



Soil Engineers Ltd.

CONSULTING ENGINEERS

GEOTECHNICAL • ENVIRONMENTAL • HYDROGEOLOGICAL • BUILDING SCIENCE

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June 21, 2024

Reference No. 2009-E125

Page 1 of 2

Global Properties (2) Inc.
122 Romina Drive
Concord, Ontario
L4K 4Z7

Attention: Mr. Luis Correia

**TOWN OF CALEDON
PLANNING
RECEIVED**

January 31, 2025

**Re: Phase Two Environmental Site Assessment Letter Report
Proposed Residential Development
12735 Centreville Creek Road and 12706 The Gore Road
Town of Caledon**

Dear Sir:

Soil Engineers Ltd. (SEL) was retained to carry out a Phase Two Environmental Site Assessment (Phase Two ESA), as defined by Ontario Regulation (O. Reg.) 153/04, as amended, for a property located at 12735 Centreville Creek Road and 12706 The Gore Road, in the Town of Caledon (hereinafter referred to as “the subject site”).

The purpose of the Phase Two ESA was to determine the soil quality at the subject site, as related to the potential environmental concerns identified in our Phase One Environmental Site Assessment (Phase One ESA) and Phase One Environmental Site Assessment Update (Phase One ESA Update) for the subject site.

The field work was performed at selected locations within the areas of potential environmental concerns at the subject site. Sampling locations are presented on Drawing No. 1. Selected soil samples from the sampling locations were submitted to an accredited laboratory, for chemical analysis.

This letter/report/certification was prepared by Soil Engineers Ltd. for the account of the captioned clients and may be relied upon by regulatory agencies. The material in it reflects the writer's best judgement in light of the information available to it at the time of preparation. Any use which a third party makes of this letter/report/certification, or any reliance on or decisions to be made based upon it, are the responsibility of such third parties. Soil Engineers Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this letter/report/certification.



The analytical test results were compared to the Ministry of the Environment, Conservation and Parks (MECP) Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition for Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use for coarse textured soils (Table 8 Standards), as published in the "Soil, Ground Water and Sediment Standards for Use Under Part XV. 1 of the Environmental Protection Act" (EPA), April 15, 2011

A review of the analytical test results of the submitted soil samples of the site investigations for the Phase Two ESA indicates that the tested parameters at the test locations meet the Table 8 Standards. Copies of Certificates of Analysis are presented in the appendix.

Based on the findings of the Phase Two ESA, it is our opinion that the property is suitable for the proposed residential development. No further environmental investigation is recommended at this time.

We trust that this letter is sufficient at this time. If you have any queries, please do not hesitate to contact our office.

Yours very truly,

SOIL ENGINEERS LTD.

Eleni Girma Beyene, P.Eng., QPESA
EGB
Encl.





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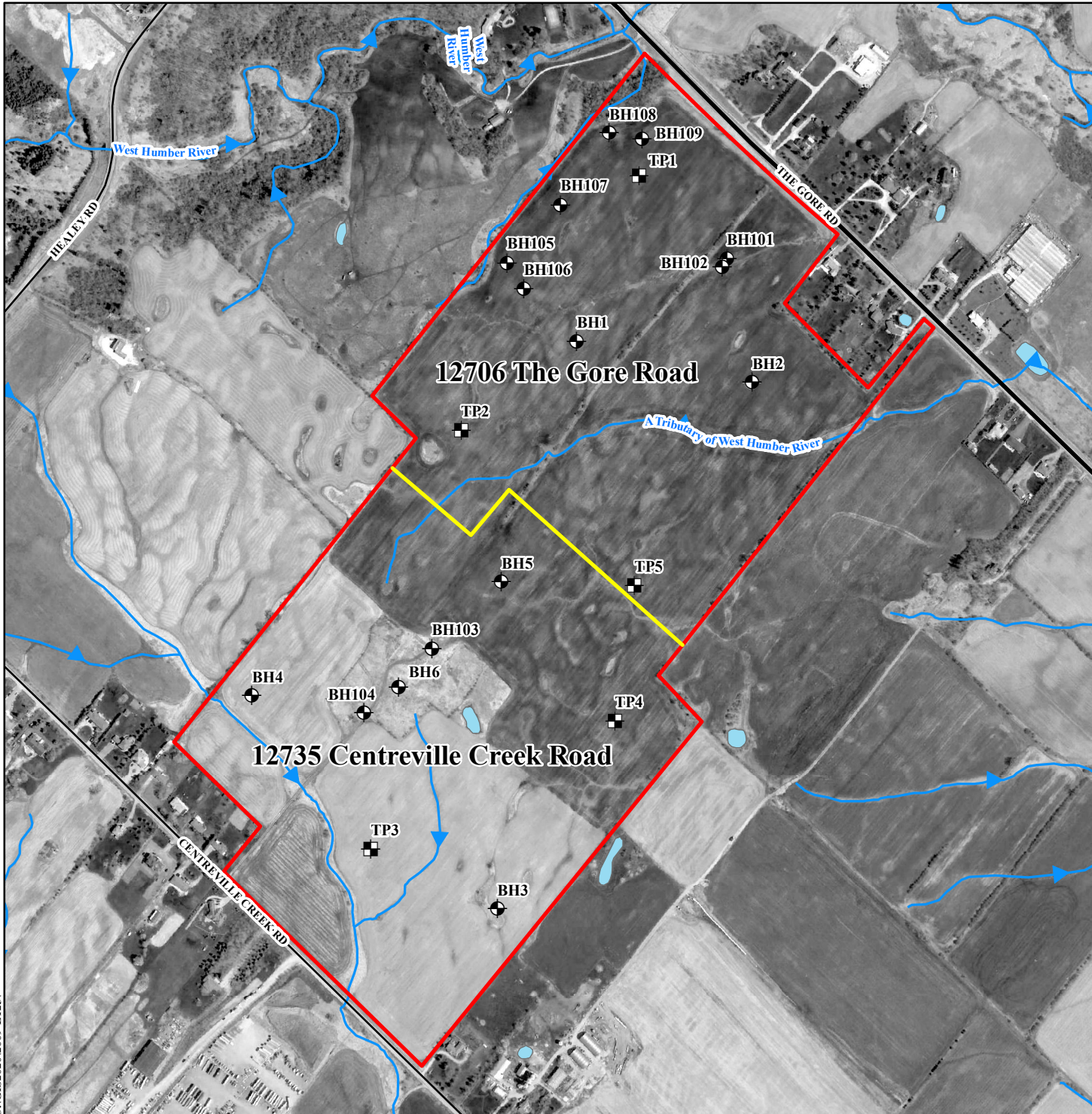
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DRAWINGS

REFERNCE NO. 2009-E125



C:\GIS\2020\2009-E125\

Subject Site

+

Borehole

Test Pit

Waterbody

Major Road

Local Road

Major Road

Title: Sampling Location Plan

Project:
 Proposed Residential Development
 12735 Centreville Creek Road and
 12706 The Gore Road
 Town of Caledon

Reference No. 2009-E125

Date: June 7, 2024

Scale:

Drawing No. 1

Source: Water Body, Ontario Ministry of Natural Resources and Forestry, 2020
 ©Queen's Printer for Ontario, 2020
 Source: Water Course, Ontario Ministry of Natural Resources and Forestry, 2020
 ©Queen's Printer for Ontario, 2020



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APPENDIX 'A'

LABORATORY CERTIFICATES OF ANALYSIS (SOIL)

REFERNCE NO. 2009-E125



Your Project #: 2009-E125
 Site Location: 12735 CENTREVILLE CREEK ROAD
 Your C.O.C. #: N/A

Attention: Munir Ahmad

Soil Engineers Ltd
 90 West Beaver Creek Road
 Unit 100
 Richmond Hill, ON
 CANADA L4B 1E7

Report Date: 2020/11/27
 Report #: R6428224
 Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C0S8718

Received: 2020/10/30, 15:57

Sample Matrix: Soil
 # Samples Received: 9

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Methylnaphthalene Sum	1	N/A	2020/11/05	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	1	2020/11/04	2020/11/05	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	1	N/A	2020/11/04		EPA 8260C m
Free (WAD) Cyanide	4	2020/11/26	2020/11/27	CAM SOP-00457	OMOE E3015 m
Free (WAD) Cyanide	1	2020/11/03	2020/11/05	CAM SOP-00457	OMOE E3015 m
Conductivity	1	2020/11/04	2020/11/04	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	5	2020/11/03	2020/11/05	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydrocarbons F2-F4 in Soil (2)	1	2020/11/03	2020/11/04	CAM SOP-00316	CCME CWS m
Strong Acid Leachable Metals by ICPMS	7	2020/11/04	2020/11/04	CAM SOP-00447	EPA 6020B m
Moisture	6	N/A	2020/11/02	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (3)	5	2020/11/06	2020/11/07	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	5	N/A	2020/11/03	CAM SOP-00307	EPA 8081/8082 m
PAH Compounds in Soil by GC/MS (SIM)	1	2020/11/03	2020/11/04	CAM SOP-00318	EPA 8270D m
pH CaCl2 EXTRACT	2	2020/11/04	2020/11/04	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	1	N/A	2020/11/05	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs	1	N/A	2020/11/03	CAM SOP-00230	EPA 8260C m

Remarks:

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

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

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



Your Project #: 2009-E125
Site Location: 12735 CENTREVILLE CREEK ROAD
Your C.O.C. #: N/A

Attention: Munir Ahmad

Soil Engineers Ltd
90 West Beaver Creek Road
Unit 100
Richmond Hill, ON
CANADA L4B 1E7

Report Date: 2020/11/27
Report #: R6428224
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C0S8718

Received: 2020/10/30, 15:57

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by BV Labs, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Soils are reported on a dry weight basis unless otherwise specified.

(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

(3) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Encryption Key

Ashton Gibson
Project Manager
27 Nov 2020 18:57:53

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Antonella Brasil, Senior Project Manager

Email: Antonella.Brasil@bvlabs.com

Phone# (905)817-5817

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



BUREAU
VERITAS

BV Labs Job #: COS8718
Report Date: 2020/11/27

Soil Engineers Ltd
Client Project #: 2009-E125
Site Location: 12735 CENTREVILLE CREEK ROAD
Sampler Initials: EL

O.REG 153 ICPMS METALS (SOIL)

BV Labs ID		OAU347	OAU347	OAU348		
Sampling Date		2020/10/29	2020/10/29	2020/10/29		
COC Number		N/A	N/A	N/A		
	UNITS	DUP S1	DUP S1 Lab-Dup	DUP S2	RDL	QC Batch
Metals						
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	<0.20	0.20	7036975
Acid Extractable Arsenic (As)	ug/g	2.4	2.2	2.3	1.0	7036975
Acid Extractable Barium (Ba)	ug/g	41	42	91	0.50	7036975
Acid Extractable Beryllium (Be)	ug/g	0.38	0.37	0.69	0.20	7036975
Acid Extractable Boron (B)	ug/g	<5.0	<5.0	5.4	5.0	7036975
Acid Extractable Cadmium (Cd)	ug/g	<0.10	<0.10	<0.10	0.10	7036975
Acid Extractable Chromium (Cr)	ug/g	12	13	24	1.0	7036975
Acid Extractable Cobalt (Co)	ug/g	5.3	5.1	7.7	0.10	7036975
Acid Extractable Copper (Cu)	ug/g	12	12	15	0.50	7036975
Acid Extractable Lead (Pb)	ug/g	5.5	5.6	8.4	1.0	7036975
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	<0.50	<0.50	0.50	7036975
Acid Extractable Nickel (Ni)	ug/g	12	13	20	0.50	7036975
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	<0.50	0.50	7036975
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	<0.20	0.20	7036975
Acid Extractable Thallium (Tl)	ug/g	0.095	0.083	0.14	0.050	7036975
Acid Extractable Uranium (U)	ug/g	0.35	0.40	0.45	0.050	7036975
Acid Extractable Vanadium (V)	ug/g	19	19	33	5.0	7036975
Acid Extractable Zinc (Zn)	ug/g	27	28	49	5.0	7036975
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	<0.050	0.050	7036975
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate						



BUREAU
VERITAS

BV Labs Job #: COS8718
Report Date: 2020/11/27

Soil Engineers Ltd
Client Project #: 2009-E125
Site Location: 12735 CENTREVILLE CREEK ROAD
Sampler Initials: EL

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		OAU341			OAU345			OAU346		
Sampling Date		2020/10/29			2020/10/29			2020/10/29		
COC Number		N/A			N/A			N/A		
	UNITS	BH2/1A	RDL	QC Batch	BH5/1A	RDL	QC Batch	BH6/1B	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A							0.80		7031794
Inorganics										
Conductivity	mS/cm							0.27	0.002	7037316
Available (CaCl2) pH	pH	7.64		7037128						
WAD Cyanide (Free)	ug/g	<0.01	0.01	7035171						
Chromium (VI)	ug/g	<0.18	0.18	7034794				<0.18	0.18	7034794
Metals										
Hot Water Ext. Boron (B)	ug/g							0.073	0.050	7037166
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7036975	<0.20	0.20	7036975	<0.20	0.20	7036960
Acid Extractable Arsenic (As)	ug/g	2.2	1.0	7036975	2.6	1.0	7036975	3.9	1.0	7036960
Acid Extractable Barium (Ba)	ug/g	48	0.50	7036975	91	0.50	7036975	130	0.50	7036960
Acid Extractable Beryllium (Be)	ug/g	0.41	0.20	7036975	0.67	0.20	7036975	1.1	0.20	7036960
Acid Extractable Boron (B)	ug/g	5.5	5.0	7036975	<5.0	5.0	7036975	10	5.0	7036960
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7036975	0.19	0.10	7036975	0.15	0.10	7036960
Acid Extractable Chromium (Cr)	ug/g	15	1.0	7036975	24	1.0	7036975	34	1.0	7036960
Acid Extractable Cobalt (Co)	ug/g	5.4	0.10	7036975	7.6	0.10	7036975	13	0.10	7036960
Acid Extractable Copper (Cu)	ug/g	13	0.50	7036975	9.5	0.50	7036975	23	0.50	7036960
Acid Extractable Lead (Pb)	ug/g	6.1	1.0	7036975	13	1.0	7036975	11	1.0	7036960
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7036975	<0.50	0.50	7036975	<0.50	0.50	7036960
Acid Extractable Nickel (Ni)	ug/g	13	0.50	7036975	16	0.50	7036975	32	0.50	7036960
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7036975	<0.50	0.50	7036975	<0.50	0.50	7036960
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7036975	<0.20	0.20	7036975	<0.20	0.20	7036960
Acid Extractable Thallium (Tl)	ug/g	0.10	0.050	7036975	0.17	0.050	7036975	0.22	0.050	7036960
Acid Extractable Uranium (U)	ug/g	0.46	0.050	7036975	0.65	0.050	7036975	0.55	0.050	7036960
Acid Extractable Vanadium (V)	ug/g	22	5.0	7036975	38	5.0	7036975	45	5.0	7036960
Acid Extractable Zinc (Zn)	ug/g	30	5.0	7036975	48	5.0	7036975	68	5.0	7036960
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7036975	<0.050	0.050	7036975	<0.050	0.050	7036960
RDL = Reportable Detection Limit QC Batch = Quality Control Batch										



BUREAU
VERITAS

BV Labs Job #: COS8718
Report Date: 2020/11/27

Soil Engineers Ltd
Client Project #: 2009-E125
Site Location: 12735 CENTREVILLE CREEK ROAD
Sampler Initials: EL

O.REG 153 METALS PACKAGE (SOIL)

BV Labs ID		OAU342	OAU344			OAU345		
Sampling Date		2020/10/29	2020/10/29			2020/10/29		
COC Number		N/A	N/A			N/A		
	UNITS	BH3/1A	BH4/1A	RDL	QC Batch	BH5/1A	RDL	QC Batch
Inorganics								
Chromium (VI)	ug/g	<0.18	<0.18	0.18	7034794	<0.18	0.18	7034794
Metals								
Acid Extractable Antimony (Sb)	ug/g	0.24	<0.20	0.20	7036975			
Acid Extractable Arsenic (As)	ug/g	6.7	3.3	1.0	7036975			
Acid Extractable Barium (Ba)	ug/g	120	160	0.50	7036975			
Acid Extractable Beryllium (Be)	ug/g	1.4	1.1	0.20	7036975			
Acid Extractable Boron (B)	ug/g	6.4	10	5.0	7036975			
Acid Extractable Cadmium (Cd)	ug/g	<0.10	<0.10	0.10	7036975			
Acid Extractable Chromium (Cr)	ug/g	31	30	1.0	7036975			
Acid Extractable Cobalt (Co)	ug/g	17	14	0.10	7036975			
Acid Extractable Copper (Cu)	ug/g	29	23	0.50	7036975			
Acid Extractable Lead (Pb)	ug/g	13	11	1.0	7036975			
Acid Extractable Molybdenum (Mo)	ug/g	0.73	<0.50	0.50	7036975			
Acid Extractable Nickel (Ni)	ug/g	41	34	0.50	7036975			
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	0.50	7036975			
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	0.20	7036975			
Acid Extractable Thallium (Tl)	ug/g	0.15	0.17	0.050	7036975			
Acid Extractable Uranium (U)	ug/g	0.60	0.60	0.050	7036975			
Acid Extractable Vanadium (V)	ug/g	52	38	5.0	7036975			
Acid Extractable Zinc (Zn)	ug/g	55	61	5.0	7036975			
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	0.050	7036975			
RDL = Reportable Detection Limit QC Batch = Quality Control Batch								



BUREAU
VERITAS

BV Labs Job #: COS8718
Report Date: 2020/11/27

Soil Engineers Ltd
Client Project #: 2009-E125
Site Location: 12735 CENTREVILLE CREEK ROAD
Sampler Initials: EL

