C

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

Sincerely,

PÍNCHIN

#### PINCHIN WEST LTD.

Prepared by:

Jason Quamme, BSc., A.Ag, EP

Project Manager 604.238.2916

jquamme@pinchinwest.com

Reviewed by:

Brennan Anstey, P.Eng.

Senior Environmental Engineering Manager

604.238.2939

banstey@pinchinwest.com

Reviewed by:

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

403.444.4936

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

	C	ontemplated 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
Certified arborist	1	Lump Sum		Not applicable	Not applicable
Protection of site trees	14	Trees			
Excavate & stockpile soil on-Site	2,864	tonnes			
Transport & dispose of impacted soil (assume CL + metals and hydrocarbon impacted, non-hazardous)	2,126	tonnes			
Transport & dispose of impacted soil (assume CL + metals only impacted, non-hazardous)	738	tonnes			
Costs for standby	3	day			
Purchase, place & compact clean imported fill material	2,291	tonnes			
Purchase, place & compact imported topsoil material	573	tonnes			
Site restoration (sod)	2,864	m²		Not applicable	Not applicable
CONTRACTOR TOTAL					

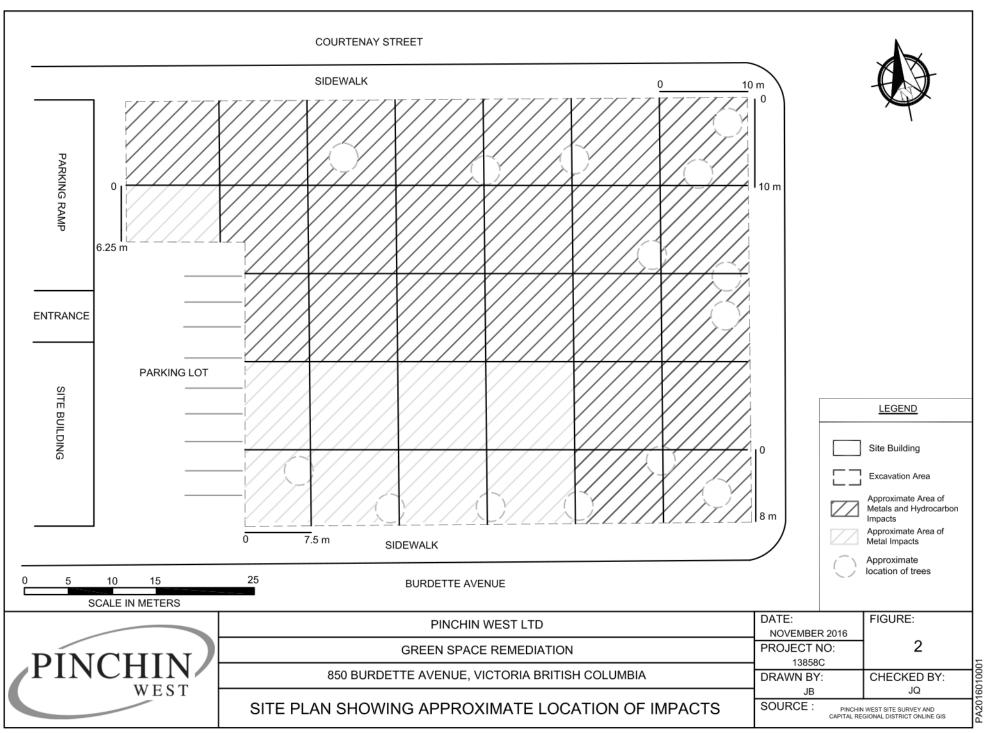
Additions and Deletions												
Quantity Unit Cost Add per Unit Delete per Unit												
Transport and dispose of impacted hazardous soil	500	tonnes										
Transport and dispose of non-impacted soil (< RL)	500	tonnes										
Additional costs for mobilization per extra excavation/analytical cycle (if required)	1	mobilization										
Tree removal	1	Tree										

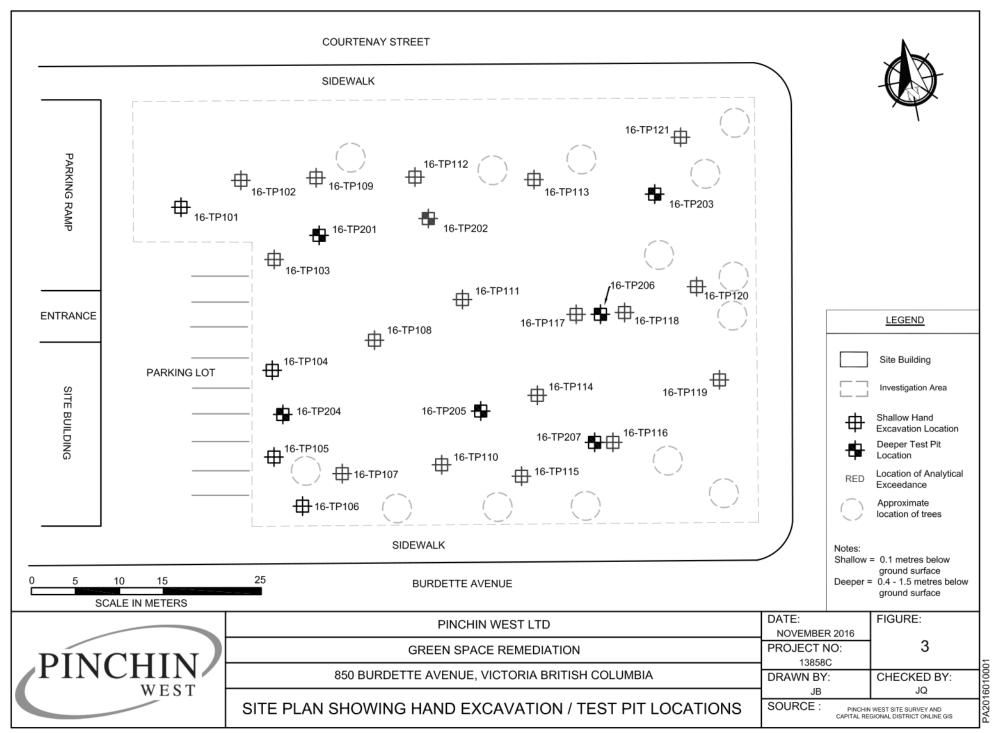
Attachment B Figures





CLIENTINA	PINCHIN WEST LTD											
PROJECT	PROJECT NAME:  GREEN SPACE REMEDIATION											
LOCATION	LOCATION: 850 BURDETT AVENUE, VICTORIA, BRITISH COLUMBIA											
TITLE:												
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
Faralleter	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	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
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
EDHe10-10			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

Barrara atau	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	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
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

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.

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# Table 2: Volatile Organic Compounds in Soil

Job Number: 13858B

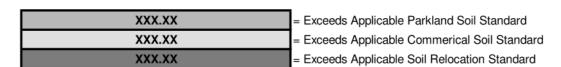
Site: 850 Burdett Avenue, Victoria, British Columbia Client: Brookfield Global Integrated Solutions

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	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



\* 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

1,1,2   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		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         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050         < 0.050 <th< td=""><td>-</td><td>1800</td><td>1800</td><td>ns</td><td></td><td>-</td><td>-</td><td>-</td><td></td><td></td><td></td><td>-</td></th<>	-	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	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		5.46	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:

ns = no standard

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

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
Farameter	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

Daramatar	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	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
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	CSP Parkland Sail Standards*	R 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
Farameter	CSh Parkianu Son Standarus	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	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	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
Farameter	Con Farkiana odi Standarus	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	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 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

Paramotor	CSR Parkland Soil Standards*		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	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
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

Davamatan	CSR Parkland Soil Standards*	dards* 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			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

Davameter	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	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
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  $\mu g/g$  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

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

Downwater.	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	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
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

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

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.

#### Partington, Nicole MTIC:EX

Burbee, Jon MTIC:EX From: Sent: Monday, December 5, 2016 2:27 PM Partington, Nicole MTIC:EX To: FW: Tent City Costs Subject: From: NICOLA MOYLES [mailto:NICOLA.MOYLES@brookfieldgis.com] Sent: Friday, August 5, 2016 2:23 PM To: Fredette, Denis MTIC:IN; Scott Knudsen; Jenkins, Nicole MTIC:IN Cc: Lidstone, Todd BLJC-WSI; Burbee, Jon MTIC:EX; Sykes, Graeme MTIC:EX; Hoffman, Jennifer B MTIC:EX; Gaudet, Bernie B MTIC:EX Subject: Re: Tent City Costs I will follow up before end of day Monday. Cheers, nikki Sent from my Samsung device ----- Original message -----From: Denis Fredette < Denis.Fredette@wsi.brookfieldgis.com> Date: 08-05-2016 11:52 AM (GMT-08:00) To: Scott Knudsen < Scott.Knudsen@wsi,brookfieldgis.com >, NICOLA MOYLES <NICOLA.MOYLES@brookfieldgis.com> Cc: Todd Lidstone < Fodd Lidstone@wsi.brookfieldgis.com >, "Burbee, Jon MTIC: EX" < Jon.Burbee@gov.bc.ca>, "Sykes, Graeme MTIC:EX" < Gracme.Sykes@gov.bc.ca>, "Hoffman, Jennifer B MTIC:EX" < Jennifer. Hoffman@gov.bc.ca >, "Gaudet, Bernie B MTIC:EX" < Bernie. Gaudet@gov.bc.ca > Subject: RE: Tent City Costs Sorry Scott, you are not the right person to ask. This should go to Nikki. Nikki, can you provide the cost information as requested by Tasha below please? Thanks. Regards

**Denis Fredette** 

Facility Manager, FMZ 106

Brookfield GIS Workplace Solutions Inc.

23-3318 Oak Street Victoria, BC V8X 1R1 T: 250 889 4371| F: 250 952 3868 denis.fredette@wsi.brookfieldgis.com

www.brookfieldgis.com

#### **Brookfield** GIS

Workplace Solutions Inc.

From: Denis Fredette

Sent: Friday, August 05, 2016 11:42 AM

To: Scott Knudsen < scott.knudsen@wsi.brookfieldgis.com>

Cc: Todd Lidstone <todd.lidstone@wsi.brookfieldgis.com>; 'Burbee, Jon MTIC:EX'

<Jon.Burbee@gov.bc.ca>; Sykes, Graeme MTIC:EX < Graeme.Sykes@gov.bc.ca>; Hoffman, Jennifer B MTIC:EX < Jennifer.Hoffman@gov.bc.ca>; Gaudet, Bernie B MTIC:EX < Bernie.Gaudet@gov.bc.ca>

Subject: RE: Tent City Costs

Scott, can you provide an update as requested by Jon please? Let me know if I can be of help. Thanks.

Regards

#### **Denis Fredette**

Facility Manager, FMZ 106

Brookfield GIS Workplace Solutions Inc.

23-3318 Oak Street Victoria, BC V8X 1R1 T: 250 889 4371| F: 250 952 3868 denis.fredette@wsi.brookfieldgis.com

www.brookfieldgis.com

## **Brookfield**GIS

Workplace Solutions Inc.

From: Burbee, Jon MTIC:EX [mailto:Jon.Burbee@gov.bc.ca]

Sent: Friday, August 05, 2016 10:59 AM

To: Denis Fredette < Denis. Fredette@wsi.brookfieldgis.com>

Cc: Todd Lidstone < Todd.Lidstone@wsi.brookfieldgis.com>; Sykes, Graeme MTIC:EX

< Graeme.Sykes@gov.bc.ca>; Hoffman, Jennifer B MTIC:EX < Jennifer.Hoffman@gov.bc.ca>; Gaudet, Bernie

B MTIC:EX < Bernie.Gaudet@gov.bc.ca>

Subject: FW: Tent City Costs

Hi Denis,

I was getting a phone call about this issue as you and Todd departed the weekly check-in call. Can we please update cost data to Graeme such that we can answer this question? \$.22

s.22 but these figures will be important to get to our communications colleagues in the near future.

Jon

From: Burbee, Jon MTIC:EX

Sent: Friday, August 5, 2016 10:57 AM

To: Schollen, Tasha GCPE:EX

Cc: Whittier, Joanne GCPE:EX; Sykes, Graeme MTIC:EX; Blaschuk, Michael MTIC:EX

Subject: RE: Tent City Costs

Hello Tasha,

We will certainly be adjusting cost estimates based on circumstances and the progress of migrating to the housing that has been provided. With the population already decreasing, I expect that operating costs will change downwards slightly. Once we are in a position to close off the site (hopefully next week – this is being assessed constantly), we will then decommission the services in place (portable toilets and showers, power etc). Decommissioning will have its own costs but ongoing costs will then drop drastically as you describe (fencing and lower security) pending start of site remediation.

I'll have to seek updated costs to the end of July from our service provider.

Jon

300

Jon Burbee | Executive Director | Asset Management Branch | Shared Services BC

Ph: 250 213-7439 | e: Jon.Burbee@gov.bc.ca | m: PO Box 9412, Stn Prov Gov, Victoria BC V8W 9V1



**From:** Schollen, Tasha GCPE:EX **Sent:** Friday, August 5, 2016 9:11 AM

To: Burbee, Jon MTIC:EX; Sykes, Graeme MTIC:EX; Blaschuk, Michael MTIC:EX

**Cc:** Whittier, Joanne GCPE:EX **Subject:** Tent City Costs

Good morning,

Do we have any cost estimates to manage the courthouse site during remediation? I am assuming the costs would be for the fencing and security only, unless there are others?

Seeing as we could very well have campers on the site for another week (or more) ... would the costs below still apply as long as campers are there?

\$184,000 per month. This money is allocated for things such as security and pest management, garbage collection, port-a-potties and upkeep, fire extinguishers, gravel, water hookup/service and power pole installation, BC Hydro service, PHS Community Services' work in connecting campers with housing, health and other services at the site.

Do we have an updated number for this stat: Provincial costs associated with managing the site are approximately \$400,000 between December 2015 and June 2016.

Thanks,
Tasha
Previous Messaging:
Provincial government costs for services associated with managing the Victoria courthouse encampment site are approximately \$184,000 per month. This money is allocated for things such as security and pest management, garbage collection, port-a-pottics and upkeep, fire extinguishers, gravel, water hookup/service and power pole installation and BC Hydro service.
Also included in the \$184,000 per month is the cost for PHS Community Services' work in connecting campers with housing, health and other services at the site, which is approximately \$84,000 per month.
Provincial costs associated with managing the site are approximately \$400,000 between December 2015 and June 2016.
Tasha Schollen   Communications Director
Ministry of Technology, Innovation and Citizens' Services
Government Communications and Public Engagement
Phone: 250-387-3134   Cell: 250-889-1121
Please consider the environment before printing this email - Help save our planet.

5

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# Partington, Nicole MTIC:EX

From:

Burbee, Jon MTIC:EX

Sent:

Monday, December 5, 2016 2:27 PM

To:

Partington, Nicole MTIC:EX

Subject:

FW: Remediation Costs - Requested by Housing MO

From: Schollen, Tasha GCPE:EX Sent: Friday, August 5, 2016 3:24 PM

To: Blaschuk, Michael MTTC:EX; Burbee, Jon MTTC:EX; Sykes, Graeme MTTC:EX

Subject: Remediation Costs - Requested by Housing MO

- Cleanup costs for the land at the Victoria Courthouse will depend on what is left at the site once everyone has left and the land can be assessed.
- There are makeshift houses on the site and a lot of belongings that will need to be removed.
- There will also be remediation of the site as the landscaping will have to be re-done.
- A preliminary estimate by the Ministry of Technology, Innovation and Citizens' Services should the soil be contaminated – is approximately \$300-thousand to \$350-thousand for the cleanup.
- Professional soil engineering services will be required to determine actual cost estimates.
- Based on current observations, anticipated remediation work includes:
  - Disposal of abandoned items, including tents & structures.
  - Top soil remediation; depth and area to be determined.
  - Replacement of top soil with appropriate landscaping.
  - Assess irrigation systems for damage.
  - o Fencing and security throughout the duration of the site remediation.
  - Replacement of sod throughout, regrading, replacement of approximately five trees and 200 feet of hedge.

**Tasha Schollen** | Communications Director Ministry of Technology, Innovation and Citizens' Services

Government Communications and Public Engagement

Phone: 250-387-3134 | Cell: 250-889-1121

# Partington, Nicole MTIC:EX

From:

Burbee, Jon MTIC:EX

Sent:

Monday, December 5, 2016 2:27 PM

To:

Partington, Nicole MTIC:EX

Subject:

FW: remediation

From: Gaudet, Bernie B MTIC:EX

Sent: Thursday, August 18, 2016 12:00 PM

To: Fellows, Brian MTIC:EX; DeLarge, Lorne MTIC:EX

Cc: Williams, Leslie J MTIC:EX; Schollen, Tasha GCPE:EX; Burbee, Jon MTIC:EX; Sykes, Graeme MTIC:EX

Subject: RE: remediation

The Minister's office has received additional enquiries related to the consultation/design process that will be used to determine the appropriate restoration of the site. s.13,s.22

s.13,s.22

s.13

While it's important to pause briefly and adequately consider the future of the site, we recognize that time is of the essence so that remediation may proceed asap (to avoid further risk and potential liabilities). Since the approach to remediation will be reflective of the land use program and resource availability, the timeliness and possible scope of a land use program decision will likely inform if not drive the nature of consultation that may take place – at least in the near future.

Tasha has asked that she be informed when a decision about consultation/design process has been determined.

Please let me know if you have any additional questions or concerns.

b

From: Fellows, Brian MTIC:EX

**Sent:** Thursday, August 18, 2016 10:49 AM

To: DeLarge, Lorne MTIC:EX; Gaudet, Bernie B MTIC:EX Cc: Williams, Leslie J MTIC:EX; Schollen, Tasha GCPE:EX

Subject: Fwd: remediation

More of a heads up, please connect with Tasha to see if there is anything she requires,

Brian

Sent from my iPhone

Begin forwarded message:

From: "Facey, Nick MTIC:EX" < Nick.Facey@gov.bc.ca>

Date: August 18, 2016 at 8:12:03 AM PDT

To: "Schollen, Tasha GCPE:EX" < Tasha. Schollen@gov.bc.ca>

Cc: "Whittier, Joanne GCPE:EX" < Joanne. Whittier@gov.bc.ca>, "Fellows, Brian MTIC:EX"

<Brian.Fellows@gov.bc.ca>

Subject: remediation

I see requests for consultation today in the clips – are we addressing that request?

- Site remediation has begun
  Soil testing is on-going
  No camping will be permitted on site
  Future use of the site....

# Partington, Nicole MTIC:EX

From:

Burbee, Jon MTIC:EX

Sent:

Monday, December 5, 2016 2:27 PM

To:

Partington, Nicole MTIC:EX

Subject:

FW: Cost estimates & Media Request - CTV - Courthouse Remediation

From: Sykes, Graeme MTIC:EX

Sent: Tuesday, August 30, 2016 4:14 PM

To: Schollen, Tasha GCPE:EX; Burbee, Jon MTIC:EX

Subject: RE: Cost estimates & Media Request - CTV - Courthouse Remediation

Hi Tasha

It turns out we've been charged \$1083/mth by pest control, for a total of \$6500.

As for the wording in the last bullet, I think we should cease calling it "the encampment" and switch to something like "the courthouse grounds" (but not lawn, since it may be landscaped differently).

Thanks! G

From: Schollen, Tasha GCPE:EX

**Sent:** Tuesday, August 30, 2016 3:26 PM

To: Sykes, Graeme MTIC:EX; Burbee, Jon MTIC:EX

Subject: FW: Cost estimates & Media Request - CTV - Courthouse Remediation

Importance: High

Hi guys,

Here is where we stand....are we any closer to getting the pest costs? Can you please check the bullet that summarizes what added up to \$1.3M and let me know if you are good with it?

Deadline @

asap

Media:

CTV - Scott Cunningham, 250-661-8630, scott.cunningham@bellmedia.ca Times Colonist – Katherine Dedyna, <u>kdedyna@timescolonist.com</u> CBC Radio – Megan Thomas, 250 414-4707, cell: 250 661-6185, <u>megan.thomas@cbc.ca</u>

Topic:

Victoria Courthouse Remediation

Background:

Reporter is looking for an update on the remediation efforts and next steps.

Recommended Response:

Could we please get the latest update on the former tent city site? What is the situation with pest control? Is there any concern rats are getting into the court house?

- The Ministry of Technology, Innovation and Citizens' Services is managing the site cleanup and restoration of the site.
- The process started the week of Aug. 8 after the former tent city was officially closed.
- While clean-up was occurring it was determined that pest control is required before any remediation should begin.
- The exact number of rodents cannot be confirmed. Pest control activities were estimated to take approximately
  two weeks, however, these efforts will continue until the pests are completely eradicated. Monitoring is occurring
  on a daily basis.
- As part of the remediation process, we will consider what the best design and future use of the site will be, in
  discussion with the City of Victoria and area neighbours.
- That process will unfold in the coming weeks. Once a site plan is determined, remediation, which will include soil removal and testing, will get underway.
- In the meantime, the adjacent parking lot has been cleaned and parking stall lines were re-painted.
- Fencing will remain around the perimeter of the encampment and will be staffed by security 24/7.

#### What is the current total bill for:

- 1. Total costs for pest management to date, are approximately \$XXX.
- 2. Provincial costs associated with managing the site are approximately \$1.3M between December 2015 and August 2016. This money is allocated for things such as security, garbage collection, port-a-potties and upkeep, fire extinguishers, gravel, water hookup/service, power pole installation, BC Hydro service, fencing and site demolition.

## Outstanding from Housing:

\$\$\$\$ for PHS Community Services' work in connecting campers with housing, health and other services at the site.

**Tasha Schollen** | Communications Director Ministry of Technology, Innovation and Citizens' Services Government Communications and Public Engagement Phone: 250-387-3134 | Cell: 250-889-1121

# Partington, Nicole MTIC:EX

From:

Burbee, Jon MTIC:EX

Sent: Fo: Subject:	Monday, December 5, 2016 2:26 PM Partington, Nicole MTIC:EX FW: Courthouse TC site soil remediation
From: Sykes, Graeme MT Sent: Thursday, Septemb To: Burbee, Jon MTIC:EX Cc: Sykes, Graeme MTIC: Subject: Fw: Courthouse	er 8, 2016 1:52 PM  EX; Lush, Ryan MTIC:EX
HI Jon	
results in about two we	ve been identified and soil sampling commenced yesterday. We will start getting eks time. It depends if the lab in Burnaby is equipped to test for all the exotic drugs or send samples elsewhere which adds a couple weeks (just for those unusual
Hope this helps. Graeme	
Sent: Thursday, Septembo To: Sykes, Graeme MTIC:I	EX: Hoffman, Jennifer B MTIC:EX; Jenkins, Nicole MTIC:IN; Cooper, Brian MTIC:EX; Blaschuk,
	on site at 9am yestetday morning, they marked off 6 hot sports areas to test and yesterday. As the days progress into early next week I will hear back on ongoing
Hope this helps with yo	ur response to the Minister.
Cheers, nikki	
Sent from my Samsung devi	ce
Original message From: "Sykes, Graeme I	: MTIC:EX" < <u>Graeme.Sγkes@gov.bc.ca</u> > 1

Date: 09-08-2016 10:28 AM (GMT-08:00)

To: NICOLA MOYLES < NICOLA.MOYLES@brookfieldgis.com>

Cc: "Stubbs, Jennifer MTIC:EX" < Jennifer.Stubbs@gov.bc.ca >, "Hoffman, Jennifer B MTIC:EX"

<<u>Jennifer.Hoffman@gov.bc.ca</u>>, Nicole Jenkins <<u>Nicole.Jenkins@brookfieldgis.com</u>>, "Cooper, Brian MTIC:EX"

<Brian.Cooper@gov.bc.ca>, "Blaschuk, Michael MTIC:EX" < Michael.Blaschuk@gov.bc.ca>

Subject: RE: Courthouse TC site soil remediation

Hi Nikki

Can you please provide an update on the results of the site tour with Pinchin?

