



BARRIE
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FAX: (705) 721-7864

MISSISSAUGA
TEL: (905) 542-7605
FAX: (905) 542-2769

OSHAWA
TEL: (905) 440-2040
FAX: (905) 725-1315

NEWMARKET
TEL: (905) 853-0647
FAX: (905) 881-8335

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TEL: (705) 684-4242
FAX: (705) 684-8522

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TEL: (905) 440-2040
FAX: (905) 725-1315

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TEL: (905) 777-7956
FAX: (905) 542-2769

November 22, 2023

Reference No. 2302-E081

Page 1 of 3

Poplar Developments I Inc.
5-167 Jolliffe Avenue, P. P. Box 760
Rockwood, ON
N0B 2K0

Attention: Mr. Rick McConnell

**Re: First Stage Soil Sampling and Testing Program for
Phase Two Environmental Site Assessment Letter Report
Proposed Residential Development
Northwest of High Street and Poplar Side Road
Town of Collingwood**

Dear Sir:

Soil Engineers Ltd. (SEL) was retained by Poplar Developments I Inc. to carry out a first stage soil sampling and testing program for Phase Two Environmental Site Assessment (Phase Two ESA), as defined by Ontario Regulation (O. Reg.) 153/04, as amended, for a property located at Northwest of High Street and Poplar Side Road in the Town of Collingwood (hereinafter referred to as “the subject site”). It should be noted that soil stockpiles occupied the northwest portion of the subject site and the first stage soil sampling and testing program of the Phase Two ESA was conducted in the non-stockpile area of the subject site (hereinafter referred to as (the current investigation area”). Site Location Plan showing the subject site and the current investigation area is presented on Drawing No. 1. It is understood that the final Phase Two ESA in accordance with the O. Reg. 153/04 will be completed after the removal of the soil stockpiles from the northwest portion of the subject site.

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 purpose of the first stage soil sampling and testing program for Phase Two ESA was to determine the soil quality at the current investigation area of the subject site, as related to the potential environmental concerns identified in our Phase One Environmental Site Assessment (Phase One ESA). The findings of first stage soil sampling and testing program of Phase Two ESA are summarized in this letter report.

The field work for the current soil sampling and testing program consisted of seven (7) boreholes (designated as BH1 to BH 7), at the location shown in the sampling location plan, Drawing No. 2. Geological cross sections are shown in Drawing No. 3 and 4. Borehole logs are presented in the appendix.

Selected soil samples were submitted to an accredited laboratory, for chemical analysis. The analytical test results were compared to the Ministry of the Environment, Conservation and Parks (MECP) Generic Site Condition Standards in a Potable Groundwater Condition for Residential/Parkland/Institutional Property Use for coarse textured soils (Table 2 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 soil samples of the soil sampling and testing program indicates that the tested parameters at the test locations meet the Table 2 Standards, except elevated level of Dieldrin in surficial soil at BH 4 location, above Table 2 Standard. The concentration of Dieldrin is 0.26 compared to the Table 2 Standard value 0.05 . Details of exceedances shown in Drawing No. 5. Copies of the Certificates of Analysis are presented in the appendix

Based on the field observation and analytical data of the current investigation, the Organochlorine Pesticides impact in surficial soil appears to be localised to the exceedance location BH 4, at the southeast side of the subject site. A surficial soil remediation in the form of impacted soil removal from the exceedance location for off-site disposal is required in order to bring the current investigation area of the subject site into compliance with the applicable site condition standard. This can be done at the time of earthworks operation for the proposed development. Confirmation soil sampling and testing for Organochlorine Pesticides parameters is required after the removal of the impacted soils to



ensure the remaining soils in the area meet the Table 2 Standards.

A final Phase Two ESA report in accordance with the O. Reg. 153/04 will be prepared after the removal the stockpiles from the northwest portion and impacted soil from the southeast side of the subject site along with confirmation soil sampling and testing is completed.

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., QP_{ESA}

EGB

Encl.





Soil Engineers Ltd.

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TEL: (705) 721-7863
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TEL: (905) 542-7605
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FAX: (905) 881-8335

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TEL: (705) 684-4242
FAX: (705) 684-8522

HAMILTON
TEL: (905) 777-7956
FAX: (905) 542-2769

DRAWINGS

Reference No. 2302-E081





N

Area of Current Investigation

Subject Site

Phase One Study Area

/

Waterbody

Local Road

Potentially Contaminating Activities (PCAs)

28

Gasoline and Associated Products Storage in Fixed Tanks

30

Importation of Fill Material of Unknown Quality

40

Pesticides (including Herbicides, Fungicides, and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage, and Large-Scale Applications



Soil Engineers Ltd.

Title: Site Location Plan

Project:
Proposed Residential Development
Northwest of High Street and Poplar Side Road
Town of Collingwood

Reference No. 2302-E081

Date: November 20, 2023

Scale:

0

25

50

100

150

200

250

Metres

Drawing No. 1

Source: Ontario Ministry of Natural Resources and Forestry
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N

Area of Current Investigation

Subject Site



Borehole

Local Road

Areas of Potential Environmental Concern (APEC)

APEC 1

APEC 2



Soil Engineers Ltd.

Title: Sampling Location Plan

Project:
Proposed Residential Development
Northwest of High Street and Poplar Side Road
Town of Collingwood

Reference No. 2302-E081

Date: November 20, 2023

Scale:

0 10 20 40 60 80 100

Metres

Drawing No. 2

Source: Ontario Ministry of Natural Resources and Forestry
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- Area of Current Investigation
- Subject Site
- Borehole
- / Waterbody
- Local Road
- Cross-Section Direction



Title: Cross-Section Key Plan

Project:
Proposed Residential Development
Northwest of High Street and Poplar Side Road
Town of Collingwood

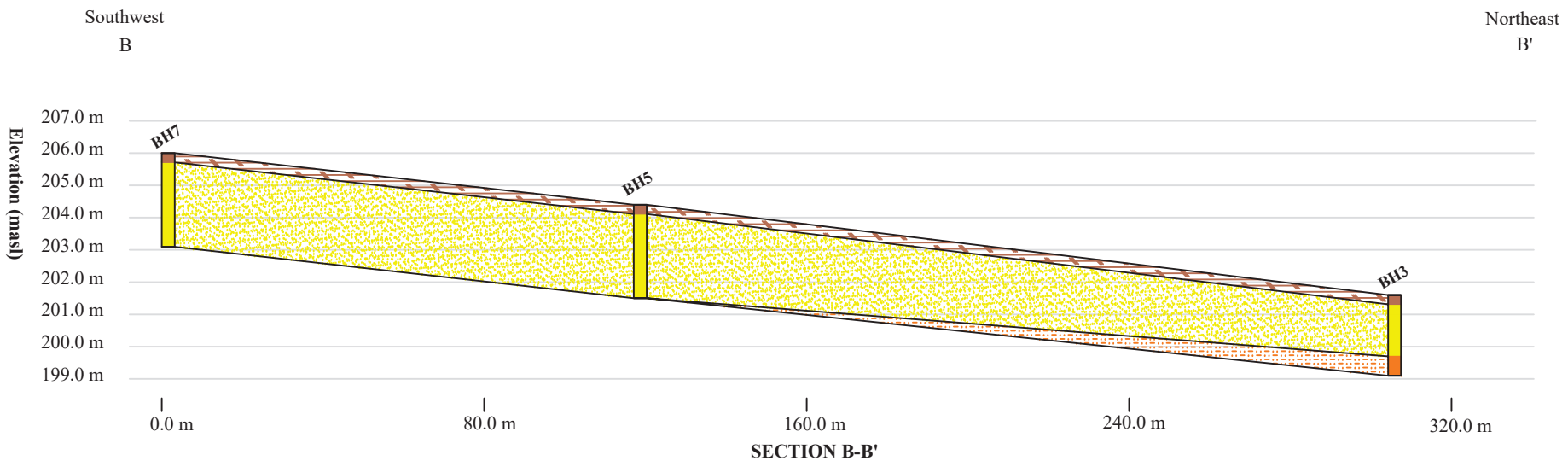
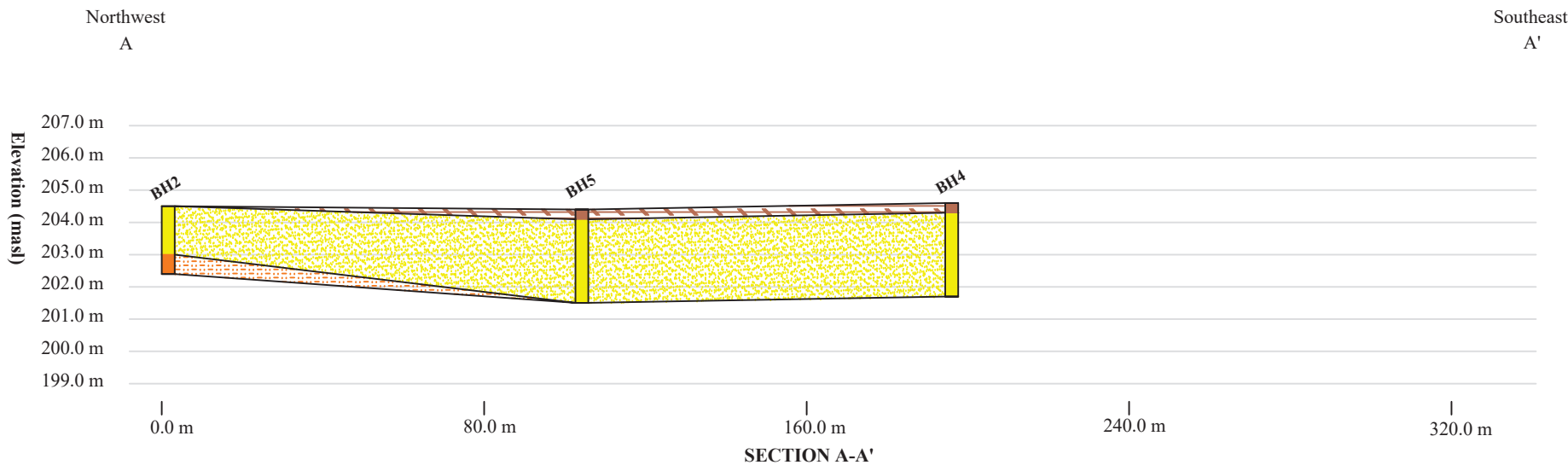
Reference No. 2302-E081

