

File No.: 04-1000-20-2019-343

May 30, 2019

s.22(1)

Dear s.22(1)

Re: **Request for Access to Records under the Freedom of Information and Protection of Privacy Act (the "Act")**

I am responding to your request of May 29, 2019 for:

Underground Storage Tank removal permit and associated reports submitted to the City for 3235 Quesnel Drive.

All responsive records are attached. Some information in the records has been severed, (blacked out), under s.22(1) of the Act. You can read or download this section here: http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/96165_00

Under section 52 of the Act you may ask the Information & Privacy Commissioner to review any matter related to the City's response to your request. The Act allows you 30 business days from the date you receive this notice to request a review by writing to: Office of the Information & Privacy Commissioner, info@oipc.bc.ca or by phoning 250-387-5629.

If you request a review, please provide the Commissioner's office with: 1) the request number assigned to your request (#04-1000-20-2019-343); 2) a copy of this letter; 3) a copy of your original request for information sent to the City of Vancouver; and 4) detailed reasons or grounds on which you are seeking the review.

Please do not hesitate to contact the Freedom of Information Office at foi@vancouver.ca if you have any questions.

Yours truly,



Barbara J. Van Fraassen, BA
Director, Access to Information & Privacy

Barbara.vanfraassen@vancouver.ca
453 W. 12th Avenue Vancouver BC V5Y 1V4

*If you have any questions, please email us at foi@vancouver.ca and we will respond to you as soon as possible. Or you can call the FOI Case Manager at 604.871.6584.

Encl.

:kt

FI-2018-00291



FIRE AND RESCUE SERVICES
FIRE PREVENTION DIVISION

Permit No.: _____
(office use only)

Tank Removal or Abandonment Permit Application

PROJECT ADDRESS: 3235 Quesnel Drive.

Requested Activity or Service				
CIRCLE ONE CAPACITY (Gal/L)	SETBACK (FT)	BOTTOM OF TANK (FT)	TYPE OF LIQUID Gasoline/Petroleum/ Diesel Oil	
1.	unknown			<input checked="" type="checkbox"/> Remove <input type="checkbox"/> Abandon
2.				<input type="checkbox"/> Remove <input type="checkbox"/> Abandon

OWNER:

SITE DRAWING ATTACHED

☐ YES

NAME OF CONTRACTOR:

s.22(1)

Name of Person Signing:

s.22(1)

Signature: _____

Dated: June 13, 2018

PK: 604-726-8458

Jaswinder

Save on
Mini Excavating

City of Vancouver, Fire and Rescue Services
Fire Prevention Office
#306, 456 W. Broadway
Vancouver, British Columbia V5Y 1R3 Canada
tel: 311 fax: 604.873.7872
website: vancouver.ca/fire



Underground Tank Removal Permit

FI-2018-00291

Issue Date: Jun 13, 2018

Application Date: Jun 13, 2018

Start Date:

Applicant	Place Name	Location of Permit
s.22(1) 3235 Quesnel Drive Vancouver, BC V6N 2H3		3235 QUESNEL DRIVE Vancouver, BC V6S 1Z7

Specific Location:

Work Description

Removal of one tank on site.
Capacity unknown

Terms and Conditions

- The work under this permit is authorized pursuant to the Fire By-Law.
- If work cannot be completed in the same day, the owner must follow requirements of Section 8.2 of the Building By-Law for Protection of the Public and Fire Safety on fencing off construction sites.
- Tank removal must comply with Division B Subsection 4.3.16 of the Vancouver Fire By-Law.
- For removal: the tanks, together with connected piping and dispensing equipment, shall have all combustible or flammable liquids removed. The tanks and piping must be removed from the ground and purged of vapours. The pipe ends must be permanently sealed by capping or plugging.
- Separate building permit for excavation and shoring, plus modified geotechnical engineer's letter.
- Clearance is required from the Engineering Department, Street Division, for work affecting...
- Backfill of excavation shall not be done prior to inspection by Vancouver Fire and Rescue Services.
- For fuel dispensing site or known contamination site, clearance from Environmental Protection Branch is required.
- This permit will become incomplete if any of the following conditions are not met:
 - Work authorized by the permit is not commenced within 90 days from the date of issuance.
 - Work has been substantially discontinued for a period of 90 days.
- The premises shall be kept in a safe manner with guards, shoring, etc. as required by the Occupational Health and Safety Regulation and City By-Laws.
- Inspection is required by Vancouver Fire and Rescue Services.
- If the soil surrounding the storage tank is contaminated, the soil shall be replaced with clean fill.
- Environmental Final Closure Report and clearance required.
- Backfill with clean soil required.
- Construction must be carried out in compliance with the provisions of the Noise Control By-Law No. 6555

Underground Tank Removal Permit

FI-2018-00291

Terms and Conditions

- Contractor or homeowner must be on site for the inspection by Vancouver Fire and Rescue Services.
- Underground storage and removal shall be done in accordance with good engineering practice.
- To book an inspection call 311 from within Vancouver or 604.873.7000 from outside Vancouver. The 311 Centre is open 7 days a week from 7am to 10pm, 365 days a year. Also, our 24 hour Building Inspections booking request message line is 604.873.7058. For information on how to use it, please contact the 311 Centre.

Permit Fees

Description	Amount	Tax Amounts	Fee Total	Fee Adjs	Pmts and Adjs	Balance
Underground Oil Tank Fee	\$300.00		\$300.00	\$0.00	\$300.00	\$0.00
					Total:	\$0.00

From: Radek <radek@alaraenvironmental.com>
To: "Underground Storage Tank Removal" <ust.reporting@vancouver.ca>
Date: 12/4/2018 8:20:46 AM
Subject: RE: 3235 Quesnel St., Vancouver, BC
Attachments: 3235 Quesnel st.pdf

Good Morning,

Apologies for the error, please see attached.

Thank you

From: Underground Storage Tank Removal [mailto:ust.reporting@vancouver.ca]
Sent: Thursday, November 29, 2018 12:04 PM
To: Radek
Cc: Steven Office
Subject: RE: 3235 Quesnel St., Vancouver, BC

Radek,

The sample IDs do not match those on the figure.

Revise and resubmit.

-Vanessa

From: Radek [mailto:radek@alaraenvironmental.com]
Sent: Tuesday, November 27, 2018 10:44 AM
To: Underground Storage Tank Removal
Subject: 3235 Quesnel St., Vancouver, BC

Please see attached document for records/approval.

Thank you,

ALARA Environmental Health and Safety Ltd.
P: 604 724 2331
F: 604 876 6585

The information contained in this e-mail is confidential and is intended solely for the addressee. If you are not the intended recipient, any form of disclosure, reproduction, distribution or any action taken or refrained from in reliance on it, is prohibited and may be unlawful. Please notify the sender immediately. We also like to inform you that communication via e-mail over the e-mail is insecure because third parties may have the possibility to access and manipulate e-mails. Any e-mail messages are sent for information purposes only and shall not be binding nor construed as constituting any legal obligation.



UNDERGROUND STORAGE TANK REMOVAL/DECOMMISSIONING REPORT

1. Site Information:

Owner's Name: s.22(1)
Site Address: 3235 Quesnel Drive, Vancouver, British Columbia

2. Excavation Plan/Sketch:

At minimum include, north arrow, buildings, extents of excavation, and sample locations.