When will soil testing commence?

Minister's office is asking.

Thanks very much!

Graeme

From: NICOLA MOYLES [mailto:NICOLA,MOYLES@brookfieldgis.com]

Sent: Tuesday, September 6, 2016 1:33 PM

To: Sykes, Graeme MTIC:EX

Cc: Stubbs, Jennifer MTIC:EX; Hoffman, Jennifer B MTIC:EX; Jenkins, Nicole MTIC:IN; Cooper, Brian MTIC:EX; Blaschuk,

Michael MTIC:EX

Subject: RE: Courthouse TC site soil remediation

Thank you Graeme, I have shared with Pinchin for tomorrow's walk through.

Nicola Moyles, LEED CI Project Manager | Gestionnaire de projet

Project Deliver Services|Services de livraison de projet

Brookfield Global Integrated Solutions c-250-889-2437

nicola.moyles@brookfieldgis.com

www.brookfieldgis.com



From: Sykes, Graeme MTIC:EX [mailto:Graeme.Sykes@gov.bc.ca]

Sent: Tuesday, September 06, 2016 1:22 PM

To: NICOLA MOYLES

Cc: Sykes, Graeme MTIC:EX; Stubbs, Jennifer MTIC:EX; Hoffman, Jennifer B MTIC:EX; Nicole Jenkins; Cooper, Brian

MTIC:EX; Blaschuk, Michael MTIC:EX

Subject: FW: Courthouse TC site soil remediation

HI Nikki

Some follow up info from Jade at Island Health. I'm sure Pinchin is well aware of these items, but it can't do any harm to share.

Nice to know we're getting support from VIHA and MOE on this one. I'm sure they'll keep close tabs on this remediation going forward.

Cheers, Graeme

From: Yehia, Jade [mailto:Jade.Yehia@viha.ca]
Sent: Friday, September 2, 2016 3:10 PM

To: Sykes, Graeme MTIC:EX

Subject: RE: Courthouse TC site soil remediation

Hello Graeme,

I just wanted to belatedly touch base after our conversation on Monday. In quick summary, a few follow up items I wanted to relay for interest and clarity:

- 1. The Fact Sheet I mentioned from MoE on illicit drug manufacturing cleanup (you may have already come across this but I thought to pass it along) <a href="https://www2.gov.bc.ca/assets/gov/environment/air-land-water/site-remediation/docs/fact-sheets/fs35.pdf">http://www2.gov.bc.ca/assets/gov/environment/air-land-water/site-remediation/docs/fact-sheets/fs35.pdf</a>
- 2. Information from the Canadian Council Ministers of the Environment Environmental Quality Guidelines (that speak to Human Health): <a href="http://www.ccme.ca/en/resources/canadian environmental quality guidelines/">http://www.ccme.ca/en/resources/canadian environmental quality guidelines/</a> (parent site) and summary table as attached.
- 3. As mentioned, Island Health would refer to MoE's Land Remediation Branch for any testing recommendations/requirements, chemical/biological parameter inclusion, and threshold limits to adhere to (under their respective legislation Environmental Management Act, Contaminated Sites Regulation, and Hazardous Waste Regulation).

I hope that summarizes our discussion well. If there is anything else I may assist with or failed to provide, please do not hesitate to let me know.

Have a happy long weekend!

Jade

Jade Yehia, CPHI(C)

Environmental Health Officer

Regional Built Environment Consultant

201 - 771 Vernon Avenue | Victoria, BC V8X 5A7

Ph: 250.519.3654 | Fax: 250.519.3402

Jade.Yehia@viha.ca | www.viha.ca/mho



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# Partington, Nicole MTIC:EX

From:

Burbee, Jon MTIC:EX

Sent:

Monday, December 5, 2016 2:26 PM

To:

Partington, Nicole MTIC:EX

Subject:

FW: NOTES Soil remediation - Vic Courthouse

From: Sykes, Graeme MTIC:EX

Sent: Friday, September 30, 2016 2:41 PM

To: Burbee, Jon MTIC:EX

**Cc:** Lush, Ryan MTIC:EX; Sykes, Graeme MTIC:EX **Subject:** FW: NOTES Soil remediation - Vic Courthouse

Hi Jon

## Quick summary:

- 21 individual samples were taken from the top few inches of soil
- 2 samples detected meth amphetamine
- A number of samples had benzene and hydrocarbons consistent with minor gas spills from a jerry can
- 15 samples had Lead
- A number of samples had human feces/coliforms
  - Feces is not a substance requiring remediation

## Next steps

- Next week; More focused soil tests in fewer locations to establish depth of contamination
- 2. Expedite lab work, 48 hours
- 3. Consultant report 1-2 weeks
  - a. delineate for Lead, Benzene, Hydrocarbons and Meth
  - b. recommended remediation approach, including selected soil removal and possibly tillage of soil
- 4. Estimate: Soil removal final week of October

Hope this helps! Graeme

From: Sykes, Graeme MTIC:EX

Sent: Friday, September 30, 2016 9:43 AM

To: Sykes, Graeme MTIC:EX; Blaschuk, Michael MTIC:EX; Lush, Ryan MTIC:EX

**Cc:** Masson, Michael MTIC:EX; Cooper, Brian MTIC:EX **Subject:** NOTES Soil remediation - Vic Courthouse

September 30, 2016, 9:00-9:30

Pinchin – Jason Quamme & Tad Burger WSI – Nikki Moyles and Scott Knudsen

SSBC - Jen Hoffman, Brian Cooper, Jason Rego, Ryan Lush & Graeme Sykes

Few contaminants of concern that should be dealt with, Tad Burger.

Commercial Land use and Park land Standard, Lower thresholds, magnitude

Petroleum Hydrocarbons, spattering of exceedences, relatively minor exceedences.

Benzene above CL (fuel, gasoline or diesel or heating or cooking oil). Little spills not major penetrations to depth. Typical all over the city, not weird or wonderful. Two locations.

Lead in majority of soil sample above CL. Not likely brought on to site, initial fill material. Batteries? Consistent concentration. Vary consistent.

21 samples.

No delineation, across the whole property.

Bacteria and fecal coliform, no specific standard. Human health type concern. Industrial health and hygenists at Pinchin, what actions and recommendations. No such thing as standards, no visible pieces of human waste then no actions are necessary. Take appropriate safety precautions. No remediation being driven by fecal.

Nutrients and alcohols and acids nothing reportable.

Illicit drugs, fairly low concentrations, 2 of 21 came back, recommend that material be removed.

Shallow, surface samples, just below the crust.

Delineation vertical.

Leachable qualifies as hazardous waste. High enough, Landfill wants further tests.

Leachate test.

Next recommended step, is to mobilize, larger shovel, dig samples a foot down, get under the lead, under Benzene and PH's under meth. Anticipate top inch or two. Either recommend till the soil out. Or we recommend. Come up with alternatives.

Only test for exceedences.

How many samples in step two - aiming at around 10, maybe more or less.

Sample next week. 5-10 days. Illicit drugs sent Colorado. 2-3 weeks for all of it.

End of meeting

Graeme Sykes Real Estate Manager, Asset Portfolio

Real Property Division | Ministry of Technology, Innovation and Citizens' Services (250) 217-3027



# **Order Confirmation-P.1**

December-8-16

Ryan Lush Ministry of Technology, Innovation and Citizens' Services W319 – 4000 Seymour Place Victoria, BC V8X 4S8

E-mail: ryan.lush@gov.bc.ca

Re: Order

Dear Ryan,

We would like to take this opportunity to thank you for your recently placed purchase order. Here are the details of your order:

Project Name: Victoria Courthouse Playground

Purchase Order: PO # P17RPD35776

Manufacturer: Landscape Structures Inc.

Product/Design #: 99655-1-1

Scheduled Ship Date: TBD

Estimated Delivery: February 2017

Shipping To: Victoria Courthouse, 850 Burdett Ave., Victoria, BC

Contact: Ryan Lush 250-893-9844

Installation By: Supervised installation with Habitat Systems
Installation Date: Requested dates: February 13-28, 2017

Installation Address: Victoria Courthouse, 850 Burdett Ave., Victoria, BC

Quantity and Price:

-Supply playground equipment (Landscape Structures Inc.)	\$141,349.96
-Corporate Supply Arrangement 15% discount	(\$21,202.49)
-Freight to Victoria, BC	\$5,985.00
-Supervised Installation; includes site layout, supervisory services and post hole digging, cor	icrete
and supervised installation of surfacing	\$12,554.54
-Corporate Supply Arrangement 15% discount	(\$1,883.18)
-Supply 270 cubic yards of Habitat's engineered wood fibre surfacing to a 12" depth,	
(complete with geotextile landscape fabric)	\$12,342.79
-Corporate Supply Arrangement 15% discount	<b>(</b> \$1,851.42 <b>)</b>
-Freight to Victoria, BC	<u>\$4,150.00</u>

Subtotal	\$151,445.20
GST @ 5%	\$7,572.26
PST @ 7%	<u>\$9,854.17</u>
Total	\$168,871.63



# Order Confirmation – P.2

December-8-16

Ryan Lush Ministry of Technology, Innovation and Citizens' Services W319 – 4000 Seymour Place Victoria, BC V8X 4S8

Special Instructions: N/A

Colours: Palette H

Invoicing Name: Ministry of Technology, Innovation and Citizens' Services

Invoicing Address: PO Box 9412, Stn. Prov Gov, Victoria, BC V8W 9V1

ATTN: Ryan Lush

Terms: Listed taxes (GST & PST) are applicable and need to be paid by

the purchaser. Past due amounts will be charged 2% interest compounded monthly [26.82% per annum], starting on the first day past the due date. Terms are net 30 days on approved

credit.

In the meantime, should you have any questions or concerns, please feel free to contact me at 1 (866) 422-4828, (604) 294-4224 or e-mail at swilson@habitat-systems.com.

Regards,

Sonya Wilson Client Services Habitat Systems Inc. From: Blonde, Sarah MTIC:EX
To: Whittier, Joanne GCPE:EX

Subject: RE: remaining interviews for MAV"s calendar Date: Wednesday, November 2, 2016 12:59:00

Wait, what is the confirmed time for CBC? It says 2pm.

From: Whittier, Joanne GCPE:EX

Sent: Wednesday, November 2, 2016 12:57 PM

To: Schaap, Samantha LASS:EX; Blonde, Sarah MTIC:EX

Cc: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX; Schollen, Tasha GCPE:EX

Subject: remaining interviews for MAV's calendar

Hi there – can you put these three media requests into Minister Virk's calendar? Samantha has confirmed he as time starting at 2:45 p.m.

**Reporter** Megan Thomas, Producer

CBC Radio - Victoria megan.thomas@cbc.ca

250-414-4707

**Deadline** Wednesday, November 2, 2016 2:00 PM

**Request** Would like to have comment for the news segment. Specific questions include how to

you remove and remediate contaminated soil? What will the playground look like? Who will be responsible for the ongoing maintenance of the new playground?

**Reporter** Jean Paetkau, Producer

CBC Radio - Victoria jean.paetkau@cbc.ca

250-414-4704

**Deadline** ASAP

Request Would like MAV on All Points West with Robyn Burns today at 4:50 p.m. for

general comment. Questions may include What kind of community consultation? Is

this a strategy to deal with issues such as tent city?

Status: Minister asked to call 250-360-2227 at 4:45 to be on the line for the interview at 4:50 p.m.

**Reporter** Lindsay Kines, Reporter

PRESS GALLERY

lkines@timescolonist.com 250-382-9006 c: 250-812-9877

**Deadline** Wednesday, November 2, 2016 4:00 PM

**Request** Would like a general comment from the Minister regarding the Victoria Courthouse

and plans to go forward with a playground. Specific questions: what was found at the site in terms of contaminants? Do you have any cost estimates for the playground?

For the clean-up? Or both?

**Status:** Minister asked to call Lindsay at approximately 3 p.m.

From: Cook, Jeannette MTIC:EX

To: <u>Facey, Nick MTIC:EX</u>; <u>Reddy, Brandon MTIC:EX</u>; <u>Schollen, Tasha GCPE:EX</u>

Cc: Blonde, Sarah MTIC:EX; Wensink, Alison MTIC:EX

 Subject:
 MTICS 30 60 90-Nov 2016 Final

 Date:
 Friday, November 4, 2016 11:46:16

 Attachments:
 MTICS 30 60 90-Nov 2016 Final.docx

Hi there – sharing a copy of our latest 30/60/90 day updates.

Cheers,

JC

From: Schollen, Tasha GCPE:EX

To: Virk, Amrik MTIC:EX; Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX; Blonde, Sarah MTIC:EX

Subject: Updated Courthouse Info Bulletin and QA

Date: Tuesday, November 1, 2016 16:51:17

Attachments: QA Courthouse Park Remediation 1 Nov 2016 FINAL.docx

IB Courthouse park remediation 2 Nov Final.pdf

## Hi Minister,

Per Q5: Because of the contaminants present in the soil, remediation will not take place on the Island, it will take place at a facility on the Lower Mainland. (Not Alberta, after all). The facility is not yet determined....

Thanks,

Т

**Tasha Schollen I** Communications Director Ministry of Technology, Innovation and Citizens' Services Government Communications and Public Engagement

Phone: 250-387-3134 | Cell: 250-889-1121

From: Schollen, Tasha GCPE:EX

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX; Blonde, Sarah MTIC:EX

Cc: Whittier, Joanne GCPE:EX

Subject: USE THIS ONE: Updated for Briefing: IB & QA Courthouse Remediation

**Date:** Tuesday, November 1, 2016 11:15:16

Attachments: QA Courthouse Park Remediation 1-Nov-2016 FINAL.docx

IB Courthouse park remediation 1-Nov-2016 v7.docx

We just added another Q to the QA. Use this one.

From: Schollen, Tasha GCPE:EX

Sent: Tuesday, November 1, 2016 11:00 AM

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX; Blonde, Sarah MTIC:EX

Cc: Whittier, Joanne GCPE:EX

Subject: Updated for Briefing: IB & QA Courthouse Remediation

Updated IB and QA for Minister's signoff in conjunction with Courthouse briefing.

Tasha Schollen | Communications Director

Ministry of Technology, Innovation and Citizens' Services Government Communications and Public Engagement

Phone: 250-387-3134 | Cell: 250-889-1121

From: Minister, MNGD MNGD:EX To: Minister, MTIC MTIC:EX Subject: FW: After Tent City

Date: Thursday, August 4, 2016 10:27:30

For your Ministry's review and consideration.

From: Coleman.MLA, Rich [mailto:Rich.Coleman.MLA@leg.bc.ca]

Sent: Thursday, August 4, 2016 9:54 AM To: Minister, MNGD MNGD:EX

Subject: FW: After Tent City

From: s.22

**Sent:** August 3, 2016 6:12 PM

To: Coleman.MLA, Rich < Rich.Coleman.MLA@leg.bc.ca >

Cc: mayorandcouncil@victoria.ca

Subject: After Tent City Hello Mr. Coleman

s.22

Page 235

Withheld pursuant to/removed as

s.22

From: Minister, MNGD MNGD:EX
To: Minister, MTIC MTIC:EX
Subject: FW: Courthouse Lawn feedback
Date: Monday, August 22, 2016 15:39:41

Please see below for your ministries review and consideration.

Thank-you,

## **Lauren Sures**

Administrative Assistant to the

Honourable Rich Coleman

Minister of Natural Gas Development

Minister Responsible for Housing and Deputy Premier

Telephone: (250) 953-0900

From: s.22

Sent: August 21, 2016 8:38 PM

To: Coleman.MLA, Rich < Rich.Coleman.MLA@leg.bc.ca >

**Subject:** Courthouse Lawn feedback

Hello Mr Virk,

s.22

From: Minister, MNGD MNGD:EX
To: Minister, MTIC MTIC:EX

Subject: FW: courthouse lawn suggestion (Ref 104867)
Date: Wednesday, August 17, 2016 09:20:17

Hello,

Please see below for your ministries review and consideration.

Thank-you

## **Lauren Sures**

Administrative Assistant to the

Honourable Rich Coleman

Minister of Natural Gas Development

Minister Responsible for Housing and Deputy Premier

Telephone: (250) 953-0900

From: s.22

**Sent:** August 12, 2016 9:24 PM

To: Coleman.MLA, Rich < Rich.Coleman.MLA@leg.bc.ca>

Subject: courthouse lawn suggestion

Hello, s.22 From: Facey, Nick MTIC:EX

To: Schollen, Tasha GCPE:EX; Reddy, Brandon MTIC:EX

Subject: Re: MTICS Media Requests - Times Colonist/CFAX - Victoria Courthouse Remediation and Playground Design

Update

Date: Tuesday, December 6, 2016 15:40:41

Good to go.

From: Tasha Schollen < tasha.schollen@gov.bc.ca > Date: Tuesday, December 6, 2016 at 3:33 PM

To: Nick Facey < nick.facey@gov.bc.ca > , Brandon Reddy < Brandon.Reddy@gov.bc.ca >

Cc: Tasha Schollen < tasha.schollen@gov.bc.ca>

Subject: MTICS Media Requests - Times Colonist/CFAX - Victoria Courthouse Remediation and

Playground Design Update

# For approval

# Reporter

Kyle Reynolds, Producer CFAX 1070 kyle.reynolds@bellmedia.ca

### Reporter

Sarah Petrescu, Reporter Times Colonist spetruscu@timescolonist.com

Deadline Tuesday, December 6, 2016 3:00 PM

# Request

Reporter would like an update on plans going forward. He read in the information bulletin issued Nov. 2/16 that we'd have a plan in a few weeks.

## **Background**

## Recommendation

### Remediation:

- \*Propose to send Times Colonist reporters the two attached Pinchin reports. Staff has approved providing them to reporter\*
- · The Ministry has retained the services of Pinchin West to provide environmental engineering oversight and recommendations.
- · Pinchin and its subcontractors will be responsible for removing and disposing of the soil appropriately, through a certified treatment facility.
- · Based on several factors including contaminants present in the soil it is unlikely to be treated on Vancouver Island, but rather at a certified treatment facility on the Mainland.
- ·That work will be subject to a fair and open procurement process, which closes on Dec. 9, 2016.

- · The scope of work includes:
  - o The excavation and disposal of 1,432 cubic meters of dirt. (estimated to be 2,864 tonnes) o Retain the services of a certified arborist to provide recommendations on how to preserve foliage at the site.
  - o Sampling of excavated soils.
  - o Backfill of the site and landscaping of sod.

## Playground:

- · Ministry staff sought design input from students who attend schools in the neighbourhood.
- · Grade five students at Christ Church Cathedral School and students at Sir James Douglas were consulted about the kinds of features they would like to see in a playground.
- · Ministry staff set up large glossy images of a dozen different equipment pieces, (swing set, merrygo-round, monkey bars, climbing ropes, etc.), which they voted on. They took a few minutes to review each piece and deposit votes in accompanying boxes, blind ballot style.
- · Staff also conducted freeform design, partially facilitated by ministry staff. The children produced drawings and words representing what they liked.
- · Some children formed teams and ideas were shared between groups and individuals.
- The playground is currently in conceptual design.
- · The playground will be accessible to children of all ages and abilities. The site will also include components geared towards adults and seniors, such as chess tables, benches and tai chi exercise equipment.
- · A finalized remediation plan is in place and a contractor is being hired through a competitive procurement process. A redevelopment plan will be completed in January.
- · By the end of February, we expect the site to be finalized.

**Tasha Schollen I** Communications Director Ministry of Technology, Innovation and Citizens' Services Government Communications and Public Engagement

Phone: 250-387-3134 Cell:250-889-1121

From: Blonde, Sarah MTIC:EX

To: Reddy, Brandon MTIC:EX; Facey, Nick MTIC:EX

Subject: 4:00 pm call today

Date: Wednesday, September 21, 2016 15:30:36

Attachments: 1600 VCH Site Renewal Report.pdf

Sarf has asked we pass this draft material along for you 4pm call today. In have uploaded to the calendar and ipad.

SB

From: Whittier, Joanne GCPE:EX

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX

Cc: Schollen, Tasha GCPE:EX; Gordon, Matt GCPE:EX; Wolford, Jessica GCPE:EX

Subject: Flagging Victoria Courthouse greenspace redesign - discussions with neighbours next week

**Date:** Friday, September 9, 2016 15:12:32

Hi folks: this just in: Mike Blaschuk and program leads are planning to start discussions with neighbours next week (Wed. and Friday evenings at the Victoria Courthouse, Justice Access Centre boardroom) regarding future options for the Victoria Courthouse greenspace. They will likely have renderings on display of a playground and possibly parking lot expansion (specs have not been confirmed but the thinking is to add about 20 parking stalls to the existing lot). We will get the renderings prior to the meetings so we know what they look like.

Program is also having similar discussions with VicPD (on Monday), the Fire Commissioner, principle Stuart Hall of Cathedral School, the Arch Deacon of Christ Church, YMCA and Court Services/Justice Access Centre next week. Other than VicPD, the timing for these meetings/phone calls has not been confirmed.

Following the discussions, options will be brought forward for consideration by the Minister. Couple of additional updates: pest control is going well; still underway but is deemed to be effective. Soil testing has also been started with samples taken from six locations on the site and sent to a lab in Burnaby for analysis. Results will take a couple of weeks. Remediation required still to be determined. In terms of timing, the aim is to have discussions with neighbours, get options to MO and then begin the design/procurement work on the redesign so it can be completed by spring of 2017.

Will get our messaging updated in advance of the meetings.

Thx - Jo

# Ahmed, Sarf MTIC:EX

From:

Schollen, Tasha GCPE:EX

Sent:

Tuesday, August 30, 2016 4:36 PM

To:

Ahmed, Sarf MTIC:EX; Fellows, Brian MTIC:EX

Subject:

RE: MTICS Media Request - CTV, TC, CBC - Courthouse Remediation/Costs

Thanks, Brian. Sarf, how about you?

From: Fellows, Brian MTIC:EX

Sent: Tuesday, August 30, 2016 4:34 PM

**To:** Schollen, Tasha GCPE:EX **Cc:** Ahmed, Sarf MTIC:EX

Subject: Re: MTICS Media Request - CTV, TC, CBC - Courthouse Remediation/Costs

Looks fine to me Tasha,

Brian

Sent from my iPhone

On Aug 30, 2016, at 4:18 PM, Schollen, Tasha GCPE:EX < Tasha. Schollen@gov.bc.ca > wrote:

Hi Brian and Sarf...tight turnaround on this. Okay to provide to reporters?

Okay to provide on background?

Deadline @ asap

Media:

CTV - Scott Cunningham, 250-661-8630, scott.cunningham@bellmedia.ca
Times Colonist – Katherine Dedyna, <u>kdedyna@timescolonist.com</u>
CBC Radio – Megan Thomas, 250 414-4707, cell: 250 661-6185, <u>megan.thomas@cbc.ca</u>

Topic:

Victoria Courthouse Remediation

Background:

Reporter is looking for an update on the remediation efforts and next steps.