Date: November 20, 2023

Scale:
0 10 20 40 60 80 100
Metres

Drawing No. 3

Source: Ontario Ministry of Natural Resources and Forestry
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Topsoil



Sand



Silty Sand



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CONSULTING SOIL, FOUNDATION & ENVIRONMENTAL ENGINEERS

Title: **Geological Cross-Sections A-A' and B-B'**

Project: **Proposed Residential Development
Northwest of High Street and Poplar Side Road
Town of Collingwood**

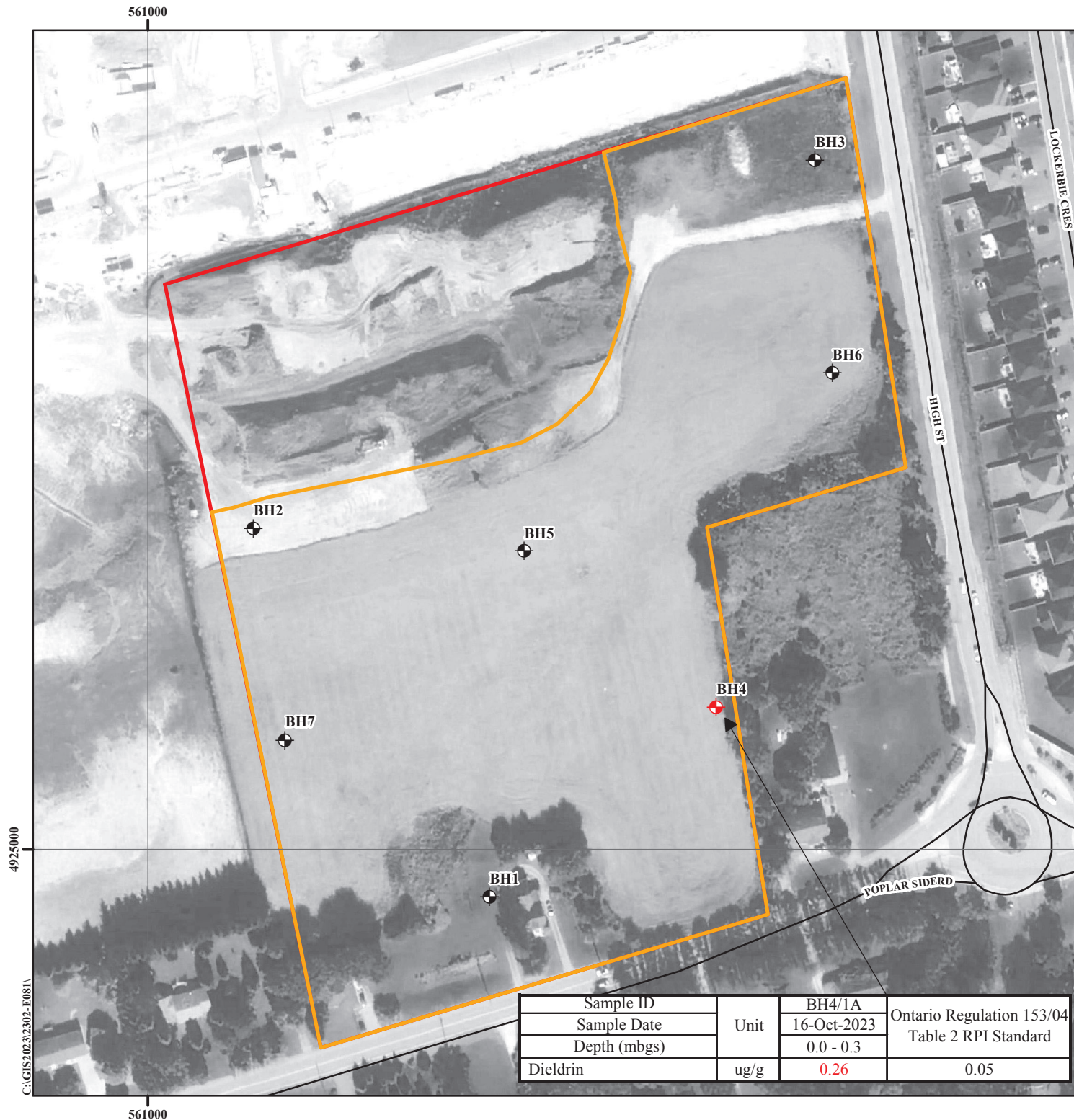
Reference No:
2302-E081

Date:
November 9, 2023

Scale: V
1:200

Scale: H
1:1600

Drawing No.
4



- Area of Current Investigation
- Subject Site
- Borehole
- Borehole Exceeding Table 2 Standards
- Local Road



Title: Soil Exceedance Plan

Project:
Proposed Residential Development
Northwest of High Street and Poplar Side Road
Town of Collingwood

Reference No. 2302-E081

Date: November 20, 2023

Scale:

 Metres

Drawing No. 5

Source: Ontario Ministry of Natural Resources and Forestry
 © Queen's Printer for Ontario, 2022

Sample ID		BH4/1A	Ontario Regulation 153/04 Table 2 RPI Standard
Sample Date	Unit	16-Oct-2023	
Depth (mbgs)		0.0 - 0.3	
Dieldrin	ug/g	0.26	
		0.05	



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APPENDIX 'A'

BOREHOLE LOGS

Reference No. 2302-E081

JOB NO.: 2302-E081

LOG OF BOREHOLE NO.: 1

FIGURE NO.: 1

PROJECT DESCRIPTION: Proposed Residential Development

METHOD OF BORING: Geoprobe

PROJECT LOCATION: Northwest of High Street and Poplar Side Road
Town of Collingwood

DRILLING DATE: October 16, 2023

El. (masl) Depth (mbgs)	SOIL DESCRIPTION	SAMPLES			Depth Scale (mbgs)	Combustible Headspace Reading (ppm)	REMARKS	WATER LEVEL
		Number	Type	Combustible Headspace Reading (ppm)				
205.9	Ground Surface							
0.0	30 cm TOPSOIL	1A	DO	15	0		BH1/1A: Metals, As, Sb, Se, Cr(VI), Hg, Cyanide, PHCs, BTEX	
0.3	Brown SAND	1B	DO	10				
		2	DO	10	1			
		3	DO	15	2			
		4	DO	25				
203.0	END OF BOREHOLE				3			
2.9								
					4			
					5			
					6			
					7			
					8			



Soil Engineers Ltd.

FIGURE NO.: 2

METHOD OF BORING: Geoprobe

DRILLING DATE: October 16, 2023



JOB NO.: 2302-E081

LOG OF BOREHOLE NO.: 3

FIGURE NO.: 3

PROJECT DESCRIPTION: Proposed Residential Development

METHOD OF BORING: Geoprobe

PROJECT LOCATION: Northwest of High Street and Poplar Side Road
Town of Collingwood

DRILLING DATE: October 16, 2023

El. (masl) Depth (mbgs)	SOIL DESCRIPTION	SAMPLES			Depth Scale (mbgs)	Combustible Headspace Reading (ppm)	REMARKS	WATER LEVEL
		Number	Type	Combustible Headspace Reading (ppm)				
201.6	Ground Surface							
0.0	30 cm TOPSOIL	1A	DO	20	0	●	BH3/1A: Metals, As, Sb, Se, Cr(VI), Hg, Cyanide, pH, OCs DUPS2	
0.3	Brown SAND	1B	DO	15		●		
		2	DO	10	1	●		
		3	DO	15		●		
199.7 1.8	Grey SILTY SAND	4	DO	15	2	●	BH3/4: pH	
199.1 2.4	END OF BOREHOLE							
					3			
					4			
					5			
					6			
					7			
					8			