3. Tank Information:

Was oil removed from tank? Y ☒ N/A ☐

Was all associated (e.g., feed lines, venting) piping removed? Y ☒ N ☐

Tank Summary Table:

Tank Removal Permit (FI) Number	Tank Capacity	Perforations		Other visible physical damage (e.g. pipe damage)		Date tank removed from service
		Yes	No	Yes	No	
FI-2018-00291	2491	Yes		No		Unknown

4. Tank and Piping Disposal/Recycling Receiver & Address:

Pan Pacific Recycling 13900 Mitchell Rd, Richmond, BC V6V 1M8

5. Liquid Waste Disposal:

Receiver name/address: N/A

Disposal dates (YYYY/MM/DD): N/A

6. Soil Disposal (if applicable):

Volume (m³) disposed: 8.50

Receiver Company & Address: Sumas Environmental Services Ltd.

4623 Byrne Rd, Burnaby, BC V5J 3H6

7. Field Observations

Field-screening (e.g., headspace, visual observations, staining, preferred pathways such as drains, NAPL identified) findings summary:

Moderate soil contamination (various seams), no signs of stressed vegetation or o.s. migration

8. Confirmatory Soil Sampling

Number of discrete *in-situ* soil samples (minimum five: one from each sidewall and the base) analyzed: 9

Sampler's name and company: ALARA Environmental Health & Safety Ltd.

9. Ministry of Environment Forms:

Was a notice of independent remediation (NIR) submitted to MoE? Y ☒ N/A ☐

Was suspect/confirmed offsite soil contamination identified? Y ☐ N ☒ N/A ☐

Was a notice of offsite migration (NOM) submitted to the MoE? Y ☐ N ☒ N/A ☐

To your knowledge, was offsite contaminated soil remediated? Y ☐ N ☐ N/A ☒

Affected Site Address: _____

10. Name and License of Individual/Firm Who Completed this Report:

Name (company and individual): ALARA Environmental Health & Safety Ltd. (Steven)

Business license number: 18-435497

11. Conclusion Statement:

"In conclusion, we confirm all information contained in this report is accurate. Based on this information, residual Site soils meet ☒ OR exceed ☐ the applicable (select one) standard:

- ☐ Parkland
- ☒ Residential
- ☐ Commercial
- ☐ Industrial

Steven Seewald
Printed Name

ALARA Environmental Health & Safety Ltd.
Company

Steven Seewald
Signature (include professional designation)

November 5th, 2018
Date

Attachments (please confirm checkbox)

- ☒ Sketch
- ☒ Laboratory Certificates of Analysis
- ☒ Sample Chain of Custody
- ☒ Standard Limitations (optional)

CERTIFICATE OF ANALYSIS

REPORTED TO ALARA Environmental Health and Safety
3889 Commercial Street
Vancouver, BC V5N 4G1

ATTENTION Radek Staufolk, MASC.

PO NUMBER

PROJECT 99100 - 3235 Quesnel

PROJECT INFO

WORK ORDER 8071585

RECEIVED / TEMP 2018-07-17 15:20 / 22°C
REPORTED 2018-07-23 10:11

Introduction:

CARO Analytical Services is a testing laboratory full of smart, engaged scientists driven to make the world a safer and healthier place. Through our clients' projects we become an essential element for a better world. We employ methods conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts. CARO is accredited by the Canadian Association for Laboratories Accreditation (CALA) to ISO 17025:2005 for specific tests listed in the scope of accreditation approved by CALA.

Big Picture Sidekicks



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

We've Got Chemistry



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

Ahead of the Curve



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

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

Authorized By:

Helen Maleki, Dipl T
Client Service Representative

1-888-311-8846 | www.caro.ca

#110 4011 Viking Way Richmond, BC V6V 2K9 | #102 3677 Highway 97N Kelowna, BC V1X 5C3 | 17225 109 Avenue Edmonton, AB T5G 1H7