O.REG 153 OC PESTICIDES (SOIL)

BV Labs ID		OAU340	OAU341	OAU342	OAU344	OAU345		
Sampling Date		2020/10/28	2020/10/29	2020/10/29	2020/10/29	2020/10/29		
COC Number		N/A	N/A	N/A	N/A	N/A		
	UNITS	BH1/1A	BH2/1A	BH3/1A	BH4/1A	BH5/1A	RDL	QC Batch
Inorganics								
Moisture	%	16	15	20	16	15	1.0	7033963
Calculated Parameters								
Chlordane (Total)	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7031591
o,p-DDD + p,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7031591
o,p-DDE + p,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7031591
o,p-DDT + p,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7031591
Total Endosulfan	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7031591
Pesticides & Herbicides								
Aldrin	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7042852
a-Chlordane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7042852
g-Chlordane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7042852
o,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7042852
p,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7042852
o,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7042852
p,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7042852
o,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7042852
p,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7042852
Dieldrin	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7042852
Lindane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7042852
Endosulfan I (alpha)	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7042852
Endosulfan II (beta)	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7042852
Endrin	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7042852
Heptachlor	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7042852
Heptachlor epoxide	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7042852
Hexachlorobenzene	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7042852
Hexachlorobutadiene	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7042852
Hexachloroethane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7042852
Methoxychlor	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7042852
Surrogate Recovery (%)								
2,4,5,6-Tetrachloro-m-xylene	%	93	108	93	86	94		7042852
Decachlorobiphenyl	%	101	95	103	94	97		7042852
RDL = Reportable Detection Limit QC Batch = Quality Control Batch								



BUREAU
VERITAS

BV Labs Job #: COS8718
Report Date: 2020/11/27

Soil Engineers Ltd
Client Project #: 2009-E125
Site Location: 12735 CENTREVILLE CREEK ROAD
Sampler Initials: EL

O.REG 153 PAHS (SOIL)

BV Labs ID		OAU346		
Sampling Date		2020/10/29		
COC Number		N/A		
	UNITS	BH6/1B	RDL	QC Batch
Calculated Parameters				
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	0.0071	7031664
Polyaromatic Hydrocarbons				
Acenaphthene	ug/g	<0.0050	0.0050	7035716
Acenaphthylene	ug/g	<0.0050	0.0050	7035716
Anthracene	ug/g	<0.0050	0.0050	7035716
Benzo(a)anthracene	ug/g	<0.0050	0.0050	7035716
Benzo(a)pyrene	ug/g	<0.0050	0.0050	7035716
Benzo(b/j)fluoranthene	ug/g	<0.0050	0.0050	7035716
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	7035716
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	7035716
Chrysene	ug/g	<0.0050	0.0050	7035716
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	7035716
Fluoranthene	ug/g	<0.0050	0.0050	7035716
Fluorene	ug/g	<0.0050	0.0050	7035716
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	7035716
1-Methylnaphthalene	ug/g	<0.0050	0.0050	7035716
2-Methylnaphthalene	ug/g	<0.0050	0.0050	7035716
Naphthalene	ug/g	<0.0050	0.0050	7035716
Phenanthrene	ug/g	<0.0050	0.0050	7035716
Pyrene	ug/g	<0.0050	0.0050	7035716
Surrogate Recovery (%)				
D10-Anthracene	%	95		7035716
D14-Terphenyl (FS)	%	99		7035716
D8-Acenaphthylene	%	87		7035716
RDL = Reportable Detection Limit QC Batch = Quality Control Batch				



BUREAU
VERITAS

BV Labs Job #: COS8718
Report Date: 2020/11/27

Soil Engineers Ltd
Client Project #: 2009-E125
Site Location: 12735 CENTREVILLE CREEK ROAD
Sampler Initials: EL

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

BV Labs ID		OAU346		
Sampling Date		2020/10/29		
COC Number		N/A		
	UNITS	BH6/1B	RDL	QC Batch
Inorganics				
Moisture	%	17	1.0	7033017
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	7031691
Volatile Organics				
Acetone (2-Propanone)	ug/g	<0.50	0.50	7034546
Benzene	ug/g	<0.020	0.020	7034546
Bromodichloromethane	ug/g	<0.050	0.050	7034546
Bromoform	ug/g	<0.050	0.050	7034546
Bromomethane	ug/g	<0.050	0.050	7034546
Carbon Tetrachloride	ug/g	<0.050	0.050	7034546
Chlorobenzene	ug/g	<0.050	0.050	7034546
Chloroform	ug/g	<0.050	0.050	7034546
Dibromochloromethane	ug/g	<0.050	0.050	7034546
1,2-Dichlorobenzene	ug/g	<0.050	0.050	7034546
1,3-Dichlorobenzene	ug/g	<0.050	0.050	7034546
1,4-Dichlorobenzene	ug/g	<0.050	0.050	7034546
Dichlorodifluoromethane (FREON 12)	ug/g	<0.050	0.050	7034546
1,1-Dichloroethane	ug/g	<0.050	0.050	7034546
1,2-Dichloroethane	ug/g	<0.050	0.050	7034546
1,1-Dichloroethylene	ug/g	<0.050	0.050	7034546
cis-1,2-Dichloroethylene	ug/g	<0.050	0.050	7034546
trans-1,2-Dichloroethylene	ug/g	<0.050	0.050	7034546
1,2-Dichloropropane	ug/g	<0.050	0.050	7034546
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	7034546
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	7034546
Ethylbenzene	ug/g	<0.020	0.020	7034546
Ethylene Dibromide	ug/g	<0.050	0.050	7034546
Hexane	ug/g	<0.050	0.050	7034546
Methylene Chloride(Dichloromethane)	ug/g	<0.050	0.050	7034546
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.50	0.50	7034546
Methyl Isobutyl Ketone	ug/g	<0.50	0.50	7034546
Methyl t-butyl ether (MTBE)	ug/g	<0.050	0.050	7034546
Styrene	ug/g	<0.050	0.050	7034546
1,1,1,2-Tetrachloroethane	ug/g	<0.050	0.050	7034546
RDL = Reportable Detection Limit QC Batch = Quality Control Batch				



O.REG 153 VOCS BY HS & F1-F4 (SOIL)

BV Labs ID		OAU346		
Sampling Date		2020/10/29		
COC Number		N/A		
	UNITS	BH6/1B	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/g	<0.050	0.050	7034546
Tetrachloroethylene	ug/g	<0.050	0.050	7034546
Toluene	ug/g	<0.020	0.020	7034546
1,1,1-Trichloroethane	ug/g	<0.050	0.050	7034546
1,1,2-Trichloroethane	ug/g	<0.050	0.050	7034546
Trichloroethylene	ug/g	<0.050	0.050	7034546
Trichlorofluoromethane (FREON 11)	ug/g	<0.050	0.050	7034546
Vinyl Chloride	ug/g	<0.020	0.020	7034546
p+m-Xylene	ug/g	<0.020	0.020	7034546
o-Xylene	ug/g	<0.020	0.020	7034546
Total Xylenes	ug/g	<0.020	0.020	7034546
F1 (C6-C10)	ug/g	<10	10	7034546
F1 (C6-C10) - BTEX	ug/g	<10	10	7034546
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7034859
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7034859
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7034859
Reached Baseline at C50	ug/g	Yes		7034859
Surrogate Recovery (%)				
o-Terphenyl	%	91		7034859
4-Bromofluorobenzene	%	89		7034546
D10-o-Xylene	%	119		7034546
D4-1,2-Dichloroethane	%	123		7034546
D8-Toluene	%	101		7034546
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



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VERITAS

BV Labs Job #: COS8718
Report Date: 2020/11/27

Soil Engineers Ltd
Client Project #: 2009-E125
Site Location: 12735 CENTREVILLE CREEK ROAD
Sampler Initials: EL

RESULTS OF ANALYSES OF SOIL

BV Labs ID		OAU340	OAU340		OAU342			OAU343	
Sampling Date		2020/10/28	2020/10/28		2020/10/29			2020/10/29	
COC Number		N/A	N/A		N/A			N/A	
	UNITS	BH1/1A	BH1/1A Lab-Dup	QC Batch	BH3/1A	RDL	QC Batch	BH3/3	QC Batch
Inorganics									
Available (CaCl ₂) pH	pH							7.74	7037123
WAD Cyanide (Free)	ug/g	<0.01	<0.01	7078042	<0.01	0.01	7079044		
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate									

BV Labs ID		OAU344	OAU345		
Sampling Date		2020/10/29	2020/10/29		
COC Number		N/A	N/A		
	UNITS	BH4/1A	BH5/1A	RDL	QC Batch
Inorganics					
WAD Cyanide (Free)	ug/g	<0.01	<0.01	0.01	7078042
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					



BUREAU
VERITAS

BV Labs Job #: COS8718
Report Date: 2020/11/27

Soil Engineers Ltd
Client Project #: 2009-E125
Site Location: 12735 CENTREVILLE CREEK ROAD
Sampler Initials: EL

TEST SUMMARY

BV Labs ID: OAU340
Sample ID: BH1/1A
Matrix: Soil

Collected: 2020/10/28
Shipped:
Received: 2020/10/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	7078042	2020/11/26	2020/11/27	Gnana Thomas
Moisture	BAL	7033963	N/A	2020/11/02	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7042852	2020/11/06	2020/11/07	Joy Zhang
OC Pesticides Summed Parameters	CALC	7031591	N/A	2020/11/03	Automated Statchk

BV Labs ID: OAU340 Dup
Sample ID: BH1/1A
Matrix: Soil

Collected: 2020/10/28
Shipped:
Received: 2020/10/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	7078042	2020/11/26	2020/11/27	Gnana Thomas

BV Labs ID: OAU341
Sample ID: BH2/1A
Matrix: Soil

Collected: 2020/10/29
Shipped:
Received: 2020/10/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	7035171	2020/11/03	2020/11/05	Gnana Thomas
Hexavalent Chromium in Soil by IC	IC/SPEC	7034794	2020/11/03	2020/11/05	Violeta Porcila
Strong Acid Leachable Metals by ICPMS	ICP/MS	7036975	2020/11/04	2020/11/04	Daniel Teclu
Moisture	BAL	7033963	N/A	2020/11/02	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7042852	2020/11/06	2020/11/07	Joy Zhang
OC Pesticides Summed Parameters	CALC	7031591	N/A	2020/11/03	Automated Statchk
pH CaCl2 EXTRACT	AT	7037128	2020/11/04	2020/11/04	Surinder Rai

BV Labs ID: OAU342
Sample ID: BH3/1A
Matrix: Soil

Collected: 2020/10/29
Shipped:
Received: 2020/10/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	7079044	2020/11/26	2020/11/27	Louise Harding
Hexavalent Chromium in Soil by IC	IC/SPEC	7034794	2020/11/03	2020/11/05	Violeta Porcila
Strong Acid Leachable Metals by ICPMS	ICP/MS	7036975	2020/11/04	2020/11/04	Daniel Teclu
Moisture	BAL	7033963	N/A	2020/11/02	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7042852	2020/11/06	2020/11/07	Joy Zhang
OC Pesticides Summed Parameters	CALC	7031591	N/A	2020/11/03	Automated Statchk

BV Labs ID: OAU343
Sample ID: BH3/3
Matrix: Soil

Collected: 2020/10/29
Shipped:
Received: 2020/10/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	7037123	2020/11/04	2020/11/04	Neil Dassanayake



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VERITAS

BV Labs Job #: COS8718
Report Date: 2020/11/27

Soil Engineers Ltd
Client Project #: 2009-E125
Site Location: 12735 CENTREVILLE CREEK ROAD
Sampler Initials: EL

TEST SUMMARY

BV Labs ID: OAU344
Sample ID: BH4/1A
Matrix: Soil

Collected: 2020/10/29
Shipped:
Received: 2020/10/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	7078042	2020/11/26	2020/11/27	Gnana Thomas
Hexavalent Chromium in Soil by IC	IC/SPEC	7034794	2020/11/03	2020/11/05	Violeta Porcila
Strong Acid Leachable Metals by ICPMS	ICP/MS	7036975	2020/11/04	2020/11/04	Daniel Teclu
Moisture	BAL	7033963	N/A	2020/11/02	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7042852	2020/11/06	2020/11/07	Joy Zhang
OC Pesticides Summed Parameters	CALC	7031591	N/A	2020/11/03	Automated Statchk

BV Labs ID: OAU345
Sample ID: BH5/1A
Matrix: Soil

Collected: 2020/10/29
Shipped:
Received: 2020/10/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	7078042	2020/11/26	2020/11/27	Gnana Thomas
Hexavalent Chromium in Soil by IC	IC/SPEC	7034794	2020/11/03	2020/11/05	Violeta Porcila
Strong Acid Leachable Metals by ICPMS	ICP/MS	7036975	2020/11/04	2020/11/04	Daniel Teclu
Moisture	BAL	7033963	N/A	2020/11/02	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7042852	2020/11/06	2020/11/07	Joy Zhang
OC Pesticides Summed Parameters	CALC	7031591	N/A	2020/11/03	Automated Statchk

BV Labs ID: OAU346
Sample ID: BH6/1B
Matrix: Soil

Collected: 2020/10/29
Shipped:
Received: 2020/10/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7031664	N/A	2020/11/05	Automated Statchk
Hot Water Extractable Boron	ICP	7037166	2020/11/04	2020/11/05	Jolly John
1,3-Dichloropropene Sum	CALC	7031691	N/A	2020/11/04	Automated Statchk
Conductivity	AT	7037316	2020/11/04	2020/11/04	Neil Dassanayake
Hexavalent Chromium in Soil by IC	IC/SPEC	7034794	2020/11/03	2020/11/05	Violeta Porcila
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7034859	2020/11/03	2020/11/04	Prabhjot Gulati
Strong Acid Leachable Metals by ICPMS	ICP/MS	7036960	2020/11/04	2020/11/04	Daniel Teclu
Moisture	BAL	7033017	N/A	2020/11/02	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7035716	2020/11/03	2020/11/04	Jett Wu
Sodium Adsorption Ratio (SAR)	CALC/MET	7031794	N/A	2020/11/05	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7034546	N/A	2020/11/03	Yang (Philip) Yu

BV Labs ID: OAU347
Sample ID: DUP S1
Matrix: Soil

Collected: 2020/10/29
Shipped:
Received: 2020/10/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	7036975	2020/11/04	2020/11/04	Daniel Teclu



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VERITAS

BV Labs Job #: COS8718
Report Date: 2020/11/27

Soil Engineers Ltd
Client Project #: 2009-E125
Site Location: 12735 CENTREVILLE CREEK ROAD
Sampler Initials: EL

TEST SUMMARY

BV Labs ID: OAU347 Dup
Sample ID: DUP S1
Matrix: Soil

Collected: 2020/10/29
Shipped:
Received: 2020/10/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	7036975	2020/11/04	2020/11/04	Daniel Teclu

BV Labs ID: OAU348
Sample ID: DUP S2
Matrix: Soil

Collected: 2020/10/29
Shipped:
Received: 2020/10/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	7036975	2020/11/04	2020/11/04	Daniel Teclu



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VERITAS

BV Labs Job #: COS8718
Report Date: 2020/11/27

Soil Engineers Ltd
Client Project #: 2009-E125
Site Location: 12735 CENTREVILLE CREEK ROAD
Sampler Initials: EL

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.7°C
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Cooler custody seal was present and intact.

Results relate only to the items tested.