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JOB NO.: 2302-E081

LOG OF BOREHOLE NO.: 4

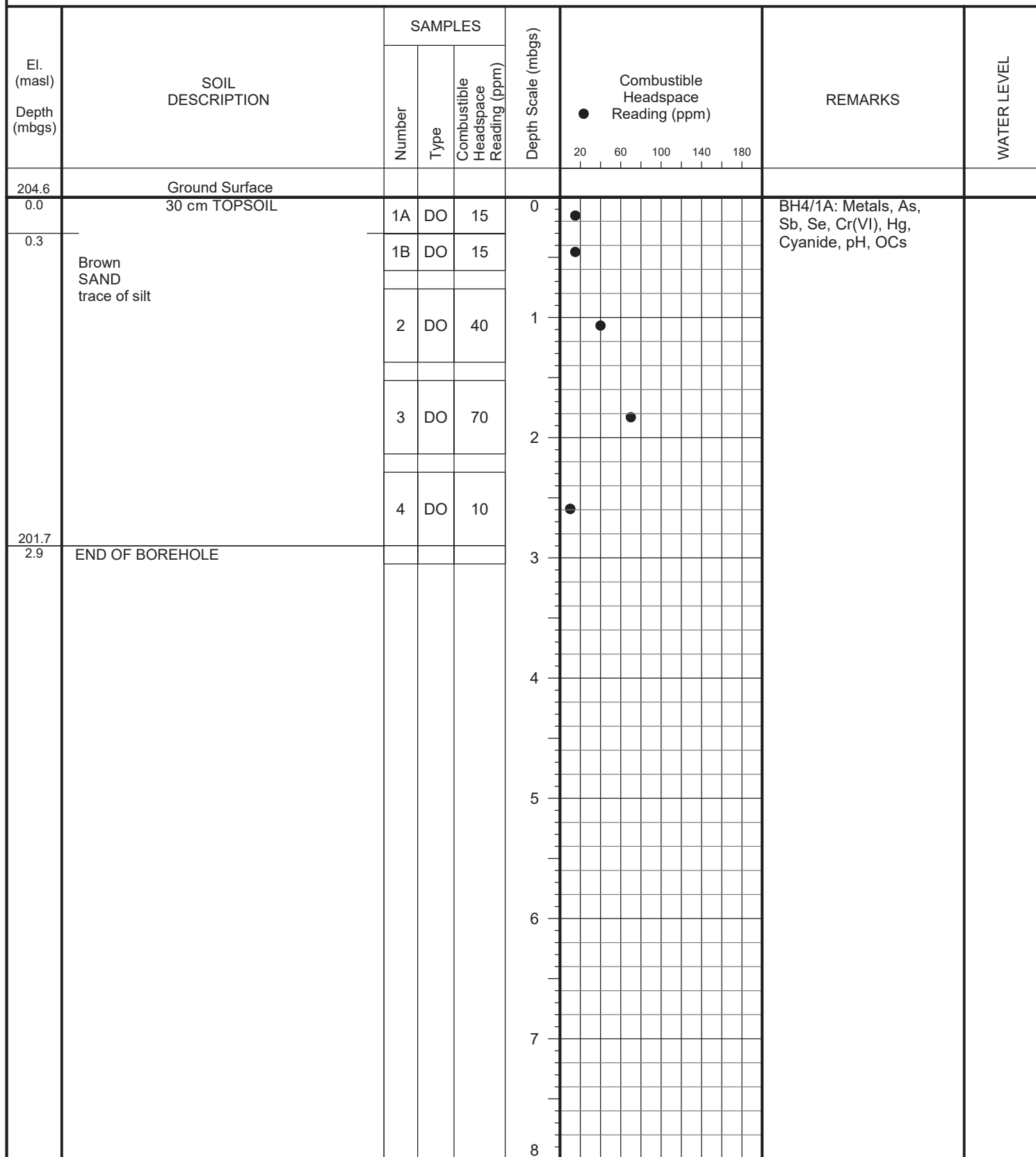
FIGURE NO.: 4

PROJECT DESCRIPTION: Proposed Residential Development

METHOD OF BORING: Geoprobe

PROJECT LOCATION: Northwest of High Street and Poplar Side Road
Town of Collingwood

DRILLING DATE: October 16, 2023



Soil Engineers Ltd.

JOB NO.: 2302-E081

LOG OF BOREHOLE NO.: 5

FIGURE NO.: 5

PROJECT DESCRIPTION: Proposed Residential Development

METHOD OF BORING: Geoprobe

PROJECT LOCATION: Northwest of High Street and Poplar Side Road
Town of Collingwood

DRILLING DATE: October 16, 2023

El. (masl) Depth (mbgs)	SOIL DESCRIPTION	SAMPLES			Depth Scale (mbgs)	Combustible Headspace Reading (ppm)	REMARKS	WATER LEVEL
		Number	Type	Combustible Headspace Reading (ppm)				
204.4	Ground Surface							
0.0	30 cm TOPSOIL	1A	DO	10	0	●	BH5/1A: Metals, As, Sb, Se, Cr(VI), Hg, Cyanide, pH, OCs DUPS1	
0.3	Brown SAND trace of silt	1B	DO	5		●		
		2	DO	15	1	●		
		3	DO	25	2	●		
		4	DO	35	3	●		
201.5	END OF BOREHOLE				3			
2.9					4			
					5			
					6			
					7			
					8			



Soil Engineers Ltd.

JOB NO.: 2302-E081

LOG OF BOREHOLE NO.: 6

FIGURE NO.: 6

PROJECT DESCRIPTION: Proposed Residential Development

METHOD OF BORING: Geoprobe

PROJECT LOCATION: Northwest of High Street and Poplar Side Road
Town of Collingwood

DRILLING DATE: October 16, 2023

El. (masl) Depth (mbgs)	SOIL DESCRIPTION	SAMPLES			Depth Scale (mbgs)	Combustible Headspace Reading (ppm)	REMARKS	WATER LEVEL
		Number	Type	Combustible Headspace Reading (ppm)				
201.3	Ground Surface							
0.0	30 cm TOPSOIL	1A	DO	30	0	●	BH6/1A: Metals, As, Sb, Se, Cr(VI), Hg, Cyanide, OCs	
0.3	Grey SILTY SAND	1B	DO	15		●		
		2	DO	15	1	●		
		3	DO	20	2	●		
		4	DO	20		●		
198.4	END OF BOREHOLE				3			
2.9								
					4			
					5			
					6			
					7			
					8			



Soil Engineers Ltd.

JOB NO.: 2302-E081

LOG OF BOREHOLE NO.: 7

FIGURE NO.: 7

PROJECT DESCRIPTION: Proposed Residential Development

METHOD OF BORING: Geoprobe

PROJECT LOCATION: Northwest of High Street and Poplar Side Road
Town of Collingwood

DRILLING DATE: October 16, 2023

El. (masl) Depth (mbgs)	SOIL DESCRIPTION	SAMPLES			Depth Scale (mbgs)	Combustible Headspace Reading (ppm)	REMARKS	WATER LEVEL
		Number	Type	Combustible Headspace Reading (ppm)				
206.0	Ground Surface							
0.0	30 cm TOPSOIL	1A	DO	10	0	●	BH7/1A: Metals, As, Sb, Se, Cr(VI), Hg, Cyanide, OCs	
0.3	Brown SAND trace of silt	1B	DO	15		●		
		2	DO	30	1	●		
		3	DO	35	2	●	BH7/4: pH	
		4	DO	15		●		
203.1	END OF BOREHOLE				3			
2.9								
					4			
					5			
					6			
					7			
					8			



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FAX: (905) 542-2769

APPENDIX 'B'

CERTIFICATE OF ANALYSIS (SOIL SAMPLES)

Reference No. 2302-E081



Your Project #: 2302-E081
Site Location: COLLINGWOOD

Attention: Madan K. Suwal

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

Report Date: 2023/10/30
Report #: R7886083
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C3W2936

Received: 2023/10/17, 15:35

Sample Matrix: Soil
Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Hot Water Extractable Boron	1	2023/10/20	2023/10/21	CAM SOP-00408	R153 Ana. Prot. 2011
Hot Water Extractable Boron	5	2023/10/20	2023/10/24	CAM SOP-00408	R153 Ana. Prot. 2011
Free (WAD) Cyanide	6	2023/10/23	2023/10/23	CAM SOP-00457	OMOE E3015 m
Hexavalent Chromium in Soil by IC (1)	4	2023/10/23	2023/10/24	CAM SOP-00436	EPA 3060A/7199 m
Hexavalent Chromium in Soil by IC (1)	2	2023/10/24	2023/10/24	CAM SOP-00436	EPA 3060A/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	1	N/A	2023/10/23	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	1	2023/10/19	2023/10/20	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	8	2023/10/20	2023/10/20	CAM SOP-00447	EPA 6020B m
Moisture	8	N/A	2023/10/19	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (4)	1	2023/10/21	2023/10/22	CAM SOP-00307	EPA 8081B/ 8082A
OC Pesticides (Selected) & PCB (4)	5	2023/10/23	2023/10/24	CAM SOP-00307	EPA 8081B/ 8082A
OC Pesticides (Selected) & PCB (4)	1	2023/10/29	2023/10/29	CAM SOP-00307	EPA 8081B/ 8082A
OC Pesticides Summed Parameters	7	N/A	2023/10/20	CAM SOP-00307	EPA 8081B/ 8082A
pH CaCl2 EXTRACT	5	2023/10/20	2023/10/20	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, MELCCFP, EPA, APHA.

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 #: 2302-E081
Site Location: COLLINGWOOD

Attention: Madan K. Suwal

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

Report Date: 2023/10/30
Report #: R7886083
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C3W2936

Received: 2023/10/17, 15:35

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.

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

Encryption Key

Antonella Brasil
Senior Project Manager
30 Oct 2023 16:47:46

Please direct all questions regarding this Certificate of Analysis to:

Antonella Brasil, Senior Project Manager

Email: Antonella.Brasil@bureauveritas.com

Phone# (905)817-5817

=====

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 #: C3W2936

Report Date: 2023/10/30

Soil Engineers Ltd

Client Project #: 2302-E081

Site Location: COLLINGWOOD

Sampler Initials: ASH

O.REG 153 ICPMS METALS (SOIL)

Bureau Veritas ID		XHX354	XHX363			
Sampling Date		2023/10/16	2023/10/16			
	UNITS	BH1/1A	DUPS1	RDL	MDL	QC Batch
Metals						
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	0.20	0.10	8994615
Acid Extractable Arsenic (As)	ug/g	3.2	2.2	1.0	0.10	8994615
Acid Extractable Barium (Ba)	ug/g	26	13	0.50	0.30	8994615
Acid Extractable Beryllium (Be)	ug/g	<0.20	0.23	0.20	0.020	8994615
Acid Extractable Boron (B)	ug/g	<5.0	<5.0	5.0	1.0	8994615
Acid Extractable Cadmium (Cd)	ug/g	0.25	0.13	0.10	0.030	8994615
Acid Extractable Chromium (Cr)	ug/g	7.2	11	1.0	0.20	8994615
Acid Extractable Cobalt (Co)	ug/g	2.1	2.6	0.10	0.020	8994615
Acid Extractable Copper (Cu)	ug/g	9.1	4.8	0.50	0.20	8994615
Acid Extractable Lead (Pb)	ug/g	24	5.3	1.0	0.10	8994615
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	<0.50	0.50	0.10	8994615
Acid Extractable Nickel (Ni)	ug/g	4.7	5.5	0.50	0.20	8994615
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	0.50	0.10	8994615
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	0.20	0.040	8994615
Acid Extractable Thallium (Tl)	ug/g	<0.050	<0.050	0.050	0.010	8994615
Acid Extractable Uranium (U)	ug/g	0.41	0.71	0.050	0.030	8994615
Acid Extractable Vanadium (V)	ug/g	13	24	5.0	0.50	8994615
Acid Extractable Zinc (Zn)	ug/g	75	18	5.0	0.50	8994615
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	0.050	0.030	8994615
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						