**Recommended Response:** 

Could we please get the latest update on the former tent city site? What is the situation with pest control? Is there any concern rats are getting into the court house?

- The Ministry of Technology, Innovation and Citizens' Services is managing the site cleanup and restoration of the site.
- . The process started the week of Aug. 8 after the former tent city was officially closed.
- While clean-up was occurring it was determined that pest control is required before any remediation should begin.

- The exact number of rodents cannot be confirmed. Pest control activities were estimated to take approximately two weeks, however, these efforts will continue until the pests are completely eradicated. Monitoring is occurring on a daily basis.
- As part of the remediation process, we will consider what the best design and future use of the site will be, in discussion with the City of Victoria and area neighbours.
- That process will unfold in the coming weeks. Once a site plan is determined, remediation, which will include soil removal and testing, will get underway.
- In the meantime, the adjacent parking lot has been cleaned and parking stall lines were repainted.
- Fencing will remain around the perimeter of the site and will be staffed by security 24/7.

What is the current total bill for pest management and the site:

- 1. Total costs for pest management from April to September, are approximately \$6,500.
- 2. Provincial costs associated with managing the site are approximately \$1.3M between December 2015 and August 2016. This money is allocated for things such as security, garbage collection, portapotties and upkeep, fire extinguishers, gravel, water hookup/service, power pole installation, BC Hydro service, fencing and site demolition.

Outstanding from Housing: (will provide to reporters when I get it) \$\$\$\$ for PHS Community Services' work in connecting campers with housing, health and other services at the site.

Tasha Schollen | Communications Director
Ministry of Technology, Innovation and Citizens' Services
Government Communications and Public Engagement

Phone: 250-387-3134 | Cell: 250-889-1121

# Ahmed, Sarf MTIC:EX

From:

Whittier, Joanne GCPE:EX

Sent:

Friday, September 30, 2016 10:19 AM

To:

Ahmed, Sarf MTIC:EX

Cc:

Schollen, Tasha GCPE:EX; Fellows, Brian MTIC:EX

Subject:

RE: for approval - media request Victoria News re: Victoria Courthouse remediation

Thx Sarf – will make this change.

From: Ahmed, Sarf MTIC:EX

Sent: Friday, September 30, 2016 10:13 AM

To: Whittier, Joanne GCPE:EX

Cc: Schollen, Tasha GCPE:EX; Fellows, Brian MTIC:EX

Subject: Re: for approval - media request Victoria News re: Victoria Courthouse remediation

Pest control was almost done based on my info. I think we should not mention spring 2017 just yet.

Otherwise ok.

Sent from my BlackBerry 10 smartphone on the TELUS network.

From: Whittier, Joanne GCPE:EX

Sent: Friday, September 30, 2016 8:47 AM

**To:** Ahmed, Sarf MTIC:EX **Cc:** Schollen, Tasha GCPE:EX

Subject: for approval - media request Victoria News re: Victoria Courthouse remediation

Hi Sarf – response points below; is this ok with you? Thx much - Jo

Deadline @

September 30 – 10 a.m.

Media:

Victoria News

Reporter:

Pamela Roth, 250-480-3265, editor@vicnews.com

Topic:

Victoria Courthouse Remediation

<u>Background</u>: The reporter would like an update on the current state of the former Victoria tent city site. She would also like to know what the future plans are for the site.

**Questions:** What is current status of the remediation at the former tent city site? What are the plans for the site once it has been fully remediated?

### Suggested Response:

- Pest control is still underway with good results.
- Soil testing is underway to determine the extent of remediation required.
- Soil sampling has been taken at six different locations on the site; these have been sent to a lab in the Lower Mainland for testing.

- During the remediation process, the province will consider what the best design and future use of the site will be, in discussion with the City of Victoria and area neighbours.
- The timing for the whole process including soil testing, remediation and development of a new design is expected to be complete by spring 2017.

# **ADVICE TO MINISTER**

# CONFIDENTIAL ISSUES NOTE

Ministry: Technology, Innovation and

Citizens' Services

Date: Sept. 13, 2016

Minister Responsible: Hon. Amrik Virk

Created by Government Communications and

Public Engagement

# VICTORIA COURTHOUSE SITE Remediation & Redevelopment

## ADVICE AND RECOMMENDED RESPONSE:

- The Ministry of Technology, Innovation and Citizens' Services is managing the site cleanup and restoration of the site.
- Pest control is being undertaken before remediation is underway. (The exact number of rodents cannot be confirmed.)
- Soil sampling has been taken at six different locations on the site; these have been sent to a lab in Burnaby for testing.
- The testing will take about two weeks; following which a remediation plan will be developed.
- During the remediation process, we will consider what the best design and future use of the site will be, in discussion with the City of Victoria and area neighbours.
- Fencing will remain around the perimeter of the encampment and will be staffed by security 24/7.

# If asked what design and future use will be discussed:

- We will be exploring an expansion of the parking lot (by about 10-20 spaces) to better serve the operations of the Victoria Courthouse, and reduce parking congestion for the neighbourhood.
- We will also be discussing design options with local residents, such as a community playground - in which a number of residents have an expressed interest – as well as a dog park and a green space.

# If asked about timing and cost for the site remediation and redesign:

- The timing for the whole process including soil testing, remediation and development of a new design – is expected to be complete by spring 2017.
- The estimated budget will be determined once the remediation and site redevelopment plans are finalized.

# If asked whether camping will be permitted:

- Camping on all provincial land is not permitted without permission or authority under statute or regulations.
- The Victoria courthouse lands are owned by the Province. As the minister responsible, I have broad powers to determine the use of the courthouse lands.

# **Housing Supports**

- As of August 1, more than 300 people from the Victoria courthouse camp were housed at five different housing projects in the region.
- To date, more than 55 people from the courthouse encampment have moved into permanent housing.
- In 2015/16, the B.C. government spent close to \$5 million to provide housing and shelter for residents of the Victoria courthouse encampment. (Central Care Home, Mt Edwards, My Place, Choices and the First Metropolitan shelter)

# BACKGROUND:

During the week of Sept. 12, discussions will be held with area neighbours (Wed. and Fri. evening); VicPD; the Fire Commissioner; Stuart Hall, Principle of Cathedral School; the Arch Deacon of Christ Church; and representatives from the YMCA and Court Services/Justice Access Centre regarding the future redevelopment of the Victoria Courthouse site.

Options that will be discussed include an expansion of the parking lot by about 10-20 spaces and a community playground, which many residents have expressed an interest. Other options that will be discussed include a dog park and a green space; it should be noted that these options would not prevent future overnight camping.

An electrical upgrade project on the courthouse, separate from the remediation work that will be done on the site, is scheduled for Wed., Sept. 14 to Fri., Sept. 16 and will involve the removal of rockwork at the northwest corner (Courtney Street), soil excavation and the pouring of concrete. This may raise media questions as to whether this work is related to the site redevelopment.

On Aug. 12, 2016, the last camper left tent city. Pest control work is now underway and soil sampling has been taken from six different spots on the site and sent to a lab in Burnaby for testing. The testing is expected to take a couple of weeks, following which the remediation plans for the site will be developed.

It is estimated that the soil testing, remediation and development of a new design will be complete by spring 2017.

On July 5, Chief Justice Hinkson ruled that the encampment on the Victoria courthouse lawn was unsafe for those living there and for the neighbouring residents and businesses, and ordered that the encampment be closed.

The campsite at the Victoria Courthouse was active since November 2015.

## Transition of the former campers from the site:

BC Housing has managed the relocation of campers into supportive housing in partnership with PHS Community Services Society, housing providers, Island Health and Provincial Ministries.

# **ADVICE TO MINISTER**

MTICS, representing the property owner, provided onsite security, managed physical assets on the site and helped make sure the site conforms to a fire order issued by the Fire Commissioner. MTICS also assist in dismantling the site as campers moved into housing.

# Ministry Lead:

Michael Blaschuk

Branch: SSBC, Asset Management

Number: (604) 614-0164

# Signoff:

ADM Brian Fellows
DM or Associate DM Sarf Ahmed

# Ahmed, Sarf MTIC:EX

From: Burbee, Jon MTIC:EX

**Sent:** Thursday, September 1, 2016 7:12 PM **To:** Ahmed, Sarf MTIC:EX; Fellows, Brian MTIC:EX

**Subject:** FW: VCH update - action item

Attachments: RE: Cost estimates & Media Request - CTV - Courthouse Remediation

Good evening Sarf and Brian,

Please find below additional details for tomorrow's call. I do have an even more granular breakdown in the attachment that was sent to GCPE as part of the most recent media request.

We are at the point that we can consider initial pest control to be complete. Soil contamination testing has started today. I have more detail on this to pass along tomorrow.

Respectfully,

Jon

**From:** Sykes, Graeme MTIC:EX **Sent:** September 1, 2016 10:33 AM

To: Burbee, Jon MTIC:EX

Cc: Sykes, Graeme MTIC:EX; Lush, Ryan MTIC:EX; Blaschuk, Michael MTIC:EX

Subject: RE: VCH update - action item

Hi Jon

## 1. Pest control:

- Substantial drop in number of dead rats, less consumption of bait, indicates pest removal has been effective
- As a precaution, bait stations to be moved to the site perimeter, serviced Monday, Wednesday, Friday, starting next week.

## 2. Remediation:

- Pinchin Engineers contracted to conduct soil sampling, to begin next week
- Both MOE and VIHA have been consulted as to public health concerns, soil testing standards and approve of our approach
- Depth and extent of soil remediation to be determined by results of soil tests/lab analysis (3 4 weeks)
- Substantial soil removal likely to commence end of September

## 3. Breakdown of the 1.3m spent on the site since Dec 2015:

December to March COMPLETE		Supplemental RFS for porta pottie washrooms and garbage collection, builds on prevaries of \$25,000, with additional costs for security services (including other locations) additional garbage and washroom services.
April to September ACTIVE	\$835,366.92	Supplemental RFS BCGV473433 Site security, pest control, crushed rock, garbage bins, bathroom cleaning, neighbour cleaning, fencing, demolition, moving campers, waste removal, etc

	eptember OMPLETE	\$383,488.06	Supplemental RFS BCGV480080 Washcar Showers, delivery and removal, rental fees, power pole, plumbing, water stowater delivery, sewage removal, Bulldog Container, parking lot painting, temporary sparking rental fees
Septe	mber to ? ACTIVE	Budget \$350,000	Soil remediation, landscaping, irrigation, playground, etc.

Hope this helps! Graeme

From: Ahmed, Sarf MTIC:EX

Sent: Thursday, September 1, 2016 8:20 AM

**To:** Fellows, Brian MTIC:EX **Cc:** Burbee, Jon MTIC:EX

Subject: VCH update - action item

## Brian

Please send me the following information for our Friday morning call.

- 1. Status of pest control activities. The plan was that they will be complete by Sept 1.
- 2. Breakdown of the 1.3m spent on the site since Dec 2015 as quoted in the media.

I would also like to know what steps have been taken to prepare for remediation.

Thanks Sarf

Sent from my BlackBerry 10 smartphone on the TELUS network.

# Ahmed, Sarf MTIC:EX

From: Sykes, Graeme MTIC:EX

Sent: Tuesday, August 30, 2016 1:57 PM

To: 'Scott Knudsen'; Fredette, Denis MTIC:IN; Moyles, Nicola MTIC:IN; Lidstone, Todd BL/C-

WSI; Schollen, Tasha GCPE:EX

Cc: Cooper, Brian MTIC:EX; Lush, Ryan MTIC:EX; Burbee, Jon MTIC:EX; Deslauriers, Christy

MTIC:EX; Sykes, Graeme MTIC:EX; Purewall, Dar MTIC:EX

Subject: RE: Cost estimates & Media Request - CTV - Courthouse Remediation

Attachments: Tent City Costs - RFS trajectory\_August 30.xlsx

Hi Folks, thanks for all your help gathering costs.

I think the attached spreadsheet shows the most up to date numbers. It's missing some of the breakdown between supplemental RFS, so we will want to get that cleared up prior to the inevitable audit and FOI request. For the meantime, we've budgeted \$1,311,943.15 in total costs from December to end of August. This does not include legal costs.

Tasha, we're working to get you the precise amount spent on Pest Control to answer your media request. There are no concerns that Rats will get migrate into the courthouse, as they are being actively exterminated with daily monitoring.

Hope this helps, Graeme

**From:** Scott Knudsen [mailto:Scott.Knudsen@wsi.brookfieldgis.com]

Sent: Tuesday, August 30, 2016 10:21 AM

To: Sykes, Graeme MTIC:EX; Fredette, Denis MTIC:IN; Moyles, Nicola MTIC:IN; Lidstone, Todd BLJC-WSI

Cc: Cooper, Brian MTIC:EX; Burbee, Jon MTIC:EX; Lush, Ryan MTIC:EX

Subject: RE: Cost estimates & Media Request - CTV - Courthouse Remediation

Hi Graeme;

I have sent my spread sheet to Todd he will forward to you. Any questions once you get the spread sheet please send me an email or call me.

## Thanks, Scott Knudsen

Service Delivery Leader

## Brookfield GIS Workplace Solutions Inc.

23 - 3318 Oak Street
Victoria, British Columbia V8X 1R1
t.: 250-812-4813 | f.: 250.952-3861
scott.knudsen@wsi.brookfieldgis.com
www.brookfieldgis.com

## **Brookfield**GIS

Workplace Solutions Inc.

From: Sykes, Graeme MTIC:EX [mailto:Graeme.Sykes@gov.bc.ca]

Sent: Tuesday, August 30, 2016 10:03 AM

**To:** Denis Fredette < <u>Denis.Fredette@wsi.brookfieldgis.com</u>>; NICOLA MOYLES < <u>NICOLA.MOYLES@brookfieldgis.com</u>>; Scott Knudsen < Scott.Knudsen@wsi.brookfieldgis.com>; Todd Lidstone < Todd.Lidstone@wsi.brookfieldgis.com>

Cc: Cooper, Brian MTIC:EX < Brian.Cooper@gov.bc.ca >; Burbee, Jon MTIC:EX < Jon.Burbee@gov.bc.ca >; Lush, Ryan

MTIC:EX < Ryan.Lush@gov.bc.ca >

Subject: RE: Cost estimates & Media Request - CTV - Courthouse Remediation

Denis, you did not send me any updated cost estimates last week. Maybe it went to Scott or Todd?

From: Denis Fredette [mailto:Denis.Fredette@wsi.brookfieldgis.com]

Sent: Tuesday, August 30, 2016 9:49 AM

To: Sykes, Graeme MTIC:EX; Moyles, Nicola MTIC:IN; Scott Knudsen; Lidstone, Todd BLJC-WSI

Cc: Cooper, Brian MTIC:EX; Burbee, Jon MTIC:EX; Lush, Ryan MTIC:EX

Subject: RE: Cost estimates & Media Request - CTV - Courthouse Remediation

Graeme, the numbers I sent you last week are still valid. There are still costs for the repairs / maintenance of the wash car that I haven't been able to gather up yet but the rest are still as they were the last time.

Regards

Denis Fredette Facility Manager, FMZ 106

Brookfield GIS Workplace Solutions Inc.

23-3318 Oak Street Victoria, BC V8X 1R1 T: 250 889 4371| F: 250 952 3868 denis.fredette@wsi.brookfieldgis.com www.brookfieldgis.com

### **Brookfield**GIS

Workplace Solutions Inc.

From: Sykes, Graeme MTIC:EX [mailto:Graeme.Sykes@gov.bc.ca]

Sent: Tuesday, August 30, 2016 9:46 AM

**To:** Denis Fredette < <u>Denis.Fredette@wsi.brookfieldgis.com</u>>; NICOLA MOYLES < <u>NICOLA.MOYLES@brookfieldgis.com</u>>; Scott Knudsen < <u>Scott.Knudsen@wsi.brookfieldgis.com</u>>; Todd Lidstone < <u>Todd.Lidstone@wsi.brookfieldgis.com</u>> **Cc:** Cooper, Brian MTIC:EX < <u>Brian.Cooper@gov.bc.ca</u>>; Sykes, Graeme MTIC:EX < <u>Graeme.Sykes@gov.bc.ca</u>>; Burbee,

Jon MTIC:EX <Jon.Burbee@gov.bc.ca>; Lush, Ryan MTIC:EX <Ryan.Lush@gov.bc.ca>

Subject: Cost estimates & Media Request - CTV - Courthouse Remediation

HI folks

Following up on my email yesterday, there is renewed interest from a number of media outlets around cost & schedule updates. To keep things clean, please send through me and I'll consolidate response.

- What are costs to date?
- What is current estimate for cost and timeline for soil remediation?
- Pest control: total cost? Is site clear of rats?

Thanks Graeme

From: Schollen, Tasha GCPE:EX

Sent: Tuesday, August 30, 2016 9:39 AM

To: Burbee, Jon MTIC:EX; Sykes, Graeme MTIC:EX

Cc: Schollen, Tasha GCPE:EX

Subject: FW: MTICS Media Request - CTV - Courthouse Remediation

Good morning, we have two additional media outlets seeking this information (see below)

### Deadline @ asap

### Media:

CTV - Scott Cunningham, 250-661-8630, scott.cunningham@bellmedia.ca
Times Colonist – Katherine Dedyna, <u>kdedyna@timescolonist.com</u>
CBC Radio – Megan Thomas, 250 414-4707, cell: 250 661-6185, <u>megan.thomas@cbc.ca</u>

**Topic: Victoria Courthouse Remediation** 

**Background**: Reporter is looking for an update on the remediation efforts and next steps.

### Recommended Response:

Could we please get the latest update on the former tent city site? What is the situation with pest control? Is there any concern rats are getting into the court house?

- The Ministry of Technology, Innovation and Citizens' Services is managing the site cleanup and restoration of the site.
- The process started the week of Aug. 8 after the former tent city was officially closed.
- While clean-up was occurring it was determined that pest control is required before any remediation should begin.
- The exact number of rodents cannot be confirmed. Pest control activities were estimated to take approximately two weeks, however, these efforts will continue until the pests are eradicated.
- As part of the remediation process, we will consider what the best design and future use of the site will be, in discussion with the City of Victoria and area neighbours.
- That process will unfold in the coming weeks. Once a site plan is determined, remediation, which will include soil removal and testing, will get underway.
- In the meantime, the adjacent parking lot has been cleaned and parking stall lines were re-painted.
- Fencing will remain around the perimeter of the encampment and will be staffed by security 24/7.

What is the current total bill for:

- 1. Pest management so far?
- 2. The entire site everything since the tent city was in place last fall?

**Tasha Schollen** | Communications Director Ministry of Technology, Innovation and Citizens' Services Government Communications and Public Engagement Phone: 250-387-3134 | Cell: 250-889-1121 Please consider the environment before printing this email - Help save our planet.

Veuillez songer à l'environnement avant d'imprimer le présent courriel – Aidez-nous à protéger notre planète.

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From: Burbee, Jon MTIC:EX

Sent: Saturday, March 5, 2016 12:50 PM

To: Plecas, Bobbi PREM:EX; Vasey, Jeff OHCS:EX; Bond, Allison MCF:EX; Sandstrom, Kurt

JAG:EX

Cc: Ahmed, Sarf MTIC:EX; Fellows, Brian MTIC:EX; Marsh, Patricia A MTIC:EX; Mason, Tyna

JAG:EX

Subject: Victoria Courthouse Site Restoration

Good day to all,

As per our discussion yesterday, please find below an updated plan that outlines the way ahead. This plan has been approved for distribution by MTICS Executive.

**Purpose:** For the province to demonstrate leadership in site demobilization of the encampment at the Victoria Courthouse. The Province would like to see empty tents removed and partial site remediation as soon as possible. A multi-pronged process could be used to achieve this goal, which will require coordination across Ministry of Technology, Infrastructure, and Citizens' Services, Victoria Police Department, BC Housing/Non-profit Housing Providers, Fire Commissioner, City of Victoria, and other stakeholders as needed.

### 1. PRE-INJUNCTION AND ENFORCEMENT ORDER PLAN

- o Initiate action to:
  - o Clean up site, and
  - Remove and clean up vacant tents and other debris to follow through with provincial fire order to remove fire safety hazards.

**OUTCOME:** This is about leveraging a cooperative approach to remove abandoned tents and garbage on site. Ideally, the cooperative approach will lead to:

## **Action Items:**

Action 1: BP to discuss approach with Provincial Fire Commissioner (Complete)

Action 2: JV to discuss with BC Housing have non-profit providers encourage campers leaving the site for housing to bring their belongings with them for disposal. (Complete)

Action 3: BF to liaise with Vic PD, campers and Vic Bylaw enforcement to coordinate removal of abandoned belongings (Complete)

Action 4: Campers will continue site cleanup activity supported by existing waste removal services provided by MTICS. Joint efforts to move through camp and remove unambiguously abandoned tents to commence sometime following liaison between WSI and waste management contractor. **Likely Tuesday start**.

NB: Ensure all communications crisply coordinated with Vic PD (Focussed Enforcement Team – Insp Scott McGregor) (Complete)

### 2. POST INJUNCTION AND ENFORCEMENT ORDER PLAN:

Coordinated incremental approach led by MTICS with support from VPD, to complete the de-mobilization activity and return the site to greenspace. (Initial planning now underway between MTICS, Vic PD, and WSI)

- 1. Secure site via erection of fencing and signage. Security required throughout via Vic PD and Paladin.
- Initiate removal of remaining belongings, debris, and surface hazardous material
- 3. Initiate remediation assessment to determine existence and/or degree of soil contamination and other damage.
- 4. Review assessment and propose landscaping remediation options for approval. Note: the plan must not compromise any conditions or assumptions that result from court applications or decisions (ie should a daytime-only camping ban be in place, any landscaping solutions must allow for this to occur).
- 5. Coordination ongoing with Vic PD and other public safety officials including the Sheriff Service, Paladin Security, and Vic Fire Dept.

<b>OUTCOME:</b> All campers have moved on. Courthouse greenspace is returned to	
its former state with all traces of campers and tent city removed.	

Regards,

Jon

From:

Ahmed, Sarf MTIC:EX

Sent:

Tuesday, October 11, 2016 5:59 PM

To: Cc:

Whittier, Joanne GCPE:EX Schollen, Tasha GCPE:EX

Subject:

Re: For revieww Media Request: Victoria Courthouse site remediation

Fine w me. Thx

Sent from my BlackBerry 10 smartphone on the TELUS network.

From: Whittier, Joanne GCPE:EX

Sent: Tuesday, October 11, 2016 5:43 PM

To: Ahmed, Sarf MTIC:EX Cc: Schollen, Tasha GCPE:EX

Subject: For revieww Media Request: Victoria Courthouse site remediation

Hi Sarf - Jon and Graeme have reviewed the response points below - are these ok with you? Thx - Jo

Request

Looking for an update on the Victoria Courthouse site remediation. Questions: Is there still a considerable rat problem? What plans have been made for the development of the space in the

future?

Reporter Scott Cunningham, Reporter CTV Vancouver Island - Victoria scott.cunningham@bellmedia.ca

250-414-6569

Deadline

Wednesday, October 12, 2016 12:00 PM

### **Suggested Response:**

- Pest control is nearly complete with good results.
- Soil testing is underway to determine the extent of remediation required.
- Soil sampling has been taken at six different locations on the site; these have been sent to a lab in the Lower Mainland for testing.
- During the remediation process, the province will consider what the best design and future use of the site will be, in discussion with the City of Victoria and area neighbours.