**BUREAU
VERITAS**

BV Labs Job #: C0S8718

Report Date: 2020/11/27

QUALITY ASSURANCE REPORT

Soil Engineers Ltd

Client Project #: 2009-E125

Site Location: 12735 CENTREVILLE CREEK ROAD

Sampler Initials: EL

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
7034546	4-Bromofluorobenzene	2020/11/03	96	60 - 140	100	60 - 140	92	%		
7034546	D10-o-Xylene	2020/11/03	129	60 - 130	87	60 - 130	110	%		
7034546	D4-1,2-Dichloroethane	2020/11/03	102	60 - 140	108	60 - 140	104	%		
7034546	D8-Toluene	2020/11/03	104	60 - 140	102	60 - 140	97	%		
7034859	o-Terphenyl	2020/11/04	94	60 - 130	92	60 - 130	95	%		
7035716	D10-Anthracene	2020/11/04	96	50 - 130	103	50 - 130	102	%		
7035716	D14-Terphenyl (FS)	2020/11/04	94	50 - 130	114	50 - 130	107	%		
7035716	D8-Acenaphthylene	2020/11/04	87	50 - 130	101	50 - 130	90	%		
7042852	2,4,5,6-Tetrachloro-m-xylene	2020/11/07	100	50 - 130	90	50 - 130	86	%		
7042852	Decachlorobiphenyl	2020/11/07	114	50 - 130	102	50 - 130	100	%		
7033017	Moisture	2020/11/02							4.8	20
7033963	Moisture	2020/11/02							0.99	20
7034546	1,1,1,2-Tetrachloroethane	2020/11/03	114	60 - 140	106	60 - 130	<0.050	ug/g	NC	50
7034546	1,1,1-Trichloroethane	2020/11/03	109	60 - 140	100	60 - 130	<0.050	ug/g	NC	50
7034546	1,1,2,2-Tetrachloroethane	2020/11/03	109	60 - 140	108	60 - 130	<0.050	ug/g	NC	50
7034546	1,1,2-Trichloroethane	2020/11/03	117	60 - 140	110	60 - 130	<0.050	ug/g	NC	50
7034546	1,1-Dichloroethane	2020/11/03	106	60 - 140	98	60 - 130	<0.050	ug/g	NC	50
7034546	1,1-Dichloroethylene	2020/11/03	107	60 - 140	95	60 - 130	<0.050	ug/g	NC	50
7034546	1,2-Dichlorobenzene	2020/11/03	112	60 - 140	100	60 - 130	<0.050	ug/g	NC	50
7034546	1,2-Dichloroethane	2020/11/03	111	60 - 140	106	60 - 130	<0.050	ug/g	NC	50
7034546	1,2-Dichloropropane	2020/11/03	111	60 - 140	104	60 - 130	<0.050	ug/g	NC	50
7034546	1,3-Dichlorobenzene	2020/11/03	111	60 - 140	97	60 - 130	<0.050	ug/g	NC	50
7034546	1,4-Dichlorobenzene	2020/11/03	130	60 - 140	116	60 - 130	<0.050	ug/g	NC	50
7034546	Acetone (2-Propanone)	2020/11/03	118	60 - 140	112	60 - 140	<0.50	ug/g	NC	50
7034546	Benzene	2020/11/03	102	60 - 140	96	60 - 130	<0.020	ug/g	NC	50
7034546	Bromodichloromethane	2020/11/03	111	60 - 140	106	60 - 130	<0.050	ug/g	NC	50
7034546	Bromoform	2020/11/03	107	60 - 140	106	60 - 130	<0.050	ug/g	NC	50
7034546	Bromomethane	2020/11/03	110	60 - 140	101	60 - 140	<0.050	ug/g	NC	50
7034546	Carbon Tetrachloride	2020/11/03	108	60 - 140	98	60 - 130	<0.050	ug/g	NC	50
7034546	Chlorobenzene	2020/11/03	109	60 - 140	100	60 - 130	<0.050	ug/g	NC	50
7034546	Chloroform	2020/11/03	110	60 - 140	103	60 - 130	<0.050	ug/g	NC	50



BUREAU
VERITAS

BV Labs Job #: C0S8718

Report Date: 2020/11/27

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd

Client Project #: 2009-E125

Site Location: 12735 CENTREVILLE CREEK ROAD

Sampler Initials: EL

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
7034546	cis-1,2-Dichloroethylene	2020/11/03	108	60 - 140	100	60 - 130	<0.050	ug/g	NC	50
7034546	cis-1,3-Dichloropropene	2020/11/03	104	60 - 140	100	60 - 130	<0.030	ug/g	NC	50
7034546	Dibromochloromethane	2020/11/03	109	60 - 140	105	60 - 130	<0.050	ug/g	NC	50
7034546	Dichlorodifluoromethane (FREON 12)	2020/11/03	108	60 - 140	99	60 - 140	<0.050	ug/g	NC	50
7034546	Ethylbenzene	2020/11/03	104	60 - 140	93	60 - 130	<0.020	ug/g	NC	50
7034546	Ethylene Dibromide	2020/11/03	108	60 - 140	105	60 - 130	<0.050	ug/g	NC	50
7034546	F1 (C6-C10) - BTEX	2020/11/03					<10	ug/g	NC	30
7034546	F1 (C6-C10)	2020/11/03	124	60 - 140	102	80 - 120	<10	ug/g	NC	30
7034546	Hexane	2020/11/03	107	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
7034546	Methyl Ethyl Ketone (2-Butanone)	2020/11/03	117	60 - 140	118	60 - 140	<0.50	ug/g	NC	50
7034546	Methyl Isobutyl Ketone	2020/11/03	118	60 - 140	124	60 - 130	<0.50	ug/g	NC	50
7034546	Methyl t-butyl ether (MTBE)	2020/11/03	104	60 - 140	98	60 - 130	<0.050	ug/g	NC	50
7034546	Methylene Chloride(Dichloromethane)	2020/11/03	107	60 - 140	102	60 - 130	<0.050	ug/g	NC	50
7034546	o-Xylene	2020/11/03	104	60 - 140	94	60 - 130	<0.020	ug/g	NC	50
7034546	p+m-Xylene	2020/11/03	104	60 - 140	93	60 - 130	<0.020	ug/g	NC	50
7034546	Styrene	2020/11/03	113	60 - 140	105	60 - 130	<0.050	ug/g	NC	50
7034546	Tetrachloroethylene	2020/11/03	103	60 - 140	93	60 - 130	<0.050	ug/g	NC	50
7034546	Toluene	2020/11/03	104	60 - 140	94	60 - 130	<0.020	ug/g	NC	50
7034546	Total Xylenes	2020/11/03					<0.020	ug/g	NC	50
7034546	trans-1,2-Dichloroethylene	2020/11/03	108	60 - 140	99	60 - 130	<0.050	ug/g	NC	50
7034546	trans-1,3-Dichloropropene	2020/11/03	113	60 - 140	108	60 - 130	<0.040	ug/g	NC	50
7034546	Trichloroethylene	2020/11/03	112	60 - 140	104	60 - 130	<0.050	ug/g	NC	50
7034546	Trichlorofluoromethane (FREON 11)	2020/11/03	110	60 - 140	98	60 - 130	<0.050	ug/g	NC	50
7034546	Vinyl Chloride	2020/11/03	109	60 - 140	101	60 - 130	<0.020	ug/g	NC	50
7034794	Chromium (VI)	2020/11/05	88	70 - 130	90	80 - 120	<0.18	ug/g	NC	35
7034859	F2 (C10-C16 Hydrocarbons)	2020/11/04	90	50 - 130	89	80 - 120	<10	ug/g	4.7	30
7034859	F3 (C16-C34 Hydrocarbons)	2020/11/04	98	50 - 130	98	80 - 120	<50	ug/g	19	30
7034859	F4 (C34-C50 Hydrocarbons)	2020/11/04	94	50 - 130	92	80 - 120	<50	ug/g	NC	30
7035171	WAD Cyanide (Free)	2020/11/05	96	75 - 125	89	80 - 120	<0.01	ug/g	NC	35
7035716	1-Methylnaphthalene	2020/11/04	87	50 - 130	93	50 - 130	<0.0050	ug/g	NC	40
7035716	2-Methylnaphthalene	2020/11/04	84	50 - 130	91	50 - 130	<0.0050	ug/g	NC	40



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VERITAS

BV Labs Job #: C0S8718

Report Date: 2020/11/27

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd

Client Project #: 2009-E125

Site Location: 12735 CENTREVILLE CREEK ROAD

Sampler Initials: EL

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
7035716	Acenaphthene	2020/11/04	88	50 - 130	90	50 - 130	<0.0050	ug/g	NC	40
7035716	Acenaphthylene	2020/11/04	86	50 - 130	91	50 - 130	<0.0050	ug/g	NC	40
7035716	Anthracene	2020/11/04	88	50 - 130	93	50 - 130	<0.0050	ug/g	NC	40
7035716	Benzo(a)anthracene	2020/11/04	84	50 - 130	92	50 - 130	<0.0050	ug/g	NC	40
7035716	Benzo(a)pyrene	2020/11/04	86	50 - 130	92	50 - 130	<0.0050	ug/g	NC	40
7035716	Benzo(b/j)fluoranthene	2020/11/04	81	50 - 130	93	50 - 130	<0.0050	ug/g	NC	40
7035716	Benzo(g,h,i)perylene	2020/11/04	86	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
7035716	Benzo(k)fluoranthene	2020/11/04	90	50 - 130	92	50 - 130	<0.0050	ug/g	NC	40
7035716	Chrysene	2020/11/04	82	50 - 130	91	50 - 130	<0.0050	ug/g	NC	40
7035716	Dibenzo(a,h)anthracene	2020/11/04	86	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
7035716	Fluoranthene	2020/11/04	92	50 - 130	110	50 - 130	<0.0050	ug/g	NC	40
7035716	Fluorene	2020/11/04	88	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
7035716	Indeno(1,2,3-cd)pyrene	2020/11/04	86	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
7035716	Naphthalene	2020/11/04	77	50 - 130	89	50 - 130	<0.0050	ug/g	NC	40
7035716	Phenanthrene	2020/11/04	84	50 - 130	91	50 - 130	<0.0050	ug/g	NC	40
7035716	Pyrene	2020/11/04	92	50 - 130	109	50 - 130	<0.0050	ug/g	NC	40
7036960	Acid Extractable Antimony (Sb)	2020/11/04	101	75 - 125	110	80 - 120	<0.20	ug/g	13	30
7036960	Acid Extractable Arsenic (As)	2020/11/04	101	75 - 125	107	80 - 120	<1.0	ug/g	NC	30
7036960	Acid Extractable Barium (Ba)	2020/11/04	NC	75 - 125	100	80 - 120	<0.50	ug/g	7.0	30
7036960	Acid Extractable Beryllium (Be)	2020/11/04	101	75 - 125	103	80 - 120	<0.20	ug/g	4.7	30
7036960	Acid Extractable Boron (B)	2020/11/04	95	75 - 125	102	80 - 120	<5.0	ug/g	NC	30
7036960	Acid Extractable Cadmium (Cd)	2020/11/04	101	75 - 125	104	80 - 120	<0.10	ug/g	NC	30
7036960	Acid Extractable Chromium (Cr)	2020/11/04	103	75 - 125	105	80 - 120	<1.0	ug/g	3.3	30
7036960	Acid Extractable Cobalt (Co)	2020/11/04	101	75 - 125	107	80 - 120	<0.10	ug/g	3.9	30
7036960	Acid Extractable Copper (Cu)	2020/11/04	101	75 - 125	106	80 - 120	<0.50	ug/g	3.1	30
7036960	Acid Extractable Lead (Pb)	2020/11/04	NC	75 - 125	103	80 - 120	<1.0	ug/g	3.2	30
7036960	Acid Extractable Mercury (Hg)	2020/11/04	81	75 - 125	90	80 - 120	<0.050	ug/g	NC	30
7036960	Acid Extractable Molybdenum (Mo)	2020/11/04	102	75 - 125	105	80 - 120	<0.50	ug/g	NC	30
7036960	Acid Extractable Nickel (Ni)	2020/11/04	98	75 - 125	109	80 - 120	<0.50	ug/g	5.0	30
7036960	Acid Extractable Selenium (Se)	2020/11/04	99	75 - 125	107	80 - 120	<0.50	ug/g	NC	30
7036960	Acid Extractable Silver (Ag)	2020/11/04	98	75 - 125	106	80 - 120	<0.20	ug/g	NC	30



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BV Labs Job #: C0S8718

Report Date: 2020/11/27

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd

Client Project #: 2009-E125

Site Location: 12735 CENTREVILLE CREEK ROAD

Sampler Initials: EL

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
7036960	Acid Extractable Thallium (Tl)	2020/11/04	99	75 - 125	103	80 - 120	<0.050	ug/g	4.6	30
7036960	Acid Extractable Uranium (U)	2020/11/04	99	75 - 125	102	80 - 120	<0.050	ug/g	5.0	30
7036960	Acid Extractable Vanadium (V)	2020/11/04	98	75 - 125	108	80 - 120	<5.0	ug/g	2.2	30
7036960	Acid Extractable Zinc (Zn)	2020/11/04	105	75 - 125	104	80 - 120	<5.0	ug/g	2.8	30
7036975	Acid Extractable Antimony (Sb)	2020/11/04	101	75 - 125	104	80 - 120	<0.20	ug/g	NC	30
7036975	Acid Extractable Arsenic (As)	2020/11/04	102	75 - 125	99	80 - 120	<1.0	ug/g	10	30
7036975	Acid Extractable Barium (Ba)	2020/11/04	NC	75 - 125	96	80 - 120	<0.50	ug/g	1.1	30
7036975	Acid Extractable Beryllium (Be)	2020/11/04	102	75 - 125	98	80 - 120	<0.20	ug/g	3.3	30
7036975	Acid Extractable Boron (B)	2020/11/04	97	75 - 125	96	80 - 120	<5.0	ug/g	NC	30
7036975	Acid Extractable Cadmium (Cd)	2020/11/04	102	75 - 125	100	80 - 120	<0.10	ug/g	NC	30
7036975	Acid Extractable Chromium (Cr)	2020/11/04	103	75 - 125	97	80 - 120	<1.0	ug/g	1.8	30
7036975	Acid Extractable Cobalt (Co)	2020/11/04	100	75 - 125	99	80 - 120	<0.10	ug/g	3.2	30
7036975	Acid Extractable Copper (Cu)	2020/11/04	99	75 - 125	103	80 - 120	<0.50	ug/g	4.5	30
7036975	Acid Extractable Lead (Pb)	2020/11/04	101	75 - 125	103	80 - 120	<1.0	ug/g	1.2	30
7036975	Acid Extractable Mercury (Hg)	2020/11/04	84	75 - 125	86	80 - 120	<0.050	ug/g	NC	30
7036975	Acid Extractable Molybdenum (Mo)	2020/11/04	104	75 - 125	101	80 - 120	<0.50	ug/g	NC	30
7036975	Acid Extractable Nickel (Ni)	2020/11/04	100	75 - 125	102	80 - 120	<0.50	ug/g	1.9	30
7036975	Acid Extractable Selenium (Se)	2020/11/04	102	75 - 125	102	80 - 120	<0.50	ug/g	NC	30
7036975	Acid Extractable Silver (Ag)	2020/11/04	103	75 - 125	102	80 - 120	<0.20	ug/g	NC	30
7036975	Acid Extractable Thallium (Tl)	2020/11/04	101	75 - 125	99	80 - 120	<0.050	ug/g	14	30
7036975	Acid Extractable Uranium (U)	2020/11/04	102	75 - 125	100	80 - 120	<0.050	ug/g	11	30
7036975	Acid Extractable Vanadium (V)	2020/11/04	101	75 - 125	98	80 - 120	<5.0	ug/g	3.6	30
7036975	Acid Extractable Zinc (Zn)	2020/11/04	NC	75 - 125	97	80 - 120	<5.0	ug/g	2.3	30
7037123	Available (CaCl2) pH	2020/11/04			100	97 - 103			0.55	N/A
7037128	Available (CaCl2) pH	2020/11/04			100	97 - 103			0.74	N/A
7037166	Hot Water Ext. Boron (B)	2020/11/05	104	75 - 125	97	75 - 125	<0.050	ug/g	31	40
7037316	Conductivity	2020/11/04			104	90 - 110	<0.002	mS/cm	1.9	10
7042852	a-Chlordane	2020/11/07	85	50 - 130	80	50 - 130	<0.0020	ug/g	NC	40
7042852	Aldrin	2020/11/07	77	50 - 130	72	50 - 130	<0.0020	ug/g	NC	40
7042852	Dieldrin	2020/11/07	101	50 - 130	93	50 - 130	<0.0020	ug/g	NC	40
7042852	Endosulfan I (alpha)	2020/11/07	79	50 - 130	71	50 - 130	<0.0020	ug/g	NC	40



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BV Labs Job #: C0S8718

Report Date: 2020/11/27

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd

Client Project #: 2009-E125

Site Location: 12735 CENTREVILLE CREEK ROAD

Sampler Initials: EL

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
7042852	Endosulfan II (beta)	2020/11/07	79	50 - 130	73	50 - 130	<0.0020	ug/g	NC	40
7042852	Endrin	2020/11/07	93	50 - 130	84	50 - 130	<0.0020	ug/g	NC	40
7042852	g-Chlordane	2020/11/07	102	50 - 130	99	50 - 130	<0.0020	ug/g	NC	40
7042852	Heptachlor epoxide	2020/11/07	82	50 - 130	78	50 - 130	<0.0020	ug/g	NC	40
7042852	Heptachlor	2020/11/07	80	50 - 130	76	50 - 130	<0.0020	ug/g	NC	40
7042852	Hexachlorobenzene	2020/11/07	76	50 - 130	87	50 - 130	<0.0020	ug/g	NC	40
7042852	Hexachlorobutadiene	2020/11/07	75	50 - 130	83	50 - 130	<0.0020	ug/g	NC	40
7042852	Hexachloroethane	2020/11/07	56	50 - 130	58	50 - 130	<0.0020	ug/g	NC	40
7042852	Lindane	2020/11/07	73	50 - 130	72	50 - 130	<0.0020	ug/g	NC	40
7042852	Methoxychlor	2020/11/07	95	50 - 130	89	50 - 130	<0.0050	ug/g	NC	40
7042852	o,p-DDD	2020/11/07	96	50 - 130	91	50 - 130	<0.0020	ug/g	NC	40
7042852	o,p-DDE	2020/11/07	86	50 - 130	80	50 - 130	<0.0020	ug/g	NC	40
7042852	o,p-DDT	2020/11/07	111	50 - 130	105	50 - 130	<0.0020	ug/g	NC	40
7042852	p,p-DDD	2020/11/07	94	50 - 130	84	50 - 130	<0.0020	ug/g	NC	40
7042852	p,p-DDE	2020/11/07	102	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40
7042852	p,p-DDT	2020/11/07	94	50 - 130	83	50 - 130	<0.0020	ug/g	NC	40
7078042	WAD Cyanide (Free)	2020/11/27	90	75 - 125	92	80 - 120	<0.01	ug/g	NC	35
7079044	WAD Cyanide (Free)	2020/11/27	91	75 - 125	94	80 - 120	<0.01	ug/g	NC	35

N/A = Not Applicable

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

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

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

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

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

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

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



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BV Labs Job #: COS8718
Report Date: 2020/11/27

Soil Engineers Ltd
Client Project #: 2009-E125
Site Location: 12735 CENTREVILLE CREEK ROAD
Sampler Initials: EL

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Anastassia Hamanov, Scientific Specialist

Brad Newman, B.Sc., C.Chem., Scientific Service Specialist

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



Your Project #: 2009-E125
 Site Location: TOWN OF CALEDON
 Your C.O.C. #: N/A

Attention: Munir Ahmad

Soil Engineers Ltd
 90 West Beaver Creek Road
 Unit 100
 Richmond Hill, ON
 CANADA L4B 1E7

Report Date: 2024/05/15
 Report #: R8149482
 Version: 2 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4D5072

Received: 2024/05/06, 15:35

Sample Matrix: Soil
 # Samples Received: 6

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Free (WAD) Cyanide	5	2024/05/09	2024/05/10	CAM SOP-00457	OMOE E3015 m
Hexavalent Chromium in Soil by IC (1)	5	2024/05/10	2024/05/10	CAM SOP-00436	EPA 3060A/7199 m
Acid Extractable Metals by ICPMS	6	2024/05/09	2024/05/09	CAM SOP-00447	EPA 6020B m
Moisture	5	N/A	2024/05/07	CAM SOP-00445	Carter 2nd ed 70.2 m
OC Pesticides (Selected) & PCB (2)	5	2024/05/09	2024/05/10	CAM SOP-00307	EPA 8081B/ 8082A
OC Pesticides Summed Parameters	5	N/A	2024/05/08	CAM SOP-00307	EPA 8081B/ 8082A
pH CaCl2 EXTRACT	5	2024/05/09	2024/05/09	CAM SOP-00413	EPA 9045 D m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

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Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Soils are reported on a dry weight basis unless otherwise specified.

(2) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane



Your Project #: 2009-E125
Site Location: TOWN OF CALEDON
Your C.O.C. #: N/A

Attention: Munir Ahmad

Soil Engineers Ltd
90 West Beaver Creek Road
Unit 100
Richmond Hill, ON
CANADA L4B 1E7

Report Date: 2024/05/15
Report #: R8149482
Version: 2 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4D5072

Received: 2024/05/06, 15:35

Encryption Key



**AUTHORIZED REPORT
RAPPORT AUTORISÉ**

Bureau Veritas
15 May 2024 10:53:55

Please direct all questions regarding this Certificate of Analysis to:
Antonella Brasil, Senior Project Manager
Email: Antonella.Brasil@bureauveritas.com
Phone# (905)817-5817

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



O.REG 153 ICPCS METALS (SOIL)

Bureau Veritas ID		ZCA704			
Sampling Date		2024/05/03			
COC Number		N/A			
	UNITS	DUP S3	RDL	MDL	QC Batch

Metals					
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	0.10	9382631
Acid Extractable Arsenic (As)	ug/g	3.9	1.0	0.10	9382631
Acid Extractable Barium (Ba)	ug/g	110	0.50	0.30	9382631
Acid Extractable Beryllium (Be)	ug/g	1.0	0.20	0.020	9382631
Acid Extractable Boron (B)	ug/g	6.5	5.0	1.0	9382631
Acid Extractable Cadmium (Cd)	ug/g	0.24	0.10	0.030	9382631
Acid Extractable Chromium (Cr)	ug/g	29	1.0	0.20	9382631
Acid Extractable Cobalt (Co)	ug/g	14	0.10	0.020	9382631
Acid Extractable Copper (Cu)	ug/g	19	0.50	0.20	9382631
Acid Extractable Lead (Pb)	ug/g	19	1.0	0.10	9382631
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	0.10	9382631
Acid Extractable Nickel (Ni)	ug/g	26	0.50	0.20	9382631
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	0.10	9382631
Acid Extractable Silver (Ag)	ug/g	0.21	0.20	0.040	9382631
Acid Extractable Thallium (Tl)	ug/g	0.17	0.050	0.010	9382631
Acid Extractable Uranium (U)	ug/g	0.79	0.050	0.030	9382631
Acid Extractable Vanadium (V)	ug/g	42	5.0	0.50	9382631
Acid Extractable Zinc (Zn)	ug/g	76	5.0	0.50	9382631
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	0.030	9382631

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch



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Bureau Veritas Job #: C4D5072
Report Date: 2024/05/15

Soil Engineers Ltd
Client Project #: 2009-E125
Site Location: TOWN OF CALEDON
Sampler Initials: AB

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		ZCA699	ZCA700	ZCA701	ZCA702	ZCA703			
Sampling Date		2024/05/03	2024/05/03	2024/05/03	2024/05/03	2024/05/03			
COC Number		N/A	N/A	N/A	N/A	N/A			
	UNITS	TP-1	TP-2	TP-3	TP-4	TP-5	RDL	MDL	QC Batch
Inorganics									
Available (CaCl2) pH	pH	6.19	7.17	6.36	5.96	5.89			9383644
WAD Cyanide (Free)	ug/g	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.0019	9383965
Chromium (VI)	ug/g	<0.18	<0.18	<0.18	<0.18	<0.18	0.18	0.050	9385314
Metals									
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	0.10	9382631
Acid Extractable Arsenic (As)	ug/g	2.2	3.4	4.1	3.5	3.1	1.0	0.10	9382631
Acid Extractable Barium (Ba)	ug/g	69	97	100	98	97	0.50	0.30	9382631
Acid Extractable Beryllium (Be)	ug/g	0.64	0.93	1.1	0.90	0.83	0.20	0.020	9382631
Acid Extractable Boron (B)	ug/g	<5.0	5.5	6.1	5.8	5.2	5.0	1.0	9382631
Acid Extractable Cadmium (Cd)	ug/g	0.19	0.13	0.22	0.19	0.16	0.10	0.030	9382631
Acid Extractable Chromium (Cr)	ug/g	19	25	30	27	25	1.0	0.20	9382631
Acid Extractable Cobalt (Co)	ug/g	6.5	11	14	12	11	0.10	0.020	9382631
Acid Extractable Copper (Cu)	ug/g	12	19	20	18	16	0.50	0.20	9382631
Acid Extractable Lead (Pb)	ug/g	12	14	17	16	15	1.0	0.10	9382631
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	<0.50	0.54	<0.50	<0.50	0.50	0.10	9382631
Acid Extractable Nickel (Ni)	ug/g	14	23	26	24	20	0.50	0.20	9382631
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	0.10	9382631
Acid Extractable Silver (Ag)	ug/g	0.21	0.31	0.26	<0.20	0.20	0.20	0.040	9382631
Acid Extractable Thallium (Tl)	ug/g	0.12	0.14	0.17	0.16	0.16	0.050	0.010	9382631
Acid Extractable Uranium (U)	ug/g	0.65	0.61	0.81	0.77	0.69	0.050	0.030	9382631
Acid Extractable Vanadium (V)	ug/g	30	36	45	39	39	5.0	0.50	9382631
Acid Extractable Zinc (Zn)	ug/g	53	56	71	71	58	5.0	0.50	9382631
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	0.030	9382631
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									



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Bureau Veritas Job #: C4D5072
Report Date: 2024/05/15

Soil Engineers Ltd
Client Project #: 2009-E125
Site Location: TOWN OF CALEDON
Sampler Initials: AB

O.REG 153 OC PESTICIDES (SOIL)

Bureau Veritas ID		ZCA699	ZCA700				ZCA700			
Sampling Date		2024/05/03	2024/05/03				2024/05/03			
COC Number		N/A	N/A				N/A			
	UNITS	TP-1	TP-2	RDL	MDL	QC Batch	TP-2 Lab-Dup	RDL	MDL	QC Batch
Calculated Parameters										
Chlordane (Total)	ug/g	<0.0020	<0.0020	0.0020	N/A	9374827				
o,p-DDD + p,p-DDD	ug/g	<0.0020	<0.0020	0.0020	N/A	9374827				
o,p-DDE + p,p-DDE	ug/g	<0.0020	<0.0020	0.0020	N/A	9374827				
o,p-DDT + p,p-DDT	ug/g	<0.0020	<0.0020	0.0020	N/A	9374827				
Total Endosulfan	ug/g	<0.0020	<0.0020	0.0020	N/A	9374827				
Pesticides & Herbicides										
Aldrin	ug/g	<0.0020	<0.0020	0.0020	0.00040	9382458	<0.0020	0.0020	0.00040	9382458
a-Chlordane	ug/g	<0.0020	<0.0020	0.0020	0.00040	9382458	<0.0020	0.0020	0.00040	9382458
g-Chlordane	ug/g	<0.0020	<0.0020	0.0020	0.00040	9382458	<0.0020	0.0020	0.00040	9382458
o,p-DDD	ug/g	<0.0020	<0.0020	0.0020	0.00040	9382458	<0.0020	0.0020	0.00040	9382458
p,p-DDD	ug/g	<0.0020	<0.0020	0.0020	0.00040	9382458	<0.0020	0.0020	0.00040	9382458
o,p-DDE	ug/g	<0.0020	<0.0020	0.0020	0.00040	9382458	<0.0020	0.0020	0.00040	9382458
p,p-DDE	ug/g	<0.0020	<0.0020	0.0020	0.00040	9382458	<0.0020	0.0020	0.00040	9382458
o,p-DDT	ug/g	<0.0020	<0.0020	0.0020	0.00040	9382458	<0.0020	0.0020	0.00040	9382458
p,p-DDT	ug/g	<0.0020	<0.0020	0.0020	0.00040	9382458	<0.0020	0.0020	0.00040	9382458
Dieldrin	ug/g	<0.0020	<0.0020	0.0020	0.00040	9382458	<0.0020	0.0020	0.00040	9382458
Lindane	ug/g	<0.0020	<0.0020	0.0020	0.00040	9382458	<0.0020	0.0020	0.00040	9382458
Endosulfan I (alpha)	ug/g	<0.0020	<0.0020	0.0020	0.00040	9382458	<0.0020	0.0020	0.00040	9382458
Endosulfan II (beta)	ug/g	<0.0020	<0.0020	0.0020	0.00040	9382458	<0.0020	0.0020	0.00040	9382458
Endrin	ug/g	<0.0020	<0.0020	0.0020	0.00040	9382458	<0.0020	0.0020	0.00040	9382458
Heptachlor	ug/g	<0.0020	<0.0020	0.0020	0.00040	9382458	<0.0020	0.0020	0.00040	9382458
Heptachlor epoxide	ug/g	<0.0020	<0.0020	0.0020	0.00040	9382458	<0.0020	0.0020	0.00040	9382458
Hexachlorobenzene	ug/g	<0.0020	<0.0020	0.0020	0.00040	9382458	<0.0020	0.0020	0.00040	9382458
Hexachlorobutadiene	ug/g	<0.0020	<0.0020	0.0020	N/A	9382458	<0.0020	0.0020	N/A	9382458
Hexachloroethane	ug/g	<0.0020	<0.0020	0.0020	N/A	9382458	<0.0020	0.0020	N/A	9382458
Methoxychlor	ug/g	<0.0050	<0.0050	0.0050	0.0016	9382458	<0.0050	0.0050	0.0016	9382458
Surrogate Recovery (%)										
2,4,5,6-Tetrachloro-m-xylene	%	97	83			9382458	91			9382458
Decachlorobiphenyl	%	97	90			9382458	100			9382458
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate N/A = Not Applicable										



BUREAU
VERITAS

Bureau Veritas Job #: C4D5072
Report Date: 2024/05/15

Soil Engineers Ltd
Client Project #: 2009-E125
Site Location: TOWN OF CALEDON
Sampler Initials: AB

O.REG 153 OC PESTICIDES (SOIL)

Bureau Veritas ID		ZCA701	ZCA702	ZCA703			
Sampling Date		2024/05/03	2024/05/03	2024/05/03			
COC Number		N/A	N/A	N/A			
	UNITS	TP-3	TP-4	TP-5	RDL	MDL	QC Batch
Calculated Parameters							
Chlordane (Total)	ug/g	<0.0020	<0.0020	<0.0020	0.0020	N/A	9374827
o,p-DDD + p,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	0.0020	N/A	9374827
o,p-DDE + p,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	0.0020	N/A	9374827
o,p-DDT + p,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	0.0020	N/A	9374827
Total Endosulfan	ug/g	<0.0020	<0.0020	<0.0020	0.0020	N/A	9374827
Pesticides & Herbicides							
Aldrin	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9382458
a-Chlordane	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9382458
g-Chlordane	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9382458
o,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9382458
p,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9382458
o,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9382458
p,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9382458
o,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9382458
p,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9382458
Dieldrin	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9382458
Lindane	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9382458
Endosulfan I (alpha)	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9382458
Endosulfan II (beta)	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9382458
Endrin	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9382458
Heptachlor	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9382458
Heptachlor epoxide	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9382458
Hexachlorobenzene	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9382458
Hexachlorobutadiene	ug/g	<0.0020	<0.0020	<0.0020	0.0020	N/A	9382458
Hexachloroethane	ug/g	<0.0020	<0.0020	<0.0020	0.0020	N/A	9382458
Methoxychlor	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0016	9382458
Surrogate Recovery (%)							
2,4,5,6-Tetrachloro-m-xylene	%	94	97	91			9382458
Decachlorobiphenyl	%	97	99	92			9382458
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable							



RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		ZCA699	ZCA700	ZCA700	ZCA701	ZCA702	ZCA703			
Sampling Date		2024/05/03	2024/05/03	2024/05/03	2024/05/03	2024/05/03	2024/05/03			
COC Number		N/A	N/A	N/A	N/A	N/A	N/A			
	UNITS	TP-1	TP-2	TP-2 Lab-Dup	TP-3	TP-4	TP-5	RDL	MDL	QC Batch
Inorganics										
Moisture	%	21	19	19	23	23	18	1.0	0.50	9378029
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate										



BUREAU
VERITAS

Bureau Veritas Job #: C4D5072
Report Date: 2024/05/15

Soil Engineers Ltd
Client Project #: 2009-E125
Site Location: TOWN OF CALEDON
Sampler Initials: AB

TEST SUMMARY

Bureau Veritas ID: ZCA699
Sample ID: TP-1
Matrix: Soil

Collected: 2024/05/03
Shipped:
Received: 2024/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	9383965	2024/05/09	2024/05/10	Prgya Panchal
Hexavalent Chromium in Soil by IC	IC/SPEC	9385314	2024/05/10	2024/05/10	Rupinder Sihota
Acid Extractable Metals by ICPMS	ICP/MS	9382631	2024/05/09	2024/05/09	Viviana Canzonieri
Moisture	BAL	9378029	N/A	2024/05/07	Joe Thomas
OC Pesticides (Selected) & PCB	GC/ECD	9382458	2024/05/09	2024/05/10	Akruti Patel
OC Pesticides Summed Parameters	CALC	9374827	N/A	2024/05/08	Automated Statchk
pH CaCl2 EXTRACT	AT	9383644	2024/05/09	2024/05/09	Kien Tran

Bureau Veritas ID: ZCA700
Sample ID: TP-2
Matrix: Soil

Collected: 2024/05/03
Shipped:
Received: 2024/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	9383965	2024/05/09	2024/05/10	Prgya Panchal
Hexavalent Chromium in Soil by IC	IC/SPEC	9385314	2024/05/10	2024/05/10	Rupinder Sihota
Acid Extractable Metals by ICPMS	ICP/MS	9382631	2024/05/09	2024/05/09	Viviana Canzonieri
Moisture	BAL	9378029	N/A	2024/05/07	Joe Thomas
OC Pesticides (Selected) & PCB	GC/ECD	9382458	2024/05/09	2024/05/10	Akruti Patel
OC Pesticides Summed Parameters	CALC	9374827	N/A	2024/05/08	Automated Statchk
pH CaCl2 EXTRACT	AT	9383644	2024/05/09	2024/05/09	Kien Tran

Bureau Veritas ID: ZCA700 Dup
Sample ID: TP-2
Matrix: Soil

Collected: 2024/05/03
Shipped:
Received: 2024/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	9378029	N/A	2024/05/07	Joe Thomas
OC Pesticides (Selected) & PCB	GC/ECD	9382458	2024/05/09	2024/05/10	Akruti Patel

Bureau Veritas ID: ZCA701
Sample ID: TP-3
Matrix: Soil

Collected: 2024/05/03
Shipped:
Received: 2024/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	9383965	2024/05/09	2024/05/10	Prgya Panchal
Hexavalent Chromium in Soil by IC	IC/SPEC	9385314	2024/05/10	2024/05/10	Rupinder Sihota
Acid Extractable Metals by ICPMS	ICP/MS	9382631	2024/05/09	2024/05/09	Viviana Canzonieri
Moisture	BAL	9378029	N/A	2024/05/07	Joe Thomas
OC Pesticides (Selected) & PCB	GC/ECD	9382458	2024/05/09	2024/05/10	Akruti Patel
OC Pesticides Summed Parameters	CALC	9374827	N/A	2024/05/08	Automated Statchk
pH CaCl2 EXTRACT	AT	9383644	2024/05/09	2024/05/09	Kien Tran



BUREAU
VERITAS

Bureau Veritas Job #: C4D5072
Report Date: 2024/05/15

Soil Engineers Ltd
Client Project #: 2009-E125
Site Location: TOWN OF CALEDON
Sampler Initials: AB

TEST SUMMARY

Bureau Veritas ID: ZCA702
Sample ID: TP-4
Matrix: Soil

Collected: 2024/05/03
Shipped:
Received: 2024/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	9383965	2024/05/09	2024/05/10	Prgya Panchal
Hexavalent Chromium in Soil by IC	IC/SPEC	9385314	2024/05/10	2024/05/10	Rupinder Sihota
Acid Extractable Metals by ICPMS	ICP/MS	9382631	2024/05/09	2024/05/09	Viviana Canzonieri
Moisture	BAL	9378029	N/A	2024/05/07	Joe Thomas
OC Pesticides (Selected) & PCB	GC/ECD	9382458	2024/05/09	2024/05/10	Akruti Patel
OC Pesticides Summed Parameters	CALC	9374827	N/A	2024/05/08	Automated Statchk
pH CaCl2 EXTRACT	AT	9383644	2024/05/09	2024/05/09	Kien Tran

Bureau Veritas ID: ZCA703
Sample ID: TP-5
Matrix: Soil

Collected: 2024/05/03
Shipped:
Received: 2024/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	9383965	2024/05/09	2024/05/10	Prgya Panchal
Hexavalent Chromium in Soil by IC	IC/SPEC	9385314	2024/05/10	2024/05/10	Rupinder Sihota
Acid Extractable Metals by ICPMS	ICP/MS	9382631	2024/05/09	2024/05/09	Viviana Canzonieri
Moisture	BAL	9378029	N/A	2024/05/07	Joe Thomas
OC Pesticides (Selected) & PCB	GC/ECD	9382458	2024/05/09	2024/05/10	Akruti Patel
OC Pesticides Summed Parameters	CALC	9374827	N/A	2024/05/08	Automated Statchk
pH CaCl2 EXTRACT	AT	9383644	2024/05/09	2024/05/09	Kien Tran

Bureau Veritas ID: ZCA704
Sample ID: DUP S3
Matrix: Soil

Collected: 2024/05/03
Shipped:
Received: 2024/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	9382631	2024/05/09	2024/05/09	Viviana Canzonieri



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VERITAS

Bureau Veritas Job #: C4D5072
Report Date: 2024/05/15

Soil Engineers Ltd
Client Project #: 2009-E125
Site Location: TOWN OF CALEDON
Sampler Initials: AB

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	7.0°C
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Results relate only to the items tested.