TEST RESULTS

REPORTED TO PROJECT ALARA Environmental Health and Safety
99100 - 3235 Quesnel

WORK ORDER REPORTED 8071585
2018-07-23 10:11

Analyte	Result	RL	Units	Analyzed	Qualifier
99100-1 (8071585-01) Matrix: Soil Sampled: 2018-07-16					
<i>General Parameters</i>					
Moisture	11.0	1.0	% wet	2018-07-20	
<i>BCMOE Aggregate Hydrocarbons</i>					
EPHs10-19	< 50	50	mg/kg dry	2018-07-20	
EPHs19-32	< 50	50	mg/kg dry	2018-07-20	
Surrogate: 2-Methylnonane (EPH/F2-4)	115	60-140	%	2018-07-20	
99100-2 (8071585-02) Matrix: Soil Sampled: 2018-07-16					
<i>General Parameters</i>					
Moisture	12.0	1.0	% wet	2018-07-20	
<i>BCMOE Aggregate Hydrocarbons</i>					
EPHs10-19	9800	50	mg/kg dry	2018-07-20	
EPHs19-32	3900	50	mg/kg dry	2018-07-20	
Surrogate: 2-Methylnonane (EPH/F2-4)	112	60-140	%	2018-07-20	
99100-3 (8071585-03) Matrix: Soil Sampled: 2018-07-16					
<i>General Parameters</i>					
Moisture	12.8	1.0	% wet	2018-07-20	
<i>BCMOE Aggregate Hydrocarbons</i>					
EPHs10-19	< 50	50	mg/kg dry	2018-07-20	
EPHs19-32	< 50	50	mg/kg dry	2018-07-20	
Surrogate: 2-Methylnonane (EPH/F2-4)	133	60-140	%	2018-07-20	
99100-4 (8071585-04) Matrix: Soil Sampled: 2018-07-16					
<i>General Parameters</i>					
Moisture	6.2	1.0	% wet	2018-07-20	
<i>BCMOE Aggregate Hydrocarbons</i>					
EPHs10-19	2600	50	mg/kg dry	2018-07-20	
EPHs19-32	1000	50	mg/kg dry	2018-07-20	
Surrogate: 2-Methylnonane (EPH/F2-4)	113	60-140	%	2018-07-20	
99100-5 (8071585-05) Matrix: Soil Sampled: 2018-07-16					
<i>General Parameters</i>					
Moisture	8.2	1.0	% wet	2018-07-20	
<i>BCMOE Aggregate Hydrocarbons</i>					

TEST RESULTS

REPORTED TO PROJECT ALARA Environmental Health and Safety
99100 - 3235 Quesnel

WORK ORDER REPORTED 8071585
2018-07-23 10:11

Analyte	Result	RL	Units	Analyzed	Qualifier
99100-5 (8071585-05) Matrix: Soil Sampled: 2018-07-16, Continued					
<i>BCMÖE Aggregate Hydrocarbons, Continued</i>					
EPHs10-19	780	50	mg/kg dry	2018-07-20	
EPHs19-32	280	50	mg/kg dry	2018-07-20	
Surrogate: 2-Methylnonane (EPH/F2-4)	130	60-140	%	2018-07-20	

99100-6 (8071585-06) | Matrix: Soil | Sampled: 2018-07-16

General Parameters

Moisture	21.8	1.0	% wet	2018-07-20	
<i>BCMÖE Aggregate Hydrocarbons</i>					
EPHs10-19	7800	50	mg/kg dry	2018-07-20	S09a
EPHs19-32	2700	50	mg/kg dry	2018-07-20	S09a
Surrogate: 2-Methylnonane (EPH/F2-4)	148	60-140	%	2018-07-20	S09

Sample Qualifiers:

S09 The surrogate recovery for this sample is outside of established control limits due to sample matrix interference
S09a The surrogate recovery for this sample is outside of established control limits due to sample matrix interference

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO PROJECT ALARA Environmental Health and Safety
99100 - 3235 Quesnel

WORK ORDER REPORTED 8071585
2018-07-23 10:11

Analysis Description	Method Ref.	Technique	Location
EPH in Soil	EPA 3570* / BCMOE EPHs*	Shaker Extraction (Hexane-Acetone 1:1) / Gas Chromatography (GC-FID)	Richmond
Moisture in Soil	ASTM D2974-87*	Gravimetry (Dried at 105C)	N/A

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

Glossary of Terms:

RL	Reporting Limit (default)
% wet	Percent (as received basis)
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
mg/kg dry	Milligrams per kilogram (dry weight basis)
ASTM	ASTM International Test Methods
EPA	United States Environmental Protection Agency Test Methods

General Comments:

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. This analytical report must be reproduced in its entirety. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Samples will be disposed of 30 days after the test report has been issued unless otherwise agreed to in writing.