From:

Ahmed, Sarf MTIC:EX

Sent:

Friday, September 30, 2016 10:13 AM

To:

Whittier, Joanne GCPE:EX

Cc:

Schollen, Tasha GCPE:EX; Fellows, Brian MTIC:EX

Subject:

Re: for approval - media request Victoria News re: Victoria Courthouse remediation

Pest control was almost done based on my info. I think we should not mention spring 2017 just yet.

Otherwise ok.

Sent from my BlackBerry 10 smartphone on the TELUS network.

From: Whittier, Joanne GCPE:EX

Sent: Friday, September 30, 2016 8:47 AM

**To:** Ahmed, Sarf MTIC:EX **Cc:** Schollen, Tasha GCPE:EX

Subject: for approval - media request Victoria News re: Victoria Courthouse remediation

Hi Sarf – response points below; is this ok with you? Thx much - Jo

Deadline @

September 30 – 10 a.m.

Media:

Victoria News

Reporter:

Pamela Roth, 250-480-3265, editor@vicnews.com

Topic:

Victoria Courthouse Remediation

<u>Background</u>: The reporter would like an update on the current state of the former Victoria tent city site. She would also like to know what the future plans are for the site.

**Questions:** What is current status of the remediation at the former tent city site? What are the plans for the site once it has been fully remediated?

### Suggested Response:

- Pest control is still underway with good results.
- · Soil testing is underway to determine the extent of remediation required.
- Soil sampling has been taken at six different locations on the site; these have been sent to a lab in the Lower Mainland for testing.
- During the remediation process, the province will consider what the best design and future use of the site will be, in discussion with the City of Victoria and area neighbours.
- The timing for the whole process including soil testing, remediation and development of a new design is expected to be complete by spring 2017.

From:

Ahmed, Sarf MTIC:EX

Sent:

Monday, March 7, 2016 2:48 PM

To:

Fellows, Brian MTIC:EX; Schollen, Tasha GCPE:EX

Cc:

Burbee, Jon MTIC:EX; Sykes, Graeme MTIC:EX; Whittier, Joanne GCPE:EX

Subject:

RE: MTICS Media Request - CHEK - Courthouse Remediation

Me too.

From: Fellows, Brian MTIC:EX

Sent: Monday, March 7, 2016 2:20 PM

To: Schollen, Tasha GCPE:EX; Ahmed, Sarf MTIC:EX

Cc: Burbee, Jon MTIC:EX; Sykes, Graeme MTIC:EX; Whittier, Joanne GCPE:EX

Subject: RE: MTICS Media Request - CHEK - Courthouse Remediation

Tasha

This looks fine with me,

Brian

**Brian Fellows** | Assistant Deputy Minister Real Property Division | Shared Services BC

Ph: 250 893-3327 | e: Brian.Fellows@gov.bc.ca | m: PO Box 9412, Stn Prov Govt, Victoria BC V8W 9V1



Ministry of Technology, Innovation and Citizens' Services

From: Schollen, Tasha GCPE:EX

Sent: Monday, March 7, 2016 2:16 PM

To: Fellows, Brian MTIC:EX; Ahmed, Sarf MTIC:EX

Cc: Burbee, Jon MTIC:EX; Sykes, Graeme MTIC:EX; Whittier, Joanne GCPE:EX; Schollen, Tasha GCPE:EX

Subject: MTICS Media Request - CHEK - Courthouse Remediation

Seeking your approval for these two follow-up questions please Brian and Sarf.

Will this go to the private sector for tender once the injunction is dealt with and everyone gone?

- We presently have a 15 year contract with Brookfield GIS Workplace Solutions Inc. (WSI) to provide Facilities
   Management Services at the Victoria courthouse property.
- As part of that contract, Workplace Solutions Inc. will procure and manage the remediation work at the site.
   Depending on the nature and extent of damage, WSI may procure contracted services through a tendering process.

We just became aware that 2 Burley Men movers have offered to clean the site up and remove all junk for free. Is this something the province would be amenable to in order to cut down costs?

 While the Province has not received a formal offer for complimentary cleanup we would be open to considering it.

### Provided earlier today:

Media:

CHEK

Reporter:

April Lawrence, alawrence@cheknews.ca

**Background:** The reporter wants to interview someone for radio. He is looking to corroborate information he heard in a story that CFAX did about the cost to remediate the courthouse site.

Question: Can a \$350 K figure be confirmed by your ministry (seems Minister Coleman said it), and can we get some bullet points on how that grand total was arrived at- what are each of the line cost items?

If the site is considered potentially contaminated, contaminated with what?

What is the basis of those findings?

Who or which body made those findings?

### Suggested Response:

- Cleanup costs for the land at the Victoria Courthouse will depend on what is left at the site once everyone has left and the land can be assessed.
- There are makeshift houses on the site and a lot of belongings that will need to be removed.
- There will also be remediation of the site as the landscaping will have to be re-done.
- A preliminary estimate by the Ministry of Technology, Innovation and Citizens' Services should the soil be contaminated – is approximately \$300-thousand to \$350-thousand for the cleanup.
- Professional soil engineering services will be required to determine actual cost estimates.
- Restore the lawn and surrounding area to a landscaped public area.
- Based on current observations, anticipated remediation work includes:
  - o Tent-by-tent identification and storage of personal items; disposal of abandoned items.
  - o Deconstruction of tents & structures, removal into an estimated ten bin loads of refuse.
  - o Top soil remediation; depth and area to be determined.
  - Replacement of top soil with appropriate landscaping.
  - Replacement of sod throughout, regrading, replacement of approximately five trees and 200 feet of hedge.
  - o Assess Irrigation systems for damage.
  - o Fencing and security throughout the duration of the site remediation.

Tasha Schollen | Communications Director Ministry of Technology, Innovation and Citizens' Services Government Communications and Public Engagement

Phone: 250-387-3134 | Cell: 250-889-1121

2

From:

Ahmed, Sarf MTIC:EX

Sent:

Monday, March 7, 2016 11:25 AM

To:

Fellows, Brian MTIC:EX; Burbee, Jon MTIC:EX

Cc:

Sykes, Graeme MTIC:EX

Subject:

FW: MTICS Media Request - CBC - Victoria Courthouse Remediation Costs

I think we need to add

Landscaping. See the 2 bullets below which may need tweaking.

thanks

From: Schollen, Tasha GCPE:EX

Sent: Monday, March 7, 2016 11:19 AM

To: Burbee, Jon MTIC:EX; Fellows, Brian MTIC:EX; Ahmed, Sarf MTIC:EX

Cc: Whittier, Joanne GCPE:EX; Schollen, Tasha GCPE:EX; Sykes, Graeme MTIC:EX Subject: FW: MTICS Media Request - CBC - Victoria Courthouse Remediation Costs

Hello - seeking your approval, please. Thanks.

From: Sykes, Graeme MTIC:EX

Sent: Monday, March 7, 2016 11:12 AM

To: Schollen, Tasha GCPE:EX; Burbee, Jon MTIC:EX

Cc: Whittier, Joanne GCPE:EX

Subject: RE: MTICS Media Request - CBC - Victoria Courthouse Remediation Costs

I'm fine with the response, as it is the same as last week.

Thanks, Graeme

From: Schollen, Tasha GCPE:EX

Sent: Monday, March 7, 2016 11:11 AM

**To:** Sykes, Graeme MTIC:EX; Burbee, Jon MTIC:EX **Cc:** Whittier, Joanne GCPE:EX; Schollen, Tasha GCPE:EX

Subject: MTICS Media Request - CBC - Victoria Courthouse Remediation Costs

Good morning,

Same response as provided to CTV on the weekend, however, I've now indicated that the estimate was done by our ministry. Good to go?

Date/Time:

Mar. 7, 9:26am

Deadline:

asap

Media:

**CBC Radio Victoria** 

Reporter:

Dave Biro, david.biro@cbc.ca

**Topic:** The reporter wants to interview someone for radio. He is looking to corroborate information he heard in a story that CFAX did about the cost to remediate the courthouse site.

Question: Can a \$350 K figure be confirmed by your ministry (seems Minister Coleman said it), and can we get some bullet points on how that grand total was arrived at- what are each of the line cost items?

If the site is considered potentially contaminated, contaminated with what?

What is the basis of those findings?

Who or which body made those findings?

### Suggested Response:

- Cleanup costs for the land at the Victoria Courthouse will depend on what is left at the site once everyone has left and the land can be assessed.
- There are makeshift houses on the site and a lot of belongings that will need to be removed.
- There will also be remediation of the site as the landscaping will have to be re-done.
- A preliminary estimate by the Ministry of Technology, Innovation and Citizens' Services should the soil be contaminated is approximately \$300-thousand to \$350-thousand for the cleanup.
- Professional soil engineering services will be required to determine actual cost estimates.
- Based on current observations, anticipated remediation work includes:
  - o Tent-by-tent identification and storage of personal items; disposal of abandoned items.
  - Deconstruction of tents & structures, removal into an estimated ten bin loads of refuse.
  - Top soil remediation; depth and area to be determined.
  - Replacement of top soil with clean fill. (may need tweaking)
  - Replacement of sod throughout, regrading, replacement of approximately five trees and 200 feet of hedge. (may need tweaking)
  - New Irrigation and drainage.
  - Fencing and security throughout the duration of the site remediation.

Tasha Schollen | Communications Director Ministry of Technology, Innovation and Citizens' Services Government Communications and Public Engagement Phone: 250-387-3134 | Cell: 250-889-1121

From:

Ahmed, Sarf MTIC:EX

Sent:

Friday, March 4, 2016 12:26 PM

To:

Schollen, Tasha GCPE:EX; Whittier, Joanne GCPE:EX

Cc:

Fellows, Brian MTIC:EX

Subject:

Re: For approval - media request, CTV re: Victoria Courthouse future land remediation

Ok. Then

Sent from my BlackBerry 10 smartphone on the TELUS network.

From: Schollen, Tasha GCPE:EX Sent: Friday, March 4, 2016 12:25 PM

To: Ahmed, Sarf MTIC:EX; Whittier, Joanne GCPE:EX

Cc: Fellows, Brian MTIC:EX

Subject: RE: For approval - media request, CTV re: Victoria Courthouse future land remediation

Hi Sarf,

Minister Coleman actually cited the \$350,000 estimate in a scrum and on CFAX as well.

From: Ahmed, Sarf MTIC:EX

Sent: Friday, March 4, 2016 12:24 PM

To: Whittier, Joanne GCPE:EX

Cc: Schollen, Tasha GCPE:EX; Fellows, Brian MTIC:EX

Subject: Re: For approval - media request, CTV re: Victoria Courthouse future land remediation

This is fine except that if we haven't given out the preliminary estimate range then let's not do it. The first bullet covers it. Can say it will be 'significant' as that's what MAV said in one of the scrums. Thx

Sent from my BlackBerry 10 smartphone on the TELUS network.

From: Whittier, Joanne GCPE:EX Sent: Friday, March 4, 2016 12:08 PM

To: Ahmed, Sarf MTIC:EX

Cc: Schollen, Tasha GCPE:EX; Sykes, Graeme MTIC:EX

Subject: For approval - media request, CTV re: Victoria Courthouse future land remediation

Hi Sarf – for your approval, response points below to respond to questions from CTV regarding future land remediation at Victoria Courthouse. Appreciating that a full assessment will be needed before the work ahead is determined; we have an opportunity to illustrate the magnitude of the potential remediation work. Can you let me know if the points below are ok with you? Thx - JO

Deadline @

5 p.m.

Media:

CTV

Reporter:

Yvonne Raymond, cell: 250-661-2072, <a href="mailto:yvonne.raymond@bellmedia.ca">yvonne.raymond@bellmedia.ca</a>

Topic:

Victoria Courthouse future land remediation

<u>Background</u>: Reporter is working on a story for the weekend and would like information on the future remediation of the Victoria Courthouse lands where campers have been living.

Questions: Can I get some background info from one of you detailing the plan to remediate the courthouse land? Particularly: How long is the work estimated to take? What is the cost estimated at? Will a hazmat team need to be brought in to remediate the land or will it simply be an aesthetic clean-up?

### Suggested Response:

- Cleanup costs for the land at the Victoria Courthouse will depend on what is left at the site once everyone has left and the land can be assessed.
- There are makeshift houses on the site and a lot of belongings that will need to be removed.
- There will also be remediation of the site as the landscaping will have to be re-done.
- A preliminary estimate should the soil be contaminated is approximately \$300-thousand to \$350-thousand for the cleanup.
- Professional soil engineering services will be required to determine actual cost estimates.
- Base on current observations, anticipated remediation work includes:
  - Tent-by-tent identification and storage of personal items; disposal of abandoned items.
  - Deconstruction of tents & structures, removal into an estimated ten bin loads of refuse.
  - Top soil remediation; depth and area to be determined.
  - Replacement of top soil with clean fill.
  - Replacement of sod throughout, regrading, replacement of approximately five trees and 200 feet of hedge.
  - New Irrigation and drainage.
  - Fencing and security throughout the duration of the site remediation.

From: Schollen, Tasha GCPE:EX
To: Facey, Nick MTIC:EX

Cc: Reddy, Brandon MTIC:EX; Whittier, Joanne GCPE:EX

Subject: RE: MTICS Media Request: Victoria Courthouse Redevelopment: CTV

Date: Thursday, November 3, 2016 13:12:29

#### Thx

From: Facey, Nick MTIC:EX

Sent: Thursday, November 3, 2016 1:12 PM

To: Schollen, Tasha GCPE:EX

Cc: Reddy, Brandon MTIC:EX; Whittier, Joanne GCPE:EX

Subject: Re: MTICS Media Request: Victoria Courthouse Redevelopment: CTV

Good

Nick Facey, Chief of Staff

for the Hon. Amrik Virk

Minister of Technology, Innovation & Citizens' Services

Government of BC

On Nov 3, 2016, at 11:51 AM, Schollen, Tasha GCPE:EX < Tasha.Schollen@gov.bc.ca> wrote:

For approval to go on background.

**Reporter** Louise Hartland, Reporter

CTV Vancouver Island - Victoria louise.hartland@bellmedia.ca

250-588-5147

**Deadline** ASAP

**Request** Follow up question regarding the contaminated soil and where it will

be dumped. If it hasn't been decided, she is hoping to find out what

the options are.

**Recommendation** ? The Ministry has retained the services of Pinchin West to provide

environmental engineering oversight and recommendations.

? Pinchin and its subcontractors will be responsible for removing and disposing of the soil appropriately, through a certified treatment

facility.

? Based on several factors including contaminants present in the soil it will likely not be treated on Vancouver Island, it will be treated at

a facility certified facility on the Mainland.

? That work will be subject to a fair and open procurement process.

**Soil Information:** 

? The site size is approximately 20,000 square feet.

? Across the site, a depth of approximately 1.5 feet of soil will be

removed.

? This works out to approximately 74 dump truck loads of soil that

will be removed.

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX
Cc: Whittier, Joanne GCPE:EX; Schollen, Tasha GCPE:EX

Subject: MTICS Media Request: Victoria Courthouse Redevelopment: CTV

Date: Thursday, November 3, 2016 11:51:09

For approval to go on background.

**Reporter** Louise Hartland, Reporter

CTV Vancouver Island - Victoria louise.hartland@bellmedia.ca

250-588-5147

**Deadline** ASAP

**Request** Follow up question regarding the contaminated soil and where it will

be dumped. If it hasn't been decided, she is hoping to find out what

the options are.

Recommendation

• The Ministry has retained the services of Pinchin West to provide environmental engineering oversight and recommendations.

- Pinchin and its subcontractors will be responsible for removing and disposing of the soil appropriately, through a certified treatment facility.
- Based on several factors including contaminants present in the soil it
  will likely not be treated on Vancouver Island, it will be treated at
  a facility certified facility on the Mainland.
- That work will be subject to a fair and open procurement process. Soil Information:
- The site size is approximately 20,000 square feet.
- Across the site, a depth of approximately 1.5 feet of soil will be removed.
- This works out to approximately 74 dump truck loads of soil that will be removed.

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX

Cc: Whittier, Joanne GCPE:EX

Subject: MTICS Media Request: Victoria Courthouse Redevelopment: CTV

Date: Thursday, November 3, 2016 10:07:29

### In draft

**Reporter** Louise Hartland, Reporter

CTV Vancouver Island - Victoria louise.hartland@bellmedia.ca

250-588-5147

**Deadline** ASAP

**Request** Follow up question regarding the contaminated soil and where it will

be dumped. If it hasn't been decided, she is hoping to find out what

the options are.

Recommendation

• The Ministry has retained the services of Pinchin West to provide environmental engineering oversight and recommendations.

- Pinchin and its subcontractors will be responsible for removing and disposing of the soil appropriately.
- Based on the contaminants present in the soil, it will not be treated on Vancouver Island, it will be treated at a facility in the Lower Mainland.
- That work will be subject to a fair and open procurement process.
- The site size is approximately 20,000 square feet.
- Across the site, a depth of 1.5 feet of soil will be removed.
- This works out to approximately 74 dump truck loads of soil that will be removed.

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX; MTIC Executive Members; van Marum, Karen GCPE:EX; Glover,

Hannah GCPE:EX; Harper, Katie GCPE:EX

Cc: Schollen, Tasha GCPE:EX; Whittier, Joanne GCPE:EX; Fort, Oriane GCPE:EX; Thomas, Rishma GCPE:EX; Wolford,

Jessica GCPE:EX; Gordon, Matt GCPE:EX

Subject: MTICS Media Wrap - Wed. Nov. 2
Date: Wednesday, November 2, 2016 16:22:29

### Completed

Joe Perkins CFAX

**Issue: Courthouse Redevelopment/Remediation Plan.** Seeking talk show appearance over the noon hour to comment on today¹s announcement.

Status: Minister did interview.

Jean Paetkau CBC Radio Victoria

**Issue: Courthouse Redevelopment/Remediation Plan.** Seeking talk show appearance at 4:50pm on All Points West to comment on today<sup>1</sup>s announcement. What kind of community consultation is being done, is this a strategy to deal with issues such as tent city.

Status: Minister did interview

Louise Hartland CTV Van. Isl.

**Issue: Courthouse Redevelopment/Remediation Plan.** How was the decision made, what work needs to be done at the site before construction of the playground starts, what if there are people attending court that should not be near children - how will this work.

Status: Minister scrummed at event in Surrey

Kylie Stanton Global TV

**Issue: Courthouse Redevelopment/Remediation Plan.** Would like general comment regarding what steps need to be taken before the new playground is ready and when will it be up and running.

Status: Minister scrummed at event in Surrey

Lindsay Kines Times Colonist

Megan Thomas CBC Victoria

**Issue: Courthouse Redevelopment/Remediation Plan.** How will contaminated soil be removed, what will the playground look like, who will be responsible for the ongoing maintenance of the new playground.

Status: Minister provided interviews and background information.

**Tasha Schollen** | Communications Director

Ministry of Technology, Innovation and Citizens<sup>1</sup> Services Government Communications and Public Engagement

Phone: 250-387-3134 | Cell: 250-889-1121

From: Blonde, Sarah MTIC:EX

To: Whittier, Joanne GCPE:EX; Schaap, Samantha LASS:EX

Cc: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX; Schollen, Tasha GCPE:EX

Subject: RE: remaining interviews for MAV"s calendar Date: Wednesday, November 2, 2016 12:57:19

You got it. I1m on it Sam.

From: Whittier, Joanne GCPE:EX

Sent: Wednesday, November 2, 2016 12:57 PM

To: Schaap, Samantha LASS:EX; Blonde, Sarah MTIC:EX

Cc: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX; Schollen, Tasha GCPE:EX

Subject: remaining interviews for MAV's calendar

Hi there can you put these three media requests into Minister Virk¹s calendar? Samantha has confirmed

he as time starting at 2:45 p.m.

**Reporter** Megan Thomas, Producer

CBC Radio - Victoria megan.thomas@cbc.ca

250-414-4707

**Deadline** Wednesday, November 2, 2016 2:00 PM

**Request** Would like to have comment for the news segment. Specific questions include how

to you remove and remediate contaminated soil? What will the playground look like?

Who will be responsible for the ongoing maintenance of the new playground?

**Reporter** Jean Paetkau, Producer

CBC Radio - Victoria jean.paetkau@cbc.ca

250-414-4704

**Deadline** ASAP

Request Would like MAV on All Points West with Robyn Burns today at 4:50 p.m. for

general comment. Questions may include What kind of community consultation? Is

this a strategy to deal with issues such as tent city?

Status: Minister asked to call <u>250-360-2227</u> at 4:45 to be on the line for the interview at 4:50 p.m.

Reporter Lindsay Kines, Reporter

PRESS GALLERY

lkines@timescolonist.com 250-382-9006 c: 250-812-9877

**Deadline** Wednesday, November 2, 2016 4:00 PM

**Request** Would like a general comment from the Minister regarding the Victoria Courthouse

and plans to go forward with a playground. Specific questions: what was found at the site in terms of contaminants? Do you have any cost estimates for the playground?

For the clean-up? Or both?

**Status:** Minister asked to call Lindsay at approximately 3 p.m.

From: Whittier, Joanne GCPE:EX

To: Schaap, Samantha LASS:EX; Blonde, Sarah MTIC:EX

Cc: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX; Schollen, Tasha GCPE:EX

Subject: remaining interviews for MAV"s calendar Date: Wednesday, November 2, 2016 12:56:56

Hi there can you put these three media requests into Minister Virk¹s calendar? Samantha has confirmed he as time starting at 2:45 p.m.

**Reporter** Megan Thomas, Producer

CBC Radio - Victoria megan.thomas@cbc.ca

250-414-4707

**Deadline** Wednesday, November 2, 2016 2:00 PM

**Request** Would like to have comment for the news segment. Specific questions include how

to you remove and remediate contaminated soil? What will the playground look like?

Who will be responsible for the ongoing maintenance of the new playground?

**Reporter** Jean Paetkau, Producer

CBC Radio - Victoria jean.paetkau@cbc.ca

250-414-4704

**Deadline** ASAP

Request Would like MAV on All Points West with Robyn Burns today at 4:50 p.m. for

general comment. Questions may include What kind of community consultation? Is

this a strategy to deal with issues such as tent city?

Status: Minister asked to call <u>250-360-2227</u> at 4:45 to be on the line for the interview at 4:50 p.m.

**Reporter** Lindsay Kines, Reporter

PRESS GALLERY
<a href="mailto:lkines@timescolonist.com">lkines@timescolonist.com</a>
250-382-9006 c: 250-812-9877

**Deadline** Wednesday, November 2, 2016 4:00 PM

**Request** Would like a general comment from the Minister regarding the Victoria Courthouse

and plans to go forward with a playground. Specific questions: what was found at the site in terms of contaminants? Do you have any cost estimates for the playground?

For the clean-up? Or both?

**Status:** Minister asked to call Lindsay at approximately 3 p.m.

From: Whittier, Joanne GCPE:EX

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX

Cc: Schollen, Tasha GCPE:EX

Subject: media requests - adding Lindsay Kines, Times Colonist - deadline 4 p.m.

Date: Wednesday, November 2, 2016 11:58:43

**1.Reporter** Joe Perkins, Host

CFAX 1070 250-415-0606

**Deadline** ASAP

Request Would like to know if MAV can comment. Would like 5 mins live at 12:15 p.m.

today

**Status:** interview with Minister confirmed for 12:15.

**2.Reporter** Jean Paetkau, Producer

CBC Radio - Victoria jean.paetkau@cbc.ca 250-414-4704

**Deadline** ASAP

Request Would like MAV on All Points West with Robyn Burns today at 4:50 p.m. for

general comment. Questions may include What kind of community consultation? Is

this a strategy to deal with issues such as tent city?