BUREAU
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Bureau Veritas Job #: C4D5072

Report Date: 2024/05/15

QUALITY ASSURANCE REPORT

Soil Engineers Ltd

Client Project #: 2009-E125

Site Location: TOWN OF CALEDON

Sampler Initials: AB

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9382458	2,4,5,6-Tetrachloro-m-xylene	2024/05/10	88	50 - 130	79	50 - 130	93	%		
9382458	Decachlorobiphenyl	2024/05/10	103	50 - 130	93	50 - 130	118	%		
9378029	Moisture	2024/05/07							2.1	20
9382458	a-Chlordane	2024/05/10	109	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40
9382458	Aldrin	2024/05/10	88	50 - 130	78	50 - 130	<0.0020	ug/g	NC	40
9382458	Dieldrin	2024/05/10	122	50 - 130	105	50 - 130	<0.0020	ug/g	NC	40
9382458	Endosulfan I (alpha)	2024/05/10	127	50 - 130	107	50 - 130	<0.0020	ug/g	NC	40
9382458	Endosulfan II (beta)	2024/05/10	116	50 - 130	96	50 - 130	<0.0020	ug/g	NC	40
9382458	Endrin	2024/05/10	120	50 - 130	102	50 - 130	<0.0020	ug/g	NC	40
9382458	g-Chlordane	2024/05/10	113	50 - 130	90	50 - 130	<0.0020	ug/g	NC	40
9382458	Heptachlor epoxide	2024/05/10	112	50 - 130	93	50 - 130	<0.0020	ug/g	NC	40
9382458	Heptachlor	2024/05/10	85	50 - 130	74	50 - 130	<0.0020	ug/g	NC	40
9382458	Hexachlorobenzene	2024/05/10	86	50 - 130	87	50 - 130	<0.0020	ug/g	NC	40
9382458	Hexachlorobutadiene	2024/05/10	79	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40
9382458	Hexachloroethane	2024/05/10	61	50 - 130	75	50 - 130	<0.0020	ug/g	NC	40
9382458	Lindane	2024/05/10	105	50 - 130	85	50 - 130	<0.0020	ug/g	NC	40
9382458	Methoxychlor	2024/05/10	130	50 - 130	116	50 - 130	<0.0050	ug/g	NC	40
9382458	o,p-DDD	2024/05/10	121	50 - 130	103	50 - 130	<0.0020	ug/g	NC	40
9382458	o,p-DDE	2024/05/10	109	50 - 130	90	50 - 130	<0.0020	ug/g	NC	40
9382458	o,p-DDT	2024/05/10	112	50 - 130	97	50 - 130	<0.0020	ug/g	NC	40
9382458	p,p-DDD	2024/05/10	125	50 - 130	105	50 - 130	<0.0020	ug/g	NC	40
9382458	p,p-DDE	2024/05/10	90	50 - 130	87	50 - 130	<0.0020	ug/g	NC	40
9382458	p,p-DDT	2024/05/10	125	50 - 130	105	50 - 130	<0.0020	ug/g	NC	40
9382631	Acid Extractable Antimony (Sb)	2024/05/09	78	75 - 125	102	80 - 120	<0.20	ug/g	NC	30
9382631	Acid Extractable Arsenic (As)	2024/05/09	94	75 - 125	101	80 - 120	<1.0	ug/g	11	30
9382631	Acid Extractable Barium (Ba)	2024/05/09	NC	75 - 125	107	80 - 120	<0.50	ug/g	6.7	30
9382631	Acid Extractable Beryllium (Be)	2024/05/09	94	75 - 125	103	80 - 120	<0.20	ug/g	6.8	30
9382631	Acid Extractable Boron (B)	2024/05/09	85	75 - 125	101	80 - 120	<5.0	ug/g	5.8	30
9382631	Acid Extractable Cadmium (Cd)	2024/05/09	89	75 - 125	95	80 - 120	<0.10	ug/g	2.8	30
9382631	Acid Extractable Chromium (Cr)	2024/05/09	94	75 - 125	98	80 - 120	<1.0	ug/g	7.3	30
9382631	Acid Extractable Cobalt (Co)	2024/05/09	89	75 - 125	96	80 - 120	<0.10	ug/g	4.7	30



BUREAU
VERITAS

Bureau Veritas Job #: C4D5072

Report Date: 2024/05/15

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd

Client Project #: 2009-E125

Site Location: TOWN OF CALEDON

Sampler Initials: AB

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9382631	Acid Extractable Copper (Cu)	2024/05/09	91	75 - 125	101	80 - 120	<0.50	ug/g	6.8	30
9382631	Acid Extractable Lead (Pb)	2024/05/09	92	75 - 125	101	80 - 120	<1.0	ug/g	6.6	30
9382631	Acid Extractable Mercury (Hg)	2024/05/09	96	75 - 125	107	80 - 120	<0.050	ug/g	NC	30
9382631	Acid Extractable Molybdenum (Mo)	2024/05/09	87	75 - 125	96	80 - 120	<0.50	ug/g	NC	30
9382631	Acid Extractable Nickel (Ni)	2024/05/09	92	75 - 125	99	80 - 120	<0.50	ug/g	7.2	30
9382631	Acid Extractable Selenium (Se)	2024/05/09	89	75 - 125	96	80 - 120	<0.50	ug/g	NC	30
9382631	Acid Extractable Silver (Ag)	2024/05/09	88	75 - 125	97	80 - 120	<0.20	ug/g	NC	30
9382631	Acid Extractable Thallium (Tl)	2024/05/09	95	75 - 125	105	80 - 120	<0.050	ug/g	1.8	30
9382631	Acid Extractable Uranium (U)	2024/05/09	92	75 - 125	101	80 - 120	<0.050	ug/g	5.8	30
9382631	Acid Extractable Vanadium (V)	2024/05/09	NC	75 - 125	101	80 - 120	<5.0	ug/g	6.6	30
9382631	Acid Extractable Zinc (Zn)	2024/05/09	NC	75 - 125	96	80 - 120	<5.0	ug/g	6.8	30
9383644	Available (CaCl2) pH	2024/05/09			100	97 - 103			0.11	N/A
9383965	WAD Cyanide (Free)	2024/05/10	88	75 - 125	97	80 - 120	<0.01	ug/g	NC	35
9385314	Chromium (VI)	2024/05/10	0 (1)	70 - 130	92	80 - 120	<0.18	ug/g	NC	35

N/A = Not Applicable

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

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

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

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

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

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

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

(1) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The sample was reanalyzed with the same results.



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Bureau Veritas Job #: C4D5072
Report Date: 2024/05/15

Soil Engineers Ltd
Client Project #: 2009-E125
Site Location: TOWN OF CALEDON
Sampler Initials: AB

VALIDATION SIGNATURE PAGE

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

Anastassia Hamanov, Scientific Specialist

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



Your Project #: 2009-E125
 Your C.O.C. #: N/A

Attention: Munir Ahmad

Soil Engineers Ltd
 90 West Beaver Creek Road
 Unit 100
 Richmond Hill, ON
 CANADA L4B 1E7

Report Date: 2024/06/18
 Report #: R8197207
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4H8293

Received: 2024/06/11, 14:30

Sample Matrix: Soil
 # Samples Received: 12

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Methylnaphthalene Sum	9	N/A	2024/06/17	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	9	2024/06/14	2024/06/17	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	7	N/A	2024/06/17		EPA 8260C m
1,3-Dichloropropene Sum	2	N/A	2024/06/18		EPA 8260C m
Conductivity	9	2024/06/17	2024/06/17	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	9	2024/06/15	2024/06/17	CAM SOP-00436	EPA 3060A/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	1	N/A	2024/06/14	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	8	2024/06/13	2024/06/14	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	10	2024/06/15	2024/06/18	CAM SOP-00447	EPA 6020B m
Moisture	11	N/A	2024/06/13	CAM SOP-00445	Carter 2nd ed 70.2 m
PAH Compounds in Soil by GC/MS (SIM)	9	2024/06/14	2024/06/14	CAM SOP-00318	EPA 8270E
Sodium Adsorption Ratio (SAR)	9	N/A	2024/06/17	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs	7	N/A	2024/06/14	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds in Soil	2	N/A	2024/06/14	CAM SOP-00228	EPA 8260D

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope



Your Project #: 2009-E125
Your C.O.C. #: N/A

Attention: Munir Ahmad

Soil Engineers Ltd
90 West Beaver Creek Road
Unit 100
Richmond Hill, ON
CANADA L4B 1E7

Report Date: 2024/06/18
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CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4H8293

Received: 2024/06/11, 14:30

dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Soils are reported on a dry weight basis unless otherwise specified.

(2) No lab extraction date is given for F1BTX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.

(3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key



**AUTHORIZED REPORT
RAPPORT AUTORISÉ**

Bureau Veritas

18 Jun 2024 17:58:01

Please direct all questions regarding this Certificate of Analysis to:

Antonella Brasil, Senior Project Manager
Email: Antonella.Brasil@bureauveritas.com
Phone# (905)817-5817

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This report has been generated and distributed using a secure automated process.

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C4H8293
Report Date: 2024/06/18

Soil Engineers Ltd
Client Project #: 2009-E125
Sampler Initials: AB

O.REG 153 ICPCS METALS (SOIL)

Bureau Veritas ID		ZKZ631			
Sampling Date		2024/06/07			
COC Number		N/A			
	UNITS	DUP S4	RDL	MDL	QC Batch
Metals					
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	0.10	9457990
Acid Extractable Arsenic (As)	ug/g	1.3	1.0	0.10	9457990
Acid Extractable Barium (Ba)	ug/g	120	0.50	0.30	9457990
Acid Extractable Beryllium (Be)	ug/g	0.99	0.20	0.020	9457990
Acid Extractable Boron (B)	ug/g	5.1	5.0	1.0	9457990
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	0.030	9457990
Acid Extractable Chromium (Cr)	ug/g	33	1.0	0.20	9457990
Acid Extractable Cobalt (Co)	ug/g	7.0	0.10	0.020	9457990
Acid Extractable Copper (Cu)	ug/g	14	0.50	0.20	9457990
Acid Extractable Lead (Pb)	ug/g	12	1.0	0.10	9457990
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	0.10	9457990
Acid Extractable Nickel (Ni)	ug/g	24	0.50	0.20	9457990
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	0.10	9457990
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	0.040	9457990
Acid Extractable Thallium (Tl)	ug/g	0.19	0.050	0.010	9457990
Acid Extractable Uranium (U)	ug/g	1.4	0.050	0.030	9457990
Acid Extractable Vanadium (V)	ug/g	35	5.0	0.50	9457990
Acid Extractable Zinc (Zn)	ug/g	95	5.0	0.50	9457990
Acid Extractable Mercury (Hg)	ug/g	0.056	0.050	0.030	9457990
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					



O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		ZKZ622	ZKZ623	ZKZ624	ZKZ625			
Sampling Date		2024/06/07	2024/06/07	2024/06/07	2024/06/07			
COC Number		N/A	N/A	N/A	N/A			
	UNITS	BH101/1	BH102/1A	BH103/1	BH104/1A	RDL	MDL	QC Batch

Calculated Parameters

Sodium Adsorption Ratio	N/A	0.39	0.17	0.22 (1)	0.29			9450121
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Inorganics

Conductivity	mS/cm	0.19	0.38	0.22	0.25	0.002	0.0005	9459170
Chromium (VI)	ug/g	<0.18	<0.18	<0.18	0.34	0.18	0.050	9457965

Metals

Hot Water Ext. Boron (B)	ug/g	<0.050	0.19	0.29	0.18	0.050	0.030	9457002
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	0.29	<0.20	0.20	0.10	9457990
Acid Extractable Arsenic (As)	ug/g	4.2	3.5	4.8	2.8	1.0	0.10	9457990
Acid Extractable Barium (Ba)	ug/g	91	72	58	30	0.50	0.30	9457990
Acid Extractable Beryllium (Be)	ug/g	0.90	0.81	0.48	0.31	0.20	0.020	9457990
Acid Extractable Boron (B)	ug/g	8.9	<5.0	5.4	<5.0	5.0	1.0	9457990
Acid Extractable Cadmium (Cd)	ug/g	0.10	0.19	0.16	<0.10	0.10	0.030	9457990
Acid Extractable Chromium (Cr)	ug/g	28	24	19	10	1.0	0.20	9457990
Acid Extractable Cobalt (Co)	ug/g	14	12	7.9	5.1	0.10	0.020	9457990
Acid Extractable Copper (Cu)	ug/g	25	15	30	15	0.50	0.20	9457990
Acid Extractable Lead (Pb)	ug/g	10	14	17	9.4	1.0	0.10	9457990
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	<0.50	0.85	<0.50	0.50	0.10	9457990
Acid Extractable Nickel (Ni)	ug/g	32	22	19	11	0.50	0.20	9457990
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	<0.50	<0.50	0.50	0.10	9457990
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	<0.20	<0.20	0.20	0.040	9457990
Acid Extractable Thallium (Tl)	ug/g	0.14	0.12	0.11	0.055	0.050	0.010	9457990
Acid Extractable Uranium (U)	ug/g	0.52	0.60	0.49	0.35	0.050	0.030	9457990
Acid Extractable Vanadium (V)	ug/g	37	36	28	19	5.0	0.50	9457990
Acid Extractable Zinc (Zn)	ug/g	61	67	61	44	5.0	0.50	9457990
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	<0.050	<0.050	0.050	0.030	9457990

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch
 (1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.



BUREAU
VERITAS

Bureau Veritas Job #: C4H8293
Report Date: 2024/06/18

Soil Engineers Ltd
Client Project #: 2009-E125
Sampler Initials: AB

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		ZKZ625				ZKZ626	ZKZ627	ZKZ628			
Sampling Date		2024/06/07				2024/06/07	2024/06/07	2024/06/07			
COC Number		N/A				N/A	N/A	N/A			
	UNITS	BH104/1A Lab-Dup	RDL	MDL	QC Batch	BH105/1	BH106/1	BH107/1	RDL	MDL	QC Batch

Calculated Parameters

Sodium Adsorption Ratio	N/A					0.20	0.34	0.28 (1)			9450121
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Inorganics

Conductivity	mS/cm	0.24	0.002	0.0005	9459170	0.30	0.12	0.13	0.002	0.0005	9459170
Chromium (VI)	ug/g					<0.18	<0.18	<0.18	0.18	0.050	9457965

Metals

Hot Water Ext. Boron (B)	ug/g					0.078	0.18	<0.050	0.050	0.030	9457002
Acid Extractable Antimony (Sb)	ug/g					<0.20	<0.20	<0.20	0.20	0.10	9457990
Acid Extractable Arsenic (As)	ug/g					3.7	1.5	3.5	1.0	0.10	9457990
Acid Extractable Barium (Ba)	ug/g					99	130	78	0.50	0.30	9457990
Acid Extractable Beryllium (Be)	ug/g					0.91	1.1	0.70	0.20	0.020	9457990
Acid Extractable Boron (B)	ug/g					6.2	<5.0	6.8	5.0	1.0	9457990
Acid Extractable Cadmium (Cd)	ug/g					0.13	0.12	<0.10	0.10	0.030	9457990
Acid Extractable Chromium (Cr)	ug/g					28	32	23	1.0	0.20	9457990
Acid Extractable Cobalt (Co)	ug/g					12	9.0	11	0.10	0.020	9457990
Acid Extractable Copper (Cu)	ug/g					21	21	21	0.50	0.20	9457990
Acid Extractable Lead (Pb)	ug/g					13	14	9.8	1.0	0.10	9457990
Acid Extractable Molybdenum (Mo)	ug/g					<0.50	<0.50	<0.50	0.50	0.10	9457990
Acid Extractable Nickel (Ni)	ug/g					27	27	23	0.50	0.20	9457990
Acid Extractable Selenium (Se)	ug/g					<0.50	<0.50	<0.50	0.50	0.10	9457990
Acid Extractable Silver (Ag)	ug/g					<0.20	<0.20	<0.20	0.20	0.040	9457990
Acid Extractable Thallium (Tl)	ug/g					0.14	0.16	0.14	0.050	0.010	9457990
Acid Extractable Uranium (U)	ug/g					0.52	1.3	0.47	0.050	0.030	9457990
Acid Extractable Vanadium (V)	ug/g					41	41	32	5.0	0.50	9457990
Acid Extractable Zinc (Zn)	ug/g					64	98	53	5.0	0.50	9457990
Acid Extractable Mercury (Hg)	ug/g					<0.050	0.059	<0.050	0.050	0.030	9457990

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch
 Lab-Dup = Laboratory Initiated Duplicate
 (1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.