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT ALARA Environmental Health and Safety
99100 - 3235 Quesnel

WORK ORDER REPORTED 8071585
2018-07-23 10:11

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

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

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

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
BCMOE Aggregate Hydrocarbons, Batch B8G1508									
Blank (B8G1508-BLK1)					Prepared: 2018-07-19, Analyzed: 2018-07-20				
EPHs10-19	< 50	50 mg/kg wet							
EPHs19-32	< 50	50 mg/kg wet							
Surrogate: 2-Methylnonane (EPH/F2-4)	10.7	mg/kg wet	16.6		101	50-140			
LCS (B8G1508-BS2)					Prepared: 2018-07-19, Analyzed: 2018-07-20				
EPHs10-19	2700	50 mg/kg wet	2690		94	70-130			
EPHs19-32	3800	50 mg/kg wet	4180		91	70-130			
Surrogate: 2-Methylnonane (EPH/F2-4)	10.8	mg/kg wet	16.6		116	50-140			
Reference (B8G1508-SRM1)					Prepared: 2018-07-19, Analyzed: 2018-07-20				
EPHs10-19	3200	50 mg/kg wet	3020		106	65-130			
EPHs19-32	4800	50 mg/kg wet	4330		112	65-130			
Surrogate: 2-Methylnonane (EPH/F2-4)	18.2	mg/kg wet	20.5		89	50-140			

General Parameters, Batch B8G1550

Duplicate (B8G1550-DUP1)		Source: 8071585-06		Prepared: 2018-07-20, Analyzed: 2018-07-20					
Moisture	21.7	1.0 % wet		21.8			0.5	40	

CERTIFICATE OF ANALYSIS

REPORTED TO ALARA Environmental Health and Safety
3889 Commercial Street
Vancouver, BC V5N 4G1

ATTENTION Radek Staufcik, MAsC.

PO NUMBER

PROJECT 99100 - 3235 Quesnel

PROJECT INFO

WORK ORDER 8072692

RECEIVED / TEMP 2018-07-26 16:20 / 17°C

REPORTED 2018-08-03 10:10

COC NUMBER No Number

Introduction:

CARO Analytical Services is a testing laboratory full of smart, engaged scientists driven to make the world a safer and healthier place. Through our clients' projects we become an essential element for a better world. We employ methods conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts. CARO is accredited by the Canadian Association for Laboratories Accreditation (CALA) to ISO 17025:2005 for specific tests listed in the scope of accreditation approved by CALA.

Big Picture Sidekicks



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

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

Ahead of the Curve



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

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

Authorized By:

Helen Maleki, Dipl T
Client Service Representative

1-888-311-8846 | www.caro.ca

#110 4011 Viking Way Richmond, BC V6V 2K9 | #102 3677 Highway 97N Kelowna, BC V1X 5C3 | 17225 109 Avenue Edmonton, AB T5S 1H7