**3.Reporter** Megan Thomas, Producer

CBC Radio - Victoria megan.thomas@cbc.ca

250-414-4707

**Deadline** Wednesday, November 2, 2016 2:00 PM

**Request** Would like to have comment for the news segment. Specific questions include how

to you remove and remediate contaminated soil? What will the playground look like? Who will be responsible for the ongoing maintenance of the new playground?

**4.Reporter** Louise Hartland, Reporter

CTV Vancouver Island - Victoria louise.hartland@bellmedia.ca

250-588-5147

**Deadline** Wednesday, November 2, 2016 2:00 PM

**Request** Would to get comment - on camera preferred. Questions: How was the decision

made? What work needs to be done at the site before construction of the

playground starts? What if there are people attending court that should not be near

children - how will this work?

**5.Reporter** Kylie Stanton, Reporter

Global TV | BC

kylie.stanton@globalnews.ca

250-415-1789

**Deadline** Wednesday, November 2, 2016 3:00 PM

**Request** Would like general comment preferably on camera regarding what steps need to be

taken before the new playground is ready and when will it be up and running.

Reporter Lindsay Kines, Reporter

PRESS GALLERY

<u>lkines@timescolonist.com</u> 250-382-9006 c: 250-812-9877

**Deadline** Wednesday, November 2, 2016 4:00 PM

**Request** Would like a general comment from the Minister regarding the Victoria Courthouse

and plans to go forward with a playground. Specific questions: what was found at the site in terms of contaminants? Do you have any cost estimates for the playground?

For the clean-up? Or both?

From: Whittier, Joanne GCPE:EX

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX

Cc: Schollen, Tasha GCPE:EX
Subject: CFAX confirmed for 12:15 p.m.

Date: Wednesday, November 2, 2016 11:41:07

CFAX has asked if Minister can call 250-920-4619 and if he can be on the line just a minute

or so prior to 12:15.

(back up number: 250-386-1161)

**Reporter** Joe Perkins, Host

CFAX 1070 250-415-0606

**Deadline** ASAP

**Request** Would like to know if MAV can comment. Would like 5 mins live at 12:15

p.m. today

From: Whittier, Joanne GCPE:EX

Sent: Wednesday, November 2, 2016 11:16 AM

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX

Cc: Schollen, Tasha GCPE:EX

Subject: media requests (x5) re Victoria Courthouse: CFAX, CBC Radio All Points West, CBC Radio news, CTV,

Global

**1.Reporter** Joe Perkins, Host

CFAX 1070 250-415-0606

**Deadline** ASAP

**Request** Would like to know if MAV can comment. Would like 5 mins live at

12:15 p.m. today

**2.Reporter** Jean Paetkau, Producer

CBC Radio - Victoria jean.paetkau@cbc.ca

250-414-4704

**Deadline** ASAP

Request Would like MAV on All Points West with Robyn Burns today at 4:50

**p.m**. for general comment. Questions may include What kind of community

consultation? is this a strategy to deal with issues such as tent city?

**3.** Megan Thomas, Producer

**Reporter** CBC Radio - Victoria

megan.thomas@cbc.ca

250-414-4707

**Deadline** Wednesday, November 2, 2016 2:00 PM

**Request** Would like to have comment for the news segment. Specific questions

include how to you remove and remediate contaminated soil? What will the playground look like? Who will be responsible for the ongoing maintenance

of the new playground?

**4.Reporter** Louise Hartland, Reporter

CTV Vancouver Island - Victoria louise.hartland@bellmedia.ca

250-588-5147

**Deadline** Wednesday, November 2, 2016 2:00 PM

**Request** Would to get comment - on camera preferred. Questions: How was the

decision made? What work needs to be done at the site before construction of the playground starts? What if there are people attending court that should

not be near children - how will this work?

**5.Reporter** Kylie Stanton, Reporter

Global TV | BC

kylie.stanton@globalnews.ca

250-415-1789

**Deadline** Wednesday, November 2, 2016 3:00 PM

**Request** Would like general comment preferably on camera regarding what steps need

to be taken before the new playground is ready and when will it be up and

running.

From: Whittier, Joanne GCPE:EX

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX

Cc: Schollen, Tasha GCPE:EX

Subject: media requests (x5) re Victoria Courthouse: CFAX, CBC Radio All Points West, CBC Radio news, CTV, Global

Date: Wednesday, November 2, 2016 11:16:05

**1.Reporter** Joe Perkins, Host

CFAX 1070 250-415-0606

**Deadline** ASAP

**Request** Would like to know if MAV can comment. Would like 5 mins live at

12:15 p.m. today

**2.Reporter** Jean Paetkau, Producer

CBC Radio - Victoria jean.paetkau@cbc.ca 250-414-4704

**Deadline** ASAP

Request Would like MAV on All Points West with Robyn Burns today at 4:50

**p.m**. for general comment. Questions may include What kind of community

consultation? is this a strategy to deal with issues such as tent city?

**3.** Megan Thomas, Producer

**Reporter** CBC Radio - Victoria

megan.thomas@cbc.ca

250-414-4707

**Deadline** Wednesday, November 2, 2016 2:00 PM

**Request** Would like to have comment for the news segment. Specific questions

include how to you remove and remediate contaminated soil? What will the playground look like? Who will be responsible for the ongoing maintenance

of the new playground?

**4.Reporter** Louise Hartland, Reporter

CTV Vancouver Island - Victoria louise.hartland@bellmedia.ca

250-588-5147

**Deadline** Wednesday, November 2, 2016 2:00 PM

**Request** Would to get comment - on camera preferred. Questions: How was the

decision made? What work needs to be done at the site before construction of the playground starts? What if there are people attending court that should

not be near children - how will this work?

**5.Reporter** Kylie Stanton, Reporter

Global TV | BC

kylie.stanton@globalnews.ca

250-415-1789

**Deadline** Wednesday, November 2, 2016 3:00 PM

Request

Would like general comment preferably on camera regarding what steps need to be taken before the new playground is ready and when will it be up and running.

From: Schollen, Tasha GCPE:EX
To: Facey, Nick MTIC:EX

Cc: Reddy, Brandon MTIC:EX; Gordon, Matt GCPE:EX

Subject: Re: 3:25pm MTICS Media Requests - CTV - Courthouse Remediation Costs

Date: Wednesday, August 31, 2016 15:57:02

Speaking to Sarf at 4 - will dbl back with you.

Sent from my iPhone

On Aug 31, 2016, at 3:56 PM, Facey, Nick MTIC:EX < Nick.Facey@gov.bc.ca > wrote:

## Good to go

From: Tasha Schollen < tasha.schollen@gov.bc.ca > Date: Wednesday, August 31, 2016 at 3:25 PM

To: Nick Facey < nick.facey@gov.bc.ca >, Brandon Reddy < Brandon.Reddy@gov.bc.ca >

**Cc:** Tasha Schollen < tasha.schollen@gov.bc.ca >, Matt Gordon

<<u>Matt.Gordon@gov.bc.ca</u>>

Subject: 3:25pm MTICS Media Requests - CTV - Courthouse Remediation Costs

Nick, two requests that need signoff here please.

<!--[if !supportLists]-->**1.** <!--[endif]-->

# Okay to provide background information (with attached FactSheet) and the ministry statement below?

Deadline @ 3pm

Media: CTV

Reporter: Rob Buffam, 250-507-6715, rob.buffam@bellmedia.ca

**Topic: Victoria Courthouse Remediation** 

**Background**: Reporter is looking for an update on the remediation efforts and next steps. He is interested in knowing what the site will look like

### **Recommended Response:**

How much money has Housing spent providing shelter and permanent housing to homeless from the courthouse tent city and please name the facilities?

- <!--[if !supportLists]-->·<!--[endif]-->In 2015/16, the B.C. government spent close to \$5 million to provide housing and shelter for residents of the Victoria courthouse encampment. (Central Care Home, Mt Edwards, My Place, Choices and the First Metropolitan shelter)
- <!--[if !supportLists]-->·<!--[endif]-->In 2016/17, the Province will spend approximately \$27 million, which includes capital costs for the Central Care Home, as well as the Super 8 hotel, scheduled to open in late fall. This includes \$373,000 to PHS Community Services for support and outreach services at the encampment site between April and August 2016.
- <!--[if !supportLists]-->-<!--[endif]-->Specific costs associated with moving residents into the Central Care Home (part of the \$27 million above) have not yet been determined.

What is the projected remediation cost? (Reporter saw the original estimate we provided in March referenced in the TC today)

- <!--[if !supportLists]-->·<!--[endif]-->Remediation costs will depend on the nature of the work that needs to be undertaken in conjunction with the future use of the site.
- <!--[if !supportLists]-->-<!--[endif]-->A preliminary estimate should the soil be contaminated is approximately \$300-thousand to \$350-thousand for the cleanup.
- <!--[if !supportLists]-->· <!--[endif]-->Professional soil engineering services will be required to determine actual cost estimates.

What is the Ministry's response to the fact that rats have delayed remediation? Ministry spokesperson:

"We've known for some time that rats were present at the site and that's why we initiated pest control some months ago, to protect the health and safety of the campers at the site and nearby residents. Pest control will continue until the site is rodent-free and in the meantime we are working on determining the future use of the site."

What are some of the possible ideas for the site?

- <!--[if !supportLists]-->-<!--[endif]--> As part of the remediation process, we will consider what the best design and future use of the site will be, in discussion with the City of Victoria and area neighbours.
- <!--[if !supportLists]-->·<!--[endif]-->That process will unfold in the coming weeks.

  Once a site plan is determined, remediation, which will include soil removal and testing, will get underway.

### Provided to CTV yesterday:

Could we please get the latest update on the former tent city site? What is the situation with pest control? Is there any concern rats are getting into the court house?

- <!--[if !supportLists]-->· <!--[endif]-->The Ministry of Technology, Innovation and Citizens' Services is managing the site cleanup and restoration of the site.
- <!--[if !supportLists]-->·<!--[endif]-->The process started the week of Aug. 8 after the former tent city was officially closed.
- <!--[if !supportLists]-->·<!--[endif]-->While clean-up was occurring it was determined that pest control is required before any remediation should begin.
- <!--[if !supportLists]-->·<!--[endif]-->The exact number of rodents cannot be confirmed. Pest control activities were estimated to take approximately two weeks, however, these efforts will continue until the pests are eradicated.
- <!--[if !supportLists]-->· <!--[endif]-->As part of the remediation process, we will consider what the best design and future use of the site will be, in discussion with the City of Victoria and area neighbours.
- <!--[if !supportLists]-->· <!--[endif]-->That process will unfold in the coming weeks.

  Once a site plan is determined, remediation, which will include soil removal and testing, will get underway.
- <!--[if !supportLists]-->· <!--[endif]-->In the meantime, the adjacent parking lot has been cleaned and parking stall lines were re-painted.

<!--[if !supportLists]-->· <!--[endif]-->Fencing will remain around the perimeter of the site and will be staffed by security 24/7.

### What is the current cost estimate for:

- <!--[if !supportLists]-->1. <!--[endif]-->Pest management?
- <!--[if !supportLists]-->2. <!--[endif]-->The entire site everything since the tent city was in place last fall?
- <!--[if !supportLists]-->-<!--[endif]-->Total costs for pest management from April to September, are approximately \$6,500.
- <!--[if !supportLists]-->·<!--[endif]-->Provincial costs associated with managing the site are approximately \$1.3M between December 2015 and August 2016. This money is allocated for things such as security, garbage collection, port-a-potties and upkeep, fire extinguishers, gravel, water hookup/service, power pole installation, BC Hydro service, fencing and site demolition.

<!--[if !supportLists]-->2. <!--[endif]-->Okay to provide on background?

Deadline @ asap

Media: CTV

Reporter: Scott Cunningham, 250-661-8630, scott.cunningham@bellmedia.ca

**Topic: Victoria Courthouse Rats** 

**Background**: Reporter is seeking background information.

### **Recommended Response:**

I'm curious if the ministry has any comment on the continuing rat problem on the court house lawn in Victoria. According to sources there was quite a rat problem inside the courthouse during tent city's reign, and a lingering problem now. What can you tell us?

<!--[if !supportLists]-->· <!--[endif]-->The Ministry of Technology, Innovation and Citizens' Services is responsible for the courthouse site and can confirm that it has not received any complaints about rats inside the courthouse building. Pest control is underway to eradicate rats outside the building where the former tent city was located.

Tasha Schollen | Communications Director

Ministry of Technology, Innovation and Citizens' Services Government Communications and Public Engagement

Phone: 250-387-3134 Cell:250-889-1121

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX
Cc: Schollen, Tasha GCPE:EX; Gordon, Matt GCPE:EX

Subject: 3:25pm MTICS Media Requests - CTV - Courthouse Remediation Costs

Date: Wednesday, August 31, 2016 15:25:26

Attachments: FS Courthouse Encampment Costs Aug 31 2016.pdf

Nick, two requests that need signoff here please.

1.

Okay to provide background information (with attached FactSheet) and the ministry statement below?

Deadline @ 3pm

Media: CTV

Reporter: Rob Buffam, 250-507-6715, rob.buffam@bellmedia.ca

**Topic: Victoria Courthouse Remediation** 

**Background**: Reporter is looking for an update on the remediation efforts and next steps. He is

interested in knowing what the site will look like

### **Recommended Response:**

How much money has Housing spent providing shelter and permanent housing to homeless from the courthouse tent city and please name the facilities?

- In 2015/16, the B.C. government spent close to \$5 million to provide housing and shelter for residents of the Victoria courthouse encampment. (Central Care Home, Mt Edwards, My Place, Choices and the First Metropolitan shelter)
- In 2016/17, the Province will spend approximately \$27 million, which includes capital costs for the Central Care Home, as well as the Super 8 hotel, scheduled to open in late fall. This includes \$373,000 to PHS Community Services for support and outreach services at the encampment site between April and August 2016.
- Specific costs associated with moving residents into the Central Care Home (part of the \$27 million above) have not yet been determined.

What is the projected remediation cost? (Reporter saw the original estimate we provided in March referenced in the TC today)

- Remediation costs will depend on the nature of the work that needs to be undertaken in conjunction with the future use of the site.
- A preliminary estimate should the soil be contaminated is approximately \$300-thousand to \$350-thousand for the cleanup.
- Professional soil engineering services will be required to determine actual cost estimates.

What is the Ministry<sup>1</sup>s response to the fact that rats have delayed remediation?

### Ministry spokesperson:

<sup>3</sup>We¹ve known for some time that rats were present at the site and that¹s why we initiated pest control some months ago, to protect the health and safety of the campers at the site and nearby residents. Pest control will continue until the site is rodent-free and in the meantime we are working on determining the future use of the site.²

What are some of the possible ideas for the site?

- As part of the remediation process, we will consider what the best design and future use of the site will be, in discussion with the City of Victoria and area neighbours.
- That process will unfold in the coming weeks. Once a site plan is determined, remediation,

which will include soil removal and testing, will get underway.

### **Provided to CTV yesterday:**

Could we please get the latest update on the former tent city site? What is the situation with pest control? Is there any concern rats are getting into the court house?

- The Ministry of Technology, Innovation and Citizens<sup>1</sup> Services is managing the site cleanup and restoration of the site.
- The process started the week of Aug. 8 after the former tent city was officially closed.
- While clean-up was occurring it was determined that pest control is required before any remediation should begin.
- The exact number of rodents cannot be confirmed. Pest control activities were estimated to take approximately two weeks, however, these efforts will continue until the pests are eradicated.
- As part of the remediation process, we will consider what the best design and future use of the site will be, in discussion with the City of Victoria and area neighbours.
- That process will unfold in the coming weeks. Once a site plan is determined, remediation, which will include soil removal and testing, will get underway.
- In the meantime, the adjacent parking lot has been cleaned and parking stall lines were repainted.
- Fencing will remain around the perimeter of the site and will be staffed by security 24/7. What is the current cost estimate for:
  - 1. Pest management?
  - 2. The entire site everything since the tent city was in place last fall?
  - Total costs for pest management from April to September, are approximately \$6,500.
  - Provincial costs associated with managing the site are approximately \$1.3M between
    December 2015 and August 2016. This money is allocated for things such as security,
    garbage collection, port-a-potties and upkeep, fire extinguishers, gravel, water
    hookup/service, power pole installation, BC Hydro service, fencing and site demolition.

### 2. Okay to provide on background?

Deadline @ asap

Media: CTV

Reporter: Scott Cunningham, 250-661-8630, scott.cunningham@bellmedia.ca

**Topic: Victoria Courthouse Rats** 

**Background**: Reporter is seeking background information.

### **Recommended Response:**

I<sup>1</sup>m curious if the ministry has any comment on the continuing rat problem on the court house lawn in Victoria. According to sources there was quite a rat problem inside the courthouse during tent city¹s reign, and a lingering problem now. What can you tell us?

The Ministry of Technology, Innovation and Citizens<sup>1</sup> Services is responsible for the
courthouse site and can confirm that it has not received any complaints about rats inside
the courthouse building. Pest control is underway to eradicate rats outside the building
where the former tent city was located.

Tasha Schollen | Communications Director

Ministry of Technology, Innovation and Citizens<sup>1</sup> Services

Government Communications and Public Engagement

Phone: 250-387-3134 | Cell: 250-889-1121

 From:
 Smart, Stephen PREM:EX

 To:
 Facey, Nick MTIC:EX

 Cc:
 Diacu, Raz MNGD:EX

Subject: Re: MTICS Media Request - CTV - Courthouse Remediation Costs

Date: Wednesday, August 31, 2016 15:21:56

### Good by me.

On Aug 31, 2016, at 3:19 PM, Facey, Nick MTIC:EX < Nick.Facey@gov.bc.ca > wrote:

No concerns here - good to send? (Noting ministry comment)

Nick Facey, Chief of Staff for the Hon. Amrik Virk Minister of Technology, Innovation & Citizens' Services Government of BC

Begin forwarded message:

From: "Schollen, Tasha GCPE:EX" < Tasha.Schollen@gov.bc.ca>

**Date:** August 31, 2016 at 2:19:04 PM PDT

To: "Facey, Nick MTIC:EX" < Nick.Facey@gov.bc.ca >, "Reddy, Brandon

MTIC:EX" < Brandon.Reddy@gov.bc.ca>

Cc: "Schollen, Tasha GCPE:EX" < Tasha.Schollen@gov.bc.ca >, "Gordon, Matt

GCPE:EX" < Matt.Gordon@gov.bc.ca>, "Wolford, Jessica GCPE:EX"

<Jessica.Wolford@gov.bc.ca>

**Subject: MTICS Media Request - CTV - Courthouse Remediation Costs** 

Okay to provide background information (with attached FactSheet) and the ministry statement below?

Deadline @ 3pm

Media: CTV

Reporter: Rob Buffam, 250-507-6715, rob.buffam@bellmedia.ca

**Topic: Victoria Courthouse Remediation** 

**Background**: Reporter is looking for an update on the remediation efforts and next

steps. He is interested in knowing what the site will look like

## **Recommended Response:**

How much money has Housing spent providing shelter and permanent housing to homeless from the courthouse tent city and please name the facilities?

- <!--[if !supportLists]-->• <!--[endif]-->In 2015/16, the B.C. government spent close to \$5 million to provide housing and shelter for residents of the Victoria courthouse encampment. (Central Care Home, Mt Edwards, My Place, Choices and the First Metropolitan shelter)
- <!--[if !supportLists]-->• <!--[endif]-->In 2016/17, the Province will spend approximately \$27 million, which includes capital costs for the Central Care Home, as well as the Super 8 hotel, scheduled to open in late fall. This includes

- \$373,000 to PHS Community Services for support and outreach services at the encampment site between April and August 2016.
- <!--[if !supportLists]-->• <!--[endif]-->Specific costs associated with moving residents into the Central Care Home (part of the \$27 million above) have not yet been determined.

What is the projected remediation cost? (Reporter saw the original estimate we provided in March referenced in the TC today)

- <!--[if !supportLists]-->• <!--[endif]-->Remediation costs will depend on the nature of the work that needs to be undertaken in conjunction with the future use of the site.
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What is the Ministry¹s response to the fact that rats have delayed remediation? Ministry spokesperson:

<sup>3</sup>We<sup>1</sup>ve known for some time that rats were present at the site and that<sup>1</sup>s why we initiated pest control some months ago, to protect the health and safety of the campers at the site and nearby residents. Pest control will continue until the site is rodent-free and in the meantime we are working on determining the future use of the site.<sup>2</sup>

What are some of the possible ideas for the site?

- <!--[if !supportLists]-->• <!--[endif]--> As part of the remediation process, we will consider what the best design and future use of the site will be, in discussion with the City of Victoria and area neighbours.
- <!--[if !supportLists]-->• <!--[endif]-->That process will unfold in the coming weeks.

  Once a site plan is determined, remediation, which will include soil removal and testing, will get underway.

### **Provided to CTV yesterday:**

Could we please get the latest update on the former tent city site? What is the situation with pest control? Is there any concern rats are getting into the court house?

- <!--[if !supportLists]-->• <!--[endif]-->The Ministry of Technology, Innovation and Citizens¹ Services is managing the site cleanup and restoration of the site.
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- <!--[if !supportLists]-->• <!--[endif]-->While clean-up was occurring it was determined that pest control is required before any remediation should begin.
- <!--[if !supportLists]-->• <!--[endif]-->The exact number of rodents cannot be confirmed. Pest control activities were estimated to take approximately two weeks, however, these efforts will continue until the pests are eradicated.
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  Once a site plan is determined, remediation, which will include soil removal and testing, will get underway.
- <!--[if !supportLists]-->• <!--[endif]-->In the meantime, the adjacent parking lot has been cleaned and parking stall lines were re-painted.
- <!--[if !supportLists]-->• <!--[endif]-->Fencing will remain around the perimeter of the site and will be staffed by security 24/7.

### What is the current cost estimate for:

- <!--[if !supportLists]-->1. <!--[endif]-->Pest management?
- <!--[if !supportLists]-->2.<!--[endif]-->**The entire site everything since the tent** city was in place last fall?
- <!--[if !supportLists]-->• <!--[endif]-->Total costs for pest management from April to September, are approximately \$6,500.
- <!--[if !supportLists]-->• <!--[endif]-->Provincial costs associated with managing the site are approximately \$1.3M between December 2015 and August 2016. This money is allocated for things such as security, garbage collection, port-a-potties and upkeep, fire extinguishers, gravel, water hookup/service, power pole installation, BC Hydro service, fencing and site demolition.

**Tasha Schollen** | Communications Director

Ministry of Technology, Innovation and Citizens<sup>1</sup> Services Government Communications and Public Engagement

Phone: 250-387-3134 | Cell: 250-889-1121

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX

Cc: Schollen, Tasha GCPE:EX; Gordon, Matt GCPE:EX; Wolford, Jessica GCPE:EX

Subject: MTICS Media Request - CTV - Courthouse Remediation Costs

Date: Wednesday, August 31, 2016 14:19:06

Attachments: FS Courthouse Encampment Costs Aug 31 2016.pdf

## Okay to provide background information (with attached FactSheet) and the ministry statement

### Deadline @ 3pm

Media: CTV

Reporter: Rob Buffam, 250-507-6715, rob.buffam@bellmedia.ca

**Topic: Victoria Courthouse Remediation** 

Background: Reporter is looking for an update on the remediation efforts and next steps. He is

interested in knowing what the site will look like

### **Recommended Response:**

How much money has Housing spent providing shelter and permanent housing to homeless from the courthouse tent city and please name the facilities?

- In 2015/16, the B.C. government spent close to \$5 million to provide housing and shelter for residents of the Victoria courthouse encampment. (Central Care Home, Mt Edwards, My Place, Choices and the First Metropolitan shelter)
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- Specific costs associated with moving residents into the Central Care Home (part of the \$27 million above) have not yet been determined.

What is the projected remediation cost? (Reporter saw the original estimate we provided in March referenced in the TC today)

- Remediation costs will depend on the nature of the work that needs to be undertaken in conjunction with the future use of the site.
- A preliminary estimate should the soil be contaminated is approximately \$300-thousand to \$350-thousand for the cleanup.
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What is the Ministry¹s response to the fact that rats have delayed remediation?

### **Ministry spokesperson:**

<sup>3</sup>We<sup>1</sup>ve known for some time that rats were present at the site and that<sup>1</sup>s why we initiated pest control some months ago, to protect the health and safety of the campers at the site and nearby residents. Pest control will continue until the site is rodent-free and in the meantime we are working on determining the future use of the site.<sup>2</sup>

What are some of the possible ideas for the site?

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### **Provided to CTV yesterday:**

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- As part of the remediation process, we will consider what the best design and future use of the site will be, in discussion with the City of Victoria and area neighbours.
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    December 2015 and August 2016. This money is allocated for things such as security,
    garbage collection, port-a-potties and upkeep, fire extinguishers, gravel, water
    hookup/service, power pole installation, BC Hydro service, fencing and site demolition.

Tasha Schollen | Communications Director

Ministry of Technology, Innovation and Citizens<sup>1</sup> Services Government Communications and Public Engagement

Phone: 250-387-3134 | Cell: 250-889-1121

From: Thomas, Rishma GCPE:EX
To: Thomas, Rishma GCPE:EX

Subject: MTICS Media Summary - Thursday, August 18, 2016

Date: Thursday, August 18, 2016 07:07:50

## **TNO Focus on - MTICS**

DO NOT FORWARD THIS E-MAIL TO ANYONE

Thursday, August 18, 2016

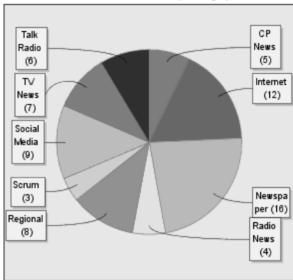
## **Executive Summary**

Minister not mentioned.

Ministry not mentioned.

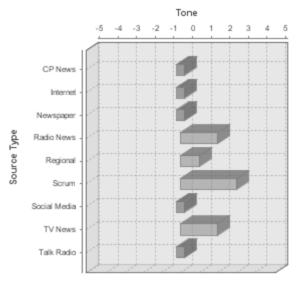
## Media Analysis

## Minister Media Mix (90 days)



[download image] [download numbers]

### Minister Tone (90 days)



[download image] [download numbers]

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# Beginning of the end?

The Province Thursday, August 18, 2016 Page A01 By Staff

With a new ban in effect and more hot weather on the horizon, B.C. campers may one day face the prospect of permanently snuffing out their fires PAGE 3 !@COPYRIGHT=© 2016 Postmedia Network Inc. All rights reserved.

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Climate plan to leave out carbon price, GHG targets Globe and Mail Thursday, August 18, 2016 Page S01 By Andrea Woo

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# Enbridge support brings down two Haida hereditary chiefs

Vancouver Sun Thursday, August 18, 2016 Page A01 By Jeff Lee

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Goodale says peace bond failed National Post Thursday, August 18, 2016 Page A01 By Ian MacLeod

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House prices a key issue for voters Globe and Mail Thursday, August 18, 2016 Page S01 By Ian Bailey and Megan Dolski

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Ottawa vows to ramp up terrorism fight Globe and Mail Thursday, August 18, 2016 Page A01 By Colin Freeze and Laura Stone

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Sausage Party animators decry 'unfair' employment conditions Globe and Mail Thursday, August 18, 2016 Page S01 By Ian Bailey

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Stronger doors needed to fight BEs Vancouver 24 hrs Thursday, August 18, 2016 Page A01 By Staff

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Vitamin therapy delivers a drip right to your door Vancouver Sun Thursday, August 18, 2016 Page A01 By Erin Ellis

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## Water main fix could cause traffic snare

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Times Colonist (Victoria)
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King of Cannabis fights city for his throne The Province Thursday, August 18, 2016 Page A06 By Michael Smyth

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Don't shoot the messenger Kelowna Capital News Wednesday, August 17, 2016 Page 01 By Alistair Waters

Alistair Waters is the assistant editor of the Kelowna Capital News.

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# Hackers demand cyber-ransom from Nelson author

Nelson Star Wednesday, August 17, 2016 Page 1 By Bill Metcalfe

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## Consultation needed on courthouse lawn

Times Colonist (Victoria) Wednesday, August 17, 2016 Page A11 By Shelley Campbell

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Shelley Campbell

Victoria

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Helps - Victoria tent city CBCV Wednesday, August 17, 2016, 07:12 By CBC On the Island

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Tent city campers, neighbours settling in to new arrangement Times Colonist (Victoria) Thursday, August 18, 2016 Page A05 By Katherine Dedyna

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What's next for the former tent city site?

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Blumenthal - Coding Kids Camp CBYG Wednesday, August 17, 2016, 17:33 By CBYG

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# Electric-vehicle seller bets on global disruption

Globe and Mail Thursday, August 18, 2016 Page B03 By Jessica Leeder

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Police access to passwords, data to figure in cybersecurity review Times Colonist (Victoria)
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### Tech firm cuts staff

Vancouver Sun Thursday, August 18, 2016 Page B10

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**Teixeira - Uber in Ontario** CFAX Wednesday, August 17, 2016, 14:51 By CFAX Pamela McCall

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## Too smart for our own good

Globe and Mail Thursday, August 18, 2016 Page L01 By Sarah Hampson

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# Toronto first in Canada to issue Uber exempted licence

National Post Thursday, August 18, 2016 Page FP3

From: Thomas, Rishma GCPE:EX
To: Thomas, Rishma GCPE:EX

Subject: MTICS Media Summary - Monday, August 15, 2016

Date: Monday, August 15, 2016 07:13:53

### **TNO Focus on - MTICS**

DO NOT FORWARD THIS E-MAIL TO ANYONE

Monday, August 15, 2016

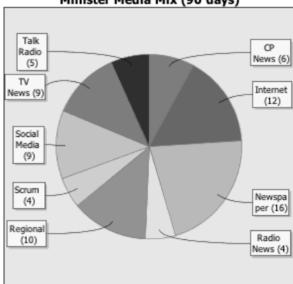
### **Executive Summary**

Minister not mentioned.

Ministry not mentioned.

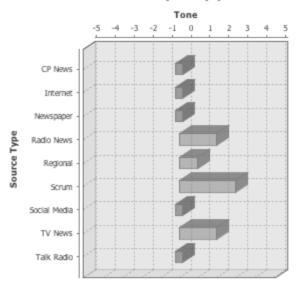
### Media Analysis

Minister Media Mix (90 days)



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#### Minister Tone (90 days)



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- <u>Virtual research helper gets favourable verdict from legal community; Lawyers subscribe to AI system that simplifies search of complex case law Drew Hasselback Vancouver Sun 13-Aug-2016</u>

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Mother of abducted children feels Trudeau has failed her Globe and Mail Monday, August 15, 2016 Page A01 By Eric Andrew-Gee

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Online rental bidding site gets mixed reception Globe and Mail Monday, August 15, 2016 Page S01 By Andrea Woo

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## Tenants shut out of rental market resort to single-room-occupancy hotels

Globe and Mail Monday, August 15, 2016 Page S01 By Wendy Stueck

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# Woman held in hospital fights for legal assistance

Vancouver Sun Monday, August 15, 2016 Page A01 By Cheryl Chan

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Central Saanich farm sparks outcry over building waste Times Colonist (Victoria) Sunday, August 14, 2016 Page A01 By Jeff Bell

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# **Downtown Eastside tour hits home**

Globe and Mail Saturday, August 13, 2016 Page S01 By Stephen Quinn

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# Gold Silver Bronze; Victoria medal winners fulfil dreams in Rio

Times Colonist (Victoria) Saturday, August 13, 2016 Page A01 By Cleve Dheensaw

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It's official: tent city is closed Times Colonist (Victoria) Saturday, August 13, 2016 Page A01 By Lindsay Kines

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Olympic coverage Times Colonist (Victoria) Saturday, August 13, 2016 Page A01

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Wilfrid Laurier opened city's first exhibition Vancouver Sun Saturday, August 13, 2016 Page A02 By John Mackie

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Clark faces pressure to add Province - 14-Aug-2016	ss rising opioid overdose death toll - Michael Smyth - The	
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Court OKs suit over roaming fees Times Colonist (Victoria) Saturday, August 13, 2016 Page B10

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New loans for Xplornet herald IPO or sale; The financing deal, repayable before maturity, will help the ISP expand its high-speed Internet offerings

Globe and Mail Saturday, August 13, 2016 Page B05 By Christine Dobby, Andrew Willis

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# SaskTel's past better than its future in busy telecom market Globe and Mail

Globe and Mail Saturday, August 13, 2016 Page B05 By Andrew Willis

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Brett/Helps - tent city CKNW Sunday, August 14, 2016, 08:02

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## Tab for cleanup at Victoria homeless camp could hit \$350,000 The Province

The Province Sunday, August 14, 2016 Page A18 By Staff

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Victoria housing advocate says Minister Coleman's math doesn't add CKNW Online Sunday, August 14, 2016	l up
By CKNW Online	

	Shared Services BC
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Brett - tent city eviction CKNW Saturday, August 13, 2016, 18:03 By CKNW

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Cleaning Victoria homeless camp could cost \$350K: minister Prince George Citizen Saturday, August 13, 2016 Page A04 By Staff

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Homeless camp officially closed Vancouver Sun Saturday, August 13, 2016 Page A04 By Staff

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It's official: tent city is closed Times Colonist (Victoria) Saturday, August 13, 2016 Page A01 By Lindsay Kines

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Brett - leaving tent city CIVI Friday, August 12, 2016, 18:02 By CTV News Live @ 6

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Coleman - tent city CKNW Friday, August 12, 2016, 18:02 By CKNW

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Coleman/Allen/Brett - tent city CHEK Friday, August 12, 2016, 17:00 By CHEK News at Five

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Coleman/Helps/Brett - tent city disbanded CIVI Friday, August 12, 2016, 17:00 By CTV News Live @ 5

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Helps/Hammond - tent city CFAX Friday, August 12, 2016, 12:00 By CFAX

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Karma Revero revved to take on Tesla; Plug-in hybrid : out of fisker's ashes rises a rebooted chinese automaker with big plans for solar vehicles

The Province Monday, August 15, 2016 Page A23 By David Welch

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Home design in a new dimension; Calgary firm harnesses Pokemon Go technology for the home building industry
Globe and Mail

Globe and Mail Saturday, August 13, 2016 Page S04 By Sharon Crowther

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### Live video a lucrative corner of the internet; Performers making a living from fans who tip their favourites

Vancouver Sun Saturday, August 13, 2016 Page B03 By Ryan Nakashima

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Social media advertising, a small but growing piece of digital pie Globe and Mail Saturday, August 13, 2016 Page B04

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Social media becoming one big homogeneous blur; Platforms lose what made them cool amid an endless quest for growth

Vancouver Sun Saturday, August 13, 2016 Page F10 By Teddy Amenabar

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Virtual research helper gets favourable verdict from legal community; Lawyers subscribe to AI system that simplifies search of complex case law

Vancouver Sun Saturday, August 13, 2016 Page B03 By Drew Hasselback

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From: <u>Diacu, Raz MNGD:EX</u>

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX

Subject: FW: Media Request - CTV VI
Date: Thursday, August 11, 2016 14:50:30

I assume the messaging came from your shop, but want to make sure you¹re aware and good with this?

Media: CTV VI

Reporter: Scott Cunningham

**Topic:** Reporter wondering if there is an updated cost estimates for clean-up at the courthouse, and what the potential remediation plans are for the site.

#### **Suggested Response:**

- Cleanup costs for the land at the Victoria Courthouse will depend on what is left at the site once everyone has left and the land can be assessed.
- There were makeshift houses on the site and belongings that are still being removed.
- There will also be remediation of the site as the landscaping will have to be re-done.
- A preliminary estimate by the Ministry of Technology, Innovation and Citizens<sup>1</sup> Services this past March should the soil be contaminated is approximately \$300-thousand to \$350-thousand for the cleanup.
- Professional soil engineering services will be required to determine actual cost estimates.
- Based on current observations, anticipated remediation work includes:
  - o Disposal of abandoned items, including tents & structures.
  - o Top soil remediation; depth and area to be determined.
  - o Replacement of top soil with appropriate landscaping.
  - o Assess irrigation systems for damage.
  - o Fencing and security throughout the duration of the site remediation.
  - o Replacement of sod throughout, regrading, replacement of approximately five trees and 200 feet of hedge.

From: Schollen, Tasha GCPE:EX
To: Facey, Nick MTIC:EX

Subject: RE: MTICS Media Request - Times Colonist - Tent City Remediation/Future Plans

Date: Thursday, July 7, 2016 15:02:24

#### 10-4 Ducky

From: Facey, Nick MTIC:EX

Sent: Thursday, July 7, 2016 2:59 PM

To: Schollen, Tasha GCPE:EX

Subject: Re: MTICS Media Request - Times Colonist - Tent City Remediation/Future Plans

Makes sense - I just didn't want multiple responses going out that are different - I understand they

have a similar request

Nick Facey, Chief of Staff

for the Hon. Amrik Virk

Minister of Technology, Innovation & Citizens' Services

Government of BC

On Jul 7, 2016, at 2:56 PM, Schollen, Tasha GCPE:EX < Tasha. Schollen@gov.bc.ca > wrote:

They¹ll respond, however, our ministry is responsible for remediation plans so I am crafting the response.

From: Facey, Nick MTIC:EX

Sent: Thursday, July 7, 2016 2:54 PM

To: Schollen, Tasha GCPE:EX; Mills, Shane PREM:EX

Cc: Reddy, Brandon MTIC:EX; Whittier, Joanne GCPE:EX; Gordon, Matt GCPE:EX; Wolford, Jessica GCPE:EX

Subject: Re: MTICS Media Request - Times Colonist - Tent City Remediation/Future Plans

One office should handle the requests/replies and given MRC is speaking that office makes sense.

Just touched base with them and they agree.

Nick Facey,

Chief of Staff

for the Hon. Amrik Virk

Minister of Technology, Innovation & Citizens' Services

Government of BC

On Jul 7, 2016, at 2:24 PM, Schollen, Tasha GCPE:EX <<u>Tasha.Schollen@gov.bc.ca</u>> wrote:

#### In draftŠ

Date/Time: July 7, 2pm Deadline @ 4:30pm Media: Times Colonist

Reporter: Sarah Petrescu, 250-507-2528 (cell phone), 250-380-5370, <a href="mailto:spetrescu@timescolonist.com">spetrescu@timescolonist.com</a>

**Topic: Tent City Remediation/ Future Plans** 

**Background**: Reporter would like some information about the plan for the courthouse lawn once the

tent city is closed.

Questions: Which ministry will do the clean-up and what are the projected costs? What will the camping rules be in the park after Aug. 8? Will any security remain?

Suggested Response:

- The Province has a transition plan in place for those people camping at the courthouse and we will continue to relocate them into appropriate shelter in an orderly and co-operative manner.
- The Ministry of Technology, Innovation and Citizens<sup>1</sup> Services will be managing the site cleanup at the Victoria Courthouse encampment.
- The Province would like to remediate Victoria courthouse greenspace so that it¹s in a safe condition and can be enjoyed by the public once again.
- The extent of cleanup for the land will depend on what is left at the site once everyone has left and the land can be assessed.
- A preliminary estimate should the soil be contaminated is approximately \$300-thousand to \$350-thousand for the cleanup.
- Then there's also remediation of the site as the landscaping will have to be re-done.
- · Future plans for the site are yet to be determined.

**Tasha Schollen** | Communications Director Ministry of Technology, Innovation and Citizens<sup>1</sup> Services Government Communications and Public Engagement

From: Stewart, Josh JAG:EX
To: Facey, Nick MTIC:EX

Subject: RE: MTICS Media Request - Times Colonist - Tent City Remediation/Future Plans

Date: Thursday, July 7, 2016 14:59:55

No concerns. Thanks.

From: Facey, Nick MTIC:EX

Sent: Thursday, July 7, 2016 2:33 PM

To: Mills, Shane PREM:EX

Cc: Myers, Tobie A MNGD:EX; Diacu, Raz MNGD:EX; Reddy, Brandon MTIC:EX; Stewart, Josh JAG:EX

Subject: MTICS Media Request - Times Colonist - Tent City Remediation/Future Plans

#### In draftŠ will share ASAP

Date/Time: July 7, 2pm Deadline @ 4:30pm Media: Times Colonist

Reporter: Sarah Petrescu, 250-507-2528 (cell phone), 250-380-5370, <a href="mailto:specification-spe

**Topic: Tent City Remediation/ Future Plans** 

**Background**: Reporter would like some information about the plan for the courthouse lawn once the

tent city is closed.

Questions: Which ministry will do the clean-up and what are the projected costs? What will the camping rules be in the park after Aug. 8? Will any security remain?

#### **Suggested Response:**

- The Province has a transition plan in place for those people camping at the courthouse and we will continue to relocate them into appropriate shelter in an orderly and co-operative manner.
- The Ministry of Technology, Innovation and Citizens<sup>1</sup> Services will be managing the site cleanup at the Victoria Courthouse encampment.
- The Province would like to remediate Victoria courthouse greenspace so that it¹s in a safe condition and can be enjoyed by the public once again.
- The extent of cleanup for the land will depend on what is left at the site once everyone has left and the land can be assessed.
- A preliminary estimate should the soil be contaminated is approximately \$300-thousand to \$350-thousand for the cleanup.
- Then there's also remediation of the site as the landscaping will have to be re-done.
- Future plans for the site are yet to be determined.

Tasha Schollen | Communications Director

Ministry of Technology, Innovation and Citizens<sup>1</sup> Services Government Communications and Public Engagement

From: Schollen, Tasha GCPE:EX

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX

Cc: Whittier, Joanne GCPE:EX; Schollen, Tasha GCPE:EX; Gordon, Matt GCPE:EX; Wolford, Jessica GCPE:EX

Subject: MTICS Media Request - Times Colonist - Tent City Remediation/ Future Plans

Date: Thursday, July 7, 2016 14:58:32

This will go to Housing for MO and PO approval

Date/Time: July 7, 2pm Deadline @ 4:30pm Media: Times Colonist

Reporter: Sarah Petrescu, 250-507-2528 (cell phone), 250-380-5370, <a href="mailto:spetrescu@timescolonist.com">spetrescu@timescolonist.com</a>

Topic: Tent City Remediation/ Future Plans

**<u>Background</u>**: Reporter would like some information about the plan for the courthouse lawn once the

tent city is closed.

Questions: Which ministry will do the clean-up and what are the projected costs? What will the camping rules be in the park after Aug. 8? Will any security remain?

#### **Suggested Response:**

- The Province¹s current priorities are to ensure safety at the site and to implement the transition plan that¹s in place for those people camping at the courthouse. We will continue to relocate them into appropriate shelter in an orderly and co-operative manner.
- The Ministry of Technology, Innovation and Citizens<sup>1</sup> Services will be managing the site cleanup at the Victoria Courthouse encampment.
- The Province would like to remediate the Victoria courthouse greenspace so that it¹s in a safe condition and can be enjoyed by the public once again.
- The extent of cleanup for the land will depend on what is left at the site once everyone has left and the land can be assessed.
- A preliminary estimate should the soil be contaminated is approximately \$300-thousand to \$350-thousand for the cleanup.
- Then there's also remediation of the site as the landscaping will have to be re-done.
- Future plans for the site are yet to be determined.

Tasha Schollen | Communications Director

Ministry of Technology, Innovation and Citizens<sup>1</sup> Services Government Communications and Public Engagement

From: Schollen, Tasha GCPE:EX

To: Facey, Nick MTIC:EX; Mills, Shane PREM:EX

Cc: Reddy, Brandon MTIC:EX; Whittier, Joanne GCPE:EX; Gordon, Matt GCPE:EX; Wolford, Jessica GCPE:EX

Subject: RE: MTICS Media Request - Times Colonist - Tent City Remediation/Future Plans

Date: Thursday, July 7, 2016 14:56:28

They<sup>1</sup>Il respond, however, our ministry is responsible for remediation plans so I am crafting the response.

From: Facey, Nick MTIC:EX

**Sent:** Thursday, July 7, 2016 2:54 PM

To: Schollen, Tasha GCPE:EX; Mills, Shane PREM:EX

Cc: Reddy, Brandon MTIC:EX; Whittier, Joanne GCPE:EX; Gordon, Matt GCPE:EX; Wolford, Jessica GCPE:EX

Subject: Re: MTICS Media Request - Times Colonist - Tent City Remediation/Future Plans

One office should handle the requests/replies and given MRC is speaking that office makes sense.

Just touched base with them and they agree.

Nick Facey,

Chief of Staff

for the Hon. Amrik Virk

Minister of Technology, Innovation & Citizens' Services

Government of BC

On Jul 7, 2016, at 2:24 PM, Schollen, Tasha GCPE:EX < Tasha. Schollen@gov.bc.ca > wrote:

#### In draftŠ

Date/Time: July 7, 2pm Deadline @ 4:30pm Media: Times Colonist

Reporter: Sarah Petrescu, 250-507-2528 (cell phone), 250-380-5370, <a href="mailto:spetrescu@timescolonist.com">spetrescu@timescolonist.com</a>

Topic: Tent City Remediation/ Future Plans

**Background**: Reporter would like some information about the plan for the courthouse lawn once the

tent city is closed.

Questions: Which ministry will do the clean-up and what are the projected costs? What will the camping rules be in the park after Aug. 8? Will any security remain?

#### **Suggested Response:**

- The Province has a transition plan in place for those people camping at the courthouse and we will continue to relocate them into appropriate shelter in an orderly and co-operative manner.
- The Ministry of Technology, Innovation and Citizens<sup>1</sup> Services will be managing the site cleanup at the Victoria Courthouse encampment.
- The Province would like to remediate Victoria courthouse greenspace so that it¹s in a safe condition and can be enjoyed by the public once again.
- The extent of cleanup for the land will depend on what is left at the site once everyone has left and the land can be assessed.
- A preliminary estimate should the soil be contaminated is approximately \$300-thousand to \$350-thousand for the cleanup.

Then there's also remediation of the site as the landscaping will have to be re-done.

• Future plans for the site are yet to be determined.

**Tasha Schollen |** Communications Director Ministry of Technology, Innovation and Citizens<sup>1</sup> Services Government Communications and Public Engagement

From: Schollen, Tasha GCPE:EX

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX

Cc: Schollen, Tasha GCPE:EX; Whittier, Joanne GCPE:EX; Gordon, Matt GCPE:EX; Wolford, Jessica GCPE:EX

Subject: MTICS Media Request - Times Colonist - Tent City Remediation/Future Plans

Date: Thursday, July 7, 2016 14:24:00

#### In draftŠ

Date/Time: July 7, 2pm Deadline @ 4:30pm Media: Times Colonist

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- Then there's also remediation of the site as the landscaping will have to be re-done.
- · Future plans for the site are yet to be determined.