BUREAU
VERITAS

Bureau Veritas Job #: C3W2936

Report Date: 2023/10/30

Soil Engineers Ltd

Client Project #: 2302-E081

Site Location: COLLINGWOOD

Sampler Initials: ASH

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		XHX355				XHX355			XHX356			
Sampling Date		2023/10/16				2023/10/16			2023/10/16			
	UNITS	BH2/1	RDL	MDL	QC Batch	BH2/1 Lab-Dup	MDL	QC Batch	BH3/1A	RDL	MDL	QC Batch

Inorganics

Available (CaCl ₂) pH	pH	7.37			8995297	7.50		8995297	6.92			8995297
WAD Cyanide (Free)	ug/g	<0.01	0.01	0.0019	8998620				<0.01	0.01	0.0019	8998620
Chromium (VI)	ug/g	0.20	0.18	0.050	9001378				<0.18	0.18	0.050	8999648

Metals

Hot Water Ext. Boron (B)	ug/g	<0.050	0.050	0.030	8994461				0.14	0.050	0.030	8994937
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	0.10	8994284				<0.20	0.20	0.10	8994615
Acid Extractable Arsenic (As)	ug/g	<1.0	1.0	0.10	8994284				1.8	1.0	0.10	8994615
Acid Extractable Barium (Ba)	ug/g	11	0.50	0.30	8994284				16	0.50	0.30	8994615
Acid Extractable Beryllium (Be)	ug/g	<0.20	0.20	0.020	8994284				0.23	0.20	0.020	8994615
Acid Extractable Boron (B)	ug/g	<5.0	5.0	1.0	8994284				<5.0	5.0	1.0	8994615
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	0.030	8994284				<0.10	0.10	0.030	8994615
Acid Extractable Chromium (Cr)	ug/g	6.7	1.0	0.20	8994284				8.0	1.0	0.20	8994615
Acid Extractable Cobalt (Co)	ug/g	1.8	0.10	0.020	8994284				2.4	0.10	0.020	8994615
Acid Extractable Copper (Cu)	ug/g	5.0	0.50	0.20	8994284				4.9	0.50	0.20	8994615
Acid Extractable Lead (Pb)	ug/g	1.8	1.0	0.10	8994284				4.9	1.0	0.10	8994615
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	0.10	8994284				<0.50	0.50	0.10	8994615
Acid Extractable Nickel (Ni)	ug/g	4.6	0.50	0.20	8994284				5.3	0.50	0.20	8994615
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	0.10	8994284				<0.50	0.50	0.10	8994615
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	0.040	8994284				<0.20	0.20	0.040	8994615
Acid Extractable Thallium (Tl)	ug/g	<0.050	0.050	0.010	8994284				<0.050	0.050	0.010	8994615
Acid Extractable Uranium (U)	ug/g	0.32	0.050	0.030	8994284				0.45	0.050	0.030	8994615
Acid Extractable Vanadium (V)	ug/g	12	5.0	0.50	8994284				14	5.0	0.50	8994615
Acid Extractable Zinc (Zn)	ug/g	7.6	5.0	0.50	8994284				14	5.0	0.50	8994615
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	0.030	8994284				<0.050	0.050	0.030	8994615

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate



BUREAU
VERITAS

Bureau Veritas Job #: C3W2936

Report Date: 2023/10/30

Soil Engineers Ltd

Client Project #: 2302-E081

Site Location: COLLINGWOOD

Sampler Initials: ASH

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		XHX357		XHX358	XHX359			
Sampling Date		2023/10/16		2023/10/16	2023/10/16			
	UNITS	BH4/1A	QC Batch	BH5/1A	BH6/1A	RDL	MDL	QC Batch
Inorganics								
Available (CaCl ₂) pH	pH	6.28	8994733					
WAD Cyanide (Free)	ug/g	<0.01	8998620	<0.01	<0.01	0.01	0.0019	8998620
Chromium (VI)	ug/g	<0.18	8999648	<0.18	<0.18	0.18	0.050	8999648
Metals								
Hot Water Ext. Boron (B)	ug/g	0.20	8994937	0.14	0.19	0.050	0.030	8994937
Acid Extractable Antimony (Sb)	ug/g	<0.20	8994615	<0.20	<0.20	0.20	0.10	8994615
Acid Extractable Arsenic (As)	ug/g	2.8	8994615	2.0	2.2	1.0	0.10	8994615
Acid Extractable Barium (Ba)	ug/g	19	8994615	12	23	0.50	0.30	8994615
Acid Extractable Beryllium (Be)	ug/g	<0.20	8994615	0.20	0.23	0.20	0.020	8994615
Acid Extractable Boron (B)	ug/g	<5.0	8994615	<5.0	<5.0	5.0	1.0	8994615
Acid Extractable Cadmium (Cd)	ug/g	0.13	8994615	<0.10	0.14	0.10	0.030	8994615
Acid Extractable Chromium (Cr)	ug/g	7.2	8994615	8.5	8.2	1.0	0.20	8994615
Acid Extractable Cobalt (Co)	ug/g	1.8	8994615	2.1	2.5	0.10	0.020	8994615
Acid Extractable Copper (Cu)	ug/g	5.0	8994615	4.3	4.8	0.50	0.20	8994615
Acid Extractable Lead (Pb)	ug/g	7.9	8994615	4.7	6.2	1.0	0.10	8994615
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	8994615	<0.50	<0.50	0.50	0.10	8994615
Acid Extractable Nickel (Ni)	ug/g	4.1	8994615	5.1	5.1	0.50	0.20	8994615
Acid Extractable Selenium (Se)	ug/g	<0.50	8994615	<0.50	<0.50	0.50	0.10	8994615
Acid Extractable Silver (Ag)	ug/g	<0.20	8994615	<0.20	<0.20	0.20	0.040	8994615
Acid Extractable Thallium (Tl)	ug/g	<0.050	8994615	<0.050	<0.050	0.050	0.010	8994615
Acid Extractable Uranium (U)	ug/g	0.53	8994615	0.53	0.48	0.050	0.030	8994615
Acid Extractable Vanadium (V)	ug/g	13	8994615	18	15	5.0	0.50	8994615
Acid Extractable Zinc (Zn)	ug/g	17	8994615	17	20	5.0	0.50	8994615
Acid Extractable Mercury (Hg)	ug/g	<0.050	8994615	<0.050	<0.050	0.050	0.030	8994615
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								



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Bureau Veritas Job #: C3W2936
Report Date: 2023/10/30

Soil Engineers Ltd
Client Project #: 2302-E081
Site Location: COLLINGWOOD
Sampler Initials: ASH

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		XHX359				XHX360			
Sampling Date		2023/10/16				2023/10/16			
	UNITS	BH6/1A Lab-Dup	RDL	MDL	QC Batch	BH7/1A	RDL	MDL	QC Batch
Inorganics									
WAD Cyanide (Free)	ug/g					<0.01	0.01	0.0019	8998620
Chromium (VI)	ug/g					<0.18	0.18	0.050	9001378
Metals									
Hot Water Ext. Boron (B)	ug/g	0.17	0.050	0.030	8994937	0.37	0.050	0.030	8994937
Acid Extractable Antimony (Sb)	ug/g					<0.20	0.20	0.10	8994615
Acid Extractable Arsenic (As)	ug/g					3.0	1.0	0.10	8994615
Acid Extractable Barium (Ba)	ug/g					21	0.50	0.30	8994615
Acid Extractable Beryllium (Be)	ug/g					0.25	0.20	0.020	8994615
Acid Extractable Boron (B)	ug/g					<5.0	5.0	1.0	8994615
Acid Extractable Cadmium (Cd)	ug/g					0.13	0.10	0.030	8994615
Acid Extractable Chromium (Cr)	ug/g					8.2	1.0	0.20	8994615
Acid Extractable Cobalt (Co)	ug/g					2.0	0.10	0.020	8994615
Acid Extractable Copper (Cu)	ug/g					8.6	0.50	0.20	8994615
Acid Extractable Lead (Pb)	ug/g					7.9	1.0	0.10	8994615
Acid Extractable Molybdenum (Mo)	ug/g					<0.50	0.50	0.10	8994615
Acid Extractable Nickel (Ni)	ug/g					4.4	0.50	0.20	8994615
Acid Extractable Selenium (Se)	ug/g					<0.50	0.50	0.10	8994615
Acid Extractable Silver (Ag)	ug/g					<0.20	0.20	0.040	8994615
Acid Extractable Thallium (Tl)	ug/g					<0.050	0.050	0.010	8994615
Acid Extractable Uranium (U)	ug/g					0.51	0.050	0.030	8994615
Acid Extractable Vanadium (V)	ug/g					17	5.0	0.50	8994615
Acid Extractable Zinc (Zn)	ug/g					29	5.0	0.50	8994615
Acid Extractable Mercury (Hg)	ug/g					<0.050	0.050	0.030	8994615
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate									



BUREAU
VERITAS

Bureau Veritas Job #: C3W2936

Report Date: 2023/10/30

Soil Engineers Ltd

Client Project #: 2302-E081

Site Location: COLLINGWOOD

Sampler Initials: ASH

O.REG 153 OC PESTICIDES (SOIL)

Bureau Veritas ID		XHX355				XHX355			
Sampling Date		2023/10/16				2023/10/16			
	UNITS	BH2/1	RDL	MDL	QC Batch	BH2/1 Lab-Dup	RDL	MDL	QC Batch
Calculated Parameters									
Chlordane (Total)	ug/g	<0.0020	0.0020	N/A	8988337				
o,p-DDD + p,p-DDD	ug/g	<0.0020	0.0020	N/A	8988337				
o,p-DDE + p,p-DDE	ug/g	0.0021	0.0020	N/A	8988337				
o,p-DDT + p,p-DDT	ug/g	<0.0020	0.0020	N/A	8988337				
Total Endosulfan	ug/g	<0.0020	0.0020	N/A	8988337				
Pesticides & Herbicides									
Aldrin	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9001122
a-Chlordane	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9001122
g-Chlordane	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9001122
o,p-DDD	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9001122
p,p-DDD	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9001122
o,p-DDE	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9001122
p,p-DDE	ug/g	0.0021	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9001122
o,p-DDT	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9001122
p,p-DDT	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9001122
Dieldrin	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9001122
Lindane	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9001122
Endosulfan I (alpha)	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9001122
Endosulfan II (beta)	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9001122
Endrin	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9001122
Heptachlor	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9001122
Heptachlor epoxide	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9001122
Hexachlorobenzene	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9001122
Hexachlorobutadiene	ug/g	<0.0020	0.0020	N/A	9001122	<0.0020	0.0020	N/A	9001122
Hexachloroethane	ug/g	<0.0020	0.0020	N/A	9001122	<0.0020	0.0020	N/A	9001122
Methoxychlor	ug/g	<0.0050	0.0050	0.0016	9001122	<0.0050	0.0050	0.0016	9001122
Surrogate Recovery (%)									
2,4,5,6-Tetrachloro-m-xylene	%	95			9001122	86			9001122
Decachlorobiphenyl	%	127			9001122	110			9001122
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate N/A = Not Applicable									



BUREAU
VERITAS

Bureau Veritas Job #: C3W2936

Report Date: 2023/10/30

Soil Engineers Ltd

Client Project #: 2302-E081

Site Location: COLLINGWOOD

Sampler Initials: ASH

O.REG 153 OC PESTICIDES (SOIL)

Bureau Veritas ID		XHX356				XHX357			
Sampling Date		2023/10/16				2023/10/16			
	UNITS	BH3/1A	RDL	MDL	QC Batch	BH4/1A	RDL	MDL	QC Batch
Calculated Parameters									
Chlordane (Total)	ug/g	<0.0020	0.0020	N/A	8988337	<0.030	0.030	N/A	8988337
o,p-DDD + p,p-DDD	ug/g	<0.0020	0.0020	N/A	8988337	0.0036	0.0020	N/A	8988337
o,p-DDE + p,p-DDE	ug/g	0.019	0.0020	N/A	8988337	0.20	0.020	N/A	8988337
o,p-DDT + p,p-DDT	ug/g	0.015	0.0020	N/A	8988337	0.15	0.020	N/A	8988337
Total Endosulfan	ug/g	<0.0020	0.0020	N/A	8988337	<0.0020	0.0020	N/A	8988337
Pesticides & Herbicides									
Aldrin	ug/g	<0.0020	0.0020	0.00040	9001122	0.0087	0.0020	0.00040	9014364
a-Chlordane	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0060	0.0060	0.0012	9014364
g-Chlordane	ug/g	<0.0020	0.0020	0.00040	9001122	<0.030	0.030	0.0060	9014364
o,p-DDD	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9014364
p,p-DDD	ug/g	<0.0020	0.0020	0.00040	9001122	0.0036	0.0020	0.00040	9014364
o,p-DDE	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9014364
p,p-DDE	ug/g	0.019	0.0020	0.00040	9001122	0.20	0.020	0.0040	9014364
o,p-DDT	ug/g	0.0031	0.0020	0.00040	9001122	0.034	0.020	0.0040	9014364
p,p-DDT	ug/g	0.012	0.0020	0.00040	9001122	0.12	0.020	0.0040	9014364
Dieldrin	ug/g	0.010	0.0020	0.00040	9001122	0.26	0.020	0.0040	9014364
Lindane	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9014364
Endosulfan I (alpha)	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9014364
Endosulfan II (beta)	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9014364
Endrin	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9014364
Heptachlor	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9014364
Heptachlor epoxide	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9014364
Hexachlorobenzene	ug/g	<0.0020	0.0020	0.00040	9001122	<0.0020	0.0020	0.00040	9014364
Hexachlorobutadiene	ug/g	<0.0020	0.0020	N/A	9001122	<0.0020	0.0020	N/A	9014364
Hexachloroethane	ug/g	<0.0020	0.0020	N/A	9001122	<0.0020	0.0020	N/A	9014364
Methoxychlor	ug/g	<0.0050	0.0050	0.0016	9001122	<0.0050	0.0050	0.0016	9014364
Surrogate Recovery (%)									
2,4,5,6-Tetrachloro-m-xylene	%	75			9001122	78			9014364
Decachlorobiphenyl	%	113			9001122	108			9014364
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									
N/A = Not Applicable									



**BUREAU
VERITAS**

Bureau Veritas Job #: C3W2936

Report Date: 2023/10/30

Soil Engineers Ltd

Client Project #: 2302-E081

Site Location: COLLINGWOOD

Sampler Initials: ASH

O.REG 153 OC PESTICIDES (SOIL)

Bureau Veritas ID		XHX358				XHX359	XHX360	XHX364			
Sampling Date		2023/10/16				2023/10/16	2023/10/16	2023/10/16			
	UNITS	BH5/1A	RDL	MDL	QC Batch	BH6/1A	BH7/1A	DUPS2	RDL	MDL	QC Batch
Calculated Parameters											
Chlordane (Total)	ug/g	<0.0020	0.0020	N/A	8988337	<0.0020	<0.0020	<0.0020	0.0020	N/A	8988337
o,p-DDD + p,p-DDD	ug/g	0.0074	0.0020	N/A	8988337	<0.0020	<0.0020	<0.0020	0.0020	N/A	8988337
o,p-DDE + p,p-DDE	ug/g	0.20	0.020	N/A	8988337	0.031	0.021	0.026	0.0020	N/A	8988337
o,p-DDT + p,p-DDT	ug/g	0.23	0.020	N/A	8988337	0.018	0.0067	0.020	0.0020	N/A	8988337
Total Endosulfan	ug/g	<0.0020	0.0020	N/A	8988337	<0.0020	<0.0020	<0.0020	0.0020	N/A	8988337
Pesticides & Herbicides											
Aldrin	ug/g	<0.0020	0.0020	0.00040	8997268	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9001122
a-Chlordane	ug/g	<0.0020	0.0020	0.00040	8997268	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9001122
g-Chlordane	ug/g	<0.0020	0.0020	0.00040	8997268	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9001122
o,p-DDD	ug/g	0.0024	0.0020	0.00040	8997268	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9001122
p,p-DDD	ug/g	0.0050	0.0020	0.00040	8997268	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9001122
o,p-DDE	ug/g	<0.010	0.010	0.0020	8997268	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9001122
p,p-DDE	ug/g	0.20	0.020	0.0040	8997268	0.031	0.021	0.026	0.0020	0.00040	9001122
o,p-DDT	ug/g	0.069	0.020	0.0040	8997268	0.0039	<0.0020	0.0042	0.0020	0.00040	9001122
p,p-DDT	ug/g	0.16	0.020	0.0040	8997268	0.014	0.0067	0.016	0.0020	0.00040	9001122
Dieldrin	ug/g	<0.0020	0.0020	0.00040	8997268	0.0062	<0.0020	0.014	0.0020	0.00040	9001122
Lindane	ug/g	<0.0020	0.0020	0.00040	8997268	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9001122
Endosulfan I (alpha)	ug/g	<0.0020	0.0020	0.00040	8997268	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9001122
Endosulfan II (beta)	ug/g	<0.0020	0.0020	0.00040	8997268	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9001122
Endrin	ug/g	<0.0020	0.0020	0.00040	8997268	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9001122
Heptachlor	ug/g	<0.0020	0.0020	0.00040	8997268	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9001122
Heptachlor epoxide	ug/g	<0.0020	0.0020	0.00040	8997268	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9001122
Hexachlorobenzene	ug/g	<0.0020	0.0020	0.00040	8997268	<0.0020	<0.0020	<0.0020	0.0020	0.00040	9001122
Hexachlorobutadiene	ug/g	<0.0020	0.0020	N/A	8997268	<0.0020	<0.0020	<0.0020	0.0020	N/A	9001122
Hexachloroethane	ug/g	<0.0020	0.0020	N/A	8997268	<0.0020	<0.0020	<0.0020	0.0020	N/A	9001122
Methoxychlor	ug/g	<0.0050	0.0050	0.0016	8997268	<0.0050	<0.0050	<0.0050	0.0050	0.0016	9001122
Surrogate Recovery (%)											
2,4,5,6-Tetrachloro-m-xylene	%	93			8997268	98	90	86			9001122
Decachlorobiphenyl	%	113			8997268	118	114	116			9001122
RDL = Reportable Detection Limit											
QC Batch = Quality Control Batch											
N/A = Not Applicable											



BUREAU
VERITAS

Bureau Veritas Job #: C3W2936

Report Date: 2023/10/30

Soil Engineers Ltd

Client Project #: 2302-E081

Site Location: COLLINGWOOD

Sampler Initials: ASH

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

Bureau Veritas ID		XHX354			
Sampling Date		2023/10/16			
	UNITS	BH1/1A	RDL	MDL	QC Batch
BTEX & F1 Hydrocarbons					
Benzene	ug/g	<0.020	0.020	0.020	8995560
Toluene	ug/g	<0.020	0.020	0.020	8995560
Ethylbenzene	ug/g	<0.020	0.020	0.020	8995560
o-Xylene	ug/g	<0.020	0.020	0.020	8995560
p+m-Xylene	ug/g	<0.040	0.040	0.040	8995560
Total Xylenes	ug/g	<0.040	0.040	0.040	8995560
F1 (C6-C10)	ug/g	<10	10	5.0	8995560
F1 (C6-C10) - BTEX	ug/g	<10	10	5.0	8995560
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	5.0	8991831
F3 (C16-C34 Hydrocarbons)	ug/g	70	50	5.0	8991831
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	10	8991831
Reached Baseline at C50	ug/g	Yes			8991831
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	103			8995560
4-Bromofluorobenzene	%	98			8995560
D10-o-Xylene	%	93			8995560
D4-1,2-Dichloroethane	%	109			8995560
o-Terphenyl	%	94			8991831
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					



**BUREAU
VERITAS**

Bureau Veritas Job #: C3W2936
Report Date: 2023/10/30

Soil Engineers Ltd
Client Project #: 2302-E081
Site Location: COLLINGWOOD
Sampler Initials: ASH

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		XHX354		XHX355	XHX356	XHX357	XHX358	XHX359			
Sampling Date		2023/10/16		2023/10/16	2023/10/16	2023/10/16	2023/10/16	2023/10/16			
	UNITS	BH1/1A	QC Batch	BH2/1	BH3/1A	BH4/1A	BH5/1A	BH6/1A	RDL	MDL	QC Batch

Inorganics

Moisture	%	18	8991452	18	16	16	12	22	1.0	0.50	8991590
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RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Bureau Veritas ID		XHX360				XHX361	XHX362			XHX364			
Sampling Date		2023/10/16				2023/10/16	2023/10/16			2023/10/16			
	UNITS	BH7/1A	RDL	MDL	QC Batch	BH3/4	BH7/4	MDL	QC Batch	DUPS2	RDL	MDL	QC Batch

Inorganics

Moisture	%	13	1.0	0.50	8991590					16	1.0	0.50	8991590
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Available (CaCl ₂) pH	pH					7.81	7.78		8994733				
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RDL = Reportable Detection Limit

QC Batch = Quality Control Batch



**BUREAU
VERITAS**

Bureau Veritas Job #: C3W2936
Report Date: 2023/10/30

Soil Engineers Ltd
Client Project #: 2302-E081
Site Location: COLLINGWOOD
Sampler Initials: ASH

TEST SUMMARY

Bureau Veritas ID: XHX354
Sample ID: BH1/1A
Matrix: Soil

Collected: 2023/10/16
Shipped:
Received: 2023/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8995560	N/A	2023/10/23	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8991831	2023/10/19	2023/10/20	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	8994615	2023/10/20	2023/10/20	Daniel Teclu
Moisture	BAL	8991452	N/A	2023/10/19	Ibadat Preet

Bureau Veritas ID: XHX355
Sample ID: BH2/1
Matrix: Soil

Collected: 2023/10/16
Shipped:
Received: 2023/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8994461	2023/10/20	2023/10/21	Medhat Nasr
Free (WAD) Cyanide	TECH	8998620	2023/10/23	2023/10/23	Prgya Panchal
Hexavalent Chromium in Soil by IC	IC/SPEC	9001378	2023/10/24	2023/10/24	Lusine Khachatryan
Acid Extractable Metals by ICPMS	ICP/MS	8994284	2023/10/20	2023/10/20	Daniel Teclu
Moisture	BAL	8991590	N/A	2023/10/19	Ibadat Preet
OC Pesticides (Selected) & PCB	GC/ECD	9001122	2023/10/23	2023/10/24	Joy Zhang
OC Pesticides Summed Parameters	CALC	8988337	N/A	2023/10/20	Automated Statchk
pH CaCl2 EXTRACT	AT	8995297	2023/10/20	2023/10/20	Gurpartee Kaur

Bureau Veritas ID: XHX355 Dup
Sample ID: BH2/1
Matrix: Soil

Collected: 2023/10/16
Shipped:
Received: 2023/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides (Selected) & PCB	GC/ECD	9001122	2023/10/23	2023/10/24	Joy Zhang
pH CaCl2 EXTRACT	AT	8995297	2023/10/20	2023/10/20	Gurpartee Kaur

Bureau Veritas ID: XHX356
Sample ID: BH3/1A
Matrix: Soil

Collected: 2023/10/16
Shipped:
Received: 2023/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8994937	2023/10/20	2023/10/24	Medhat Nasr
Free (WAD) Cyanide	TECH	8998620	2023/10/23	2023/10/23	Prgya Panchal
Hexavalent Chromium in Soil by IC	IC/SPEC	8999648	2023/10/23	2023/10/24	Theodora Luck
Acid Extractable Metals by ICPMS	ICP/MS	8994615	2023/10/20	2023/10/20	Daniel Teclu
Moisture	BAL	8991590	N/A	2023/10/19	Ibadat Preet
OC Pesticides (Selected) & PCB	GC/ECD	9001122	2023/10/23	2023/10/24	Joy Zhang
OC Pesticides Summed Parameters	CALC	8988337	N/A	2023/10/20	Automated Statchk
pH CaCl2 EXTRACT	AT	8995297	2023/10/20	2023/10/20	Gurpartee Kaur



BUREAU
VERITAS

Bureau Veritas Job #: C3W2936
Report Date: 2023/10/30

Soil Engineers Ltd
Client Project #: 2302-E081
Site Location: COLLINGWOOD
Sampler Initials: ASH

TEST SUMMARY

Bureau Veritas ID: XHX357
Sample ID: BH4/1A
Matrix: Soil

Collected: 2023/10/16
Shipped:
Received: 2023/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8994937	2023/10/20	2023/10/24	Medhat Nasr
Free (WAD) Cyanide	TECH	8998620	2023/10/23	2023/10/23	Prgya Panchal
Hexavalent Chromium in Soil by IC	IC/SPEC	8999648	2023/10/23	2023/10/24	Theodora Luck
Acid Extractable Metals by ICPMS	ICP/MS	8994615	2023/10/20	2023/10/20	Daniel Teclu
Moisture	BAL	8991590	N/A	2023/10/19	Ibadat Preet
OC Pesticides (Selected) & PCB	GC/ECD	9014364	2023/10/29	2023/10/29	Joy Zhang
OC Pesticides Summed Parameters	CALC	8988337	N/A	2023/10/20	Automated Statchk
pH CaCl2 EXTRACT	AT	8994733	2023/10/20	2023/10/20	Gurpartee Kaur

Bureau Veritas ID: XHX358
Sample ID: BH5/1A
Matrix: Soil

Collected: 2023/10/16
Shipped:
Received: 2023/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8994937	2023/10/20	2023/10/24	Medhat Nasr
Free (WAD) Cyanide	TECH	8998620	2023/10/23	2023/10/23	Prgya Panchal
Hexavalent Chromium in Soil by IC	IC/SPEC	8999648	2023/10/23	2023/10/24	Theodora Luck
Acid Extractable Metals by ICPMS	ICP/MS	8994615	2023/10/20	2023/10/20	Daniel Teclu
Moisture	BAL	8991590	N/A	2023/10/19	Ibadat Preet
OC Pesticides (Selected) & PCB	GC/ECD	8997268	2023/10/21	2023/10/22	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	8988337	N/A	2023/10/20	Automated Statchk

Bureau Veritas ID: XHX359
Sample ID: BH6/1A
Matrix: Soil

Collected: 2023/10/16
Shipped:
Received: 2023/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8994937	2023/10/20	2023/10/24	Medhat Nasr
Free (WAD) Cyanide	TECH	8998620	2023/10/23	2023/10/23	Prgya Panchal
Hexavalent Chromium in Soil by IC	IC/SPEC	8999648	2023/10/23	2023/10/24	Theodora Luck
Acid Extractable Metals by ICPMS	ICP/MS	8994615	2023/10/20	2023/10/20	Daniel Teclu
Moisture	BAL	8991590	N/A	2023/10/19	Ibadat Preet
OC Pesticides (Selected) & PCB	GC/ECD	9001122	2023/10/23	2023/10/24	Joy Zhang
OC Pesticides Summed Parameters	CALC	8988337	N/A	2023/10/20	Automated Statchk

Bureau Veritas ID: XHX359 Dup
Sample ID: BH6/1A
Matrix: Soil

Collected: 2023/10/16
Shipped:
Received: 2023/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8994937	2023/10/20	2023/10/24	Medhat Nasr



BUREAU
VERITAS

Bureau Veritas Job #: C3W2936
Report Date: 2023/10/30

Soil Engineers Ltd
Client Project #: 2302-E081
Site Location: COLLINGWOOD
Sampler Initials: ASH

TEST SUMMARY

Bureau Veritas ID: XHX360
Sample ID: BH7/1A
Matrix: Soil

Collected: 2023/10/16
Shipped:
Received: 2023/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8994937	2023/10/20	2023/10/24	Medhat Nasr
Free (WAD) Cyanide	TECH	8998620	2023/10/23	2023/10/23	Prgya Panchal
Hexavalent Chromium in Soil by IC	IC/SPEC	9001378	2023/10/24	2023/10/24	Lusine Khachatryan
Acid Extractable Metals by ICPMS	ICP/MS	8994615	2023/10/20	2023/10/20	Daniel Teclu
Moisture	BAL	8991590	N/A	2023/10/19	Ibadat Preet
OC Pesticides (Selected) & PCB	GC/ECD	9001122	2023/10/23	2023/10/24	Joy Zhang
OC Pesticides Summed Parameters	CALC	8988337	N/A	2023/10/20	Automated Statchk

Bureau Veritas ID: XHX361
Sample ID: BH3/4
Matrix: Soil

Collected: 2023/10/16
Shipped:
Received: 2023/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	8994733	2023/10/20	2023/10/20	Gurpartee Kaur

Bureau Veritas ID: XHX362
Sample ID: BH7/4
Matrix: Soil

Collected: 2023/10/16
Shipped:
Received: 2023/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	8994733	2023/10/20	2023/10/20	Gurpartee Kaur

Bureau Veritas ID: XHX363
Sample ID: DUPS1
Matrix: Soil

Collected: 2023/10/16
Shipped:
Received: 2023/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8994615	2023/10/20	2023/10/20	Daniel Teclu

Bureau Veritas ID: XHX364
Sample ID: DUPS2
Matrix: Soil

Collected: 2023/10/16
Shipped:
Received: 2023/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	8991590	N/A	2023/10/19	Ibadat Preet
OC Pesticides (Selected) & PCB	GC/ECD	9001122	2023/10/23	2023/10/24	Joy Zhang
OC Pesticides Summed Parameters	CALC	8988337	N/A	2023/10/20	Automated Statchk



GENERAL COMMENTS

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

Package 1	2.7°C
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Revised Report (2023/10/30) : OC Pesticide re-run for BH4/1 A as per client request.

Sample XHX357 [BH4/1A] : OC Pesticide Analysis: Due to high concentrations of target analytes, sample required dilution. Detection limits were adjusted accordingly.

Sample XHX358 [BH5/1A] : OC Pesticide Analysis: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

Results relate only to the items tested.



QUALITY ASSURANCE REPORT

Soil Engineers Ltd
Client Project #: 2302-E081
Site Location: COLLINGWOOD
Sampler Initials: ASH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8991831	o-Terphenyl	2023/10/19	91	60 - 130	92	60 - 130	94	%		
8995560	1,4-Difluorobenzene	2023/10/23	105	60 - 140	106	60 - 140	99	%		
8995560	4-Bromofluorobenzene	2023/10/23	98	60 - 140	98	60 - 140	97	%		
8995560	D10-o-Xylene	2023/10/23	102	60 - 140	88	60 - 140	81	%		
8995560	D4-1,2-Dichloroethane	2023/10/23	99	60 - 140	97	60 - 140	119	%		
8997268	2,4,5,6-Tetrachloro-m-xylene	2023/10/22	97	50 - 130	76	50 - 130	94	%		
8997268	Decachlorobiphenyl	2023/10/22	119	50 - 130	94	50 - 130	120	%		
9001122	2,4,5,6-Tetrachloro-m-xylene	2023/10/24	96	50 - 130	77	50 - 130	88	%		
9001122	Decachlorobiphenyl	2023/10/24	124	50 - 130	99	50 - 130	104	%		
9014364	2,4,5,6-Tetrachloro-m-xylene	2023/10/29	86	50 - 130	87	50 - 130	80	%		
9014364	Decachlorobiphenyl	2023/10/29	108	50 - 130	110	50 - 130	115	%		
8991452	Moisture	2023/10/19							1.2	20
8991590	Moisture	2023/10/19							0.89	20
8991831	F2 (C10-C16 Hydrocarbons)	2023/10/20	97	60 - 130	97	80 - 120	<10	ug/g	NC	30
8991831	F3 (C16-C34 Hydrocarbons)	2023/10/20	97	60 - 130	98	80 - 120	<50	ug/g	NC	30
8991831	F4 (C34-C50 Hydrocarbons)	2023/10/20	97	60 - 130	97	80 - 120	<50	ug/g	NC	30
8994284	Acid Extractable Antimony (Sb)	2023/10/20	105	75 - 125	102	80 - 120	<0.20	ug/g	NC	30
8994284	Acid Extractable Arsenic (As)	2023/10/20	103	75 - 125	100	80 - 120	<1.0	ug/g	0.63	30
8994284	Acid Extractable Barium (Ba)	2023/10/20	102	75 - 125	103	80 - 120	<0.50	ug/g	2.3	30
8994284	Acid Extractable Beryllium (Be)	2023/10/20	110	75 - 125	105	80 - 120	<0.20	ug/g	NC	30
8994284	Acid Extractable Boron (B)	2023/10/20	107	75 - 125	104	80 - 120	<5.0	ug/g	NC	30
8994284	Acid Extractable Cadmium (Cd)	2023/10/20	103	75 - 125	98	80 - 120	<0.10	ug/g	NC	30
8994284	Acid Extractable Chromium (Cr)	2023/10/20	103	75 - 125	99	80 - 120	<1.0	ug/g	4.1	30
8994284	Acid Extractable Cobalt (Co)	2023/10/20	102	75 - 125	99	80 - 120	<0.10	ug/g	1.9	30
8994284	Acid Extractable Copper (Cu)	2023/10/20	102	75 - 125	100	80 - 120	<0.50	ug/g	2.0	30
8994284	Acid Extractable Lead (Pb)	2023/10/20	100	75 - 125	98	80 - 120	<1.0	ug/g	0.96	30
8994284	Acid Extractable Mercury (Hg)	2023/10/20	104	75 - 125	99	80 - 120	<0.050	ug/g		
8994284	Acid Extractable Molybdenum (Mo)	2023/10/20	106	75 - 125	99	80 - 120	<0.50	ug/g	NC	30
8994284	Acid Extractable Nickel (Ni)	2023/10/20	101	75 - 125	100	80 - 120	<0.50	ug/g	1.6	30
8994284	Acid Extractable Selenium (Se)	2023/10/20	104	75 - 125	100	80 - 120	<0.50	ug/g	NC	30
8994284	Acid Extractable Silver (Ag)	2023/10/20	105	75 - 125	102	80 - 120	<0.20	ug/g	NC	30



Bureau Veritas Job #: C3W2936
Report Date: 2023/10/30

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd
Client Project #: 2302-E081
Site Location: COLLINGWOOD
Sampler Initials: ASH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8994284	Acid Extractable Thallium (Tl)	2023/10/20	104	75 - 125	101	80 - 120	<0.050	ug/g	NC	30
8994284	Acid Extractable Uranium (U)	2023/10/20	104	75 - 125	98	80 - 120	<0.050	ug/g	1.1	30
8994284	Acid Extractable Vanadium (V)	2023/10/20	102	75 - 125	99	80 - 120	<5.0	ug/g	1.7	30
8994284	Acid Extractable Zinc (Zn)	2023/10/20	98	75 - 125	98	80 - 120	<5.0	ug/g	0.74	30
8994461	Hot Water Ext. Boron (B)	2023/10/21	102	75 - 125	107	75 - 125	<0.050	ug/g	12	40
8994615	Acid Extractable Antimony (Sb)	2023/10/20	107	75 - 125	101	80 - 120	<0.20	ug/g	NC	30
8994615	Acid Extractable Arsenic (As)	2023/10/20	105	75 - 125	98	80 - 120	<1.0	ug/g	4.4	30
8994615	Acid Extractable Barium (Ba)	2023/10/20	103	75 - 125	102	80 - 120	<0.50	ug/g	1.4	30
8994615	Acid Extractable Beryllium (Be)	2023/10/20	107	75 - 125	101	80 - 120	<0.20	ug/g	NC	30
8994615	Acid Extractable Boron (B)	2023/10/20	105	75 - 125	102	80 - 120	<5.0	ug/g	NC	30
8994615	Acid Extractable Cadmium (Cd)	2023/10/20	104	75 - 125	97	80 - 120	<0.10	ug/g	NC	30
8994615	Acid Extractable Chromium (Cr)	2023/10/20	105	75 - 125	97	80 - 120	<1.0	ug/g	4.3	30
8994615	Acid Extractable Cobalt (Co)	2023/10/20	103	75 - 125	98	80 - 120	<0.10	ug/g	1.4	30
8994615	Acid Extractable Copper (Cu)	2023/10/20	103	75 - 125	99	80 - 120	<0.50	ug/g	0.90	30
8994615	Acid Extractable Lead (Pb)	2023/10/20	99	75 - 125	98	80 - 120	<1.0	ug/g	1.5	30
8994615	Acid Extractable Mercury (Hg)	2023/10/20	99	75 - 125	100	80 - 120	<0.050	ug/g		
8994615	Acid Extractable Molybdenum (Mo)	2023/10/20	106	75 - 125	98	80 - 120	<0.50	ug/g	NC	30
8994615	Acid Extractable Nickel (Ni)	2023/10/20	103	75 - 125	98	80 - 120	<0.50	ug/g	3.2	30
8994615	Acid Extractable Selenium (Se)	2023/10/20	105	75 - 125	99	80 - 120	<0.50	ug/g	NC	30
8994615	Acid Extractable Silver (Ag)	2023/10/20	106	75 - 125	100	80 - 120	<0.20	ug/g	NC	30
8994615	Acid Extractable Thallium (Tl)	2023/10/20	104	75 - 125	101	80 - 120	<0.050	ug/g	NC	30
8994615	Acid Extractable Uranium (U)	2023/10/20	104	75 - 125	99	80 - 120	<0.050	ug/g	1.3	30
8994615	Acid Extractable Vanadium (V)	2023/10/20	107	75 - 125	96	80 - 120	<5.0	ug/g	3.0	30
8994615	Acid Extractable Zinc (Zn)	2023/10/20	100	75 - 125	98	80 - 120	<5.0	ug/g	1.6	30
8994733	Available (CaCl2) pH	2023/10/20			100	97 - 103			0.21	N/A
8994937	Hot Water Ext. Boron (B)	2023/10/24	94	75 - 125	94	75 - 125	<0.050	ug/g	6.6	40
8995297	Available (CaCl2) pH	2023/10/20			100	N/A			1.7	N/A
8995560	Benzene	2023/10/23	105	50 - 140	89	50 - 140	<0.020	ug/g	3.7	50
8995560	Ethylbenzene	2023/10/23	118	50 - 140	100	50 - 140	<0.020	ug/g	15	50
8995560	F1 (C6-C10) - BTEX	2023/10/23					<10	ug/g	NC	30
8995560	F1 (C6-C10)	2023/10/23	106	60 - 140	87	80 - 120	<10	ug/g	NC	30



Bureau Veritas Job #: C3W2936
Report Date: 2023/10/30

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd
Client Project #: 2302-E081
Site Location: COLLINGWOOD
Sampler Initials: ASH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8995560	o-Xylene	2023/10/23	116	50 - 140	97	50 - 140	<0.020	ug/g	12	50
8995560	p+m-Xylene	2023/10/23	109	50 - 140	93	50 - 140	<0.040	ug/g	15	50
8995560	Toluene	2023/10/23	99	50 - 140	85	50 - 140	<0.020	ug/g	14	50
8995560	Total Xylenes	2023/10/23					<0.040	ug/g	14	50
8997268	a-Chlordane	2023/10/22	98	50 - 130	80	50 - 130	<0.0020	ug/g	NC	40
8997268	Aldrin	2023/10/22	96	50 - 130	82	50 - 130	<0.0020	ug/g	NC	40
8997268	Dieldrin	2023/10/22	105	50 - 130	85	50 - 130	<0.0020	ug/g	NC	40
8997268	Endosulfan I (alpha)	2023/10/22	108	50 - 130	87	50 - 130	<0.0020	ug/g	NC	40
8997268	Endosulfan II (beta)	2023/10/22	105	50 - 130	78	50 - 130	<0.0020	ug/g	NC	40
8997268	Endrin	2023/10/22	103	50 - 130	82	50 - 130	<0.0020	ug/g	NC	40
8997268	g-Chlordane	2023/10/22	92	50 - 130	74	50 - 130	<0.0020	ug/g	NC	40
8997268	Heptachlor epoxide	2023/10/22	95	50 - 130	76	50 - 130	<0.0020	ug/g	NC	40
8997268	Heptachlor	2023/10/22	86	50 - 130	70	50 - 130	<0.0020	ug/g	NC	40
8997268	Hexachlorobenzene	2023/10/22	86	50 - 130	73	50 - 130	<0.0020	ug/g	NC	40
8997268	Hexachlorobutadiene	2023/10/22	69	50 - 130	98	50 - 130	<0.0020	ug/g	NC	40
8997268	Hexachloroethane	2023/10/22	45 (1)	50 - 130	71	50 - 130	<0.0020	ug/g	NC	40
8997268	Lindane	2023/10/22	103	50 - 130	82	50 - 130	<0.0020	ug/g	NC	40
8997268	Methoxychlor	2023/10/22	94	50 - 130	50	50 - 130	<0.0050	ug/g	NC	40
8997268	o,p-DDD	2023/10/22	110	50 - 130	89	50 - 130	<0.0020	ug/g	NC	40
8997268	o,p-DDE	2023/10/22	117	50 - 130	103	50 - 130	<0.0020	ug/g	NC	40
8997268	o,p-DDT	2023/10/22	106	50 - 130	78	50 - 130	<0.0020	ug/g	NC	40
8997268	p,p-DDD	2023/10/22	105	50 - 130	84	50 - 130	<0.0020	ug/g	NC	40
8997268	p,p-DDE	2023/10/22	105	50 - 130	93	50 - 130	<0.0020	ug/g	NC	40
8997268	p,p-DDT	2023/10/22	104	50 - 130	64	50 - 130	<0.0020	ug/g	NC	40
8998620	WAD Cyanide (Free)	2023/10/23	91	75 - 125	106	80 - 120	<0.01	ug/g	NC	35
8999648	Chromium (VI)	2023/10/24	85	70 - 130	91	80 - 120	<0.18	ug/g	NC	35
9001122	a-Chlordane	2023/10/24	110	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40
9001122	Aldrin	2023/10/24	97	50 - 130	75	50 - 130	<0.0020	ug/g	NC	40
9001122	Dieldrin	2023/10/24	119	50 - 130	99	50 - 130	<0.0020	ug/g	NC	40
9001122	Endosulfan I (alpha)	2023/10/24	121	50 - 130	101	50 - 130	<0.0020	ug/g	NC	40
9001122	Endosulfan II (beta)	2023/10/24	112	50 - 130	96	50 - 130	<0.0020	ug/g	NC	40



QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd
Client Project #: 2302-E081
Site Location: COLLINGWOOD
Sampler Initials: ASH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9001122	Endrin	2023/10/24	129	50 - 130	119	50 - 130	<0.0020	ug/g	NC	40
9001122	g-Chlordane	2023/10/24	109	50 - 130	89	50 - 130	<0.0020	ug/g	NC	40
9001122	Heptachlor epoxide	2023/10/24	104	50 - 130	85	50 - 130	<0.0020	ug/g	NC	40
9001122	Heptachlor	2023/10/24	95	50 - 130	76	50 - 130	<0.0020	ug/g	NC	40
9001122	Hexachlorobenzene	2023/10/24	96	50 - 130	78	50 - 130	<0.0020	ug/g	NC	40
9001122	Hexachlorobutadiene	2023/10/24	84	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40
9001122	Hexachloroethane	2023/10/24	60	50 - 130	61	50 - 130	<0.0020	ug/g	NC	40
9001122	Lindane	2023/10/24	96	50 - 130	80	50 - 130	<0.0020	ug/g	NC	40
9001122	Methoxychlor	2023/10/24	109	50 - 130	102	50 - 130	<0.0050	ug/g	NC	40
9001122	o,p-DDD	2023/10/24	126	50 - 130	107	50 - 130	<0.0020	ug/g	NC	40
9001122	o,p-DDE	2023/10/24	105	50 - 130	84	50 - 130	<0.0020	ug/g	NC	40
9001122	o,p-DDT	2023/10/24	115	50 - 130	92	50 - 130	<0.0020	ug/g	NC	40
9001122	p,p-DDD	2023/10/24	118	50 - 130	106	50 - 130	<0.0020	ug/g	NC	40
9001122	p,p-DDE	2023/10/24	100	50 - 130	91	50 - 130	<0.0020	ug/g	4-5	40
9001122	p,p-DDT	2023/10/24	112	50 - 130	98	50 - 130	<0.0020	ug/g	NC	40
9001378	Chromium (VI)	2023/10/24	65 (3)	70 - 130	91	80 - 120	<0.18	ug/g	NC	35
9014364	a-Chlordane	2023/10/29	82	50 - 130	91	50 - 130	<0.0020	ug/g	NC	40
9014364	Aldrin	2023/10/29	80	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40
9014364	Dieldrin	2023/10/29	102	50 - 130	108	50 - 130	<0.0020	ug/g	NC	40
9014364	Endosulfan I (alpha)	2023/10/29	119	50 - 130	123	50 - 130	<0.0020	ug/g	NC	40
9014364	Endosulfan II (beta)	2023/10/29	94	50 - 130	99	50 - 130	<0.0020	ug/g	NC	40
9014364	Endrin	2023/10/29	98	50 - 130	106	50 - 130	<0.0020	ug/g	NC	40
9014364	g-Chlordane	2023/10/29	88	50 - 130	94	50 - 130	<0.0020	ug/g	NC	40
9014364	Heptachlor epoxide	2023/10/29	97	50 - 130	108	50 - 130	<0.0020	ug/g	NC	40
9014364	Heptachlor	2023/10/29	74	50 - 130	82	50 - 130	<0.0020	ug/g	NC	40
9014364	Hexachlorobenzene	2023/10/29	92	50 - 130	101	50 - 130	<0.0020	ug/g	NC	40
9014364	Hexachlorobutadiene	2023/10/29	80	50 - 130	103	50 - 130	<0.0020	ug/g	NC	40
9014364	Hexachloroethane	2023/10/29	73	50 - 130	79	50 - 130	<0.0020	ug/g	NC	40
9014364	Lindane	2023/10/29	99	50 - 130	110	50 - 130	<0.0020	ug/g	NC	40
9014364	Methoxychlor	2023/10/29	71	50 - 130	77	50 - 130	<0.0050	ug/g	NC	40
9014364	o,p-DDD	2023/10/29	100	50 - 130	106	50 - 130	<0.0020	ug/g	NC	40



QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd
Client Project #: 2302-E081
Site Location: COLLINGWOOD
Sampler Initials: ASH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9014364	o,p-DDE	2023/10/29	99	50 - 130	99	50 - 130	<0.0020	ug/g	NC	40
9014364	o,p-DDT	2023/10/29	84	50 - 130	89	50 - 130	<0.0020	ug/g	NC	40
9014364	p,p-DDD	2023/10/29	90	50 - 130	99	50 - 130	<0.0020	ug/g	NC	40
9014364	p,p-DDE	2023/10/29	95	50 - 130	107	50 - 130	<0.0020	ug/g	NC	40
9014364	p,p-DDT	2023/10/29	74	50 - 130	77	50 - 130	<0.0020	ug/g	NC	40

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 (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) Matrix spike recovery is below the control limit stipulated by Ont Reg 153, however, this recovery is still within Bureau Veritas' performance based limits. Results reported with recoveries within this range are still valid but may have a low bias.

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(3) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The matrix spike was reanalyzed to confirm result.



BUREAU
VERITAS

Bureau Veritas Job #: C3W2936

Report Date: 2023/10/30

Soil Engineers Ltd

Client Project #: 2302-E081

Site Location: COLLINGWOOD

Sampler Initials: ASH

VALIDATION SIGNATURE PAGE

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

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.