TEST RESULTS

REPORTED TO PROJECT ALARA Environmental Health and Safety
99100 - 3235 Quesnel

WORK ORDER REPORTED 8072692
2018-08-03 10:10

Analyte	Result	RL	Units	Analyzed	Qualifier
99100-1 (8072692-01) Matrix: Soil Sampled: 2018-07-25					
<i>General Parameters</i>					
Moisture	28.5	1.0	% wet	2018-08-01	
<i>BCMOE Aggregate Hydrocarbons</i>					
EPHs10-19	140	50	mg/kg dry	2018-08-02	
EPHs19-32	78	50	mg/kg dry	2018-08-02	
Surrogate: 2-Methylnonane (EPH/F2-4)	88	60-140	%	2018-08-02	
99100-2 (8072692-02) Matrix: Soil Sampled: 2018-07-25					
<i>General Parameters</i>					
Moisture	9.6	1.0	% wet	2018-08-01	
<i>BCMOE Aggregate Hydrocarbons</i>					
EPHs10-19	590	50	mg/kg dry	2018-08-02	
EPHs19-32	170	50	mg/kg dry	2018-08-02	
Surrogate: 2-Methylnonane (EPH/F2-4)	90	60-140	%	2018-08-02	
99100-3 (8072692-03) Matrix: Soil Sampled: 2018-07-25					
<i>General Parameters</i>					
Moisture	9.7	1.0	% wet	2018-08-01	
<i>BCMOE Aggregate Hydrocarbons</i>					
EPHs10-19	1300	50	mg/kg dry	2018-08-02	
EPHs19-32	320	50	mg/kg dry	2018-08-02	
Surrogate: 2-Methylnonane (EPH/F2-4)	95	60-140	%	2018-08-02	



APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO PROJECT ALARA Environmental Health and Safety
99100 - 3235 Quesnel

WORK ORDER REPORTED 8072692
2018-08-03 10:10

Analysis Description	Method Ref.	Technique	Location
EPH in Soil	EPA 3570* / BCMOE EPHs*	Shaker Extraction (Hexane-Acetone 1:1) / Gas Chromatography (GC-FID)	Richmond
Moisture in Soil	ASTM D2974-87*	Gravimetry (Dried at 105C)	N/A

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

Glossary of Terms:

RL	Reporting Limit (default)
% wet	Percent (as received basis)
mg/kg dry	Milligrams per kilogram (dry weight basis)
ASTM	ASTM International Test Methods
EPA	United States Environmental Protection Agency Test Methods

General Comments:

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APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT ALARA Environmental Health and Safety
89100 - 3235 Quesnel

WORK ORDER REPORTED 8072692
2018-08-03 10:10

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

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

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

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
BCMOE Aggregate Hydrocarbons, Batch B8H0143									
Blank (B8H0143-BLK1)					Prepared: 2018-08-02, Analyzed: 2018-08-02				
EPHs10-19	< 50	50 mg/kg wet							
EPHs19-32	< 50	50 mg/kg wet							
Surrogate: 2-Methylnonane (EPH/F2-4)	14.5	mg/kg wet	16.3		80	80-140			
LCS (B8H0143-BS2)					Prepared: 2018-08-02, Analyzed: 2018-08-02				
EPHs10-19	2300	50 mg/kg wet	2800		82	70-130			
EPHs19-32	3100	50 mg/kg wet	4050		76	70-130			
Surrogate: 2-Methylnonane (EPH/F2-4)	14.5	mg/kg wet	16.2		90	80-140			
Reference (B8H0143-SRM1)					Prepared: 2018-08-02, Analyzed: 2018-08-02				



CLIENT NAME: ALARA ENVIRONMENTAL HEALTH & SAFETY
3869 COMMERCIAL STREET
VANCOUVER, BC V5N4G1
(604) 724-2331

ATTENTION TO: STEVEN SEEWALD

PROJECT: 3235 Quesnel St

AGAT WORK ORDER: 18V402058

TRACE ORGANICS REVIEWED BY: Dana Solari, Lab Reporter

DATE REPORTED: Oct 31, 2018

PAGES (INCLUDING COVER): 6

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 1: Sample receipt temperature 5°C.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

AGAT Laboratories (V1)

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation.