Tasha Schollen | Communications Director

Ministry of Technology, Innovation and Citizens<sup>1</sup> Services Government Communications and Public Engagement

From: Whittier, Joanne GCPE:EX
To: Whittier, Joanne GCPE:EX

Subject: MTICS Media Summary - Wednesday, June 08, 2016

Date: Wednesday, June 8, 2016 07:02:43

#### **TNO Focus on - MTICS Media Summary**

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Wednesday, June 08, 2016

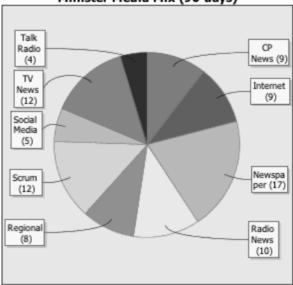
#### **Executive Summary**

No mention of Minister.

Brief mention of Ministry - please see **Connectivity**: Cellphone coverage extended north up 19 - Campbell River Mirror.

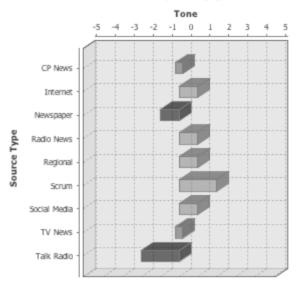
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Minister Media Mix (90 days)



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#### Minister Tone (90 days)



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- Gender targets call for women to make up 40 per cent of government appointments Jane Taber and Tavia Grant Globe and Mail 08-Jun-2016
- Police find W-18, fentanyl in drug bust Andrea Woo Globe and Mail 08-Jun-2016
- Premier Clark sings familiar pre-election song, but sings it louder now Gary Mason Globe and Mail 08-Jun-2016
- Private sponsors help Syrian family reunite Wendy Stueck Globe and Mail 08-Jun-2016
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- New generation of film lovers reviving Capitol 6 theatre Michael D. Reid Times Colonist (Victoria) 08-Jun-2016
- Donated organs not what they used to be Sharon Kirkey National Post 08-Jun-2016
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- NDP leader's promises court controversy Vaughn Palmer Vancouver Sun 08-Jun-2016
- Treaty process gets a tentative reboot Les Leyne Times Colonist (Victoria) 08-Jun-2016



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- Carmichael tent city CKNW CKNW (Vancouver) 07-Jun-2016
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- Street View technology heads for the bush Christine Hinzmann Prince George Citizen 07-Jun-2016

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## Alberta rules out prosecutions for assisted death medical teams

Globe and Mail Wednesday, June 08, 2016 Page A01 By Sean Fine



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### GM Canada to hire 1,000 engineers to fuel R&D drive

Globe and Mail Wednesday, June 08, 2016 Page A01 By Greg Keenan, Bill Curry and Adrian Morrow



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# Gender targets call for women to make up 40 per cent of government appointments $\operatorname{Globe}$ and $\operatorname{Mail}$

Globe and Mail Wednesday, June 08, 2016 Page A01 By Jane Taber and Tavia Grant



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# **Police find W-18, fentanyl in drug bust** Globe and Mail

Globe and Mail Wednesday, June 08, 2016 Page S01 By Andrea Woo



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### Premier Clark sings familiar pre-election song, but sings it louder now

Globe and Mail Wednesday, June 08, 2016 Page S01 By Gary Mason



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# **Private sponsors help Syrian family reunite** Globe and Mail

Globe and Mail Wednesday, June 08, 2016 Page S01 By Wendy Stueck



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### Tests reveal toxic levels of contaminants in Fort Mac soil and ash

Globe and Mail Wednesday, June 08, 2016 Page A01 By Justin Giovannetti



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## Glacier crash landing 'was a miracle,' pilot says

Vancouver Sun Wednesday, June 08, 2016 Page A01 By Jeff Lee



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# **Property taxes vary wildly in boom time** Vancouver Sun

Vancouver Sun Wednesday, June 08, 2016 Page A01 By Kelly Sinoski and Dan Fumano



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## Conservation officers get more discretion

The Province Wednesday, June 08, 2016 Page A02 By Larry Pynn



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# **Atwell sparks ruckus by making own sewage moves** Times Colonist (Victoria)

Times Colonist (Victoria) Wednesday, June 08, 2016 Page A01 By Bill Cleverley



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New generation of film lovers reviving Capitol 6 theatre Times Colonist (Victoria) Wednesday, June 08, 2016 Page A01 By Michael D. Reid



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# **Donated organs not what they used to be** National Post

National Post Wednesday, June 08, 2016 Page A01 By Sharon Kirkey



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# Leadership hopeful learns NDP doesn't stand for 'no deposit please'

National Post Wednesday, June 08, 2016 Page A01 By Ashley Csanady



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Why is the Legion trying to silence this woman? National Post Wednesday, June 08, 2016 Page A01 By David Pugliese



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Campaigning has begun
Burnaby Now
Wednesday, June 08, 2016
Page A06
By Keith Baldrey

Keith Baldrey is chief political reporter for Global B.C.

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## **NDP leader's promises court controversy** Vancouver Sun

Vancouver Sun Wednesday, June 08, 2016 Page A09 By Vaughn Palmer

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Treaty process gets a tentative reboot
Times Colonist (Victoria)
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By Les Leyne
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Cellphone coverage extended north up 19 Campbell River Mirror Tuesday, June 07, 2016 Page 1
By Kristen Douglas

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# **University pays \$20K ransom to hackers** National Post

National Post Wednesday, June 08, 2016 Page A05 By Shawn Logan

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Carmichael - tent city CKNW Tuesday, June 07, 2016, 07:01 By CKNW

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Street View technology heads for the bush
Prince George Citizen
Tuesday, June 07, 2016
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By Christine Hinzmann

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 From:
 Stephan.Herman@gov.bc.ca

 To:
 Stephan.Herman@gov.bc.ca

 Cc:
 Stephan.Herman@gov.bc.ca

Subject: MTICS Media Summary - Monday, April 18, 2016

Date: Monday, April 18, 2016 06:34:55

### **TNO Focus on - MTICS Media Summary**

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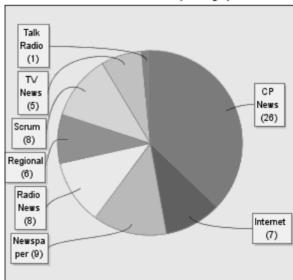
Monday, April 18, 2016

## **Executive Summary**

- Minister not mentioned.
- Story on sale of Jericho Lands. (see: Shared Services BC)
- Muliple stories on courthouse camp developments. (see: Shared Services BC)
- Ministry not mentioned.

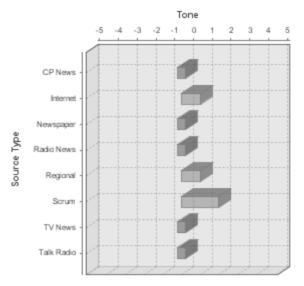
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#### Minister Media Mix (90 days)



[download image] [download numbers]

#### Minister Tone (90 days)



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- Array of items raises cost of new bridge to \$105 million Bill Cleverley Times Colonist (Victoria) 16-Apr-2016
- Assisted-death bill lacking, co-chair says Ian Macleod National Post 16-Apr-2016
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- Leap Manifesto faces uphill battle in NDP Campbell Clark Globe and Mail 16-Apr-2016
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- Replacement for Carnegie library was a long time coming John Mackie Vancouver Sun 16-Apr-2016
- <u>Senators mull delaying passage of 'flawed' assisted-death bill Laura Stone Globe and Mail 18-Apr-2016</u>
- Students energized by refugee art project Daphne Bramham Vancouver Sun 18-Apr-2016

- Sunny outlook for solar power in B.C. Staff The Province 18-Apr-2016
- Three held after dramatic chase Jeff Bell and Louise Dickson Times Colonist (Victoria) 16-Apr-2016
- <u>UVic grad comes home as Irish rugby warrior Cleve Dheensaw Times Colonist (Victoria) 17-Apr-2016</u>
- Whale found dead five weeks after being tagged by researchers Mark Hume Globe and Mail 18-Apr-2016

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- Leap Manifesto a gift to the BC Liberals Les Leyne The Daily Courier (Kelowna) 18-Apr-2016
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- Tent neighbours deserve concern Editorial Times Colonist (Victoria) 16-Apr-2016
- Union memo makes NDP a bit jumpy Les Leyne Times Colonist (Victoria) 16-Apr-2016

#### Connectivity

- FCM urges increase in rural broadband access at CRTC hearings Selina Chignall iPolitics 15-Apr-2016
- <u>Public interest groups propose fund to pay for expanded Internet access Christine Dobby Globe and Mail 15-Apr-2016</u>

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- <u>UBC hacking incident Global BC News Hour CHAN (Global BC Vancouver) 16-Apr-2016</u>
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#### • Science, Research & Innovation

- Marijuana compounds brewed using yeast by Canadian biotech firms Jillian Bell CBC Online 17-Apr-2016
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- Smartphone app to help brew beer Eric Mackenzie Vancouver 24 hrs 18-Apr-2016
- Solar enjoying its moment in sun Cassidy Olivier The Province 18-Apr-2016

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- Allen tent city CFAX Pamela McCall CFAX (Victoria) 15-Apr-2016
- First Nations ink \$480M Jericho lands deal Jane Seyd North Shore News 15-Apr-2016
- McGregor Victoria tent city CBC On the Island CBCV (CBC Victoria) 15-Apr-2016
- Nursey tent city tourism CFAX CFAX (Victoria) 15-Apr-2016
- Nursey tent city tourism CFAX CFAX (Victoria) 15-Apr-2016
- Nursey/Hammond/Helps tent city tourism CHEK News at Five CHEK (Victoria) 15-Apr-2016
- Portland Hotel Society to offer services for Victoria tent city CBC Online CBC Online 16-Apr-2016
- Saanich to sell trio of surplus properties Travis Paterson Saanich News 15-Apr-2016

### Technology

- <u>Vancouver's Spring startup program acquires Kick incubator in push for global presence Tyler Orton BiV 15-Apr-2016</u>
- Victoria video-game producer inks major partnership Andrew A. Duffy Times Colonist

## (Victoria) - 16-Apr-2016

- Google, NASA put big money on Burnaby company's quantum computer CBC Online -CBC Online - 18-Apr-2016
- High-tech greenhouse grows on City of Surrey, University of Fraser Valley Susan Lazaruk -Surrey Now - 17-Apr-2016
- Making technology accessible Cornelia Naylor Burnaby Now 15-Apr-2016
  Study gauges economic effect of clean-energy sector Felicity Stone bcbuisness.ca 14-APR-2016

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# **\$1-million home is not the luxury it used to be** Globe and Mail

Globe and Mail Monday, April 18, 2016 Page S01 By Brent Jang

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'Our hearts go out to them. They're Crees like us' National Post Monday, April 18, 2016 Page A01 By Graeme Hamilton

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# **10 of metro Vancouver's masterpiece mansions** The Province

The Province Sunday, April 17, 2016 Page A01

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Array of items raises cost of new bridge to \$105 million Times Colonist (Victoria) Saturday, April 16, 2016 Page A01 By Bill Cleverley

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## Assisted-death bill lacking, co-chair says

National Post Saturday, April 16, 2016 Page A03 By Ian Macleod

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Charging low-income earners to reconnect services is 'outrageous'
Globe and Mail
Monday, April 18, 2016
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By Justine Hunter

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Compensation blunder lets church off hook Globe and Mail Monday, April 18, 2016 Page A01 By Gloria Galloway

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Discipline decisions stay sealed for now Globe and Mail Monday, April 18, 2016 Page S01 By Mike Hager

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## From coast to coast to coast

Globe and Mail Saturday, April 16, 2016 Page S01 By Mark Hume

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ICBC's losing lawsuits behind backpedalling on legal changes Vancouver Sun Saturday, April 16, 2016 Page A01 By Ian Mulgrew

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Leap Manifesto faces uphill battle in NDP Globe and Mail Saturday, April 16, 2016 Page S01 By Campbell Clark

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## Liberals were warned of Saudi practices

Globe and Mail Saturday, April 16, 2016 Page A03 By Steven Chase

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# **Patient photos prescribe trouble for doctors** National Post

National Post Monday, April 18, 2016 Page A01 By Tom Blackwell

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Police tried to stop truck before it hit Mountie's cruiser in fatal crash: RCMP Times Colonist (Victoria)
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By Louise Dickson

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Quake devastates Ecuador National Post Monday, April 18, 2016 Page A01 By Dolores Ochoa and Gonzalo Solano Copyright

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# **Replacement for Carnegie library was a long time coming** Vancouver Sun

Vancouver Sun Saturday, April 16, 2016 Page A02 By John Mackie

THIS WEEK IN HISTORY: 1956

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Senators mull delaying passage of 'flawed' assisted-death bill Globe and Mail Monday, April 18, 2016 Page A01 By Laura Stone

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Students energized by refugee art project Vancouver Sun Monday, April 18, 2016 Page A02 By Daphne Bramham

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# **Sunny outlook for solar power in B.C.** The Province

The Province Monday, April 18, 2016 Page A01 By Staff

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## Three held after dramatic chase

Times Colonist (Victoria) Saturday, April 16, 2016 Page A01 By Jeff Bell and Louise Dickson

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UVic grad comes home as Irish rugby warrior Times Colonist (Victoria) Sunday, April 17, 2016 Page A01 By Cleve Dheensaw

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# Whale found dead five weeks after being tagged by researchers

Globe and Mail Monday, April 18, 2016 Page S01 By Mark Hume

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## Do we still need the NRC?

Vancouver Sun Saturday, April 16, 2016 Page A21 By Editorial

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Leap Manifesto a gift to the BC Liberals The Daily Courier (Kelowna) Monday, April 18, 2016 Page A07 By Les Leyne

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## NDP should take a look beyond the capital

Vancouver Sun Saturday, April 16, 2016 Page A21 By Vaughn Palmer

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**Tent neighbours deserve concern** Times Colonist (Victoria) Saturday, April 16, 2016 Page A12 By Editorial

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Union memo makes NDP a bit jumpy Times Colonist (Victoria) Saturday, April 16, 2016 Page A12 By Les Leyne

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FCM urges increase in ru iPolitics Friday, April 15, 2016	ral broadband access at CRTC hearings
By Selina Chignall	
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	Connectivity
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Public interest groups propose fund to pay for expanded Internet access  $\operatorname{Globe}$  and  $\operatorname{Mail}$ 

Globe and Mail Friday, April 15, 2016 Page B03 By Christine Dobby

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Information Security

UBC hacking incident CHAN Saturday, April 16, 2016, 18:07 By Global BC News Hour

Information Security

Vincalek - cyber attack CIVT

Saturday, April 16, 2016, 18:08 By CTV News at Six

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Marijuana compounds brewed CBC Online Sunday, April 17, 2016	using yeast by Canadian biotech firms
By Jillian Bell	

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New equipment for hands-or Castanet Friday, April 15, 2016	n training
By Castanet	
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Smartphone app to help brew beer Vancouver 24 hrs Monday, April 18, 2016 Page A05 By Eric Mackenzie

Science,	Research	& Inno	vation

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# **Solar enjoying its moment in sun** The Province

The Province Monday, April 18, 2016 Page A04 By Cassidy Olivier

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Allen - tent city CFAX Friday, April 15, 2016, 10:14 By CFAX Pamela McCall

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# First Nations ink \$480M Jericho lands deal

North Shore News Friday, April 15, 2016 Page A11 By Jane Seyd

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McGregor - Victoria tent city CBCV Friday, April 15, 2016, 07:12 By CBC On the Island

——— Shared Services BC

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Nursey - tent city tourism CFAX Friday, April 15, 2016, 08:02 By CFAX

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Nursey - tent city tourism CFAX Friday, April 15, 2016, 12:02 By CFAX

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Nursey/Hammond/Helps - tent city tourism CHEK Friday, April 15, 2016, 17:03 By CHEK News at Five

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Portland Hotel Society to CBC Online Saturday, April 16, 2016	o offer services for Victoria tent city	
By CBC Online		
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	Shared Services BC
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# Saanich to sell trio of surplus properties

Saanich Vosen trio of Saanich News Friday, April 15, 2016 Page 1 By Travis Paterson

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Vancouver's Spring startup program acquires Kick incubator in pu BiV Friday, April 15, 2016	ish for global presence
By Tyler Orton	
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Victoria video-game producer inks major partnership Times Colonist (Victoria) Saturday, April 16, 2016 Page B01 By Andrew A. Duffy

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Google, NASA put big money on CBC Online Monday, April 18, 2016	Burnaby company's quantum computer
By CBC Online	
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# High-tech greenhouse grows on City of Surrey, University of Fraser Valley

Surrey Now Sunday, April 17, 2016 Page 1 By Susan Lazaruk

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Making technology accessible Burnaby Now Friday, April 15, 2016 Page A05 By Cornelia Naylor

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Study gauges ecor APR-2016	nomic effect of clean-energy sector - Felicity Stone - bcbuisness.ca - 14-
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 From:
 Alaimo, Marie GCPE:EX

 To:
 Alaimo, Marie GCPE:EX

 Cc:
 Alaimo, Marie GCPE:EX

Subject: MTICS Media Summary - Tuesday, March 22, 2016

Date: Tuesday, March 22, 2016 07:28:53

# **TNO Focus on - MTICS Media Summary**

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Tuesday, March 22, 2016

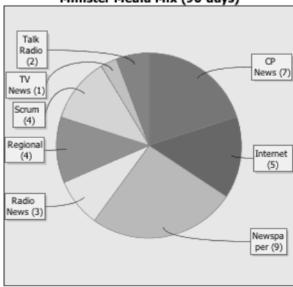
# **Executive Summary**

Minister not mentioned.

Ministry not mentioned.

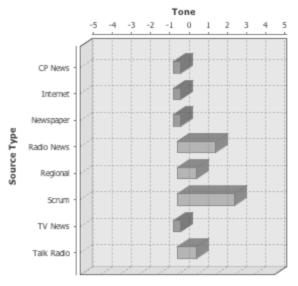
# Media Analysis

Minister Media Mix (90 days)



[download image] [download numbers]

### Minister Tone (90 days)



[download image] [download numbers]

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- Red tape entangles green thumbs Staff The Province 22-Mar-2016
- Suspicious hotel fire leaves dozens of tenants on streets Cindy E. Harnett Times Colonist (Victoria) 22-Mar-2016
- Teachers call for Wi-Fi ban Ashley Csanady National Post 22-Mar-2016
- The PM's last best day Chris Selley National Post 22-Mar-2016
- Toxic-soil landfill violates bylaw: judge Jeff Bell Times Colonist (Victoria) 22-Mar-2016
- Zero-waste pop-up's demand means permanent digs needed Randy Shore Vancouver Sun 22-Mar-2016

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- Taxpayers still on hook for partisan ads Vaughn Palmer Vancouver Sun 22-Mar-2016
- Why Christy Clark loves the Green party Michael Smyth The Province 22-Mar-2016

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Trudeau condemns 'deplorable' Brussels attacks - CP News - 22-Mar-2016

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- Air canada to offer wi-fi internationally National Post 22-Mar-2016
- Google offers faster Internet in Cuba; TICKER Globe and Mail 22-Mar-2016
- Teachers, unions call for Wi-Fi ban in schools Ashley Csanady Vancouver Sun 22-Mar-2016

## Shared Services BC

Brett - tent city overdose - CHEK News at Five - CHEK (Victoria) - 21-Mar-2016

• CSE chief says federal departments need to "get on" Shared Services' cyber defences - Amanda Connolly - iPolitics - 21-Mar-2016

# Technology

- Agencies didn't get federal authorization to employ surveillance-dragnet devices Matthew Braga, Colin Freeze Globe and Mail 22-Mar-2016
- Ambrose says taxing stock options could hurt Canada's innovation economy Selina Chignall
   iPolitics 21-Mar-2016
- Apple to release miniature new iPhone, iPad for business use Brandon Bailey Vancouver Sun - 22-Mar-2016
- Biofuel startup gets \$4.2 million Alex Boyd Metro metronews.ca 21-Mar-2016
- Bond / Leech- Technology Skills Appreciation Week CFTV (Fairchild TV) 18-Mar-2016
- CNC trades funding CKPG at 5:00 CKPG (Prince George) 21-Mar-2016
- <u>Canadian VC funds seek to bring clean tech to China Shawn McCarthy Globe and Mail 22-Mar-2016</u>
- Costigane Airbnb rentals CFAX Ian Jessop CFAX (Victoria) 21-Mar-2016
- Life Lessons: Adrian Moise, Aequilibrium Software Jen St. Denis BiV 21-Mar-2016
- McKee Revelstoke Airbnb crackdown CBC Daybreak South CBTK (CBC Kelowna) 21-Mar-2016
- Westport shareholders vote to merge with New York's Fuel Systems Solutions Tyler Orton Business in Vancouver 21-Mar-2016
- Zuckerberg trumps Trump Terence Corcoran National Post 22-Mar-2016

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## **Burnaby outpacing Vancouver in race for new towers** Vancouver Sun

Vancouver Sun Tuesday, March 22, 2016 Page A01 By Jeff Lee, Matt Robinson and Brian Morton

Page 557 to/à Page 558

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Indigenous issues to reap budget benefits Globe and Mail Tuesday, March 22, 2016 Page A01 By Robert Fife and Bill Curry

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# **Red tape entangles green thumbs**The Province

The Province Tuesday, March 22, 2016 Page A01 By Staff

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Suspicious hotel fire leaves dozens of tenants on streets Times Colonist (Victoria) Tuesday, March 22, 2016 Page A01 By Cindy E. Harnett

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### Teachers call for Wi-Fi ban

National Post Tuesday, March 22, 2016 Page A01 By Ashley Csanady

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### The PM's last best day

National Post Tuesday, March 22, 2016 Page A01 By Chris Selley

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Toxic-soil landfill violates bylaw: judge Times Colonist (Victoria) Tuesday, March 22, 2016 Page A01 By Jeff Bell

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Zero-waste pop-up's demand means permanent digs needed Vancouver Sun Tuesday, March 22, 2016 Page A01 By Randy Shore

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**Grounded barge was a warning** Times Colonist (Victoria) 22-Mar-2016 Page A08 By Editorial Copyright

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## **Taxpayers still on hook for partisan ads** Vancouver Sun

Vancouver Sun
22-Mar-2016
Page A13
By Vaughn Palmer
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Why Christy Clark loves the Green party
The Province
Tuesday, March 22, 2016
Page A06
By Michael Smyth

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Trudeau condemns 'deplora CP News Tuesday, March 22, 2016	able' Brussels attacks

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## $\label{lem:alpha} \textbf{Air canada to offer wi-fi internationally}$

National Post Tuesday, March 22, 2016 Page FP3

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## **Google offers faster Internet in Cuba; TICKER** Globe and Mail

Globe and Mail Tuesday, March 22, 2016 Page B08

	———— Connectivity
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# **Teachers, unions call for Wi-Fi ban in schools** Vancouver Sun

Vancouver Sun Tuesday, March 22, 2016 Page A09 By Ashley Csanady

**Brett - tent city overdose** 

CHEK Monday, March 21, 2016, 17:10 By CHEK News at Five

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CSE chief says federal departments need to "get on" Shared Services' cyber defences iPolitics Monday, March 21, 2016		
By Amanda Connolly		
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Agencies didn't get federal authorization to employ surveillance-dragnet devices Globe and Mail

Globe and Mail Tuesday, March 22, 2016 Page A01 By Matthew Braga, Colin Freeze

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Ambrose says taxing stock options iPolitics Monday, March 21, 2016	could hurt Canada's innovation economy	
By Selina Chignall		
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# Apple to release miniature new iPhone, iPad for business use Vancouver Sun

Vancouver Sun Tuesday, March 22, 2016 Page B03 By Brandon Bailey

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## Biofuel startup gets \$4.2 million

metronews.ca Monday, March 21, 2016

By Alex Boyd - Metro

top	Technology	
Bond / Leech- Technology Skills	s Appreciation Week	
CFTV	11	
Friday, March 18, 2016, 19:08		
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\_\_\_\_\_ Technology

CNC trades funding CKPG Monday, March 21, 2016, 17:04 By CKPG at 5:00

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# Canadian VC funds seek to bring clean tech to China

Globe and Mail Tuesday, March 22, 2016 Page B03 By Shawn McCarthy

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Technology top

Costigane - Airbnb rentals CFAX Monday, March 21, 2016, 14:06 By CFAX Ian Jessop

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Life Lessons: Adrian Moise, A BiV Monday, March 21, 2016	equilibrium Software
By Jen St. Denis	
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jstdenis@biv.com

[tciz, jtst]

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McKee - Revelstoke Airbnb crackdown CBTK Monday, March 21, 2016, 07:12 By CBC Daybreak South

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Westport shareholders vote to merge with New York's Fuel Systems Solutions
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**Zuckerberg trumps Trump** National Post Tuesday, March 22, 2016 Page FP7 By Terence Corcoran

Page 601

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From: Schollen, Tasha GCPE:EX

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX

Cc: Schollen, Tasha GCPE:EX; Whittier, Joanne GCPE:EX; Koolsbergen, Nick GCPE:EX; Gordon, Matt GCPE:EX;

Woolley, Paul GCPE:EX; Ash, Christine GCPE:EX; Platts, Robin GCPE:EX; Byers, Lindsay GCPE:EX

Subject: MTICS Media Request - CHEK FOLO - Courthouse Remediation

Date: Monday, March 7, 2016 14:53:18

### Okay to provide on background?

## Deadline @ asap Media: CHEK

Reporter: April Lawrence, alawrence@cheknews.ca

**Background:** The reporter wants to interview someone for radio. He is looking to corroborate information he heard in a story that CFAX did about the cost to remediate the courthouse site.

### **Questions:**

Will this go to the private sector for tender once the injunction is dealt with and everyone gone?

- We presently have a 15 year contract with Brookfield GIS Workplace Solutions Inc. (WSI) to provide Facilities Management Services at the Victoria courthouse property.
- As part of that contract, Workplace Solutions Inc. will procure and manage the remediation work at the site. Depending on the nature and extent of damage, WSI may procure contracted services through a tendering process.

We just became aware that 2 Burley Men movers have offered to clean the site up and remove all junk for free. Is this something the province would be amenable to in order to cut down costs?

 While the Province has not received a formal offer for complimentary cleanup we would be open to considering it.

### Provided earlier today:

<u>Question</u>: Can a \$350 K figure be confirmed by your ministry (seems Minister Coleman said it), and can we get some bullet points on how that grand total was arrived at- what are each of the line cost items?

If the site is considered potentially contaminated, contaminated with what?

What is the basis of those findings?

Who or which body made those findings?

### Suggested Response:

- Cleanup costs for the land at the Victoria Courthouse will depend on what is left at the site once everyone has left and the land can be assessed.
- There are makeshift houses on the site and a lot of belongings that will need to be removed.
- There will also be remediation of the site as the landscaping will have to be re-done.
- A preliminary estimate by the Ministry of Technology, Innovation and Citizens<sup>1</sup> Services should the soil be contaminated is approximately \$300-thousand to \$350-thousand for the cleanup.
- Professional soil engineering services will be required to determine actual cost estimates.
- Restore the lawn and surrounding area to a landscaped public area.
- Based on current observations, anticipated remediation work includes:
  - o Tent-by-tent identification and storage of personal items; disposal of abandoned items.
  - o Deconstruction of tents & structures, removal into an estimated ten bin loads of

### refuse.

- o Top soil remediation; depth and area to be determined.
- o Replacement of top soil with appropriate landscaping.
- Replacement of sod throughout, regrading, replacement of approximately five trees and 200 feet of hedge.
- o Assess Irrigation systems for damage.
- $\circ$  Fencing and security throughout the duration of the site remediation.

Tasha Schollen | Communications Director

Ministry of Technology, Innovation and Citizens<sup>1</sup> Services Government Communications and Public Engagement

From: Schollen, Tasha GCPE:EX
To: Facey, Nick MTIC:EX

Cc: Reddy, Brandon MTIC:EX; Whittier, Joanne GCPE:EX; Koolsbergen, Nick GCPE:EX; Gordon, Matt GCPE:EX;

Woolley, Paul GCPE:EX; Ash, Christine GCPE:EX; Byers, Lindsay GCPE:EX; Platts, Robin GCPE:EX

Subject: RE: MTICS Media Request - CBC Radio - Courthouse Remediation Costs

Date: Monday, March 7, 2016 11:53:00

ThanksŠSarf has asked for one addition and slight rewording. Will send this version.

- Cleanup costs for the land at the Victoria Courthouse will depend on what is left at the site
  once everyone has left and the land can be assessed.
- There are makeshift houses on the site and a lot of belongings that will need to be removed.
- There will also be remediation of the site as the landscaping will have to be re-done.
- A preliminary estimate by the Ministry of Technology, Innovation and Citizens<sup>1</sup> Services should the soil be contaminated is approximately \$300-thousand to \$350-thousand for the cleanup.
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Tasha Schollen | Communications Director

Ministry of Technology, Innovation and Citizens<sup>1</sup> Services Government Communications and Public Engagement

Phone: 250-387-3134 | Cell: 250-889-1121

From: Facey, Nick MTIC:EX

Sent: Monday, March 7, 2016 11:52 AM

To: Schollen, Tasha GCPE:EX

Cc: Reddy, Brandon MTIC:EX; Whittier, Joanne GCPE:EX; Koolsbergen, Nick GCPE:EX; Gordon, Matt GCPE:EX;

Woolley, Paul GCPE:EX; Ash, Christine GCPE:EX; Byers, Lindsay GCPE:EX; Platts, Robin GCPE:EX

Subject: Re: MTICS Media Request - CBC Radio - Courthouse Remediation Costs

Good to share.

Nick Facey,

Chief of Staff

for the Hon. Amrik Virk

Minister of Technology, Innovation & Citizens' Services

Government of BC

On Mar 7, 2016, at 11:38 AM, Schollen, Tasha GCPE:EX < Tasha. Schollen@gov.bc.ca > wrote:

Hello

CFAX (Mark Brennae) and CHEK (April Lawrence) are also requesting this informationŠ

From: Schollen, Tasha GCPE:EX

**Sent:** Monday, March 7, 2016 11:18 AM

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX

Cc: Schollen, Tasha GCPE:EX; Whittier, Joanne GCPE:EX; Koolsbergen, Nick GCPE:EX; Gordon, Matt GCPE:EX;

Woolley, Paul GCPE:EX; Ash, Christine GCPE:EX; Byers, Lindsay GCPE:EX **Subject:** MTICS Media Request - CBC Radio - Courthouse Remediation Costs

Hi,

Okay to provide on background? (Same response we provided to CTV on Friday.)

Date/Time: Mar. 7, 9:26am

Deadline: asap

Media: CBC Radio Victoria

Reporter: Dave Biro, david.biro@cbc.ca

**Topic:** The reporter wants to interview someone for radio. He is looking to corroborate information

he heard in a story that CFAX did about the cost to remediate the courthouse site.

<u>Question</u>: Can a \$350 K figure be confirmed by your ministry (seems your Minister said it), and can we get some bullet points on how that grand total was arrived at- what are each of the line cost items?

If the site is considered potentially contaminated, contaminated with what?

What is the basis of those findings?

Who or which body made those findings?

Suggested Response:

- Cleanup costs for the land at the Victoria Courthouse will depend on what is left at the site
  once everyone has left and the land can be assessed.
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- There will also be remediation of the site as the landscaping will have to be re-done.
- A preliminary estimate by the Ministry of Technology, Innovation and Citizens<sup>1</sup> Services should the soil be contaminated is approximately \$300-thousand to \$350-thousand for the cleanup.
- Professional soil engineering services will be required to determine actual cost estimates.
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  - Top soil remediation; depth and area to be determined.
  - Replacement of top soil with clean fill.
  - Replacement of sod throughout, regrading, replacement of approximately five trees and 200 feet of hedge.
  - New Irrigation and drainage.
  - Fencing and security throughout the duration of the site remediation.

Tasha Schollen | Communications Director

Ministry of Technology, Innovation and Citizens<sup>1</sup> Services Government Communications and Public Engagement

From: Schollen, Tasha GCPE:EX

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX

Cc: Whittier, Joanne GCPE:EX; Koolsbergen, Nick GCPE:EX; Gordon, Matt GCPE:EX; Woolley, Paul GCPE:EX; Ash,

Christine GCPE:EX; Byers, Lindsay GCPE:EX; Platts, Robin GCPE:EX

Subject: RE: MTICS Media Request - CBC Radio - Courthouse Remediation Costs

Date: Monday, March 7, 2016 11:38:01

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CFAX (Mark Brennae) and CHEK (April Lawrence) are also requesting this information S

From: Schollen, Tasha GCPE:EX

Sent: Monday, March 7, 2016 11:18 AM

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Cc: Schollen, Tasha GCPE:EX; Whittier, Joanne GCPE:EX; Koolsbergen, Nick GCPE:EX; Gordon, Matt GCPE:EX;

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\_\_\_\_\_

Tasha Schollen | Communications Director

Ministry of Technology, Innovation and Citizens<sup>1</sup> Services Government Communications and Public Engagement

From: Schollen, Tasha GCPE:EX
To: Facey, Nick MTIC:EX

Cc: Reddy, Brandon MTIC:EX; Whittier, Joanne GCPE:EX; Lafrance, Martyn JAG:EX

Subject: RE: MTICS Media Request - CBC Radio - Courthouse Remediation Costs

Date: Monday, March 7, 2016 11:37:02

They¹ve shared with their MOŠ.haven¹t heard back - they passed the request to us. CHEK and CFAX now requesting this as wellŠ

\_\_\_\_\_

Tasha Schollen | Communications Director

Ministry of Technology, Innovation and Citizens<sup>1</sup> Services Government Communications and Public Engagement

Phone: 250-387-3134 | Cell: 250-889-1121

From: Facey, Nick MTIC:EX

Sent: Monday, March 7, 2016 11:35 AM

To: Schollen, Tasha GCPE:EX

**Cc:** Reddy, Brandon MTIC:EX; Whittier, Joanne GCPE:EX; Lafrance, Martyn HLTH:EX **Subject:** Re: MTICS Media Request - CBC Radio - Courthouse Remediation Costs

Housing is okay with it?

Nick Facey, Chief of Staff

for the Hon. Amrik Virk

Minister of Technology, Innovation & Citizens' Services

Government of BC

On Mar 7, 2016, at 11:17 AM, Schollen, Tasha GCPE:EX < Tasha.Schollen@gov.bc.ca > wrote:

Hi,

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Deadline: asap

Media: CBC Radio Victoria

Reporter: Dave Biro, david.biro@cbc.ca

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**Tasha Schollen** | Communications Director

Ministry of Technology, Innovation and Citizens<sup>1</sup> Services Government Communications and Public Engagement

From: Schollen, Tasha GCPE:EX

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX

Cc: Schollen, Tasha GCPE:EX; Whittier, Joanne GCPE:EX; Koolsbergen, Nick GCPE:EX; Gordon, Matt GCPE:EX;

Woolley, Paul GCPE:EX; Ash, Christine GCPE:EX; Byers, Lindsay GCPE:EX

Subject: MTICS Media Request - CBC Radio - Courthouse Remediation Costs

Date: Monday, March 7, 2016 11:17:50

Ηi,

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Date/Time: Mar. 7, 9:26am

Deadline: asap

Media: CBC Radio Victoria

Reporter: Dave Biro, david.biro@cbc.ca

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Tasha Schollen | Communications Director

Ministry of Technology, Innovation and Citizens<sup>1</sup> Services Government Communications and Public Engagement

From: Mills, Shane

To: Wallace-Deering, Eric MEM:EX; Gordon, Matt GCPE:EX

Cc: Petrie, Cynthia; Ted Lewis; Haslam, David GCPE:EX; Koolsbergen, Nick GCPE:EX; Facey, Nick MTIC:EX; Myers,

Tobie A MNGD:EX; Kapac de Frias, Martina E ENV:EX

Subject: Re: Rock Bay / Tent City Heads-Up
Date: Saturday, February 27, 2016 16:55:41

### Thanks

Sent from my BlackBerry 10 smartphone on the TELUS network.

Original Message

From: Wallace-Deering, Eric MEM:EX Sent: Saturday, February 27, 2016 4:27 PM To: Mills, Shane; Gordon, Matt GCPE:EX

Cc: Petrie, Cynthia MEM:EX; Ted Lewis; Haslam, David GCPE:EX; Koolsbergen, Nick GCPE:EX; Facey, Nick MTIC:EX; Myers, Tobie A MNGD:EX; Kapac de Frias,

Martina E ENV:EX

Subject: Rock Bay / Tent City Heads-Up

Hi.

Heads up on some rumours BC Hydro have been hearing that the Victoria courthouse tent city occupants are looking at alternative sites for their people.

Apparently their Rock Bay property has been cited and they've had a direct call from one of the organizers a few days ago.

The Rock Bay land is the site of a remediation project which includes 1.73 hectares of uplands and 2.02 hectares of harbour floor that is administered by Transport Canada.

Hydro¹s land at Rock Bay is the site of a former coal gasification facility that operated from 1862 to 1949 by Victoria Gas and B.C. Electric. The coal gasification process < the main waste product being coal tar < resulted in a significant impact to soil, groundwater and harbour sediments.

This is also the site of the proposed CRD sewage facility.

At this point, Hydro have increased our security, reached out to the Victoria Police and informed their adjacent neighbours including the two First Nations with interests in this land.

They'll have an issues note on Monday.

At this point, their holding lines are:

- · Rock Bay is still active work site and not a safe area for public activity or camping.
- This was one of the Province¹s most contaminated sites and has been the subject of environmental remediation by BC Hydro and Transport Canada for the past 10 15 years.

• Our remediation activities are not complete. There is extensive and ongoing monitoring and testing to ensure that the remediation has created safe environmental conditions.

Eric

From: Wallace-Deering, Eric MEM:EX

To: Mills, Shane LASS:EX; Gordon, Matt GCPE:EX

Cc: Petrie, Cynthia; Ted Lewis; Haslam, David GCPE:EX; Koolsbergen, Nick GCPE:EX; Facey, Nick MTIC:EX; Myers,

Tobie A MNGD:EX; Kapac de Frias, Martina E ENV:EX

Subject: Rock Bay / Tent City Heads-Up
Date: Saturday, February 27, 2016 16:27:02

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The Rock Bay land is the site of a remediation project which includes 1.73 hectares of uplands and 2.02 hectares of harbour floor that is administered by Transport Canada.

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Eric

From: Schollen, Tasha GCPE:EX

To: Facey, Nick MTIC:EX; Reddy, Brandon MTIC:EX

Cc: Whittier, Joanne GCPE:EX
Subject: Cleanup Costs Victoria Courthouse
Date: Thursday, February 25, 2016 14:39:29

Keep in mind that this estimate, assumes that the soil is contaminated.

From: Burbee, Jon MTIC:EX

Sent: Thursday, February 25, 2016 2:26 PM

To: Schollen, Tasha GCPE:EX

Cc: Whittier, Joanne GCPE:EX; Fellows, Brian MTIC:EX; Ahmed, Sarf MTIC:EX; Sykes, Graeme MTIC:EX

Subject: FW: Cleanup Costs Victoria Courthouse

Tasha,

As requested, here¹s the estimates costs. Further definition is required, but right now we approximate \$300-\$350K. In the interest of providing a timely response to the MO, this is sent to you in advance of being circulated to Min Executive yet as they are presently in an all staff meeting on Red Tape Reduction.

Class D estimate of site restoration to lawn is \$300,000 - \$350,000.

### Break Down:

Tent-by-tent removal of personal effects, disposal of needles,	\$5,000
paraphernalia, etc.	
Deconstruction of tents & structures, removal into bins	\$20,000
Ten bin loads of refuse to landfill (non-hazardous material)	
Top soil removed from entire site to a depth of 30 cm	\$100,000
Contamination equivalent to Commercial Level 1	
Environmental Engineer Consultant	
Backhoe, truck, transport and disposal	
Replace top soil with clean fill	\$48,000
Replacement of Sod throughout, regrading, replacement of 5	\$30,000
trees and 200 feet of hedge	
Fencing	\$3,000
New Irrigation and drainage	\$20,000
Security	\$8,000
Contingency 25%	\$58,000
PM Fees 12.5%	\$36,000
Mid-range of 300-350K	\$330,000

**PLEASE NOTE:** The major assumption is that the **soil is contaminated**, it requires testing by an environmental engineer and qualifies under the Contaminated Sites Regulation standard CL1. This level of contamination falls close to the median for commercial soil contamination. Should site contaminants be determined to be at a higher level, say as hazardous waste, costs will skyrocket (ie. transport to Alberta for incineration). Conversely, should there be no or limited contamination, and soil removal not required, costs will be reduced by +/- \$100,000.

### Jon

Jon Burbee | Executive Director | Asset Management Branch | Shared Services BC Ph: 250 213-7439 | e: Jon.Burbee@gov.bc.ca | m: PO Box 9412, Stn Prov Gov, Victoria BC V8W 9V1



# **Brookfield**GIS

Workplace Solutions Inc.

Rec	uest	for	Serv	vice
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<del></del>	harar a	<del></del>	I		
CPJ#	WSI Project #	Agreement #	Building #	Lease #	Request #
1013752 Type of Service	BCGV605283	99999996	10900		Issue Date: 29-Nov-16
Major Asset Maintenar	ice – Unplanned				
Project Name	en Space Remediation			,	
	Street Address, City)		• •		
350 Burdett Street Vict					
Client / Branch (ECHNOLOGY INNO	VATION AND CITIZENS	S SERVICES / SSE	RC-PEAL DOCUED	LA DIMISION	
Client Contact	VATION AND OTTECH	OEIWIOLO / GOL	Implementer	TENTOION	
<u> Braeme Sykes, graen</u>				)-889-2437,nicola.m	ovles@brookfieldgis.com
Ferm #4 Substantial (			_Planned Substar	itial Completion Da	
f Term #4 applicable, W client approval by way of	SI to revise date and obtain initialling	(dd-mmm-yy)			(dd-mmm-yy)
		[nitials	1		
Scope of Work Regui	red				· · · · · · · · · · · · · · · · · · ·
<u> </u>					n given by SSBC for Sole Source
or Afghan War Memori The costs are all estima To provide labour and ma Courtney/Quadra/Burdett ecommendations for full	af. All work as outlined in stes at this time and will b aterials for Green Space Re Street. All work included b	n emails from Graen be revised once hard emediation on exteror out not limited to: Pin green space into use	ne and proposals red floosts come in from lawn area located on sphin West Ltd as Enviror future developem	ceived from Landsca tendering soil reme exterior of 850 Burde ironmental Consultant ent. Space not yet kno	It requirements and preparation of site spe Structures Playground proposal, idiation, landscape work etc. It Avenue, bordering is to do all soil testing, reporting, future own as to finished product at this time.
lient will be billed on act	cuals Origy				
unding Approvat Ty	pe				
Cost Plus Estimate	\$ 350,037,50	<del></del>			
NOGST ® GST_ TOTAL	<u>○ N/A</u> \$ 350.037.50				
<u> </u>	v 000.001.00	<b>L</b> _			
erms:					
(1) Brookfield GIS Wo and explained on this to approval of a Suppleme	rm. Requests for variation:	s in the scope of the e-approving authority	work to be undertaker  This work may be	by Brookfield GIS W	scope of Work/Service required, detail lorkplace Solutions Inc. will require prior Real Property Division (RPD) Labour
(2) Cost Plus Estimate will be billed on actual		be requested if cost	s are anticipated to ex	ceed the estimate by t	more than 10%. Cost Plus projects
	<ul> <li>Where a fixed price quote uote, the charge will be rev</li> </ul>			ided and the associate	ed actual project costs are less than
*(4) Substantial Comple	tion Date - The estimated	completion date may	be extended if the ap	proved RFS is not rec	eived with one week of submission.
	This Estim	ate is valid for 30	davs from the Issu	é Date noted above	2
Approved by Customer Sig	gning Authority		///////////////////////////////////////	a Alexander	2011

Signature

Name (Please Print)

Approved by Customer Signing Authority

# **Brookfield**GIS Workplace Solutions Inc. Budget Detail

29-Nov-16 02

Revision No.: Date

)			
PROJECT INFORMATION		BUILDING INFORMATION	ATION
WSI Project #	BCGV605283	Building Number:	10900
Project Name:	MAM - Unplanned Green Space Remediation	Building Address:	850 Burdett Street
Project Manager:	Nicola Moyles	City, Prov./State.	Victoria, BC
FORMATION	The continuous of the property		
Square Footage	Agreement #:	9888888	9888888
		1013752	

Item	QTY	Unit Price	SCE	Capital	Expansa	Total Coet
PROFESSIONAL SERVICES			453	67.000.00		5 A7 000 00
P32 Pinchin West Ltd Original Proposal	-	28,000,00	O	28,000,00	\$	28,000,00
P32 Pinchin West Ltd Revised Proposal add scope	1	14,000.00	<u>L</u>	14,000.00		14,000,00
P45 Murdoch de Greeff Landscape Architects	1 \$	25,000.00	မ	25,000.00	9	25,000,00
CONSTRUCTION (P71)			45	183,500.00	5	183.500.00
ø,			w	•		
Exterior Construction			99	183,500,00	1	183.500.00
Soil Remediation work	1 8	36,500.00	S)	36.500.00		36 500 00
Site prepartion for War Memorial and Playground	1   \$	147,000,00	ပ	147,000,00		147 000 00
Carpentry and Millwork			u	-		33.000, 12.
Openings - Doors, Frames, Hardware		-	45			
Partitions			69	,		•
Finishes		***************************************	65		***************************************	
-			•	,		
Electrical			•			•
Communications			A 6			•
Controls			9 4			-
Specialities PST Exempt TPP (P52)			۱		*	
Security (DQ4)			٩		-	
Paladin Security Organ 144			}	75,000.00		
I diadili Security Group Liu.	-	75,000.00	S)	75,000.00		75,000.00
urnicure (rou)			\$	•	45	
Move Mangement (P22)			es?	\$	5	
Disbursements			LSP.	125.00	-	125.00
P02 Disbursements			ပ			
P03 Lien Search (PO's >\$50K)	-	125.00		125.00		125.00
Project Management Labour			5	,		
POT DPS/WSI PM Labour			ပ			
33 WSI Technician Labour			ပ			
FE SUB-TOTAL			<b>\$</b> \$	325,500.00		325.500.00
26 Contingency (% drop down or \$ override C only)			↔	1	-	
						,