O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		ZKZ629	ZKZ630			
Sampling Date		2024/06/07	2024/06/07			
COC Number		N/A	N/A			
	UNITS	BH108/1	BH109/1	RDL	MDL	QC Batch
Calculated Parameters						
Sodium Adsorption Ratio	N/A	0.29 (1)	0.33 (1)			9450121
Inorganics						
Conductivity	mS/cm	0.13	0.11	0.002	0.0005	9459170
Chromium (VI)	ug/g	<0.18	<0.18	0.18	0.050	9457965
Metals						
Hot Water Ext. Boron (B)	ug/g	0.062	0.16	0.050	0.030	9457002
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	0.20	0.10	9457990
Acid Extractable Arsenic (As)	ug/g	3.7	4.3	1.0	0.10	9457990
Acid Extractable Barium (Ba)	ug/g	62	120	0.50	0.30	9457990
Acid Extractable Beryllium (Be)	ug/g	0.65	1.2	0.20	0.020	9457990
Acid Extractable Boron (B)	ug/g	6.4	7.5	5.0	1.0	9457990
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.12	0.10	0.030	9457990
Acid Extractable Chromium (Cr)	ug/g	20	35	1.0	0.20	9457990
Acid Extractable Cobalt (Co)	ug/g	11	16	0.10	0.020	9457990
Acid Extractable Copper (Cu)	ug/g	23	25	0.50	0.20	9457990
Acid Extractable Lead (Pb)	ug/g	9.1	20	1.0	0.10	9457990
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	<0.50	0.50	0.10	9457990
Acid Extractable Nickel (Ni)	ug/g	24	36	0.50	0.20	9457990
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	0.50	0.10	9457990
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	0.20	0.040	9457990
Acid Extractable Thallium (Tl)	ug/g	0.13	0.18	0.050	0.010	9457990
Acid Extractable Uranium (U)	ug/g	0.43	0.56	0.050	0.030	9457990
Acid Extractable Vanadium (V)	ug/g	30	47	5.0	0.50	9457990
Acid Extractable Zinc (Zn)	ug/g	54	80	5.0	0.50	9457990
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	0.050	0.030	9457990
RDL = Reportable Detection Limit QC Batch = Quality Control Batch (1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.						



BUREAU
VERITAS

Bureau Veritas Job #: C4H8293
Report Date: 2024/06/18

Soil Engineers Ltd
Client Project #: 2009-E125
Sampler Initials: AB

O.REG 153 PAHS (SOIL)

Bureau Veritas ID		ZKZ622	ZKZ623	ZKZ624	ZKZ625	ZKZ626	ZKZ627			
Sampling Date		2024/06/07	2024/06/07	2024/06/07	2024/06/07	2024/06/07	2024/06/07			
COC Number		N/A	N/A	N/A	N/A	N/A	N/A			
	UNITS	BH101/1	BH102/1A	BH103/1	BH104/1A	BH105/1	BH106/1	RDL	MDL	QC Batch

Calculated Parameters

Methylnaphthalene, 2-(1-)	ug/g	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	0.0071	N/A	9449413
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Polyaromatic Hydrocarbons

Acenaphthene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	0.0020	9455161
Acenaphthylene	ug/g	<0.0050	<0.0050	0.0096	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9455161
Anthracene	ug/g	<0.0050	<0.0050	0.012	0.0082	<0.0050	<0.0050	0.0050	0.0010	9455161
Benzo(a)anthracene	ug/g	<0.0050	<0.0050	0.045	0.054	<0.0050	<0.0050	0.0050	0.0020	9455161
Benzo(a)pyrene	ug/g	<0.0050	<0.0050	0.055	0.069	<0.0050	<0.0050	0.0050	0.0010	9455161
Benzo(b,j)fluoranthene	ug/g	<0.0050	0.0054	0.074	0.090	<0.0050	<0.0050	0.0050	0.0020	9455161
Benzo(g,h,i)perylene	ug/g	<0.0050	<0.0050	0.037	0.046	<0.0050	<0.0050	0.0050	0.0040	9455161
Benzo(k)fluoranthene	ug/g	<0.0050	<0.0050	0.026	0.035	<0.0050	<0.0050	0.0050	0.0020	9455161
Chrysene	ug/g	<0.0050	<0.0050	0.040	0.050	<0.0050	<0.0050	0.0050	0.0020	9455161
Dibenzo(a,h)anthracene	ug/g	<0.0050	<0.0050	0.0079	0.0096	<0.0050	<0.0050	0.0050	0.0040	9455161
Fluoranthene	ug/g	<0.0050	0.0054	0.094	0.12	<0.0050	<0.0050	0.0050	0.0010	9455161
Fluorene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9455161
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	<0.0050	0.037	0.049	<0.0050	<0.0050	0.0050	0.0040	9455161
1-Methylnaphthalene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9455161
2-Methylnaphthalene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9455161
Naphthalene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9455161
Phenanthrene	ug/g	<0.0050	<0.0050	0.037	0.037	<0.0050	<0.0050	0.0050	0.0010	9455161
Pyrene	ug/g	<0.0050	<0.0050	0.080	0.10	<0.0050	<0.0050	0.0050	0.0010	9455161

Surrogate Recovery (%)

D10-Anthracene	%	109	113	115	116	118	114			9455161
D14-Terphenyl (FS)	%	103	108	107	108	110	107			9455161
D8-Acenaphthylene	%	91	94	98	98	100	97			9455161

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

N/A = Not Applicable



O.REG 153 PAHS (SOIL)

Bureau Veritas ID		ZKZ629	ZKZ630	ZKZ632			
Sampling Date		2024/06/07	2024/06/07	2024/06/07			
COC Number		N/A	N/A	N/A			
	UNITS	BH108/1	BH109/1	DUP S5	RDL	MDL	QC Batch
Calculated Parameters							
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	<0.0071	<0.0071	0.0071	N/A	9449413
Polyaromatic Hydrocarbons							
Acenaphthene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0020	9455161
Acenaphthylene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9455161
Anthracene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9455161
Benzo(a)anthracene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0020	9455161
Benzo(a)pyrene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9455161
Benzo(b/j)fluoranthene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0020	9455161
Benzo(g,h,i)perylene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0040	9455161
Benzo(k)fluoranthene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0020	9455161
Chrysene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0020	9455161
Dibenzo(a,h)anthracene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0040	9455161
Fluoranthene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9455161
Fluorene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9455161
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0040	9455161
1-Methylnaphthalene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9455161
2-Methylnaphthalene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9455161
Naphthalene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9455161
Phenanthrene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9455161
Pyrene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9455161
Surrogate Recovery (%)							
D10-Anthracene	%	111	106	109			9455161
D14-Terphenyl (FS)	%	104	99	102			9455161
D8-Acenaphthylene	%	93	89	92			9455161
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable							



O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

Bureau Veritas ID		ZKZ627			
Sampling Date		2024/06/07			
COC Number		N/A			
	UNITS	BH106/1	RDL	MDL	QC Batch
BTEX & F1 Hydrocarbons					
Benzene	ug/g	<0.020	0.020	0.020	9455172
Toluene	ug/g	<0.020	0.020	0.020	9455172
Ethylbenzene	ug/g	<0.020	0.020	0.020	9455172
o-Xylene	ug/g	<0.020	0.020	0.020	9455172
p+m-Xylene	ug/g	<0.040	0.040	0.040	9455172
Total Xylenes	ug/g	<0.040	0.040	0.040	9455172
F1 (C6-C10)	ug/g	<10	10	5.0	9455172
F1 (C6-C10) - BTEX	ug/g	<10	10	5.0	9455172
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	5.0	9454137
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	5.0	9454137
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	10	9454137
Reached Baseline at C50	ug/g	Yes			9454137
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	103			9455172
4-Bromofluorobenzene	%	86			9455172
D10-o-Xylene	%	95			9455172
D4-1,2-Dichloroethane	%	95			9455172
o-Terphenyl	%	85			9454137
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					



BUREAU
VERITAS

Bureau Veritas Job #: C4H8293
Report Date: 2024/06/18

Soil Engineers Ltd
Client Project #: 2009-E125
Sampler Initials: AB

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID		ZKZ622	ZKZ623	ZKZ624	ZKZ625	ZKZ626			
Sampling Date		2024/06/07	2024/06/07	2024/06/07	2024/06/07	2024/06/07			
COC Number		N/A	N/A	N/A	N/A	N/A			
	UNITS	BH101/1	BH102/1A	BH103/1	BH104/1A	BH105/1	RDL	MDL	QC Batch

Calculated Parameters									
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	0.010	9449414
Volatile Organics									
Acetone (2-Propanone)	ug/g	<0.49	<0.49	<0.49	<0.49	<0.49	0.49	0.49	9455734
Benzene	ug/g	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	0.0060	0.0060	9455734
Bromodichloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
Bromoform	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
Bromomethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
Carbon Tetrachloride	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
Chlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
Chloroform	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
Dibromochloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
1,1-Dichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
1,2-Dichloroethane	ug/g	<0.049	<0.049	<0.049	<0.049	<0.049	0.049	0.049	9455734
1,1-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
1,2-Dichloropropane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	0.030	9455734
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
Ethylbenzene	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	0.010	9455734
Ethylene Dibromide	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
Hexane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	<0.049	<0.049	<0.049	0.049	0.049	9455734
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	0.40	9455734
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	0.40	9455734
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
Styrene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
Tetrachloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
Toluene	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	0.020	9455734
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch



BUREAU
VERITAS

Bureau Veritas Job #: C4H8293
Report Date: 2024/06/18

Soil Engineers Ltd
Client Project #: 2009-E125
Sampler Initials: AB

O.REG 153 VOCs BY HS & F1-F4 (SOIL)

Bureau Veritas ID		ZKZ622	ZKZ623	ZKZ624	ZKZ625	ZKZ626			
Sampling Date		2024/06/07	2024/06/07	2024/06/07	2024/06/07	2024/06/07			
COC Number		N/A	N/A	N/A	N/A	N/A			
	UNITS	BH101/1	BH102/1A	BH103/1	BH104/1A	BH105/1	RDL	MDL	QC Batch
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
Trichloroethylene	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	0.010	9455734
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9455734
Vinyl Chloride	ug/g	<0.019	<0.019	<0.019	<0.019	<0.019	0.019	0.019	9455734
p+m-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	0.020	9455734
o-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	0.020	9455734
Total Xylenes	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	0.020	9455734
F1 (C6-C10)	ug/g	<10	<10	<10	<10	<10	10	2.0	9455734
F1 (C6-C10) - BTEX	ug/g	<10	<10	<10	<10	<10	10	2.0	9455734
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	<10	<10	<10	10	5.0	9454137
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	<50	<50	<50	50	5.0	9454137
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	<50	<50	<50	50	10	9454137
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes	Yes			9454137
Surrogate Recovery (%)									
o-Terphenyl	%	88	88	83	86	88			9454137
4-Bromofluorobenzene	%	97	95	97	97	97			9455734
D10-o-Xylene	%	100	108	102	101	106			9455734
D4-1,2-Dichloroethane	%	106	107	106	107	108			9455734
D8-Toluene	%	92	92	92	92	92			9455734
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									



O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID		ZKZ628				ZKZ628			
Sampling Date		2024/06/07				2024/06/07			
COC Number		N/A				N/A			
	UNITS	BH107/1	RDL	MDL	QC Batch	BH107/1 Lab-Dup	RDL	MDL	QC Batch
Calculated Parameters									
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	0.010	9449414				
Volatile Organics									
Acetone (2-Propanone)	ug/g	<0.49	0.49	0.49	9455734				
Benzene	ug/g	<0.0060	0.0060	0.0060	9455734				
Bromodichloromethane	ug/g	<0.040	0.040	0.040	9455734				
Bromoform	ug/g	<0.040	0.040	0.040	9455734				
Bromomethane	ug/g	<0.040	0.040	0.040	9455734				
Carbon Tetrachloride	ug/g	<0.040	0.040	0.040	9455734				
Chlorobenzene	ug/g	<0.040	0.040	0.040	9455734				
Chloroform	ug/g	<0.040	0.040	0.040	9455734				
Dibromochloromethane	ug/g	<0.040	0.040	0.040	9455734				
1,2-Dichlorobenzene	ug/g	<0.040	0.040	0.040	9455734				
1,3-Dichlorobenzene	ug/g	<0.040	0.040	0.040	9455734				
1,4-Dichlorobenzene	ug/g	<0.040	0.040	0.040	9455734				
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	0.040	9455734				
1,1-Dichloroethane	ug/g	<0.040	0.040	0.040	9455734				
1,2-Dichloroethane	ug/g	<0.049	0.049	0.049	9455734				
1,1-Dichloroethylene	ug/g	<0.040	0.040	0.040	9455734				
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	0.040	9455734				
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	0.040	9455734				
1,2-Dichloropropane	ug/g	<0.040	0.040	0.040	9455734				
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	0.030	9455734				
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	0.040	9455734				
Ethylbenzene	ug/g	<0.010	0.010	0.010	9455734				
Ethylene Dibromide	ug/g	<0.040	0.040	0.040	9455734				
Hexane	ug/g	<0.040	0.040	0.040	9455734				
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	0.049	9455734				
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	0.40	9455734				
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	0.40	9455734				
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	0.040	9455734				
Styrene	ug/g	<0.040	0.040	0.040	9455734				
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	0.040	9455734				
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	0.040	9455734				
Tetrachloroethylene	ug/g	<0.040	0.040	0.040	9455734				
Toluene	ug/g	<0.020	0.020	0.020	9455734				
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate									



O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID		ZKZ628				ZKZ628			
Sampling Date		2024/06/07				2024/06/07			
COC Number		N/A				N/A			
	UNITS	BH107/1	RDL	MDL	QC Batch	BH107/1 Lab-Dup	RDL	MDL	QC Batch
1,1,1-Trichloroethane	ug/g	<0.040	0.040	0.040	9455734				
1,1,2-Trichloroethane	ug/g	<0.040	0.040	0.040	9455734				
Trichloroethylene	ug/g	<0.010	0.010	0.010	9455734				
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	0.040	9455734				
Vinyl Chloride	ug/g	<0.019	0.019	0.019	9455734				
p+m-Xylene	ug/g	<0.020	0.020	0.020	9455734				
o-Xylene	ug/g	<0.020	0.020	0.020	9455734				
Total Xylenes	ug/g	<0.020	0.020	0.020	9455734				
F1 (C6-C10)	ug/g	<10	10	2.0	9455734				
F1 (C6-C10) - BTEX	ug/g	<10	10	2.0	9455734				
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	5.0	9454137	<10	10	5.0	9454137
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	5.0	9454137	<50	50	5.0	9454137
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	10	9454137	<50	50	10	9454137
Reached Baseline at C50	ug/g	Yes			9454137	Yes			9454137
Surrogate Recovery (%)									
o-Terphenyl	%	85			9454137	84			9454137
4-Bromofluorobenzene	%	96			9455734				
D10-o-Xylene	%	115			9455734				
D4-1,2-Dichloroethane	%	108			9455734				
D8-Toluene	%	92			9455734				
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate									



O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID		ZKZ630			
Sampling Date		2024/06/07			
COC Number		N/A			
	UNITS	BH109/1	RDL	MDL	QC Batch
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	0.010	9449414
Volatile Organics					
Acetone (2-Propanone)	ug/g	<0.49	0.49	0.49	9455734
Benzene	ug/g	<0.0060	0.0060	0.0060	9455734
Bromodichloromethane	ug/g	<0.040	0.040	0.040	9455734
Bromoform	ug/g	<0.040	0.040	0.040	9455734
Bromomethane	ug/g	<0.040	0.040	0.040	9455734
Carbon Tetrachloride	ug/g	<0.040	0.040	0.040	9455734
Chlorobenzene	ug/g	<0.040	0.040	0.040	9455734
Chloroform	ug/g	<0.040	0.040	0.040	9455734
Dibromochloromethane	ug/g	<0.040	0.040	0.040	9455734
1,2-Dichlorobenzene	ug/g	<0.040	0.040	0.040	9455734
1,3-Dichlorobenzene	ug/g	<0.040	0.040	0.040	9455734
1,4-Dichlorobenzene	ug/g	<0.040	0.040	0.040	9455734
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	0.040	9455734
1,1-Dichloroethane	ug/g	<0.040	0.040	0.040	9455734
1,2-Dichloroethane	ug/g	<0.049	0.049	0.049	9455734
1,1-Dichloroethylene	ug/g	<0.040	0.040	0.040	9455734
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	0.040	9455734
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	0.040	9455734
1,2-Dichloropropane	ug/g	<0.040	0.040	0.040	9455734
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	0.030	9455734
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	0.040	9455734
Ethylbenzene	ug/g	<0.010	0.010	0.010	9455734
Ethylene Dibromide	ug/g	<0.040	0.040	0.040	9455734
Hexane	ug/g	<0.040	0.040	0.040	9455734
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	0.049	9455734
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	0.40	9455734
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	0.40	9455734
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	0.040	9455734
Styrene	ug/g	<0.040	0.040	0.040	9455734
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	0.040	9455734
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	0.040	9455734
Tetrachloroethylene	ug/g	<0.040	0.040	0.040	9455734
Toluene	ug/g	<0.020	0.020	0.020	9455734
1,1,1-Trichloroethane	ug/g	<0.040	0.040	0.040	9455734
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					



O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID		ZKZ630			
Sampling Date		2024/06/07			
COC Number		N/A			
	UNITS	BH109/1	RDL	MDL	QC Batch
1,1,2-Trichloroethane	ug/g	<0.040	0.040	0.040	9455734
Trichloroethylene	ug/g	<0.010	0.010	0.010	9455734
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	0.040	9455734
Vinyl Chloride	ug/g	<0.019	0.019	0.019	9455734
p+m-Xylene	ug/g	<0.020	0.020	0.020	9455734
o-Xylene	ug/g	<0.020	0.020	0.020	9455734
Total Xylenes	ug/g	<0.020	0.020	0.020	9455734
F1 (C6-C10)	ug/g	<10	10	2.0	9455734
F1 (C6-C10) - BTEX	ug/g	<10	10	2.0	9455734
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	5.0	9454137
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	5.0	9454137
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	10	9454137
Reached Baseline at C50	ug/g	Yes			9454137
Surrogate Recovery (%)					
o-Terphenyl	%	85			9454137
4-Bromofluorobenzene	%	96			9455734
D10-o-Xylene	%	108			9455734
D4-1,2-Dichloroethane	%	107			9455734
D8-Toluene	%	92			9455734
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					



BUREAU
VERITAS

Bureau Veritas Job #: C4H8293

Report Date: 2024/06/18

Soil Engineers Ltd

Client Project #: 2009-E125

Sampler Initials: AB

O.REG 153 VOCs BY HS (SOIL)

Bureau Veritas ID		ZKZ629	ZKZ633			
Sampling Date		2024/06/07	2024/06/07			
COC Number		N/A	N/A			
	UNITS	BH108/1	DUP S6	RDL	MDL	QC Batch
Calculated Parameters						
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	0.050	0.010	9449414
Volatile Organics						
Acetone (2-Propanone)	ug/g	<0.49	<0.49	0.49	0.49	9453139
Benzene	ug/g	<0.0060	<0.0060	0.0060	0.0060	9453139
Bromodichloromethane	ug/g	<0.040	<0.040	0.040	0.040	9453139
Bromoform	ug/g	<0.040	<0.040	0.040	0.040	9453139
Bromomethane	ug/g	<0.040	<0.040	0.040	0.040	9453139
Carbon Tetrachloride	ug/g	<0.040	<0.040	0.040	0.040	9453139
Chlorobenzene	ug/g	<0.040	<0.040	0.040	0.040	9453139
Chloroform	ug/g	<0.040	<0.040	0.040	0.040	9453139
Dibromochloromethane	ug/g	<0.040	<0.040	0.040	0.040	9453139
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	0.040	9453139
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	0.040	9453139
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	0.040	9453139
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	0.040	0.050	9453139
1,1-Dichloroethane	ug/g	<0.040	<0.040	0.040	0.040	9453139
1,2-Dichloroethane	ug/g	<0.049	<0.049	0.049	0.040	9453139
1,1-Dichloroethylene	ug/g	<0.040	<0.040	0.040	0.040	9453139
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	0.040	0.040	9453139
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	0.040	0.040	9453139
1,2-Dichloropropane	ug/g	<0.040	<0.040	0.040	0.040	9453139
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	0.030	0.030	9453139
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	0.040	0.040	9453139
Ethylbenzene	ug/g	<0.010	<0.010	0.010	0.010	9453139
Ethylene Dibromide	ug/g	<0.040	<0.040	0.040	0.040	9453139
Hexane	ug/g	<0.040	<0.040	0.040	0.040	9453139
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	0.049	0.049	9453139
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	0.40	0.40	9453139
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	0.40	0.40	9453139
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	0.040	0.040	9453139
Styrene	ug/g	<0.040	<0.040	0.040	0.040	9453139
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	0.040	0.040	9453139
1,1,1,2,2-Tetrachloroethane	ug/g	<0.040	<0.040	0.040	0.040	9453139
Tetrachloroethylene	ug/g	<0.040	<0.040	0.040	0.040	9453139
Toluene	ug/g	<0.020	<0.020	0.020	0.020	9453139
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	0.040	0.040	9453139
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						



O.REG 153 VOCS BY HS (SOIL)

Bureau Veritas ID		ZKZ629	ZKZ633			
Sampling Date		2024/06/07	2024/06/07			
COC Number		N/A	N/A			
	UNITS	BH108/1	DUP S6	RDL	MDL	QC Batch
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	0.040	0.040	9453139
Trichloroethylene	ug/g	<0.010	<0.010	0.010	0.010	9453139
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	0.040	0.040	9453139
Vinyl Chloride	ug/g	<0.019	<0.019	0.019	0.019	9453139
p+m-Xylene	ug/g	<0.020	<0.020	0.020	0.020	9453139
o-Xylene	ug/g	<0.020	<0.020	0.020	0.020	9453139
Total Xylenes	ug/g	<0.020	<0.020	0.020	0.020	9453139
Surrogate Recovery (%)						
4-Bromofluorobenzene	%	91	92			9453139
D10-o-Xylene	%	84	88			9453139
D4-1,2-Dichloroethane	%	100	104			9453139
D8-Toluene	%	97	98			9453139
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						



BUREAU
VERITAS

Bureau Veritas Job #: C4H8293
Report Date: 2024/06/18

Soil Engineers Ltd
Client Project #: 2009-E125
Sampler Initials: AB

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		ZKZ622	ZKZ623	ZKZ624	ZKZ625	ZKZ626	ZKZ627	ZKZ628			
Sampling Date		2024/06/07	2024/06/07	2024/06/07	2024/06/07	2024/06/07	2024/06/07	2024/06/07			
COC Number		N/A	N/A	N/A	N/A	N/A	N/A	N/A			
	UNITS	BH101/1	BH102/1A	BH103/1	BH104/1A	BH105/1	BH106/1	BH107/1	RDL	MDL	QC Batch

Inorganics											
Moisture	%	16	19	13	14	20	22	17	1.0	0.50	9453035

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		ZKZ629	ZKZ630	ZKZ632	ZKZ633			
Sampling Date		2024/06/07	2024/06/07	2024/06/07	2024/06/07			
COC Number		N/A	N/A	N/A	N/A			
	UNITS	BH108/1	BH109/1	DUP S5	DUP S6	RDL	MDL	QC Batch

Inorganics								
Moisture	%	17	18	19	19	1.0	0.50	9453035

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch



BUREAU
VERITAS

Bureau Veritas Job #: C4H8293
Report Date: 2024/06/18

Soil Engineers Ltd
Client Project #: 2009-E125
Sampler Initials: AB

TEST SUMMARY

Bureau Veritas ID: ZKZ622
Sample ID: BH101/1
Matrix: Soil

Collected: 2024/06/07
Shipped:
Received: 2024/06/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9449413	N/A	2024/06/17	Automated Statchk
Hot Water Extractable Boron	ICP	9457002	2024/06/14	2024/06/17	Medhat Nasr
1,3-Dichloropropene Sum	CALC	9449414	N/A	2024/06/17	Automated Statchk
Conductivity	AT	9459170	2024/06/17	2024/06/17	Gurpartee K AUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9457965	2024/06/15	2024/06/17	Rupinder Sihota
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9454137	2024/06/13	2024/06/14	Dennis Ngondou
Acid Extractable Metals by ICPMS	ICP/MS	9457990	2024/06/15	2024/06/18	Viviana Canzonieri
Moisture	BAL	9453035	N/A	2024/06/13	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9455161	2024/06/14	2024/06/14	Jonghan Yoon
Sodium Adsorption Ratio (SAR)	CALC/MET	9450121	N/A	2024/06/17	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9455734	N/A	2024/06/14	Anna Gabrielyan

Bureau Veritas ID: ZKZ623
Sample ID: BH102/1A
Matrix: Soil

Collected: 2024/06/07
Shipped:
Received: 2024/06/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9449413	N/A	2024/06/17	Automated Statchk
Hot Water Extractable Boron	ICP	9457002	2024/06/14	2024/06/17	Medhat Nasr
1,3-Dichloropropene Sum	CALC	9449414	N/A	2024/06/17	Automated Statchk
Conductivity	AT	9459170	2024/06/17	2024/06/17	Gurpartee K AUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9457965	2024/06/15	2024/06/17	Rupinder Sihota
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9454137	2024/06/13	2024/06/14	Dennis Ngondou
Acid Extractable Metals by ICPMS	ICP/MS	9457990	2024/06/15	2024/06/18	Viviana Canzonieri
Moisture	BAL	9453035	N/A	2024/06/13	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9455161	2024/06/14	2024/06/14	Jonghan Yoon
Sodium Adsorption Ratio (SAR)	CALC/MET	9450121	N/A	2024/06/17	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9455734	N/A	2024/06/14	Anna Gabrielyan

Bureau Veritas ID: ZKZ624
Sample ID: BH103/1
Matrix: Soil

Collected: 2024/06/07
Shipped:
Received: 2024/06/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9449413	N/A	2024/06/17	Automated Statchk
Hot Water Extractable Boron	ICP	9457002	2024/06/14	2024/06/17	Medhat Nasr
1,3-Dichloropropene Sum	CALC	9449414	N/A	2024/06/17	Automated Statchk
Conductivity	AT	9459170	2024/06/17	2024/06/17	Gurpartee K AUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9457965	2024/06/15	2024/06/17	Rupinder Sihota
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9454137	2024/06/13	2024/06/14	Dennis Ngondou
Acid Extractable Metals by ICPMS	ICP/MS	9457990	2024/06/15	2024/06/18	Viviana Canzonieri
Moisture	BAL	9453035	N/A	2024/06/13	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9455161	2024/06/14	2024/06/14	Jonghan Yoon
Sodium Adsorption Ratio (SAR)	CALC/MET	9450121	N/A	2024/06/17	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9455734	N/A	2024/06/14	Anna Gabrielyan



BUREAU
VERITAS

Bureau Veritas Job #: C4H8293
Report Date: 2024/06/18

Soil Engineers Ltd
Client Project #: 2009-E125
Sampler Initials: AB

TEST SUMMARY

Bureau Veritas ID: ZKZ625
Sample ID: BH104/1A
Matrix: Soil

Collected: 2024/06/07
Shipped:
Received: 2024/06/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9449413	N/A	2024/06/17	Automated Statchk
Hot Water Extractable Boron	ICP	9457002	2024/06/14	2024/06/17	Medhat Nasr
1,3-Dichloropropene Sum	CALC	9449414	N/A	2024/06/17	Automated Statchk
Conductivity	AT	9459170	2024/06/17	2024/06/17	Gurpartee K AUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9457965	2024/06/15	2024/06/17	Rupinder Sihota
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9454137	2024/06/13	2024/06/14	Dennis Ngondou
Acid Extractable Metals by ICPMS	ICP/MS	9457990	2024/06/15	2024/06/18	Viviana Canzonieri
Moisture	BAL	9453035	N/A	2024/06/13	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9455161	2024/06/14	2024/06/14	Jonghan Yoon
Sodium Adsorption Ratio (SAR)	CALC/MET	9450121	N/A	2024/06/17	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9455734	N/A	2024/06/14	Anna Gabrielyan

Bureau Veritas ID: ZKZ625 Dup
Sample ID: BH104/1A
Matrix: Soil

Collected: 2024/06/07
Shipped:
Received: 2024/06/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	9459170	2024/06/17	2024/06/17	Gurpartee K AUR

Bureau Veritas ID: ZKZ626
Sample ID: BH105/1
Matrix: Soil

Collected: 2024/06/07
Shipped:
Received: 2024/06/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9449413	N/A	2024/06/17	Automated Statchk
Hot Water Extractable Boron	ICP	9457002	2024/06/14	2024/06/17	Medhat Nasr
1,3-Dichloropropene Sum	CALC	9449414	N/A	2024/06/17	Automated Statchk
Conductivity	AT	9459170	2024/06/17	2024/06/17	Gurpartee K AUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9457965	2024/06/15	2024/06/17	Rupinder Sihota
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9454137	2024/06/13	2024/06/14	Dennis Ngondou
Acid Extractable Metals by ICPMS	ICP/MS	9457990	2024/06/15	2024/06/18	Viviana Canzonieri
Moisture	BAL	9453035	N/A	2024/06/13	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9455161	2024/06/14	2024/06/14	Jonghan Yoon
Sodium Adsorption Ratio (SAR)	CALC/MET	9450121	N/A	2024/06/17	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9455734	N/A	2024/06/14	Anna Gabrielyan

Bureau Veritas ID: ZKZ627
Sample ID: BH106/1
Matrix: Soil

Collected: 2024/06/07
Shipped:
Received: 2024/06/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9449413	N/A	2024/06/17	Automated Statchk
Hot Water Extractable Boron	ICP	9457002	2024/06/14	2024/06/17	Medhat Nasr
Conductivity	AT	9459170	2024/06/17	2024/06/17	Gurpartee K AUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9457965	2024/06/15	2024/06/17	Rupinder Sihota



BUREAU
VERITAS

Bureau Veritas Job #: C4H8293
Report Date: 2024/06/18

Soil Engineers Ltd
Client Project #: 2009-E125
Sampler Initials: AB

TEST SUMMARY

Bureau Veritas ID: ZKZ627
Sample ID: BH106/1
Matrix: Soil

Collected: 2024/06/07
Shipped:
Received: 2024/06/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	9455172	N/A	2024/06/14	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9454137	2024/06/13	2024/06/14	Dennis Ngandu
Acid Extractable Metals by ICPMS	ICP/MS	9457990	2024/06/15	2024/06/18	Viviana Canzonieri
Moisture	BAL	9453035	N/A	2024/06/13	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9455161	2024/06/14	2024/06/14	Jonghan Yoon
Sodium Adsorption Ratio (SAR)	CALC/MET	9450121	N/A	2024/06/17	Automated Statchk

Bureau Veritas ID: ZKZ628
Sample ID: BH107/1
Matrix: Soil

Collected: 2024/06/07
Shipped:
Received: 2024/06/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	9457002	2024/06/14	2024/06/17	Medhat Nasr
1,3-Dichloropropene Sum	CALC	9449414	N/A	2024/06/17	Automated Statchk
Conductivity	AT	9459170	2024/06/17	2024/06/17	Gurpartee K AUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9457965	2024/06/15	2024/06/17	Rupinder Sihota
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9454137	2024/06/13	2024/06/14	Dennis Ngandu
Acid Extractable Metals by ICPMS	ICP/MS	9457990	2024/06/15	2024/06/18	Viviana Canzonieri
Moisture	BAL	9453035	N/A	2024/06/13	Joe Thomas
Sodium Adsorption Ratio (SAR)	CALC/MET	9450121	N/A	2024/06/17	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9455734	N/A	2024/06/14	Anna Gabrielyan

Bureau Veritas ID: ZKZ628 Dup
Sample ID: BH107/1
Matrix: Soil

Collected: 2024/06/07
Shipped:
Received: 2024/06/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9454137	2024/06/13	2024/06/14	Dennis Ngandu

Bureau Veritas ID: ZKZ629
Sample ID: BH108/1
Matrix: Soil

Collected: 2024/06/07
Shipped:
Received: 2024/06/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9449413	N/A	2024/06/17	Automated Statchk
Hot Water Extractable Boron	ICP	9457002	2024/06/14	2024/06/17	Medhat Nasr
1,3-Dichloropropene Sum	CALC	9449414	N/A	2024/06/18	Automated Statchk
Conductivity	AT	9459170	2024/06/17	2024/06/17	Gurpartee K AUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9457965	2024/06/15	2024/06/17	Rupinder Sihota
Acid Extractable Metals by ICPMS	ICP/MS	9457990	2024/06/15	2024/06/18	Viviana Canzonieri
Moisture	BAL	9453035	N/A	2024/06/13	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9455161	2024/06/14	2024/06/14	Jonghan Yoon
Sodium Adsorption Ratio (SAR)	CALC/MET	9450121	N/A	2024/06/17	Automated Statchk
Volatile Organic Compounds in Soil	GC/MS	9453139	N/A	2024/06/14	Narayan Ghimire



TEST SUMMARY

Bureau Veritas ID: ZKZ630
Sample ID: BH109/1
Matrix: Soil

Collected: 2024/06/07
Shipped:
Received: 2024/06/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9449413	N/A	2024/06/17	Automated Statchk
Hot Water Extractable Boron	ICP	9457002	2024/06/14	2024/06/17	Medhat Nasr
1,3-Dichloropropene Sum	CALC	9449414	N/A	2024/06/17	Automated Statchk
Conductivity	AT	9459170	2024/06/17	2024/06/17	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9457965	2024/06/15	2024/06/17	Rupinder Sihota
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9454137	2024/06/13	2024/06/14	Dennis Ngundu
Acid Extractable Metals by ICPMS	ICP/MS	9457990	2024/06/15	2024/06/18	Viviana Canzonieri
Moisture	BAL	9453035	N/A	2024/06/13	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9455161	2024/06/14	2024/06/14	Jonghan Yoon
Sodium Adsorption Ratio (SAR)	CALC/MET	9450121	N/A	2024/06/17	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9455734	N/A	2024/06/14	Anna Gabrielyan

Bureau Veritas ID: ZKZ631
Sample ID: DUP S4
Matrix: Soil

Collected: 2024/06/07
Shipped:
Received: 2024/06/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	9457990	2024/06/15	2024/06/18	Viviana Canzonieri

Bureau Veritas ID: ZKZ632
Sample ID: DUP S5
Matrix: Soil

Collected: 2024/06/07
Shipped:
Received: 2024/06/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9449413	N/A	2024/06/17	Automated Statchk
Moisture	BAL	9453035	N/A	2024/06/13	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9455161	2024/06/14	2024/06/14	Jonghan Yoon

Bureau Veritas ID: ZKZ633
Sample ID: DUP S6
Matrix: Soil

Collected: 2024/06/07
Shipped:
Received: 2024/06/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9449414	N/A	2024/06/18	Automated Statchk
Moisture	BAL	9453035	N/A	2024/06/13	Joe Thomas
Volatile Organic Compounds in Soil	GC/MS	9453139	N/A	2024/06/14	Narayan Ghimire



GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.7°C
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Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C4H8293

Report Date: 2024/06/18

QUALITY ASSURANCE REPORT

Soil Engineers Ltd

Client Project #: 2009-E125

Sampler Initials: AB

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9453139	4-Bromofluorobenzene	2024/06/14	93	60 - 140	94	60 - 140	92	%		
9453139	D10-o-Xylene	2024/06/14	97	60 - 130	92	60 - 130	79	%		
9453139	D4-1,2-Dichloroethane	2024/06/14	97	60 - 140	98	60 - 140	97	%		
9453139	D8-Toluene	2024/06/14	102	60 - 140	100	60 - 140	96	%		
9454137	o-Terphenyl	2024/06/13	95	60 - 130	91	60 - 130	91	%		
9455161	D10-Anthracene	2024/06/14	115	50 - 130	117	50 - 130	115	%		
9455161	D14-Terphenyl (FS)	2024/06/14	110	50 - 130	111	50 - 130	108	%		
9455161	D8-Acenaphthylene	2024/06/14	96	50 - 130	99	50 - 130	96	%		
9455172	1,4-Difluorobenzene	2024/06/14	97	60 - 140	97	60 - 140	108	%		
9455172	4-Bromofluorobenzene	2024/06/14	90	60 - 140	89	60 - 140	84	%		
9455172	D10-o-Xylene	2024/06/14	105	60 - 140	91	60 - 140	98	%		
9455172	D4-1,2-Dichloroethane	2024/06/14	90	60 - 140	88	60 - 140	93	%		
9455734	4-Bromofluorobenzene	2024/06/14	102	60 - 140	101	60 - 140	97	%		
9455734	D10-o-Xylene	2024/06/14	109	60 - 130	113	60 - 130	101	%		
9455734	D4-1,2-Dichloroethane	2024/06/14	102	60 - 140	101	60 - 140	102	%		
9455734	D8-Toluene	2024/06/14	104	60 - 140	105	60 - 140	93	%		
9453035	Moisture	2024/06/13							2.6	20
9453139	1,1,1,2-Tetrachloroethane	2024/06/14	92	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
9453139	1,1,1-Trichloroethane	2024/06/14	92	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
9453139	1,1,2,2-Tetrachloroethane	2024/06/14	96	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
9453139	1,1,2-Trichloroethane	2024/06/14	93	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
9453139	1,1-Dichloroethane	2024/06/14	100	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
9453139	1,1-Dichloroethylene	2024/06/14	99	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9453139	1,2-Dichlorobenzene	2024/06/14	95	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
9453139	1,2-Dichloroethane	2024/06/14	94	60 - 140	95	60 - 130	<0.049	ug/g	NC	50
9453139	1,2-Dichloropropane	2024/06/14	97	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9453139	1,3-Dichlorobenzene	2024/06/14	97	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
9453139	1,4-Dichlorobenzene	2024/06/14	96	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
9453139	Acetone (2-Propanone)	2024/06/14	94	60 - 140	94	60 - 140	<0.49	ug/g	NC	50
9453139	Benzene	2024/06/14	101	60 - 140	101	60 - 130	<0.0060	ug/g	NC	50
9453139	Bromodichloromethane	2024/06/14	94	60 - 140	97	60 - 130	<0.040	ug/g	NC	50



BUREAU
VERITAS

Bureau Veritas Job #: C4H8293

Report Date: 2024/06/18

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd

Client Project #: 2009-E125

Sampler Initials: AB

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9453139	Bromoform	2024/06/14	85	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
9453139	Bromomethane	2024/06/14	86	60 - 140	85	60 - 140	<0.040	ug/g	NC	50
9453139	Carbon Tetrachloride	2024/06/14	95	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
9453139	Chlorobenzene	2024/06/14	95	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
9453139	Chloroform	2024/06/14	98	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
9453139	cis-1,2-Dichloroethylene	2024/06/14	95	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
9453139	cis-1,3-Dichloropropene	2024/06/14	91	60 - 140	95	60 - 130	<0.030	ug/g	NC	50
9453139	Dibromochloromethane	2024/06/14	92	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
9453139	Dichlorodifluoromethane (FREON 12)	2024/06/14	73	60 - 140	78	60 - 140	<0.040	ug/g	NC	50
9453139	Ethylbenzene	2024/06/14	93	60 - 140	91	60 - 130	<0.010	ug/g	NC	50
9453139	Ethylene Dibromide	2024/06/14	94	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
9453139	Hexane	2024/06/14	102	60 - 140	100	60 - 130	<0.040	ug/g	12	50
9453139	Methyl Ethyl Ketone (2-Butanone)	2024/06/14	98	60 - 140	101	60 - 140	<0.40	ug/g	NC	50
9453139	Methyl Isobutyl Ketone	2024/06/14	83	60 - 140	88	60 - 130	<0.40	ug/g	NC	50
9453139	Methyl t-butyl ether (MTBE)	2024/06/14	86	60 - 140	88	60 - 130	<0.040	ug/g	NC	50
9453139	Methylene Chloride(Dichloromethane)	2024/06/14	99	60 - 140	99	60 - 130	<0.049	ug/g	NC	50
9453139	o-Xylene	2024/06/14	95	60 - 140	93	60 - 130	<0.020	ug/g	NC	50
9453139	p+m-Xylene	2024/06/14	93	60 - 140	90	60 - 130	<0.020	ug/g	1.7	50
9453139	Styrene	2024/06/14	93	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
9453139	Tetrachloroethylene	2024/06/14	94	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
9453139	Toluene	2024/06/14	99	60 - 140	97	60 - 130	<0.020	ug/g	NC	50
9453139	Total Xylenes	2024/06/14					<0.020	ug/g	1.7	50
9453139	trans-1,2-Dichloroethylene	2024/06/14	101	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
9453139	trans-1,3-Dichloropropene	2024/06/14	96	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
9453139	Trichloroethylene	2024/06/14	96	60 - 140	96	60 - 130	<0.010	ug/g	NC	50
9453139	Trichlorofluoromethane (FREON 11)	2024/06/14	97	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
9453139	Vinyl Chloride	2024/06/14	93	60 - 140	96	60 - 130	<0.019	ug/g	NC	50
9454137	F2 (C10-C16 Hydrocarbons)	2024/06/14	97	60 - 130	92	80 - 120	<10	ug/g	NC	30
9454137	F3 (C16-C34 Hydrocarbons)	2024/06/14	100	60 - 130	95	80 - 120	<50	ug/g	NC	30
9454137	F4 (C34-C50 Hydrocarbons)	2024/06/14	98	60 - 130	93	80 - 120	<50	ug/g	NC	30
9455161	1-Methylnaphthalene	2024/06/14	98	50 - 130	108	50 - 130	<0.0050	ug/g	NC	40



BUREAU
VERITAS

Bureau Veritas Job #: C4H8293

Report Date: 2024/06/18

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd

Client Project #: 2009-E125

Sampler Initials: AB

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9455161	2-Methylnaphthalene	2024/06/14	95	50 - 130	106	50 - 130	<0.0050	ug/g	NC	40
9455161	Acenaphthene	2024/06/14	106	50 - 130	111	50 - 130	<0.0050	ug/g	NC	40
9455161	Acenaphthylene	2024/06/14	101	50 - 130	104	50 - 130	<0.0050	ug/g	NC	40
9455161	Anthracene	2024/06/14	127	50 - 130	130	50 - 130	<0.0050	ug/g	NC	40
9455161	Benzo(a)anthracene	2024/06/14	116	50 - 130	109	50 - 130	<0.0050	ug/g	NC	40
9455161	Benzo(a)pyrene	2024/06/14	117	50 - 130	119	50 - 130	<0.0050	ug/g	NC	40
9455161	Benzo(b/j)fluoranthene	2024/06/14	116	50 - 130	121	50 - 130	<0.0050	ug/g	NC	40
9455161	Benzo(g,h,i)perylene	2024/06/14	106	50 - 130	110	50 - 130	<0.0050	ug/g	NC	40
9455161	Benzo(k)fluoranthene	2024/06/14	117	50 - 130	117	50 - 130	<0.0050	ug/g	NC	40
9455161	Chrysene	2024/06/14	112	50 - 130	115	50 - 130	<0.0050	ug/g	NC	40
9455161	Dibenzo(a,h)anthracene	2024/06/14	110	50 - 130	112	50 - 130	<0.0050	ug/g	NC	40
9455161	Fluoranthene	2024/06/14	116	50 - 130	118	50 - 130	<0.0050	ug/g	NC	40
9455161	Fluorene	2024/06/14	106	50 - 130	110	50 - 130	<0.0050	ug/g	NC	40
9455161	Indeno(1,2,3-cd)pyrene	2024/06/14	111	50 - 130	114	50 - 130	<0.0050	ug/g	NC	40
9455161	Naphthalene	2024/06/14	88	50 - 130	103	50 - 130	<0.0050	ug/g	NC	40
9455161	Phenanthrene	2024/06/14	115	50 - 130	118	50 - 130	<0.0050	ug/g	NC	40
9455161	Pyrene	2024/06/14	117	50 - 130	118	50 - 130	<0.0050	ug/g	NC	40
9455172	Benzene	2024/06/14	97	50 - 140	85	50 - 140	<0.020	ug/g	NC	50
9455172	Ethylbenzene	2024/06/14	109	50 - 140	92	50 - 140	<0.020	ug/g	NC	50
9455172	F1 (C6-C10) - BTEX	2024/06/14					<10	ug/g	NC	30
9455172	F1 (C6-C10)	2024/06/14	106	60 - 140	98	80 - 120	<10	ug/g	NC	30
9455172	o-Xylene	2024/06/14	106	50 - 140	88	50 - 140	<0.020	ug/g	NC	50
9455172	p+m-Xylene	2024/06/14	105	50 - 140	89	50 - 140	<0.040	ug/g	NC	50
9455172	Toluene	2024/06/14	101	50 - 140	86	50 - 140	<0.020	ug/g	NC	50
9455172	Total Xylenes	2024/06/14					<0.040	ug/g	NC	50
9455734	1,1,1,2-Tetrachloroethane	2024/06/14	99	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
9455734	1,1,1-Trichloroethane	2024/06/14	101	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
9455734	1,1,2,2-Tetrachloroethane	2024/06/14	97	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
9455734	1,1,2-Trichloroethane	2024/06/14	97	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
9455734	1,1-Dichloroethane	2024/06/14	104	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
9455734	1,1-Dichloroethylene	2024/06/14	103	60 - 140	103	60 - 130	<0.040	ug/g	NC	50



BUREAU
VERITAS

Bureau Veritas Job #: C4H8293

Report Date: 2024/06/18

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd

Client Project #: 2009-E125

Sampler Initials: AB

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9455734	1,2-Dichlorobenzene	2024/06/14	94	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
9455734	1,2-Dichloroethane	2024/06/14	98	60 - 140	98	60 - 130	<0.049	ug/g	NC	50
9455734	1,2-Dichloropropane	2024/06/14	98	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9455734	1,3-Dichlorobenzene	2024/06/14	97	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
9455734	1,4-Dichlorobenzene	2024/06/14	95	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9455734	Acetone (2-Propanone)	2024/06/14	95	60 - 140	97	60 - 140	<0.49	ug/g	NC	50
9455734	Benzene	2024/06/14	97	60 - 140	97	60 - 130	<0.0060	ug/g	NC	50
9455734	Bromodichloromethane	2024/06/14	100	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9455734	Bromoform	2024/06/14	92	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
9455734	Bromomethane	2024/06/14	93	60 - 140	94	60 - 140	<0.040	ug/g	NC	50
9455734	Carbon Tetrachloride	2024/06/14	103	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
9455734	Chlorobenzene	2024/06/14	95	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
9455734	Chloroform	2024/06/14	101	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
9455734	cis-1,2-Dichloroethylene	2024/06/14	101	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
9455734	cis-1,3-Dichloropropene	2024/06/14	101	60 - 140	105	60 - 130	<0.030	ug/g	NC	50
9455734	Dibromochloromethane	2024/06/14	96	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
9455734	Dichlorodifluoromethane (FREON 12)	2024/06/14	93	60 - 140	92	60 - 140	<0.040	ug/g	NC	50
9455734	Ethylbenzene	2024/06/14	94	60 - 140	96	60 - 130	<0.010	ug/g	NC	50
9455734	Ethylene Dibromide	2024/06/14	96	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
9455734	F1 (C6-C10) - BTEX	2024/06/14					<10	ug/g	NC	30
9455734	F1 (C6-C10)	2024/06/14	91	60 - 140	90	80 - 120	<10	ug/g	NC	30
9455734	Hexane	2024/06/14	108	60 - 140	109	60 - 130	<0.040	ug/g	NC	50
9455734	Methyl Ethyl Ketone (2-Butanone)	2024/06/14	101	60 - 140	102	60 - 140	<0.40	ug/g	NC	50
9455734	Methyl Isobutyl Ketone	2024/06/14	100	60 - 140	100	60 - 130	<0.40	ug/g	NC	50
9455734	Methyl t-butyl ether (MTBE)	2024/06/14	93	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
9455734	Methylene Chloride(Dichloromethane)	2024/06/14	99	60 - 140	98	60 - 130	<0.049	ug/g	NC	50
9455734	o-Xylene	2024/06/14	95	60 - 140	96	60 - 130	<0.020	ug/g	NC	50
9455734	p+m-Xylene	2024/06/14	94	60 - 140	96	60 - 130	<0.020	ug/g	NC	50
9455734	Styrene	2024/06/14	77	60 - 140	78	60 - 130	<0.040	ug/g	NC	50
9455734	Tetrachloroethylene	2024/06/14	102	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
9455734	Toluene	2024/06/14	97	60 - 140	98	60 - 130	<0.020	ug/g	NC	50



BUREAU
VERITAS

Bureau Veritas Job #: C4H8293

Report Date: 2024/06/18

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd

Client Project #: 2009-E125

Sampler Initials: AB

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9455734	Total Xylenes	2024/06/14					<0.020	ug/g	NC	50
9455734	trans-1,2-Dichloroethylene	2024/06/14	102	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
9455734	trans-1,3-Dichloropropene	2024/06/14	105	60 - 140	112	60 - 130	<0.040	ug/g	NC	50
9455734	Trichloroethylene	2024/06/14	100	60 - 140	99	60 - 130	<0.010	ug/g	NC	50
9455734	Trichlorofluoromethane (FREON 11)	2024/06/14	108	60 - 140	106	60 - 130	<0.040	ug/g	NC	50
9455734	Vinyl Chloride	2024/06/14	105	60 - 140	104	60 - 130	<0.019	ug/g	NC	50
9457002	Hot Water Ext. Boron (B)	2024/06/17	104	75 - 125	101	75 - 125	<0.050	ug/g	7.8	40
9457965	Chromium (VI)	2024/06/17	71	70 - 130	89	80 - 120	<0.18	ug/g	NC	35
9457990	Acid Extractable Antimony (Sb)	2024/06/18	80	75 - 125	101	80 - 120	<0.20	ug/g	11	30
9457990	Acid Extractable Arsenic (As)	2024/06/18	97	75 - 125	102	80 - 120	<1.0	ug/g	1.1	30
9457990	Acid Extractable Barium (Ba)	2024/06/18	NC	75 - 125	91	80 - 120	<0.50	ug/g	2.6	30
9457990	Acid Extractable Beryllium (Be)	2024/06/18	95	75 - 125	101	80 - 120	<0.20	ug/g	3.2	30
9457990	Acid Extractable Boron (B)	2024/06/18	81	75 - 125	96	80 - 120	<5.0	ug/g	3.3	30
9457990	Acid Extractable Cadmium (Cd)	2024/06/18	92	75 - 125	97	80 - 120	<0.10	ug/g	9.6	30
9457990	Acid Extractable Chromium (Cr)	2024/06/18	97	75 - 125	101	80 - 120	<1.0	ug/g	1.4	30
9457990	Acid Extractable Cobalt (Co)	2024/06/18	98	75 - 125	101	80 - 120	<0.10	ug/g	3.9	30
9457990	Acid Extractable Copper (Cu)	2024/06/18	NC	75 - 125	101	80 - 120	<0.50	ug/g	1.7	30
9457990	Acid Extractable Lead (Pb)	2024/06/18	90	75 - 125	95	80 - 120	<1.0	ug/g	1.7	30
9457990	Acid Extractable Mercury (Hg)	2024/06/18	93	75 - 125	101	80 - 120	<0.050	ug/g	NC	30
9457990	Acid Extractable Molybdenum (Mo)	2024/06/18	87	75 - 125	93	80 - 120	<0.50	ug/g	4.9	30
9457990	Acid Extractable Nickel (Ni)	2024/06/18	98	75 - 125	104	80 - 120	<0.50	ug/g	2.2	30
9457990	Acid Extractable Selenium (Se)	2024/06/18	95	75 - 125	102	80 - 120	<0.50	ug/g	NC	30
9457990	Acid Extractable Silver (Ag)	2024/06/18	93	75 - 125	98	80 - 120	<0.20	ug/g	NC	30
9457990	Acid Extractable Thallium (Tl)	2024/06/18	87	75 - 125	93	80 - 120	<0.050	ug/g	0.70	30
9457990	Acid Extractable Uranium (U)	2024/06/18	90	75 - 125	95	80 - 120	<0.050	ug/g	0.56	30
9457990	Acid Extractable Vanadium (V)	2024/06/18	NC	75 - 125	104	80 - 120	<5.0	ug/g	1.8	30
9457990	Acid Extractable Zinc (Zn)	2024/06/18	NC	75 - 125	101	80 - 120	<5.0	ug/g	0.095	30



BUREAU
VERITAS

Bureau Veritas Job #: C4H8293

Report Date: 2024/06/18

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd

Client Project #: 2009-E125

Sampler Initials: AB

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9459170	Conductivity	2024/06/17			104	90 - 110	<0.002	mS/cm	5.4	10

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

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

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

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

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

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

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



VALIDATION SIGNATURE PAGE

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

Anastassia Hamanov, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.