Results relate only to the items tested and to all the items tested

All reportable information is provided in accordance with the requirements of the City of Vancouver FOI File # 2019-043



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18V402058

PROJECT: 3235 Quesnel St

Unit 120, 5600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: ALARA ENVIRONMENTAL HEALTH & SAFETY

ATTENTION TO: STEVEN SEEWALD

SAMPLING SITE:

SAMPLED BY:

EPH Soil					
DATE RECEIVED: 2018-10-25			DATE REPORTED: 2018-10-29		
		SAMPLE DESCRIPTION:		#01-W	
		SAMPLE TYPE:		Soil	
		DATE SAMPLED:		2018-10-24	
Parameter	Unit	G / S	RDL	9653986	
EPH C10-C19	µg/g		20	<20	
EPH C19-C32	µg/g		20	21	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
9653986 Results are based on dry weight of sample.
EPH results are not corrected for potential PAH contributions.
Soil sample is visibly heterogeneous.

Analysis performed at AGAT Vancouver (unless marked by *).

Certified By: _____

D. Soliman



Quality Assurance

CLIENT NAME: ALARA ENVIRONMENTAL HEALTH & SAFETY

AGAT WORK ORDER: 18V402058

PROJECT: 3235 Quesnel St

ATTENTION TO: STEVEN SEEWALD

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date:			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
EPH Soil															
EPH C10-C19	70124	9651129	<20	<20	NA	< 20	94%	70%	130%				119%	65%	120%
EPH C19-C32	70124	9651129	<20	<20	NA	< 20	100%	70%	130%				114%	80%	120%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By:



Method Summary

CLIENT NAME: ALARA ENVIRONMENTAL HEALTH & SAFETY

AGAT WORK ORDER: 18V402058

PROJECT: 3235 Quesnel St

ATTENTION TO: STEVEN SEEWALD

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
EPH C10-C19	ORG-180-5101	Modified from BCMOE Lab Manual Section D (EPH)	GC/FID
EPH C19-C32	ORG-180-5101	Modified from BCMOE Lab Manual Section D (EPH)	GC/FID



Laboratories

120 - 8600 Glenlyon Parkway
Burnaby, BC
V5J 0B6

P: 778.452.4000 • F: 778.452.4074

Laboratory Use Only

Arrival Temperature: 5°C

AGAT Job Number: 18V402050

Notes:

Chain of Custody Record

Report Information

Company: ALACA Int. H & S
Contact: Chris
Address: 3819 Comm. street,
Van, BC
Phone: 604 661 9325 Fax: /
LSD: /
Client Project #: 3235 Queen st.

Report Information

1. Name: Chris
Email: RADON @ ALARAENVIRON MENTAL.COM

2. Name: STEVEN
Email: STEVEN @ ALARAENVIRON MENTAL.COM

Report Format

Single Sample per page

Multiple Samples per page

☐ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT: ☐ 5 to 7 working days.

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To ☐ Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

Requirements (Please Check)

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL-LD ☐ RL-HD

☐ WL-N ☐ WL-R

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 3.3 (Please Specify)

CCME (Please Specify)

Other (Please Specify) _____

[illegible]

Page 5 of 6

Source: *Journal of the American Statistical Association*, 91(434), 1031-1042.

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happy time

[illegible]

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Submitted by Jinet Nang and Rami

Sample Roadcut ID (River Name and Site)

Page 10

Time/Time

Days/Time

Page _____ of _____

Nº: 031424

AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 18V402058

RECEIVING BASICS:

Received From: NOVEX #3

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 1 Containers: 1

TIME SENSITIVE ISSUES:

Earliest Date Sampled: Oct 24, 2018

ALREADY EXCEEDED? Yes ☐ No ☒

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler. (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) 4 + 5 + 5 = 5 °C (2) _____ + _____ + _____ = _____ °C (3) _____ + _____ + _____ = _____ °C (4) _____ + _____ + _____ = _____ °C

Was ice or ice pack present: ☒ Yes ☐ No

Integrity Issues:

Account Project Manager: _____ have they been notified of the above issues: Yes ☐ No ☐

Whom spoken to: _____ Date and Time: _____

ADDITIONAL NOTES:

