



FINAL

# Phase II Environmental Site Assessment

91 Eglinton Avenue East  
Mississauga, ON

Prepared for:

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Attn: Dr. Jamie Kaukinen

August 23, 2017

Pinchin File: 208402.001



**Phase II Environmental Site Assessment**

91 Eglinton Avenue East, Mississauga, ON  
Dr. Jamie Kaukinen

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Pinchin File: 208402.001  
FINAL

**Issued To:** Dr. Jamie Kaukinen  
**Issued On:** August 23, 2017  
**Pinchin File:** 208402.001  
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## EXECUTIVE SUMMARY

Pinchin Ltd. (Pinchin) was retained through an Authorization to Proceed signed by Dr. Jamie Kaukinen (Client) to conduct a Phase II Environmental Site Assessment (ESA) in conjunction with a Preliminary Geotechnical Investigation of the property located at in Mississauga, Ontario (hereafter referred to as the Site).

The Site is developed with four single-storey barns and one single-storey residential building with a basement (hereafter referred to as Site Buildings A to E). Site Building A is comprised of a split-level residential dwelling with a basement, while Site Buildings B and D are comprised of single-storey storage barns. Site Building C includes a two-storey barn ("Site Building C"), while Site Building E consists of a wood shed ("Site Building E"). \ Site Buildings B, C, D and E were recently demolished.

The purpose of this Phase II ESA was to address potential issues of environmental concern in relation to the potential disposition of the Site.

The results of the Phase I ESA completed by Pinchin completed by identified the following potential issues of environmental concern:

- An orchard was formerly present on the central portion of the Site. Pesticides and herbicides were typically applied to orchards. Based on the age of the orchard (from at least 1954 to at least 1975), the potential use of pesticides and/or herbicides could result in potential subsurface impacts at the Site.
- A former Speedy Auto Service repair facility was located adjacent to the southwest of the Site. Based on the suspected age of the operations (from at least 1997 to 2003), this off-Site activity could result in potential subsurface impacts at the Site.

Based on the above-mentioned findings, Pinchin recommended that a Phase II ESA be conducted at the Site in order to assess for the presence of environmental impacts.

The Phase II ESA was completed at the Site by Pinchin between August 3, 2017 and August 9, 2017 and consisted of the advancement of three boreholes, two of which were completed as groundwater monitoring wells.

Selected "worst case" soil samples collected during the borehole drilling program were submitted for laboratory analysis of PHCs (F1-F4), benzene, toluene, ethylbenzene and xylenes (BTEX), pesticides, PCBs and/or metals. Groundwater samples collected from the newly installed monitoring wells were submitted for laboratory analysis of PHCs (F1-F4), polycyclic aromatic hydrocarbons (PAHs), pesticides and/or metals.



Based on Site-specific information, the soil and groundwater quality was assessed based on the Ontario Ministry of the Environment and Climate Change *Table 6 Standards* for residential/parkland/institutional property use and medium/fine-textured soil.

Reported concentrations in the soil and groundwater samples submitted for analysis of PHCs (F1-F4), BTEX, PAHs, pesticides, PCBs and/or metals satisfied the *Table 6 Standards*.

Based on the findings of this Phase II ESA, it is Pinchin's opinion that no further subsurface investigation is required for the Site in relation to the findings of the Phase I ESA.

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



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## 1.0 INTRODUCTION

Pinchin Ltd. (Pinchin) was retained through an Authorization to Proceed signed by Dr. Jamie Kaukinen (Client) to conduct a Phase II Environmental Site Assessment (ESA) in conjunction with a Preliminary Geotechnical Investigation of the property located at in Mississauga, Ontario (All Figures included in Appendix I)

The Site is developed with four single-storey barns and one single-storey residential building with a basement (hereafter referred to as Site Buildings A to E). Site Building A is comprised of a split-level residential dwelling with a basement, while Site Buildings B and D are comprised of single-storey storage barns. Site Building C includes a two-storey barn ("Site Building C"), while Site Building E consists of a wood shed ("Site Building E"). Site Buildings B, C, D and E were recently demolished.

The purpose of this Phase II ESA was to address potential issues of environmental concern in relation to the potential disposition of the Site.

### 1.1 Background

Pinchin completed a Phase I ESA of the Site for the Client, the findings of which were provided in the report entitled "*Phase I Environmental Site Assessment, 91 Eglinton Avenue East, Mississauga, Ontario*", dated August 8, 2017. The results of the Phase I ESA completed by Pinchin identified the following areas of potential environmental concern (APECs) that could give rise to potential subsurface impacts in connection with the Site:

- An orchard was formerly present on the central portion of the Site. Pesticides and herbicides were typically applied to orchards. Based on the age of the orchard (from at least 1954 to at least 1975), the potential use of pesticides and/or herbicides could result in potential subsurface impacts at the Site.
- A former Speedy Auto Service repair facility was located adjacent to the southwest of the Site. Based on the suspected age of the operations (from at least 1997 to 2003), this off-Site activity could result in potential subsurface impacts at the Site.

Based on the above-mentioned findings, it was Pinchin's recommendation that a Phase II ESA be conducted at the Site in order to assess the above-noted APECs for the presence of environmental impacts.

## 1.2 Scope of Work

The scope of work completed by Pinchin, as outlined in the Pinchin proposal entitled "*Proposal for Phase I and II Environmental Site Assessments and Preliminary Geotechnical Investigation*" submitted to the Client on July 10, 2017 included the following:

- Advancement of three boreholes following the clearance of underground services, two of which were instrumented with a monitoring well;
- Submission of selected "worst case" soil samples for laboratory analysis of petroleum hydrocarbons (PHCs) in the F1 to F4 fraction ranges (F1-F4), benzene, toluene, ethylbenzene and xylenes (BTEX), metals, PCBs, and/or pesticides.
- Collection of groundwater samples from each of the newly installed monitoring wells following well development and purging, for laboratory analysis of PHCs (F1-F4), polycyclic aromatic hydrocarbons (PAHs), PCBs, pesticides and/or metals;
- Comparison of the soil and groundwater laboratory analytical results to the applicable regulatory criteria; and
- Preparation of a factual report detailing the findings of the Phase II ESA and recommendations.

## 2.0 METHODOLOGY

The investigation methodology was conducted in general accordance with the Ontario Ministry of the Environment and Climate Change (MOECC, formerly the Ontario Ministry of the Environment) document entitled "*Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*" dated December 1996 (*MOECC Sampling Guideline*), the Association of Professional Geoscientists of Ontario document entitled "*Guidance for Environmental Site Assessments under Ontario Regulation 153/04 (as amended)*", dated April 2011 (*APGO Guideline*) and Pinchin's standard operating procedures (SOPs).

### 2.1 Borehole Investigation

Pinchin retained Strata Drilling Group (Strata) to complete the borehole drilling program at the Site on August 3 and 4, 2017 following the clearance of underground services in the vicinity of the work area by public utility locators and a private utility locator retained by Pinchin. Strata is licensed by the MOECC in accordance with Ontario Regulation 903 (as amended) to undertake borehole drilling/well installation activities.



The boreholes were advanced to a maximum depth of 6.86 mbgs using a Geoprobe 7822 DT direct push drill rig. Soil samples were collected at regular intervals using 5.08 inner diameter (ID) split-spoon samplers. Discrete soil samples were collected from the split-spoon samplers and containerized in laboratory-supplied glass sampling jars.

Subsurface soil conditions were logged on-Site by Pinchin personnel at the time of drilling. Soil samples were examined for visual and olfactory evidence of impacts and a portion of each sample was analyzed in the field for VOC and petroleum-derived vapour concentrations in soil headspace using a photoionization detector (PID) and a combustible gas indicator (CGI) in methane elimination mode (RKI Eagle II).

The locations of the boreholes are shown on Figure 2 and a description of the subsurface stratigraphy encountered during the drilling program is documented on the borehole logs included in Appendix II.

## **2.3 Monitoring Well Installation**

Groundwater monitoring wells were installed in boreholes MW1 and MW5 to enable groundwater monitoring and sampling. The monitoring wells were constructed with 5.08 cm inner diameter (ID) flush-threaded Schedule 40 polyvinyl chloride (PVC) risers, followed by a length of 5.08 cm ID No. 10 slot PVC screen that intersected the water table.

Each well screen was sealed at the bottom using a threaded cap and each riser was sealed at the top with a lockable J-plug cap. Silica sand was placed around and above the screened interval to form a filter pack around the well screen. A layer of bentonite was placed above the silica sand and was extended to just below the ground surface. A 6.35 cm ID Schedule 40 PVC outer casing, approximately 30 cm in length, was installed in each well around the top of the riser and into the top of the bentonite seal. A bentonite seal was then placed between the riser and outer casing. A protective aboveground monument casing was installed at the ground surface over each riser pipe and outer casing and cemented in place.

## **2.3 Groundwater Monitoring**

The water levels within the monitoring wells were measured on August 08, 2017 using an interface probe. The presence/absence of non-aqueous phase liquid (NAPL) was also assessed during groundwater monitoring using the interface probe.

## **2.4 Sampling and Laboratory Analysis**

### **2.4.1 Soil**

One most apparent “worst case” soil sample, based on vapour concentrations as well as visual and/or olfactory considerations recovered from each borehole was submitted for laboratory analysis of PHCs (F1-F4), BTEX, PCBs, pesticides and/or metals.

In addition, representative soil samples were submitted for pH analysis and grain size distribution analysis to confirm the Site Condition Standards applicable to the Site as provided in the MOECC document entitled "*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*", dated April 15, 2011 (*MOECC Standards*). The grain size distribution samples were collected and submitted for analysis during a co-incident geotechnical investigation by Pinchin.

The borehole locations are shown on Figure 2. Table 2 provides a summary of the soil samples submitted for laboratory analysis.

#### 2.4.2 Groundwater

On August 08, 2017 all newly installed groundwater monitoring wells were developed by purging until dry, in accordance with Pinchin's SOPs.

On August 10, 2017 newly installed groundwater monitoring wells MW1 and MW5 were purged and sampled using Pinchin's SOPs. The groundwater samples collected from these monitoring wells were submitted for laboratory analysis of VOCs, PHCs (F1-F4), PAHs, PCBs, pesticides and/or metals. Samples collected for metals analysis were filtered in the field using dedicated 0.45-micron in-line filters prior to preservation.

All monitoring well development activities were conducted using dedicated inertial lift pumps comprised of Waterra polyethylene tubing and foot valves. Following pre-sampling purging with dedicated inertial lift pumps, sampling for PHCs (F2-F4) and PAHs was conducted using a peristaltic pump and dedicated polyethylene tubing. Sampling for VOCs, PHCs (F1)/BTEX and pesticides was then conducted using dedicated inertial lift pumps.

#### 2.4.3 Analytical Laboratory

Selected soil and groundwater samples were delivered to Maxxam Analytics Inc. (Maxxam) in Mississauga, Ontario for analysis. Maxxam is an independent laboratory accredited by the Standards Council of Canada. Formal chain of custody records of the sample submissions were maintained between Pinchin and the staff at Maxxam.

### 2.5 QA/QC Protocols

Various quality assurance/quality control (QA/QC) protocols were followed during the Phase II ESA to ensure that representative samples were obtained and that representative analytical data were reported by the laboratory.



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

- Soil samples were extracted from the interior of the sampling device (where possible), rather than from areas in contact with the sampler walls to minimize the potential for cross-contamination;
- Soil and groundwater samples were placed in laboratory-supplied glass sample jars;
- The monitoring wells were developed following installation and were purged to remove stagnant water prior to sample collection so that representative groundwater samples could be obtained. Dedicated purging and sampling equipment was used for monitoring well development, purging and sampling to minimize the potential for cross-contamination;
- Soil and groundwater samples were placed in coolers on ice immediately upon collection, with appropriate sample temperatures maintained prior to submission to the laboratory;
- Dedicated and disposable nitrile gloves were used for sample handling; and
- Non-dedicated monitoring and sampling equipment (e.g., interface probe) was cleaned before initial use and between uses to minimize the potential for cross-contamination by washing with an Alconox™/potable water mixture followed by a deionized water rinse.

Sample collection and handling procedures were performed in general accordance with the *MOECC Sampling Guideline*, the *APGO Guideline* and Pinchin's SOPs for Phase II ESA.

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

### **Ontario Water Well Records**

Ontario Regulation 903 (as amended) requires that all wells installed to depths greater than 3.0 mbgs have a water well record completed by a licensed well technician. The owner of the monitoring well must keep the water well record on file for a period of two years and the monitoring wells must be decommissioned as per Ontario Regulation 903 (as amended) if monitoring wells are no longer in use. Strata is a licensed well driller under Ontario Regulation 903 (as amended), and submitted a water well record to the MOECC and the Client to fulfill the requirements of Ontario Regulation 903 (as amended).



## **2.7 Site Condition Standards**

The Site is a residential property, formerly used for agricultural purposes, located in the City of Mississauga. It is Pinchin's understanding that potable water for the Site is supplied by an on-Site domestic well.

Ontario Regulation 153/04 (as amended) states that a Site is classified as an "environmentally sensitive area" if the pH of the surface soil (less than 1.5 mbgs) is less than 5 or greater than 9, the pH of the subsurface soil (greater than 1.5 mbgs) is less than 5 or greater than 11, or if the Site is an area of natural significance or is adjacent to or contains land within 30 metres of an area of natural significance. Two representative soil samples collected from the boreholes advanced at the Site were submitted for pH analysis. The pH values measured in the submitted soil samples were within the limits for non-sensitive sites. The Site is also not an area of natural significance and it is not adjacent to, nor does it contain land within 30 metres of, an area of natural significance. As such, the Site is not an environmentally sensitive area. In addition, no water body is located on or within 30 metres of the Site.

The depth to bedrock at BH5 through BH7 (eastern portion of the Site) was less than 2 m. As this area covers over 1/3 of the Site, it is classified as a shallow soil site under O.Reg. 153/04.

Three representative soil samples collected from the boreholes advanced at the Site were submitted for 75 micron single-sieve grain size analysis. Based on the results of this analysis, the soil at the Site is interpreted to be medium-fine textured for the purpose of selecting the appropriate *MOECC Standards*. The pH and grain size analytical results are summarized in Table 3.

Based on the above, the appropriate Site Condition Standards for the Site are:

- "Table 6: Full Depth Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition", provided in the *MOECC Standards (Table 6 Standards)* for:
  - Medium/fine-textured soils; and
  - Residential/parkland/institutional property use.

As such, the analytical results have been compared to these *Table 6 Standards*.

## **3.0 RESULTS**

### **3.1 Site Geology and Hydrogeology**

Based on the soil samples recovered during the borehole drilling program, the soil stratigraphy at the drilling locations below the grass surface generally consists of fill material comprised of sand and gravel to a depth between approximately 0.15 to 1.07 mbgs.

Native subsurface material underlying the fill material was observed to generally consist of silt over sand (where bedrock was not shallow) over shale bedrock at depths of 1.2 mbgs (eastern portion of the Site) to 5.3 mbgs (western portion of the Site). Moist to wet soil conditions were generally observed between 1.52 to 2.74 mbgs.

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

The water level information obtained during groundwater monitoring is presented in Table 4 and on the borehole logs in Appendix II. The depth to groundwater measured within the monitoring wells ranged from 3.42 mbgs at monitoring well MW5 to 3.42 mbgs at monitoring well MW1 on August 08, 2017.

Cooksville Creek is located approximately 450 metres south-southwest of the Site and Lake Ontario is located approximately 9 kilometres southwest of the Site. The topography of the Site and surrounding area were observed to slope towards the south. Groundwater flow at the Site is inferred to be towards the south-southwest based on the topography of the Site area and the location of Cooksville Creek.

### **3.2 Soil Headspace Vapour Concentrations**

Vapour concentrations measured in the headspace of soil samples collected during the drilling investigation are presented on the borehole logs in Appendix II and ranged from 0 parts per million by volume (ppm<sub>v</sub>) to a maximum of 250 ppm<sub>v</sub> in soil sample MW1-SS5 collected at a depth of 3.05 to 3.66 mbgs in borehole MW1.

### **3.3 Field Observations**

No odours or staining were observed in the soil samples collected during the borehole drilling program.

### **3.4 Analytical**

#### **3.4.1 Soil**

As indicated in Tables 5 through 7, reported concentrations of PHCs (F1-F4), BTEX, PCBs, pesticides and metals in the soil samples submitted for analysis met the *Table 6 Standards*. Selected soil samples were also submitted for analysis for organophosphorus pesticides (i.e., pesticides without *Table 6 Standards*). None of these pesticides were detected (Appendix IV).

The laboratory Certificates of Analysis for the soil samples is provided in Appendix IV.

#### **3.4.2 Groundwater**

As indicated in Tables 8 through 11, reported concentrations in the groundwater samples submitted for analysis of PHCs (F1-F4), VOCs, pesticides and metals met the *Table 6 Standards*.



The laboratory Certificates of Analysis for the groundwater samples is provided in Appendix IV.

#### **4.0 FINDINGS AND CONCLUSIONS**

Based on the work completed, the following is a summary of the activities and findings of this Phase II ESA:

- Pinchin Retained Strata to advance three boreholes at the Site on August 3, and 4, 2017. The boreholes were advanced to a maximum depth of mbgs using a Geoprobe 78322DT direct push drill rig, two boreholes were instrumented with monitoring wells to enable groundwater monitoring and sampling.
- The soil stratigraphy at the drilling locations below the grass surface generally consisted of fill material comprised of sand and gravel to a depth between approximately 0.15 to 1.07 mbgs. Native subsurface material underlying the fill material was observed to generally consist of silt over sand (where bedrock was not shallow) over shale bedrock at depths of 1.2 mbgs (eastern portion of the Site) to 5.3 mbgs (western portion of the Site). Moist to wet soil conditions were generally observed between 1.52 to 2.74 mbgs.
- Groundwater levels at the Site measured on August 08, 2017 varied between 2.95 mbgs (MW5) and 3.42 mbgs (MW1). Inferred groundwater flow is expected to be south- southeast based on topography and the presence of Cooksville Creek and Lake Ontario in relation to the Site.
- Based on Site-specific information, the soil and groundwater quality was assessed based on the *Table 6 Standards* for residential/parkland/institutional property use and medium/fine-textured soils.
- One “worst case” soil sample based on the results of field screening were submitted for laboratory analysis of PHCs (F1-F4), BTEX, PCBs, metals and/or pesticides.
- Groundwater samples were collected from monitoring wells MW1 and MW5 installed by Pinchin on August 09, 2017 and were submitted for laboratory analysis of PHCs (F1-F4), BTEX, PCBs, metals, pesticides and/or PAHs.
- Reported concentrations in the soil samples submitted for analysis of PHCs (F1-F4), BTEX, PCBs, PAHs, pesticides and/or metals satisfied their respective *Table 6 Standards*.
- Reported concentrations in the groundwater samples submitted for analysis of PHCs (F1-F4), BTEX, PCBs, PAHs, pesticides and/or metals satisfied their respective *Table 6 Standards*.

Based on the findings of this Phase II ESA, it is Pinchin’s opinion that no further subsurface investigation is required for the Site in relation to the findings of the Phase I ESA.



## **5.0 TERMS AND LIMITATIONS**

This Phase II ESA was performed for Dr. Jamie Kaukinen (Client) in order to investigate potential environmental impacts at 91 Eglinton Avenue East in Mississauga, Ontario (Site). The term recognized environmental condition means the presence or likely presence of any hazardous substance on a property under conditions that indicate an existing release, past release, or a material threat of a release of a hazardous substance into structures on the property or into the ground, groundwater, or surface water of the property. This Phase II ESA does not quantify the extent of the current and/or recognized environmental condition or the cost of any remediation.

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

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

This Phase II ESA was performed in general compliance with currently acceptable practices for environmental site investigations, and specific Client requests, as applicable to this Site. The scope of work completed by Pinchin, as part of this Phase II ESA, is not sufficient (in and of itself) to meet the requirements for the submission of a Record of Site Condition (RSC) in accordance with Ontario Regulation 153/04 (as amended). If an RSC is an intended end product of work conducted at the Site, further consultation and/or work will be required.

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

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



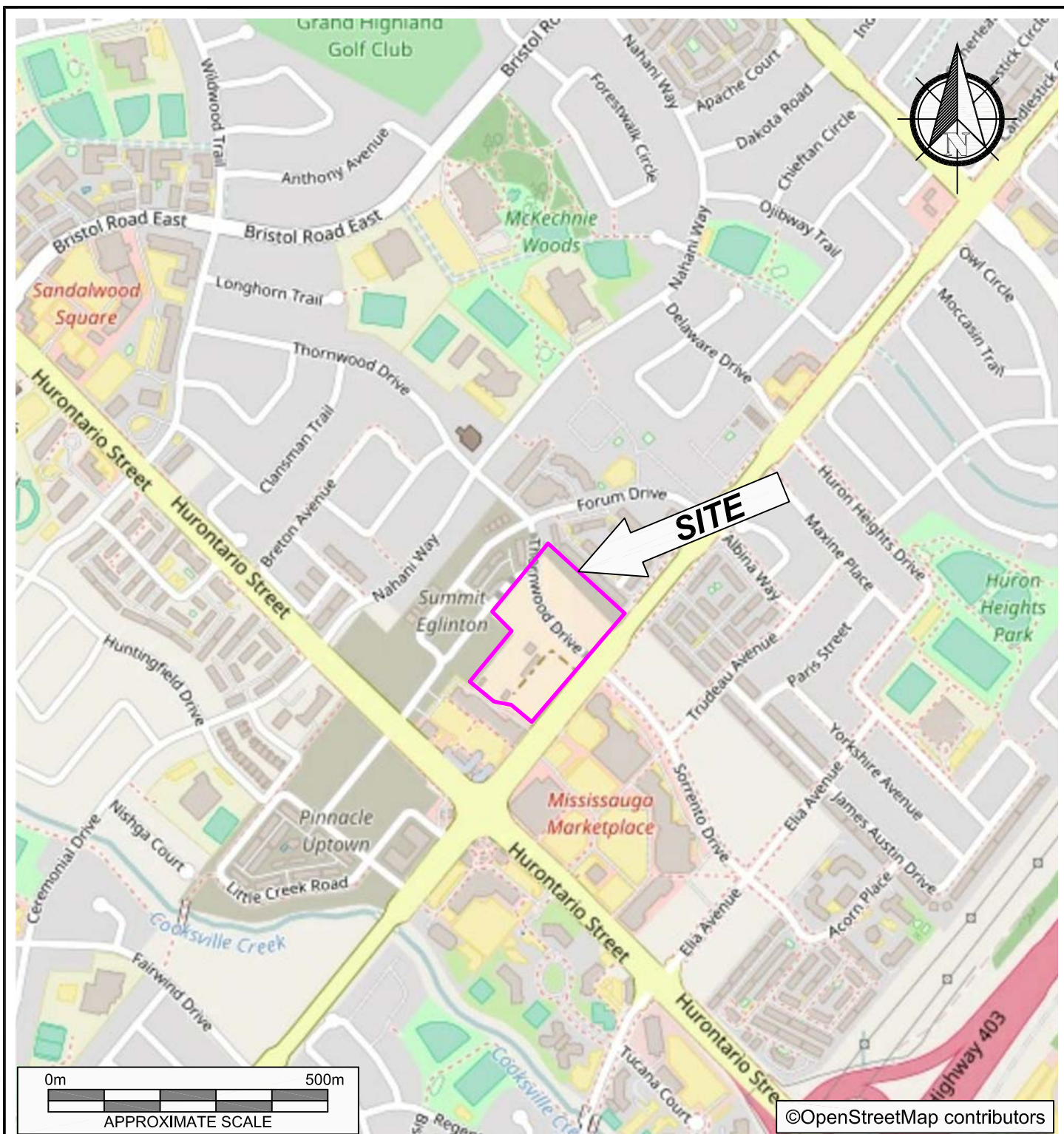
Pinchin makes no other representations whatsoever, including those concerning the legal significance of its findings, or as to other legal matters touched on in this report, including, but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect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


208402\_FINAL\_Phase II ESA Report\_91 Eglinton Avenue West, Mississauga ON\_Aug 2017.docx

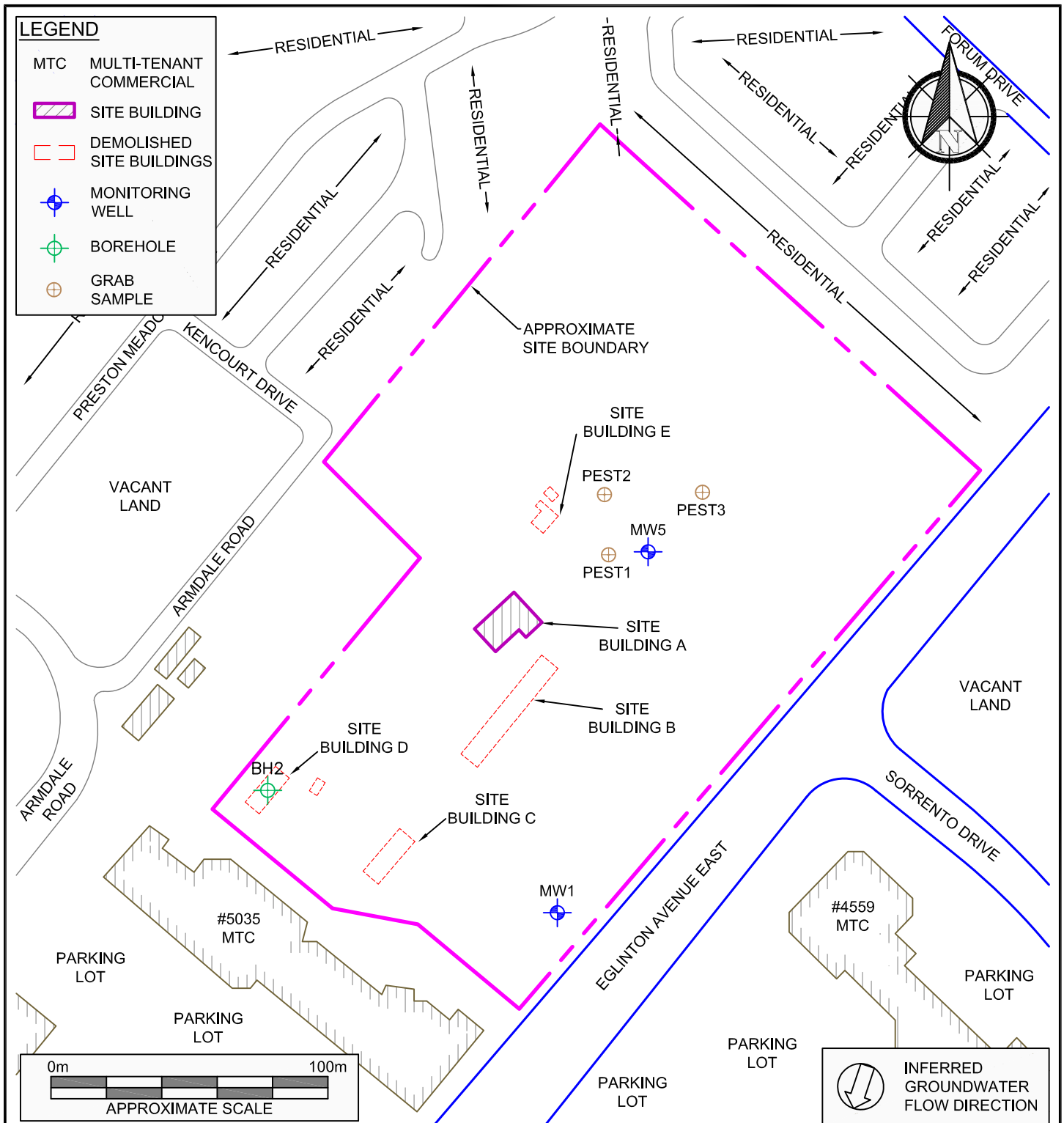
Template: Master Report for Phase II ESA - Stage 2 PSI, EDR, July 20, 2017



**APPENDIX I**  
**Figures**



	PROJECT NAME		
	PHASE II ENVIRONMENTAL SITE ASSESSMENT		
	CLIENT NAME		
	DR. JAMIE KAUKINEN		
	PROJECT LOCATION		
	91 EGLINTON AVENUE EAST, MISSISSAUGA, ONTARIO		
FIGURE NAME		KEY MAP	FIGURE NO.  1
APPROXIMATE SCALE	PROJECT NO.	DATE	
AS SHOWN	208402.001	AUGUST 2017	



	PROJECT NAME		
	PHASE II ENVIRONMENTAL SITE ASSESSMENT		
	CLIENT NAME		
	DR. JAMIE KAUKINEN		
	PROJECT LOCATION		
91 EGLINTON AVENUE EAST, MISSISSAUGA, ONTARIO			
FIGURE NAME			FIGURE NO.
BOREHOLE AND MONITORING WELL LOCATION PLAN			
APPROXIMATE SCALE	PROJECT NO.	DATE	
AS SHOWN	208402.001	AUGUST 2017	2

**APPENDIX II**  
**Borehole Logs**



# Log of Borehole: MW1

Project #: 208402.001

Logged By: VN

Project: Phase II Environmental Site Assessment

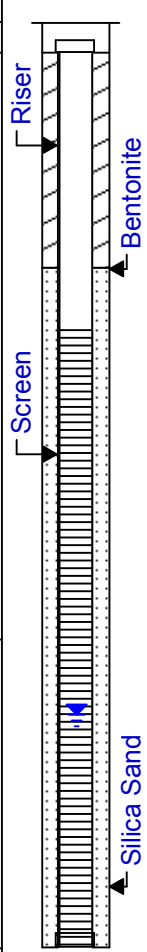
Client: Dr. Jamie Kaukinen

Location: 91 Eglinton Avenue East, Mississauga, Ontario

Drill Date: August 3, 2017

Project Manager: GS

SUBSURFACE PROFILE					SAMPLE				
Depth	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Sampler #	Recovery (%)	Sample ID	Soil Vapour Concentration (ppm) (CGI/PID)	Laboratory Analysis
0		Ground Surface	0.00						
0		<b>Topsoil</b>	0.15						
1		<b>Silt</b>					SS1	0/0	
2		Dark brown, trace clay.							
3		Moist at 1.52 mbgs.							
4		Shale cobble from 2.13 to 2.29 mbgs.					SS2	0/0	
5									
6		Trace sand and wet at 2.74 mbgs.					SS3	0/0	
7									
8							SS4	210/0	
9									
10			3.05						
11		<b>Sand</b>					SS5	250/1	PHCs (F1-F4)/BTEX
12		Brown, fine, trace silt.							
13									
14							SS6	0/0	pH
15			4.57						
16		End of Borehole							
17		Soil vapour concentrations were measured using a RKI Eagle II photoionization detector (PID) and a combustible gas indicator (CGI).							
18									



Contractor: Strata Drilling Group Inc.

Pinchin Ltd.

Grade Elevation: NM

Drilling Method: Split Spoon

2470 Milltower Court

Top of Casing Elevation: NM

Well Casing Size: 5.1

Mississauga, ON L5N 7W5

Sheet: 1 of 1



## Log of Borehole: BH2

Project #: 208402.001

Logged By: VN

Project: Phase II Environmental Site Assessment

Client: Dr. Jamie Kaukinen

Location: 91 Eglinton Avenue East, Mississauga, Ontario

Drill Date: August 4, 2017

Project Manager: GS

SUBSURFACE PROFILE					SAMPLE				
Depth	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Sampler #	Recovery (%)	Sample ID	Soil Vapour Concentration (ppm) (CGI/PID)	Laboratory Analysis
0 ft 0 m		Ground Surface	0.00	No Monitoring Well Installed					
1	●	<b>Fill</b> Brown, rootlets, moist.					SS1	0/0	PHCs (F1-F4)/BTEX
2	●								
3	●		1.07				SS2	0/0	
4	■	<b>Silt</b> Brown, wet.							
5	■								
6	■						SS3	0/0	
7	■		2.29						
8	■	<b>Sandy Silt</b> Brown, moist.					SS4	0/0	
9	■								
10	■	Grey at 3.20 mbgs.							
11	■	Increased clay content at 3.66 mbgs.					SS5	0/0	
12	■								
13	■						SS6	0/0	
14	■		4.57						
15	■	<b>Sand</b> Brown, saturated.							
16	■								
17	■								
18	■								

Contractor: Strata Drilling Group Inc.

Pinchin Ltd.

Grade Elevation: NM

Drilling Method: Split Spoon

2470 Milltower Court

Top of Casing Elevation: NM

Well Casing Size: NM

Mississauga, ON L5N 7W5

Sheet: 1 of 2



## Log of Borehole: BH2

Project #: 208402.001

Logged By: VN

Project: Phase II Environmental Site Assessment

Client: Dr. Jamie Kaukinen

Location: 91 Eglinton Avenue East, Mississauga, Ontario

Drill Date: August 4, 2017

Project Manager: GS

SUBSURFACE PROFILE					SAMPLE				
Depth	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Sampler #	Recovery (%)	Sample ID	Soil Vapour Concentration (ppm) (CGI/PID)	Laboratory Analysis
19									
20		<b>Shale</b>	6.10						
21		Grey.							
22			6.86						
23		End of Borehole							
24		Soil vapour concentrations were measured using a RKI Eagle II photoionization detector (PID) and combustible gas indicator (CGI).							
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									

Contractor: Strata Drilling Group Inc.

Pinchin Ltd.

Grade Elevation: NM

Drilling Method: Split Spoon

2470 Milltower Court

Top of Casing Elevation: NM

Well Casing Size: NM

Mississauga, ON L5N 7W5

Sheet: 2 of 2





# Log of Borehole: MW5

Project #: 208402.001

Logged By: VN

Project: Phase II Environmental Site Assessment

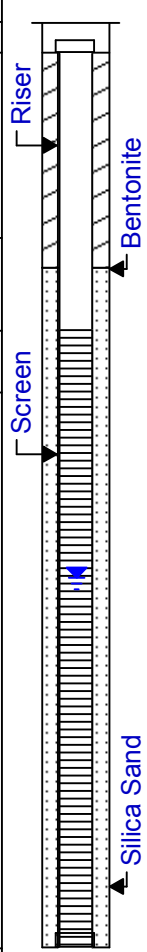
Client: Dr. Jamie Kaukinen

Location: 91 Eglinton Avenue East, Mississauga, Ontario

Drill Date: August 3, 2017

Project Manager: GS

SUBSURFACE PROFILE					SAMPLE				
Depth	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Sampler #	Recovery (%)	Sample ID	Soil Vapour Concentration (ppm) (CGI/PID)	Laboratory Analysis
0 ft 0 m		Ground Surface	0.00						
0.15		<b>Topsoil</b>	0.15						
1		<b>Silt</b> Brown, trace clay, some rootlets, moist.					SS1	0/0	Metals
2									
3			1.07				SS2	0/0	
4		<b>Silt</b> Brown, some sand and clay, moist.							
5			1.52						
6		<b>Sand</b> Brown, moist to wet.	1.83				SS3	0/0	
7		<b>Shale</b> Grey.							
8							SS4	0/0	
9									
10							SS5	0/0	
11									
12							SS6	0/0	
13									
14									
15			4.57						
16		End of Borehole							
17		Soil vapour concentrations were measured using a RKI Eagle II photoionization detector (PID) and a combustible gas indicator (CGI).							
18									



Contractor: Strata Drilling Group Inc.

Pinchin Ltd.

Grade Elevation: NM

Drilling Method: Split Spoon

2470 Milltower Court

Top of Casing Elevation: NM

Well Casing Size: 5.1

Mississauga, ON L5N 7W5

Sheet: 1 of 1



**APPENDIX III**  
**Summary Tables**

**TABLE 1**  
**MONITORING WELL CONSTRUCTION DETAILS**  
**Dr. Jamie Kaukinen**  
**91 Eglinton Avenue East, Mississauga, Ontario**

<i>Well Number</i>	<i>Calculated Difference Between Ground and TOC (m)</i>	<i>Length of Screen (m)</i>
MW1	0.65	3.05
MW5	0.65	3.05

Notes:

TOC	Indicates Top of Casing
NM	Not Measured
m	Metres

**TABLE 2**  
**SAMPLES SUBMITTED FOR LABORATORY ANALYSIS**  
**Dr. Jamie Kaukinen**  
**91 Eglinton Avenue East, Mississauga, Ontario**

Samples			Parameters										Rationale/Notes
Borehole / Monitoring Well ID	Sample ID	Sample Depth Range (mbgs)	PHCs (F1-F4) & BTEX	PAHs	Metals	pH	TCLP	Pesticides and Total PCBs	PHCs (F1-F4) & BTEX	PAHs	Metals	Pesticides and Total PCBs	
MW1	MW1	–							●	●			To assess soil and groundwater quality in relation to the Speedy Auto Service repair facility located adjacent to the southwest of the Site. Based on the suspected age of the operations.
	MW1-SS5	3.0-3.7	●										To determine the pH of the soil subsurface for MOECC classification.
	MW1-SS6	4.6-5.2				●							
BH2	BH2-SS1	0-0.6	●										To assess soil quality in relation to staining found in the former barn in the northwest corner of the Site.
MW5	MW5	–									●	●	To assess to the soil and groundwater in relation to the former orchard located within the central portion of the site.
	BH5-SS1	0-0.6			●								
BH7	BH7-01					●							To determine the pH of the surface soil for MOECC classification.
NA	PEST1	0 -0.2						●					Surface soil grab sample in the vicinity of the former orchard located within the central portion of the site.
	PEST2							●					
	PEST3							●					

PHCs (F1-F4) Petroleum Hydrocarbons (Fraction 1 to Fraction 4)  
 BTEX Benzene, Toluene, Ethylbenzene, and Xylenes  
 PCBs Polychlorinated Biphenyls  
 PAHs Polycyclic Aromatic Hydrocarbons  
 NA Not Applicable  
 mbgs Metres Below Ground Surface  
 MOECC Ontario Ministry of the Environment and Climate Change

**TABLE 3**  
**pH AND GRAIN SIZE ANALYSIS FOR SOIL**  
**Dr. Jamie Kaukinen**  
**91 Eglinton Avenue East, Mississauga, Ontario**

Parameter	Units	MOECC Site Condition Standard Selection Criteria	Sample Designation				
			Sample Collection Date (dd/mm/yyyy)				
			Sample Depth (mbgs)				
			BH2	BH4	BH7	BH7-01	MW1-SS6
			04/08/2017	04/08/2017	04/08/2017	04/08/2017	04/08/2017
			4.6-5.2	2.3-2.9	0.8-1.4	0-0.6	4.6-5.2
pH		Surface: 5 < pH < 9	NA	NA	NA	7.14	7.90
		Subsurface: 5 < pH < 11					
Sieve #200 <0.075 mm	%	50%	23	88	91	NA	NA
Sieve #200 >0.075 mm	%	50%	77	12	9		
Grain Size Classification			COARSE	FINE	FINE		

Notes:

<b>BOLD</b>	Environmentally Sensitive Area (Based Upon pH of Surface Soil)
<b>BOLD</b>	Environmentally Sensitive Area (Based Upon pH of Sub-Surface Soil)
NA	Not Analysed
mbgs	Metres Below Ground Surface

**TABLE 4**  
**GROUNDWATER ELEVATION DATA**  
**Dr. Jamie Kaukinen**  
**91 Eglinton Avenue East, Mississauga, Ontario**

<i><b>Well Number</b></i>	<i><b>Date (dd/mm/yyyy)</b></i>	<i><b>NAPL Level Measurement from TOC (m)</b></i>	<i><b>Water Level Measurement from TOC (m)</b></i>	<i><b>Water Level Measurement from Ground (mbgs)</b></i>	<i><b>Product Thickness (m)</b></i>
MW1	08/08/2017	ND	4.07	3.42	ND
MW5	08/08/2017	ND	3.35	2.95	ND

Notes:

NAPL Non-Aqueous Phase Liquid  
 ND Not Detected  
 TOC Indicates Top of Casing  
 m Metres  
 mbgs Metres Below Ground Surface

**TABLE 5**  
**PETROLEUM HYDROCARBON AND BTEX ANALYSIS FOR SOIL**  
**Dr. Jamie Kaukinen**  
**91 Eglinton Avenue East, Mississauga, Ontario**

<i>Parameter</i>	<i>MOECC Table 6 Standards*</i>	<i>Sample Designation</i>	
		<i>Sample Collection Date (dd/mm/yyyy)</i>	
		<i>Sample Depth (mbgs)</i>	
		<i>BH2-SS1</i>	<i>MW1-SS5</i>
		<i>04/08/2017</i>	<i>04/08/2017</i>
		<i>0-0.6</i>	<i>3.0-3.7</i>
Benzene	0.17	<0.020	<0.020
Toluene	6	<0.020	<0.020
Ethylbenzene	1.6	<0.020	<0.020
Xylenes (Total)	25	<0.040	<0.040
Petroleum Hydrocarbons F1 (C <sub>6</sub> - C <sub>10</sub> )	65	<10	<10
Petroleum Hydrocarbons F2 (>C <sub>10</sub> - C <sub>16</sub> )	150	<10	<10
Petroleum Hydrocarbons F3 (>C <sub>16</sub> - C <sub>34</sub> )	1300	270	<50
Petroleum Hydrocarbons F4 (>C <sub>34</sub> - C <sub>50</sub> )	5600	170	<50

Notes:

MOECC Table 6 Standards\*

Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011, Table 6 Standards, Medium/Fine-Textured Soils, Shallow Soils, Potable Groundwater Condition, for Residential/Parkland/Institutional Property Use.

<b>BOLD</b>
<b>BOLD</b>

Exceeds Site Condition Standard

Reportable Detection Limit Exceeds Site Condition Standard

Units All Units in µg/g

mbgs Metres Below Ground Surface

BTEX Benzene, Toluene, Ethylbenzene and Xylenes

TABLE 6  
METALS ANALYSIS FOR SOIL  
Dr. Jamie Kaukinen  
91 Eglinton Avenue East, Mississauga, Ontario

Parameter	MOECC Table 6 Standards*	Sample Designation
		Sample Collection Date (dd/mm/yyyy)
		Sample Depth (mbgs)
		BH5-SS1
		04/08/2017
		0-0.6
Antimony	7.5	0.27
Arsenic	18	6.5
Barium	390	62
Beryllium	5	0.64
Boron (Total)	120	6.2
Cadmium	1.2	0.17
Chromium (Total)	160	18
Cobalt	22	8.7
Copper	180	26
Lead	120	33
Mercury	1.8	<0.050
Molybdenum	6.9	<0.50
Nickel	130	17
Selenium	2.4	<0.50
Silver	25	<0.20
Thallium	1	0.14
Uranium	23	0.42
Vanadium	86	27
Zinc	340	65

Notes:

MOECC Table 6 Standards\*

Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011, Table 6 Standards, Medium/Fine-Textured Soils, Shallow Soils, Potable Groundwater Condition, for Residential/Parkland/Institutional Property Use.

<b>BOLD</b>	Exceeds Site Condition Standard
<b>BOLD</b>	Reportable Detection Limit Exceeds Site Condition Standard
Units	All Units in µg/g
mbgs	Metres Below Ground Surface
NA	Not Applicable

**TABLE 7**  
**PESTICIDES & POLYCHLORINATED BIPHENYLS ANALYSIS FOR SOIL**  
**Dr. Jamie Kaukinen**  
**91 Eglinton Avenue East, Mississauga, Ontario**

Parameter	MOECC Table 6 Standards*	Sample Designation		
		Sample Collection Date (dd/mm/yyyy)		
		Sample Depth (mbgs)		
		PEST1	PEST2	PEST3
		04/08/2017	04/08/2017	04/08/2017
		Surface Soil Grab Sample		
Aldrin	0.05	<0.0020	<0.0020	<0.0020
Chlordane (alpha)	NV	<0.0020	<0.0020	<0.0020
Chlordane (gamma)	NV	<0.0020	<0.0020	<0.0020
Chlordane (total)	0.05	<0.0020	<0.0020	<0.0020
o,p DDD	NV	<0.0020	<0.0020	<0.0020
p,p-DDD	NV	<0.0020	<0.0020	<0.0020
DDD (total)	3.3	<0.0020	<0.0020	<0.0020
o,p DDE	NV	<0.0020	<0.0020	<0.0020
p,p-DDE	NV	0.011	0.0093	0.0052
DDE (total)	0.33	0.011	0.0093	0.0052
op-DDT	NV	<0.0020	<0.0020	<0.0020
pp-DDT	NV	0.01	0.01	0.0041
DDT (total)	1.4	0.01	0.01	0.0041
Dieldrin	0.05	<0.0020	<0.0020	<0.0020
Endosulphan I	NV	<0.0020	<0.0020	<0.0020
Endosulphan II	NV	<0.0020	<0.0020	<0.0020
Total Endosulphan	0.04	<0.0020	<0.0020	<0.0020
Endrin	0.04	<0.0020	<0.0020	<0.0020
Heptachlor	0.15	<0.0020	<0.0020	<0.0020
Heptachlor Epoxide	0.05	<0.0020	<0.0020	<0.0020
Lindane	0.063	<0.0020	<0.0020	<0.0020
Methoxychlor	0.13	<0.0050	<0.0050	<0.0050
Total PCB	0.35	<0.015	<0.015	<0.015
Hexachlorobenzene	0.52	<0.0020	<0.0020	<0.0020
Hexachlorobutadiene	0.014	<0.0020	<0.0020	<0.0020
Hexachloroethane	0.07	<0.0020	<0.0020	<0.0020

Notes:

MOECC Table 6 Standards\*

Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011, Table 6 Standards, Medium/Fine-Textured Soils, Shallow Soils, Potable Groundwater Condition, for Residential/Parkland/Institutional Property Use.

<b>BOLD</b>
<b>BOLD</b>

Units  
mbgs  
NA

Exceeds Site Condition Standard  
Reportable Detection Limit Exceeds Site Condition Standard  
All Units in µg/g  
Metres Below Ground Surface  
Not Applicable



**TABLE 8**  
**PETROLEUM HYDROCARBON AND BTEX ANALYSIS FOR GROUNDWATER**  
**Dr. Jamie Kaukinen**  
**91 Eglinton Avenue East, Mississauga, Ontario**

<i>Parameter</i>	<i>MOECC Table 6 Standards*</i>	<i>Sample Designation</i>
		<i>Sample Collection Date (dd/mm/yyyy)</i>
		<i>MW1</i>
		<i>09/08/2017</i>
Benzene	0.5	<0.20
Toluene	24	<0.20
Ethylbenzene	2.4	<0.20
Xylenes (Total)	72	<0.40
Petroleum Hydrocarbons F1 (C <sub>6</sub> - C <sub>10</sub> )	420	<25
Petroleum Hydrocarbons F2 (>C <sub>10</sub> - C <sub>16</sub> )	150	<100
Petroleum Hydrocarbons F3 (>C <sub>16</sub> - C <sub>34</sub> )	500	<200
Petroleum Hydrocarbons F4 (>C <sub>34</sub> - C <sub>50</sub> )	500	<200

Notes:

MOECC Table 6 Standards\*

Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011, Table 6 Standards, Medium/Fine-Textured Soils, Shallow Soils, Potable Groundwater Condition, for All Types of Property Use.

<b>BOLD</b>
<b>BOLD</b>
Units

Exceeds Site Condition Standard

Reportable Detection Limit Exceeds Site Condition Standard

All Units in µg/L

**TABLE 9**  
**POLYCYCLIC AROMATIC HYDROCARBON ANALYSIS FOR GROUNDWATER**  
**Dr. Jamie Kaukinen**  
**91 Eglinton Avenue East, Mississauga, Ontario**

<i>Parameter</i>	<i>MOECC Table 6 Standards*</i>	<i>Sample Designation</i>
		<i>Sample Collection Date (dd/mm/yyyy)</i>
		<i>MW1</i>
		<i>09/08/2017</i>
Acenaphthene	4.1	<0.050
Acenaphthylene	1	<0.050
Anthracene	1	<0.050
Benzo(a)anthracene	1	<0.050
Benzo(a)pyrene	0.01	<0.010
Benzo(b)fluoranthene	0.1	<0.050
Benzo(ghi)perylene	0.2	<0.050
Benzo(k)fluoranthene	0.1	<0.050
Chrysene	0.1	<0.050
Dibenzo(a,h)anthracene	0.2	<0.050
Fluoranthene	0.41	<0.050
Fluorene	120	<0.050
Indeno(1,2,3-cd)pyrene	0.2	<0.050
Methylnaphthalene 2-(1-)	3.2	<0.071
Naphthalene	7	<0.050
Phenanthrene	1	<0.030
Pyrene	4.1	<0.050

Notes:

MOECC Table 6 Standards\*

Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011, Table 6 Standards, Medium/Fine-Textured Soils, Shallow Soils, Potable Groundwater Condition, for All Types of Property Use.

<b>BOLD</b>
<b>BOLD</b>
Units

Exceeds Site Condition Standard

Reportable Detection Limit Exceeds Site Condition Standard

All Units in µg/L

**TABLE 10**  
**METALS ANALYSIS FOR GROUNDWATER**  
**Dr. Jamie Kaukinen**  
**91 Eglinton Avenue East, Mississauga, Ontario**

<i>Parameter</i>	<i>MOECC Table 6 Standards*</i>	<i>Sample Designation</i>
		<i>Sample Collection Date (dd/mm/yyyy)</i>
		<i>MW5</i>
		<i>09/08/2017</i>
Antimony	6	0.77
Arsenic	25	1.7
Barium	1000	74
Beryllium	4	<0.50
Boron	5000	56
Cadmium	2.1	<0.10
Chromium (Total)	50	<5.0
Cobalt	3.8	1.1
Copper	69	2.9
Lead	10	<0.50
Molybdenum	70	5
Nickel	100	1.2
Selenium	10	<2.0
Silver	1.2	<0.10
Sodium	490000	22000
Thallium	2	<0.050
Uranium	20	6.2
Vanadium	6.2	1
Zinc	890	<5.0

Notes:

MOECC Table 6 Standards\* Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011, Table 6 Standards, Medium/Fine-Textured Soils, Shallow Soils, Potable Groundwater Condition, for All Types of Property Use.

<b>BOLD</b>
<b>BOLD</b>

Units

Exceeds Site Condition Standard

Reportable Detection Limit Exceeds Site Condition Standard

All Units in µg/L

**TABLE 11**  
**PESTICIDES & POLYCHLORINATED BIPHENYLS FOR GROUNDWATER**  
**Dr. Jamie Kaukinen**  
**91 Eglinton Avenue East, Mississauga, Ontario**

<i>Parameter</i>	<i>MOECC Table 6 Standards*</i>	<i>Sample Designation</i>
		<i>Sample Collection Date (dd/mm/yyyy)</i>
		<i>MW5</i>
		<i>09/08/2017</i>
Aldrin	0.35	<0.005
Chlordane (alpha)	NV	<0.005
Chlordane (gamma)	NV	<0.005
Chlordane (total)	0.06	<0.005
o,p DDD	NV	<0.005
p,p-DDD	NV	<0.005
DDD (total)	1.8	<0.005
o,p DDE	NV	<0.005
p,p-DDE	NV	<0.005
DDE (total)	10	<0.005
op-DDT	NV	<0.005
pp-DDT	NV	<0.005
DDT (total)	0.05	<0.005
Dieldrin	0.35	<0.005
Endosulphan I	NV	<0.005
Endosulphan II	NV	<0.005
Total Endosulphan	0.56	<0.005
Endrin	0.36	<0.005
Heptachlor	0.038	<0.005
Hepatchlor Epoxide	0.038	<0.005
Lindane	0.95	<0.003
Methoxychlor	0.3	<0.01
Total PCB	0.2	<0.05
Hexachlorobenzene	1	<0.005
Hexachlorobutadiene	0.012	<0.009
Hexachloroethane	0.17	<0.01

Notes:

MOECC Table 6 Standards\*

Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011, Table 6 Standards, Medium/Fine-Textured Soils, Shallow Soils, Potable Groundwater Condition, for All Types of Property Use.

<b>BOLD</b>
<b>BOLD</b>

Units

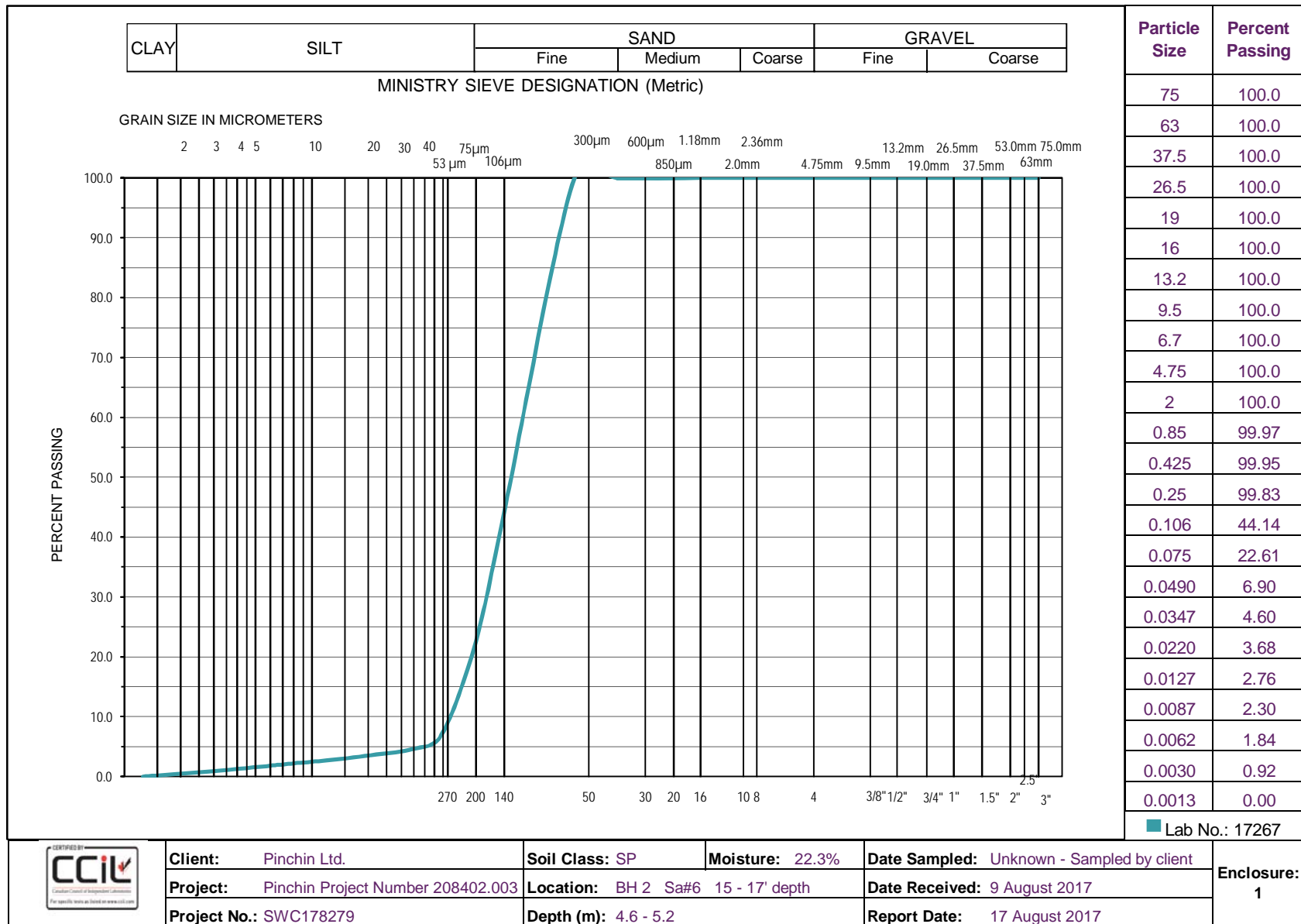
Exceeds Site Condition Standard

Reportable Detection Limit Exceeds Site Condition Standard

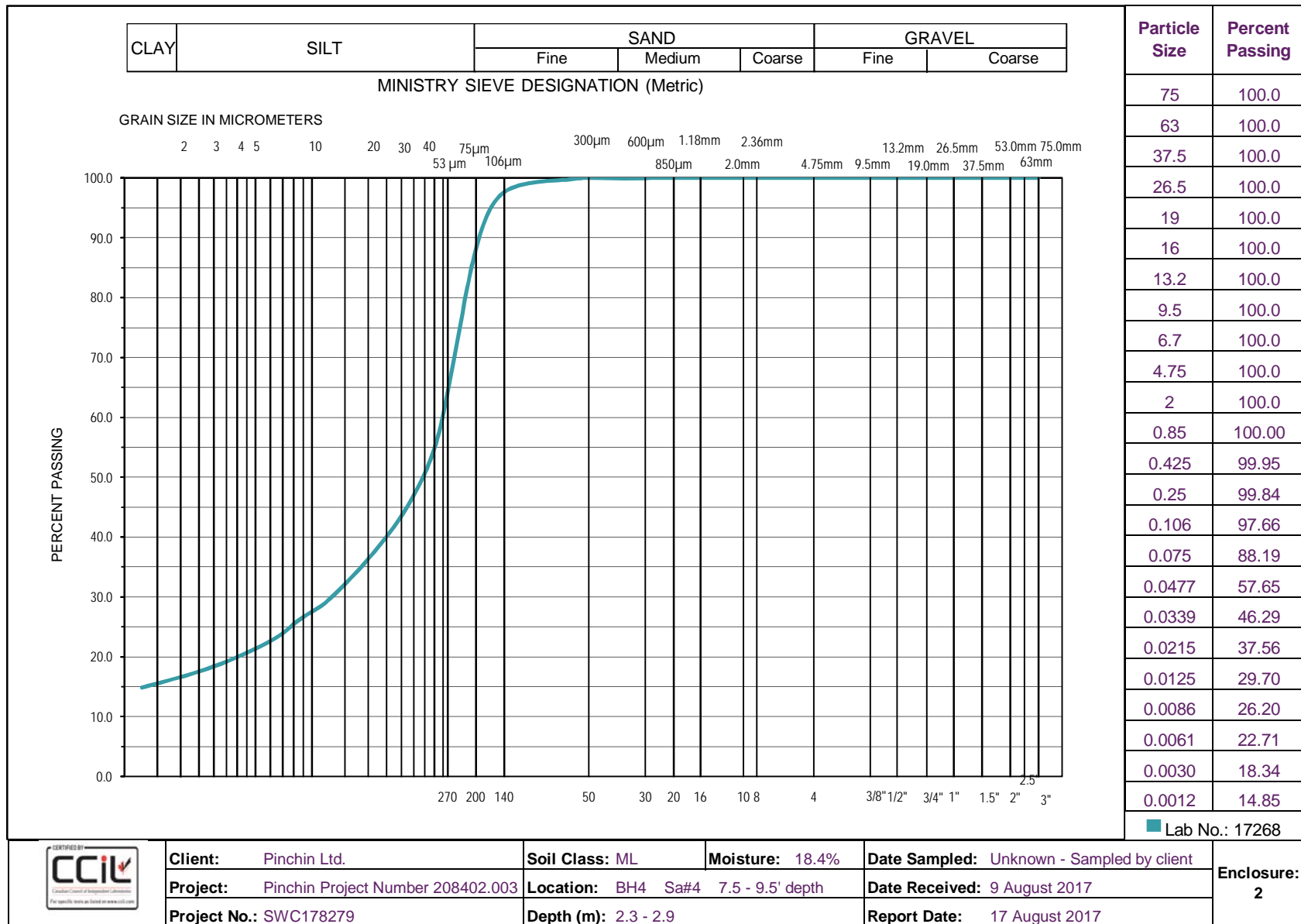
All Units in µg/L

**APPENDIX IV**  
**Laboratory Certificates of Analysis**

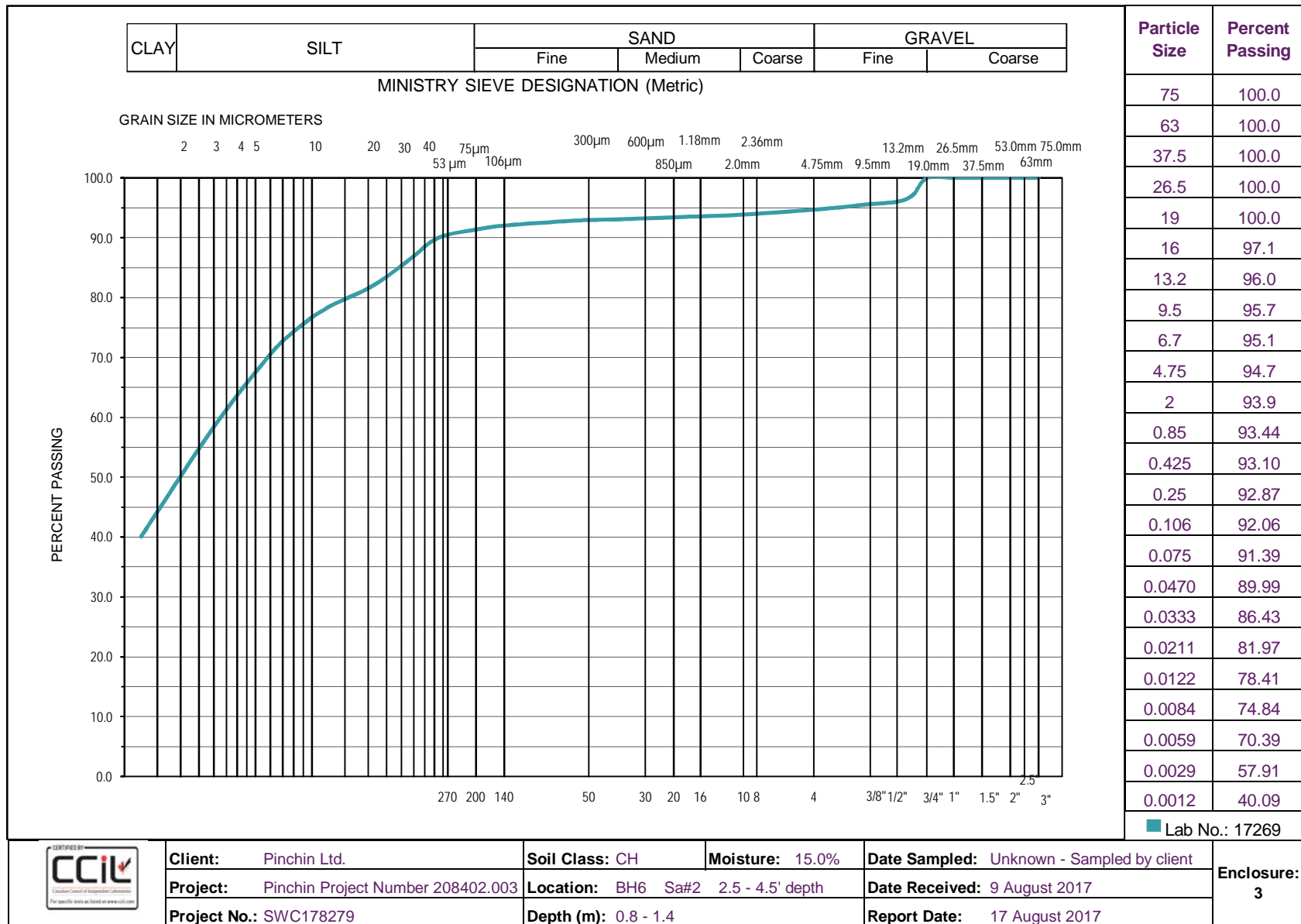
## UNIFIED SOIL CLASSIFICATION SYSTEM - GRAINSIZE DISTRIBUTION



## UNIFIED SOIL CLASSIFICATION SYSTEM - GRAINSIZE DISTRIBUTION



## UNIFIED SOIL CLASSIFICATION SYSTEM - GRAINSIZE DISTRIBUTION





## MOISTURE CONTENT TEST RESULTS

LAB NO.: 17270-17277      DATE SAMPLED: Unknown - Sampled by client      DATE TESTED: August 14th - 15th, 2017  
 PROJECT NO.: SWC178279 (208402.003)      DATE RECEIVED: 9 August 2017      TESTED BY: J. Taylor

BORE HOLE #:	BH4	BH4	BH4	BH4	BH4						
SAMPLE #:	SS 2	SS 3	SS 4	SS 5	SS 6						
TARE & WET SAMPLE:	88	144	1418.6	163.7	122.7						
TARE & DRY SAMPLE:	78.6	125.5	1281.1	145.9	108.5						
MOISTURE (g):	9.4	18.5	137.5	17.8	14.2						
TARE WEIGHT:	30.3	30.3	532.2	30.7	30.8						
SAMPLE DRY WEIGHT:	48.3	95.2	748.9	115.2	77.7						
% MOISTURE:	19.5	19.4	18.4	15.5	18.3						

BORE HOLE #:	BH1	BH1	BH1	BH1							
SAMPLE #:	SS 2	SS 3	SS 4	SS 5							
TARE & WET SAMPLE:	136.6	113.9	201.2	200.2							
TARE & DRY SAMPLE:	126.2	102.5	178.7	169.7							
MOISTURE (g):	10.4	11.4	22.5	30.5							
TARE WEIGHT:	29.8	30.1	30.3	30.5							
SAMPLE DRY WEIGHT:	96.4	72.4	148.4	139.2							
% MOISTURE:	10.8	15.7	15.2	21.9							

BORE HOLE #:	BH2	BH6									
SAMPLE #:	SS 6	SS 2									
TARE & WET SAMPLE:	1581.6	1265.5									
TARE & DRY SAMPLE:	1392.3	1174.2									
MOISTURE (g):	189.3	91.3									
TARE WEIGHT:	544.3	566.2									
SAMPLE DRY WEIGHT:	848.0	608.0									
% MOISTURE:	22.3	15.0									

## MOISTURE CONTENT TEST RESULTS

LAB NO.: 17270-17277  
PROJECT NO.: SWC178279 (2

DATE SAMPLED: Unknown - Sampled by client  
DATE RECEIVED: 9 August 2017

DATE TESTED: August 14th - 15th, 2017  
TESTED BY: J. Taylor

BORE HOLE #:	0	0	0	0	0	0	0	0	0	0	0
SAMPLE #:	SS 1	SS 2	SS 3	SS 4	SS 5	SS 6	SS 7	SS 8	SS 9	SS 10	SS 11
TARE & WET SAMPLE:											
TARE & DRY SAMPLE:											
MOISTURE (g):	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TARE WEIGHT:											
SAMPLE DRY WEIGHT:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% MOISTURE:	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

BORE HOLE #:	0	0	0	0	0	0	0	0	0	0	0
SAMPLE #:	SS 12	SS 13	SS 14	SS 15	SS 16	SS 17	SS 18	SS 19	SS 20	SS 21	SS 22
TARE & WET SAMPLE:											
TARE & DRY SAMPLE:											
MOISTURE (g):	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TARE WEIGHT:											
SAMPLE DRY WEIGHT:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% MOISTURE:	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

BORE HOLE #:	0	0	0	0	0	0	0	0	0	0	0
SAMPLE #:	SS 23	SS 24	SS 25	SS 26	SS 27	SS 28	SS 29	SS 30	SS 31	SS 32	SS 33
TARE & WET SAMPLE:											
TARE & DRY SAMPLE:											
MOISTURE (g):	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TARE WEIGHT:											
SAMPLE DRY WEIGHT:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% MOISTURE:	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Amec Foster Wheeler Environment & Infrastructure  
900 Maple Grove Road, Unit 10  
Cambridge, ON N3H 4R7  
Tel: (519) 650-7100  
Amecfw.com



## MOISTURE CONTENT TEST RESULTS

LAB NO.: 17270-17277  
PROJECT NO.: SWC178279 (2

DATE SAMPLED: Unknown - Sampled by client  
DATE RECEIVED: 9 August 2017

DATE TESTED: August 14th - 15th, 2017  
TESTED BY: J. Taylor

BORE HOLE #:	0	0	0	0	0	0	0	0	0	0	0
SAMPLE #:	SS 34	SS 35	SS 36	SS 37	SS 38	SS 39	SS 40	SS 41	SS 42	SS 43	SS 44
TARE & WET SAMPLE:											
TARE & DRY SAMPLE:											
MOISTURE (g):	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TARE WEIGHT:											
SAMPLE DRY WEIGHT:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% MOISTURE:	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

BORE HOLE #:	0	0	0	0	0	0	0	0	0	0	0
SAMPLE #:	SS 45	SS 46	SS 47	SS 48	SS 49	SS 50	SS 51	SS 52	SS 53	SS 54	SS 55
TARE & WET SAMPLE:											
TARE & DRY SAMPLE:											
MOISTURE (g):	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TARE WEIGHT:											
SAMPLE DRY WEIGHT:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% MOISTURE:	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

BORE HOLE #:	0	0	0	0	0	0	0	0	0	0	0
SAMPLE #:	SS 56	SS 57	SS 58	SS 59	SS 60	SS 61	SS 62	SS 63	SS 64	SS 65	SS 66
TARE & WET SAMPLE:											
TARE & DRY SAMPLE:											
MOISTURE (g):	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TARE WEIGHT:											
SAMPLE DRY WEIGHT:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% MOISTURE:	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Amec Foster Wheeler Environment & Infrastructure  
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Cambridge, ON N3H 4R7  
Tel: (519) 650-7100  
Amecfw.com



## MOISTURE CONTENT TEST RESULTS

LAB NO.: 17270-17277  
PROJECT NO.: SWC178279 (2

DATE SAMPLED: Unknown - Sampled by client  
DATE RECEIVED: 9 August 2017

DATE TESTED: August 14th - 15th, 2017  
TESTED BY: J. Taylor

BORE HOLE #:	0	0	0	0	0	0	0	0	0	0	0
SAMPLE #:	SS 67	SS 68	SS 69	SS 70	SS 71	SS 72	SS 73	SS 74	SS 75	SS 76	SS 77
TARE & WET SAMPLE:											
TARE & DRY SAMPLE:											
MOISTURE (g):	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TARE WEIGHT:											
SAMPLE DRY WEIGHT:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% MOISTURE:	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

BORE HOLE #:	0	0	0	0	0	0	0	0	0	0	0
SAMPLE #:	SS 78	SS 79	SS 80	SS 81	SS 82	SS 83	SS 84	SS 85	SS 86	SS 87	SS 88
TARE & WET SAMPLE:											
TARE & DRY SAMPLE:											
MOISTURE (g):	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TARE WEIGHT:											
SAMPLE DRY WEIGHT:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% MOISTURE:	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

BORE HOLE #:	0	0	0	0	0	0	0	0	0	0	0
SAMPLE #:	SS 89	SS 90	SS 91	SS 92	SS 93	SS 94	SS 95	SS 96	SS 97	SS 98	SS 99
TARE & WET SAMPLE:											
TARE & DRY SAMPLE:											
MOISTURE (g):	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TARE WEIGHT:											
SAMPLE DRY WEIGHT:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% MOISTURE:	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Amec Foster Wheeler Environment & Infrastructure  
900 Maple Grove Road, Unit 10  
Cambridge, ON N3H 4R7  
Tel: (519) 650-7100  
Amecfw.com



**Attention:Gagandip Singh**

Pinchin Ltd  
2470 Milltower Crt  
Mississauga, ON  
L5N 7W5

Your Project #: 208402.001  
Site Location: PHASE II ESA / 91 EGLINGTON AVE EAST,  
MISSISSAUGA, ON  
Your C.O.C. #: 623445-01-01

**Report Date: 2017/08/16**

Report #: R4655434

Version: 1 - Final

## **CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B7H0396**

**Received: 2017/08/09, 12:00**

Sample Matrix: Water  
# Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	1	N/A	2017/08/14	CAM SOP-00301	EPA 8270D m
Petroleum Hydro. CCME F1 & BTEX in Water	1	N/A	2017/08/12	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	1	2017/08/12	2017/08/13	CAM SOP-00316	CCME PHC-CWS m
Dissolved Metals by ICPMS	1	N/A	2017/08/15	CAM SOP-00447	EPA 6020B m
OC Pesticides (Selected) & PCB (2)	1	2017/08/14	2017/08/15	CAM SOP-00307	EPA 8081A/8082B m
OC Pesticides Summed Parameters	1	N/A	2017/08/15	CAM SOP-00307	EPA 8081A/8082B m
PAH Compounds in Water by GC/MS (SIM)	1	2017/08/12	2017/08/13	CAM SOP-00318	EPA 8270D m

**Remarks:**

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam 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.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam 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 Maxxam, unless otherwise agreed in writing.

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.

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) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam 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.

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

**Attention:Gagandip Singh**

Pinchin Ltd  
2470 Milltower Crt  
Mississauga, ON  
L5N 7W5

Your Project #: 208402.001

Site Location: PHASE II ESA / 91 EGLINGTON AVE EAST,  
MISSISSAUGA, ON

Your C.O.C. #: 623445-01-01

**Report Date: 2017/08/16**

Report #: R4655434

Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B7H0396**

**Received: 2017/08/09, 12:00**

**Encryption Key**

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

Antonella Brasil, Senior Project Manager

Email: ABrasil@maxxam.ca

Phone# (905)817-5817

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

### O.REG 153 DISSOLVED ICPMS METALS (WATER)

<b>Maxxam ID</b>		EXG017		
<b>Sampling Date</b>		2017/08/09 09:55		
<b>COC Number</b>		623445-01-01		
	<b>UNITS</b>	<b>MW5</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Metals</b>				
Dissolved Antimony (Sb)	ug/L	0.77	0.50	5114872
Dissolved Arsenic (As)	ug/L	1.7	1.0	5114872
Dissolved Barium (Ba)	ug/L	74	2.0	5114872
Dissolved Beryllium (Be)	ug/L	<0.50	0.50	5114872
Dissolved Boron (B)	ug/L	56	10	5114872
Dissolved Cadmium (Cd)	ug/L	<0.10	0.10	5114872
Dissolved Chromium (Cr)	ug/L	<5.0	5.0	5114872
Dissolved Cobalt (Co)	ug/L	1.1	0.50	5114872
Dissolved Copper (Cu)	ug/L	2.9	1.0	5114872
Dissolved Lead (Pb)	ug/L	<0.50	0.50	5114872
Dissolved Molybdenum (Mo)	ug/L	5.0	0.50	5114872
Dissolved Nickel (Ni)	ug/L	1.2	1.0	5114872
Dissolved Selenium (Se)	ug/L	<2.0	2.0	5114872
Dissolved Silver (Ag)	ug/L	<0.10	0.10	5114872
Dissolved Sodium (Na)	ug/L	22000	100	5114872
Dissolved Thallium (Tl)	ug/L	<0.050	0.050	5114872
Dissolved Uranium (U)	ug/L	6.2	0.10	5114872
Dissolved Vanadium (V)	ug/L	1.0	0.50	5114872
Dissolved Zinc (Zn)	ug/L	<5.0	5.0	5114872
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				

### O.REG 153 OC PESTICIDES (WATER)

Maxxam ID		EXG017		
Sampling Date		2017/08/09 09:55		
COC Number		623445-01-01		
	UNITS	MW5	RDL	QC Batch
<b>Calculated Parameters</b>				
Chlordane (Total)	ug/L	<0.005	0.005	5111977
o,p-DDD + p,p-DDD	ug/L	<0.005	0.005	5111977
o,p-DDE + p,p-DDE	ug/L	<0.005	0.005	5111977
o,p-DDT + p,p-DDT	ug/L	<0.005	0.005	5111977
Total Endosulfan	ug/L	<0.005	0.005	5111977
Total PCB	ug/L	<0.05	0.05	5111977
<b>Pesticides &amp; Herbicides</b>				
Aldrin	ug/L	<0.005	0.005	5117378
Dieldrin	ug/L	<0.005	0.005	5117378
a-Chlordane	ug/L	<0.005	0.005	5117378
g-Chlordane	ug/L	<0.005	0.005	5117378
o,p-DDD	ug/L	<0.005	0.005	5117378
p,p-DDD	ug/L	<0.005	0.005	5117378
o,p-DDE	ug/L	<0.005	0.005	5117378
p,p-DDE	ug/L	<0.005	0.005	5117378
o,p-DDT	ug/L	<0.005	0.005	5117378
p,p-DDT	ug/L	<0.005	0.005	5117378
Lindane	ug/L	<0.003	0.003	5117378
Endosulfan I (alpha)	ug/L	<0.005	0.005	5117378
Endosulfan II (beta)	ug/L	<0.005	0.005	5117378
Endrin	ug/L	<0.005	0.005	5117378
Heptachlor	ug/L	<0.005	0.005	5117378
Heptachlor epoxide	ug/L	<0.005	0.005	5117378
Hexachlorobenzene	ug/L	<0.005	0.005	5117378
Hexachlorobutadiene	ug/L	<0.009	0.009	5117378
Hexachloroethane	ug/L	<0.01	0.01	5117378
Methoxychlor	ug/L	<0.01	0.01	5117378
Aroclor 1242	ug/L	<0.05	0.05	5117378
Aroclor 1248	ug/L	<0.05	0.05	5117378
Aroclor 1254	ug/L	<0.05	0.05	5117378
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



Maxxam Job #: B7H0396  
Report Date: 2017/08/16

Pinchin Ltd  
Client Project #: 208402.001  
Site Location: PHASE II ESA / 91 EGLINGTON AVE EAST,  
MISSISSAUGA, ON  
Sampler Initials: KW

### O.REG 153 OC PESTICIDES (WATER)

<b>Maxxam ID</b>		EXG017		
<b>Sampling Date</b>		2017/08/09 09:55		
<b>COC Number</b>		623445-01-01		
	<b>UNITS</b>	<b>MW5</b>	<b>RDL</b>	<b>QC Batch</b>
Aroclor 1260	ug/L	<0.05	0.05	5117378
<b>Surrogate Recovery (%)</b>				
2,4,5,6-Tetrachloro-m-xylene	%	65		5117378
Decachlorobiphenyl	%	79		5117378
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				

### O.REG 153 PAHS (WATER)

<b>Maxxam ID</b>		EXG016		
<b>Sampling Date</b>		2017/08/09 09:22		
<b>COC Number</b>		623445-01-01		
	<b>UNITS</b>	<b>MW1</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Calculated Parameters</b>				
Methylnaphthalene, 2-(1-)	ug/L	<0.071	0.071	5110868
<b>Polyaromatic Hydrocarbons</b>				
Acenaphthene	ug/L	<0.050	0.050	5116606
Acenaphthylene	ug/L	<0.050	0.050	5116606
Anthracene	ug/L	<0.050	0.050	5116606
Benzo(a)anthracene	ug/L	<0.050	0.050	5116606
Benzo(a)pyrene	ug/L	<0.010	0.010	5116606
Benzo(b/j)fluoranthene	ug/L	<0.050	0.050	5116606
Benzo(g,h,i)perylene	ug/L	<0.050	0.050	5116606
Benzo(k)fluoranthene	ug/L	<0.050	0.050	5116606
Chrysene	ug/L	<0.050	0.050	5116606
Dibenz(a,h)anthracene	ug/L	<0.050	0.050	5116606
Fluoranthene	ug/L	<0.050	0.050	5116606
Fluorene	ug/L	<0.050	0.050	5116606
Indeno(1,2,3-cd)pyrene	ug/L	<0.050	0.050	5116606
1-Methylnaphthalene	ug/L	<0.050	0.050	5116606
2-Methylnaphthalene	ug/L	<0.050	0.050	5116606
Naphthalene	ug/L	<0.050	0.050	5116606
Phenanthrene	ug/L	<0.030	0.030	5116606
Pyrene	ug/L	<0.050	0.050	5116606
<b>Surrogate Recovery (%)</b>				
D10-Anthracene	%	98		5116606
D14-Terphenyl (FS)	%	53		5116606
D8-Acenaphthylene	%	105		5116606
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				

### O.REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		EXG016	EXG016		
Sampling Date		2017/08/09 09:22	2017/08/09 09:22		
COC Number		623445-01-01	623445-01-01		
	UNITS	MW1	MW1 Lab-Dup	RDL	QC Batch
<b>BTEX &amp; F1 Hydrocarbons</b>					
Benzene	ug/L	<0.20	<0.20	0.20	5116743
Toluene	ug/L	<0.20	<0.20	0.20	5116743
Ethylbenzene	ug/L	<0.20	<0.20	0.20	5116743
o-Xylene	ug/L	<0.20	<0.20	0.20	5116743
p+m-Xylene	ug/L	<0.40	<0.40	0.40	5116743
Total Xylenes	ug/L	<0.40	<0.40	0.40	5116743
F1 (C6-C10)	ug/L	<25	<25	25	5116743
F1 (C6-C10) - BTEX	ug/L	<25	<25	25	5116743
<b>F2-F4 Hydrocarbons</b>					
F2 (C10-C16 Hydrocarbons)	ug/L	<100		100	5116599
F3 (C16-C34 Hydrocarbons)	ug/L	<200		200	5116599
F4 (C34-C50 Hydrocarbons)	ug/L	<200		200	5116599
Reached Baseline at C50	ug/L	Yes			5116599
<b>Surrogate Recovery (%)</b>					
1,4-Difluorobenzene	%	88	88		5116743
4-Bromofluorobenzene	%	97	99		5116743
D10-Ethylbenzene	%	104	104		5116743
D4-1,2-Dichloroethane	%	91	92		5116743
o-Terphenyl	%	103			5116599
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate					

Maxxam Job #: B7H0396  
Report Date: 2017/08/16

Pinchin Ltd  
Client Project #: 208402.001  
Site Location: PHASE II ESA / 91 EGLINGTON AVE EAST,  
MISSISSAUGA, ON  
Sampler Initials: KW

## TEST SUMMARY

**Maxxam ID:** EXG016  
**Sample ID:** MW1  
**Matrix:** Water

**Collected:** 2017/08/09  
**Shipped:**  
**Received:** 2017/08/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5110868	N/A	2017/08/14	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	5116743	N/A	2017/08/12	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5116599	2017/08/12	2017/08/13	Barbara Wowk
PAH Compounds in Water by GC/MS (SIM)	GC/MS	5116606	2017/08/12	2017/08/13	Lingyun Feng

**Maxxam ID:** EXG016 Dup  
**Sample ID:** MW1  
**Matrix:** Water

**Collected:** 2017/08/09  
**Shipped:**  
**Received:** 2017/08/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	5116743	N/A	2017/08/12	Abdi Mohamud

**Maxxam ID:** EXG017  
**Sample ID:** MW5  
**Matrix:** Water

**Collected:** 2017/08/09  
**Shipped:**  
**Received:** 2017/08/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	5114872	N/A	2017/08/15	Prempal Bhatti
OC Pesticides (Selected) & PCB	GC/ECD	5117378	2017/08/14	2017/08/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5111977	N/A	2017/08/15	Automated Statchk

### GENERAL COMMENTS

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

Package 1	4.7°C
-----------	-------

Cooler custody seal was present and intact.

All 40mL vials for F1BTEx analysis contained visible sediment.

All 250mL amber glass bottles for F2-F4 analysis contained visible sediment, which was included in the extraction.

The 500mL amber glass bottle for PCB analysis contained visible sediment.

**Results relate only to the items tested.**

## QUALITY ASSURANCE REPORT

Pinchin Ltd  
Client Project #: 208402.001

PHASE II ESA / 91 EGLINGTON AVE EAST,  
Site Location: MISSISSAUGA, ON  
Sampler Initials: KW

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5116599	o-Terphenyl	2017/08/13	106	60 - 130	106	60 - 130	105	%		
5116606	D10-Anthracene	2017/08/12	108	50 - 130	102	50 - 130	100	%		
5116606	D14-Terphenyl (FS)	2017/08/12	88	50 - 130	79	50 - 130	79	%		
5116606	D8-Acenaphthylene	2017/08/12	115	50 - 130	110	50 - 130	104	%		
5116743	1,4-Difluorobenzene	2017/08/12	90	70 - 130	90	70 - 130	99	%		
5116743	4-Bromofluorobenzene	2017/08/12	98	70 - 130	98	70 - 130	99	%		
5116743	D10-Ethylbenzene	2017/08/12	108	70 - 130	107	70 - 130	101	%		
5116743	D4-1,2-Dichloroethane	2017/08/12	89	70 - 130	90	70 - 130	91	%		
5117378	2,4,5,6-Tetrachloro-m-xylene	2017/08/15	81	50 - 130	76	50 - 130	81	%		
5117378	Decachlorobiphenyl	2017/08/15	109	50 - 130	103	50 - 130	117	%		
5114872	Dissolved Antimony (Sb)	2017/08/15	107	80 - 120	98	80 - 120	<0.50	ug/L		
5114872	Dissolved Arsenic (As)	2017/08/15	106	80 - 120	99	80 - 120	<1.0	ug/L		
5114872	Dissolved Barium (Ba)	2017/08/15	104	80 - 120	96	80 - 120	<2.0	ug/L		
5114872	Dissolved Beryllium (Be)	2017/08/15	104	80 - 120	98	80 - 120	<0.50	ug/L		
5114872	Dissolved Boron (B)	2017/08/15	103	80 - 120	94	80 - 120	<10	ug/L		
5114872	Dissolved Cadmium (Cd)	2017/08/15	106	80 - 120	98	80 - 120	<0.10	ug/L		
5114872	Dissolved Chromium (Cr)	2017/08/15	103	80 - 120	96	80 - 120	<5.0	ug/L		
5114872	Dissolved Cobalt (Co)	2017/08/15	108	80 - 120	102	80 - 120	<0.50	ug/L		
5114872	Dissolved Copper (Cu)	2017/08/15	111	80 - 120	102	80 - 120	<1.0	ug/L		
5114872	Dissolved Lead (Pb)	2017/08/15	104	80 - 120	96	80 - 120	<0.50	ug/L		
5114872	Dissolved Molybdenum (Mo)	2017/08/15	107	80 - 120	98	80 - 120	<0.50	ug/L		
5114872	Dissolved Nickel (Ni)	2017/08/15	103	80 - 120	96	80 - 120	<1.0	ug/L		
5114872	Dissolved Selenium (Se)	2017/08/15	110	80 - 120	101	80 - 120	<2.0	ug/L		
5114872	Dissolved Silver (Ag)	2017/08/15	103	80 - 120	96	80 - 120	<0.10	ug/L		
5114872	Dissolved Sodium (Na)	2017/08/15	108	80 - 120	100	80 - 120	140, RDL=100	ug/L		
5114872	Dissolved Thallium (Tl)	2017/08/15	107	80 - 120	97	80 - 120	<0.050	ug/L		
5114872	Dissolved Uranium (U)	2017/08/15	107	80 - 120	100	80 - 120	<0.10	ug/L		
5114872	Dissolved Vanadium (V)	2017/08/15	103	80 - 120	95	80 - 120	<0.50	ug/L		
5114872	Dissolved Zinc (Zn)	2017/08/15	104	80 - 120	97	80 - 120	<5.0	ug/L		
5116599	F2 (C10-C16 Hydrocarbons)	2017/08/13	97	50 - 130	91	60 - 130	<100	ug/L	NC	30

## QUALITY ASSURANCE REPORT(CONT'D)

Pinchin Ltd  
Client Project #: 208402.001

PHASE II ESA / 91 EGLINGTON AVE EAST,  
Site Location: MISSISSAUGA, ON  
Sampler Initials: KW

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5116599	F3 (C16-C34 Hydrocarbons)	2017/08/13	99	50 - 130	94	60 - 130	<200	ug/L	NC	30
5116599	F4 (C34-C50 Hydrocarbons)	2017/08/13	103	50 - 130	96	60 - 130	<200	ug/L	NC	30
5116606	1-Methylnaphthalene	2017/08/12	137 (1)	50 - 130	123	50 - 130	<0.050	ug/L	NC	30
5116606	2-Methylnaphthalene	2017/08/12	121	50 - 130	114	50 - 130	<0.050	ug/L	NC	30
5116606	Acenaphthene	2017/08/12	106	50 - 130	99	50 - 130	<0.050	ug/L	NC	30
5116606	Acenaphthylene	2017/08/12	112	50 - 130	104	50 - 130	<0.050	ug/L	NC	30
5116606	Anthracene	2017/08/12	112	50 - 130	106	50 - 130	<0.050	ug/L	NC	30
5116606	Benzo(a)anthracene	2017/08/12	113	50 - 130	106	50 - 130	<0.050	ug/L	NC	30
5116606	Benzo(a)pyrene	2017/08/12	107	50 - 130	100	50 - 130	<0.010	ug/L	NC	30
5116606	Benzo(b,j)fluoranthene	2017/08/12	99	50 - 130	106	50 - 130	<0.050	ug/L	NC	30
5116606	Benzo(g,h,i)perylene	2017/08/12	84	50 - 130	86	50 - 130	<0.050	ug/L	NC	30
5116606	Benzo(k)fluoranthene	2017/08/12	108	50 - 130	91	50 - 130	<0.050	ug/L	NC	30
5116606	Chrysene	2017/08/12	105	50 - 130	100	50 - 130	<0.050	ug/L	NC	30
5116606	Dibenz(a,h)anthracene	2017/08/12	76	50 - 130	78	50 - 130	<0.050	ug/L	NC	30
5116606	Fluoranthene	2017/08/12	122	50 - 130	106	50 - 130	<0.050	ug/L	NC	30
5116606	Fluorene	2017/08/12	100	50 - 130	100	50 - 130	<0.050	ug/L	NC	30
5116606	Indeno(1,2,3-cd)pyrene	2017/08/12	84	50 - 130	87	50 - 130	<0.050	ug/L	NC	30
5116606	Naphthalene	2017/08/12	101	50 - 130	96	50 - 130	<0.050	ug/L	10	30
5116606	Phenanthrene	2017/08/12	109	50 - 130	101	50 - 130	<0.030	ug/L	NC	30
5116606	Pyrene	2017/08/12	121	50 - 130	107	50 - 130	<0.050	ug/L	NC	30
5116743	Benzene	2017/08/12	98	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
5116743	Ethylbenzene	2017/08/12	107	70 - 130	108	70 - 130	<0.20	ug/L	NC	30
5116743	F1 (C6-C10) - BTEX	2017/08/12					<25	ug/L	NC	30
5116743	F1 (C6-C10)	2017/08/12	77	70 - 130	90	70 - 130	<25	ug/L	NC	30
5116743	o-Xylene	2017/08/12	111	70 - 130	111	70 - 130	<0.20	ug/L	NC	30
5116743	p+m-Xylene	2017/08/12	106	70 - 130	108	70 - 130	<0.40	ug/L	NC	30
5116743	Toluene	2017/08/12	103	70 - 130	104	70 - 130	<0.20	ug/L	NC	30
5116743	Total Xylenes	2017/08/12					<0.40	ug/L	NC	30
5117378	a-Chlordane	2017/08/15	100	50 - 130	96	50 - 130	<0.005	ug/L	NC	30
5117378	Aldrin	2017/08/15	91	50 - 130	85	50 - 130	<0.005	ug/L	NC	30

## QUALITY ASSURANCE REPORT(CONT'D)

Pinchin Ltd  
Client Project #: 208402.001

PHASE II ESA / 91 EGLINGTON AVE EAST,  
Site Location: MISSISSAUGA, ON  
Sampler Initials: KW

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5117378	Aroclor 1242	2017/08/15					<0.05	ug/L	NC	30
5117378	Aroclor 1248	2017/08/15					<0.05	ug/L	NC	30
5117378	Aroclor 1254	2017/08/15					<0.05	ug/L	NC	30
5117378	Aroclor 1260	2017/08/15					<0.05	ug/L	NC	30
5117378	Dieldrin	2017/08/15	115	50 - 130	105	50 - 130	<0.005	ug/L	NC	30
5117378	Endosulfan I (alpha)	2017/08/15	94	50 - 130	92	50 - 130	<0.005	ug/L	NC	30
5117378	Endosulfan II (beta)	2017/08/15	100	50 - 130	91	50 - 130	<0.005	ug/L	NC	30
5117378	Endrin	2017/08/15	103	50 - 130	88	50 - 130	<0.005	ug/L	NC	30
5117378	g-Chlordane	2017/08/15	97	50 - 130	86	50 - 130	<0.005	ug/L	NC	30
5117378	Heptachlor epoxide	2017/08/15	97	50 - 130	89	50 - 130	<0.005	ug/L	NC	30
5117378	Heptachlor	2017/08/15	90	50 - 130	82	50 - 130	<0.005	ug/L	NC	30
5117378	Hexachlorobenzene	2017/08/15	92	50 - 130	83	50 - 130	<0.005	ug/L	NC	30
5117378	Hexachlorobutadiene	2017/08/15	91	50 - 130	82	50 - 130	<0.009	ug/L		
5117378	Hexachloroethane	2017/08/15	73	50 - 130	66	50 - 130	<0.01	ug/L		
5117378	Lindane	2017/08/15	89	50 - 130	82	50 - 130	<0.003	ug/L	NC	30
5117378	Methoxychlor	2017/08/15	111	50 - 130	97	50 - 130	<0.01	ug/L	NC	30
5117378	o,p-DDD	2017/08/15	108	50 - 130	102	50 - 130	<0.005	ug/L	NC	30
5117378	o,p-DDE	2017/08/15	102	50 - 130	92	50 - 130	<0.005	ug/L	NC	30
5117378	o,p-DDT	2017/08/15	98	50 - 130	82	50 - 130	<0.005	ug/L	NC	30
5117378	p,p-DDD	2017/08/15	108	50 - 130	98	50 - 130	<0.005	ug/L	NC	30
5117378	p,p-DDE	2017/08/15	102	50 - 130	96	50 - 130	<0.005	ug/L	NC	30
5117378	p,p-DDT	2017/08/15	120	50 - 130	88	50 - 130	<0.005	ug/L	NC	30

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) The recovery was above the upper control limit. This may represent a high bias in some results for flagged analytes. For results that were not detected (ND), this potential bias has no impact.

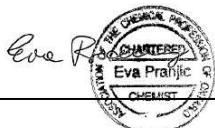


Maxxam Job #: B7H0396  
Report Date: 2017/08/16

Pinchin Ltd  
Client Project #: 208402.001  
Site Location: PHASE II ESA / 91 EGLINGTON AVE EAST,  
MISSISSAUGA, ON  
Sampler Initials: KW

### VALIDATION SIGNATURE PAGE

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



Ewa Pranjić, M.Sc., C.Chem, Scientific Specialist

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



Maxxam Analytics International Corporation o/a Maxxam Analytics  
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel: (905) 817-5700 Toll-free: 800-963-6296 Fax: (905) 817-5777 www.maxxam.ca

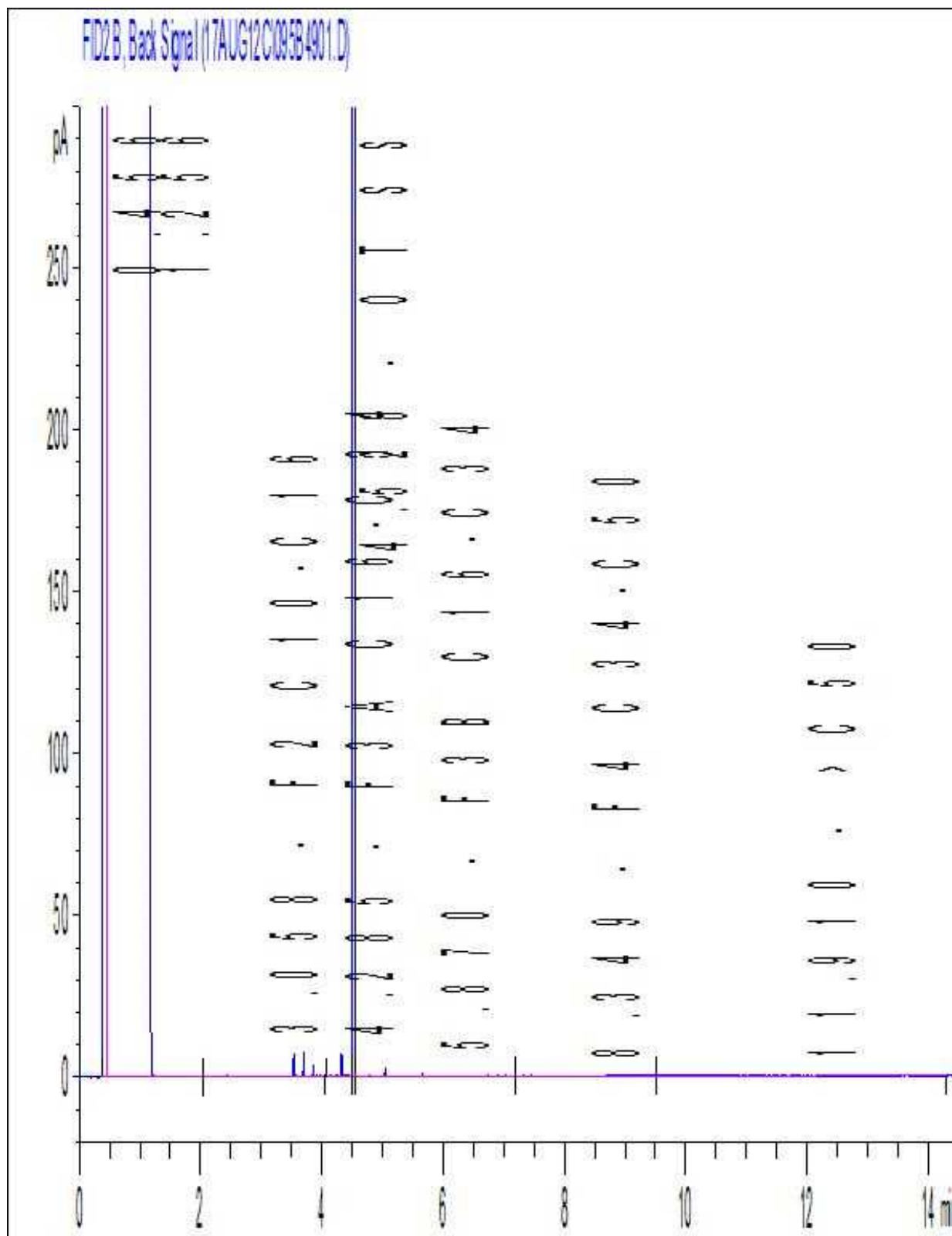
# CHAIN OF CUSTODY RECORD

Page 1 of 1

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#3103 Pinchin Ltd	Company Name:	PINCHIN LTD	Quotation #:	A70927	Maxxam Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Gagandip Singh	P.O. #:	208402.001		
Address:	2470 Milltower Crt	Address:		Project:	BRASELLESA	COC #:	Project Manager:
	Mississauga ON L5N 7W5			Project Name:	91 EGLINGTON AVE, EAST, MISSISSAUGA		
Tel:	(905) 363-0678 x	Tel:	(905) 363-0678 x1467	Site #:	K. WOOLLEY		Antonella Brasil
Email:	ap@pinchin.com	Email:	gsingh@pinchin.com	Sampled By:			

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY						ANALYSIS REQUESTED (PLEASE BE SPECIFIC)										Turnaround Time (TAT) Required: Please provide advance notice for rush projects				
Regulation 153 (2011)			Other Regulations			Special Instructions			Field Filtered (please circle): Metals / Hg / Cr VI										Regular (Standard) TAT: (will be applied if Rush TAT is not specified). Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.	
<input type="checkbox"/> Table 1	<input checked="" type="checkbox"/> Res/Park	<input type="checkbox"/> Medium/Fine	<input type="checkbox"/> CCME	<input type="checkbox"/> Sanitary Sewer Bylaw												<input checked="" type="checkbox"/>				
<input type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> Reg 558	<input type="checkbox"/> Storm Sewer Bylaw																
<input checked="" type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other	<input type="checkbox"/> For RSC	<input type="checkbox"/> MISA	<input type="checkbox"/> Municipality																
<input type="checkbox"/> Table			<input type="checkbox"/> PWQO	<input type="checkbox"/> Other																
Include Criteria on Certificate of Analysis (Y/N)?						N										Job Specific Rush TAT (if applies to entire submission) Date Required: Time Required: Rush Confirmation Number: (call lab for #)				
Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix												# of Bottles	Comments			
1	MW1	2017/08/09	09:22	GW	N/A	X	X									6	on ice			
2	MWS	2017/08/09	09:55	GW	YES				X	X						3	" "			
3																				
4																				
5																				
6	10-Aug-17 12:00																			
7	Antonella Brasil																			
8	B7H0396																			
9	GK1 ENV-919																			
10																				
* RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	# jars used and not submitted		Laboratory Use Only		Custody Seal		Yes		No				
Kara Woolley		17/08/09	12:00	LISA MUNSTER		2017/08/09	12:00			Time Sensitive		Temperature (°C) on Receipt		Present		Intact				
* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO MAXXAM'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.MAXXAM.CA/TERMS.										SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM				White: Maxxa Yellow: Client						
** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT HTTP://WWW.MAXXAM.CA/WP-CONTENT/UPLOADS/ONTARIO-COC.PDF.																				

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: 208402.001  
Your C.O.C. #: 81273

**Attention:Gagandip Singh**

Pinchin Ltd  
2470 Milltower Crt  
Mississauga, ON  
L5N 7W5

**Report Date: 2017/08/16**

Report #: R4655087

Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B7G7895**

**Received: 2017/08/04, 15:35**

Sample Matrix: Soil  
# Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	2	N/A	2017/08/09	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	2	2017/08/09	2017/08/10	CAM SOP-00316	CCME CWS m
F4G (CCME Hydrocarbons Gravimetric)	1	2017/08/14	2017/08/15	CAM SOP-00316	CCME PHC-CWS m
Strong Acid Leachable Metals by ICPMS	1	2017/08/10	2017/08/14	CAM SOP-00447	EPA 6020B m
Moisture	2	N/A	2017/08/09	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	3	N/A	2017/08/10	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (3)	3	2017/08/08	2017/08/09	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	3	N/A	2017/08/11	CAM SOP-00307	EPA 8081/8082 m
GC/MS Analysis of OP Pesticides	3	2017/08/15	2017/08/16	CAM SOP-00301	EPA 8270 m
pH CaCl2 EXTRACT	2	2017/08/10	2017/08/10	CAM SOP-00413	EPA 9045 D m

**Remarks:**

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam 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.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam 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 Maxxam, unless otherwise agreed in writing.

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.

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.

Your Project #: 208402.001  
Your C.O.C. #: 81273

**Attention:Gagandip Singh**

Pinchin Ltd  
2470 Milltower Crt  
Mississauga, ON  
L5N 7W5

**Report Date: 2017/08/16**  
Report #: R4655087  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B7G7895**

**Received: 2017/08/04, 15:35**

- (1) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
- (2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam 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**

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

Antonella Brasil, Senior Project Manager

Email: ABrasil@maxxam.ca

Phone# (905)817-5817

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

### O.REG 153 ICPMS METALS (SOIL)

<b>Maxxam ID</b>		EWS021		
<b>Sampling Date</b>		2017/08/04		
<b>COC Number</b>		81273		
	<b>UNITS</b>	<b>BH5-SS1</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Metals</b>				
Acid Extractable Antimony (Sb)	ug/g	0.27	0.20	5112346
Acid Extractable Arsenic (As)	ug/g	6.5	1.0	5112346
Acid Extractable Barium (Ba)	ug/g	62	0.50	5112346
Acid Extractable Beryllium (Be)	ug/g	0.64	0.20	5112346
Acid Extractable Boron (B)	ug/g	6.2	5.0	5112346
Acid Extractable Cadmium (Cd)	ug/g	0.17	0.10	5112346
Acid Extractable Chromium (Cr)	ug/g	18	1.0	5112346
Acid Extractable Cobalt (Co)	ug/g	8.7	0.10	5112346
Acid Extractable Copper (Cu)	ug/g	26	0.50	5112346
Acid Extractable Lead (Pb)	ug/g	33	1.0	5112346
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	5112346
Acid Extractable Nickel (Ni)	ug/g	17	0.50	5112346
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	5112346
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	5112346
Acid Extractable Thallium (Tl)	ug/g	0.14	0.050	5112346
Acid Extractable Uranium (U)	ug/g	0.42	0.050	5112346
Acid Extractable Vanadium (V)	ug/g	27	5.0	5112346
Acid Extractable Zinc (Zn)	ug/g	65	5.0	5112346
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	5112346
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				

### O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID		EWS011	EWS012	EWS013		
Sampling Date		2017/08/04	2017/08/04	2017/08/04		
COC Number		81273	81273	81273		
	UNITS	PEST 1	PEST 2	PEST 3	RDL	QC Batch
<b>Inorganics</b>						
Moisture	%	14	19	12	1.0	5113195
<b>Calculated Parameters</b>						
Chlordane (Total)	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5107927
o,p-DDD + p,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5107927
o,p-DDE + p,p-DDE	ug/g	0.011	0.0093	0.0052	0.0020	5107927
o,p-DDT + p,p-DDT	ug/g	0.010	0.010	0.0041	0.0020	5107927
Total Endosulfan	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5107927
Total PCB	ug/g	<0.015	<0.015	<0.015	0.015	5107927
<b>Pesticides &amp; Herbicides</b>						
Aldrin	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5108946
a-Chlordane	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5108946
g-Chlordane	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5108946
o,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5108946
p,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5108946
o,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5108946
p,p-DDE	ug/g	0.011	0.0093	0.0052	0.0020	5108946
o,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5108946
p,p-DDT	ug/g	0.010	0.010	0.0041	0.0020	5108946
Dieldrin	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5108946
Lindane	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5108946
Endosulfan I (alpha)	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5108946
Endosulfan II (beta)	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5108946
Endrin	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5108946
Heptachlor	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5108946
Heptachlor epoxide	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5108946
Hexachlorobenzene	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5108946
Hexachlorobutadiene	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5108946
Hexachloroethane	ug/g	<0.0020	<0.0020	<0.0020	0.0020	5108946
Methoxychlor	ug/g	<0.0050	<0.0050	<0.0050	0.0050	5108946
Aroclor 1242	ug/g	<0.015	<0.015	<0.015	0.015	5108946
Aroclor 1248	ug/g	<0.015	<0.015	<0.015	0.015	5108946
Aroclor 1254	ug/g	<0.015	<0.015	<0.015	0.015	5108946
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						

### O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID		EWS011	EWS012	EWS013		
Sampling Date		2017/08/04	2017/08/04	2017/08/04		
COC Number		81273	81273	81273		
	UNITS	PEST 1	PEST 2	PEST 3	RDL	QC Batch
Aroclor 1260	ug/g	<0.015	<0.015	<0.015	0.015	5108946
<b>Surrogate Recovery (%)</b>						
2,4,5,6-Tetrachloro-m-xylene	%	75	74	80		5108946
Decachlorobiphenyl	%	121	122	126		5108946
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						



### O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

<b>Maxxam ID</b>		EWS008	EWS018		
<b>Sampling Date</b>		2017/08/04	2017/08/04		
<b>COC Number</b>		81273	81273		
	<b>UNITS</b>	<b>BH2-SS1</b>	<b>MW1-SS5</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Inorganics</b>					
Moisture	%	20	15	1.0	5110927
<b>BTEX &amp; F1 Hydrocarbons</b>					
Benzene	ug/g	<0.020	<0.020	0.020	5110555
Toluene	ug/g	<0.020	<0.020	0.020	5110555
Ethylbenzene	ug/g	<0.020	<0.020	0.020	5110555
o-Xylene	ug/g	<0.020	<0.020	0.020	5110555
p-m-Xylene	ug/g	<0.040	<0.040	0.040	5110555
Total Xylenes	ug/g	<0.040	<0.040	0.040	5110555
F1 (C6-C10)	ug/g	<10	<10	10	5110555
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	5110555
<b>F2-F4 Hydrocarbons</b>					
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	5111761
F3 (C16-C34 Hydrocarbons)	ug/g	270	<50	50	5111761
F4 (C34-C50 Hydrocarbons)	ug/g	100	<50	50	5111761
Reached Baseline at C50	ug/g	No	Yes		5111761
<b>Surrogate Recovery (%)</b>					
1,4-Difluorobenzene	%	103	95		5110555
4-Bromofluorobenzene	%	96	92		5110555
D10-Ethylbenzene	%	101	90		5110555
D4-1,2-Dichloroethane	%	100	103		5110555
o-Terphenyl	%	92	87		5111761
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					

### RESULTS OF ANALYSES OF SOIL

<b>Maxxam ID</b>		EWS019	EWS020	
<b>Sampling Date</b>		2017/08/04	2017/08/04	
<b>COC Number</b>		81273	81273	
	<b>UNITS</b>	<b>MW1-SS6</b>	<b>BH7-01</b>	<b>QC Batch</b>
<b>Inorganics</b>				
Available (CaCl <sub>2</sub> ) pH	pH	7.93	7.14	5110847
QC Batch = Quality Control Batch				

### PETROLEUM HYDROCARBONS (CCME)

<b>Maxxam ID</b>		EWS008		
<b>Sampling Date</b>		2017/08/04		
<b>COC Number</b>		81273		
	<b>UNITS</b>	<b>BH2-SS1</b>	<b>RDL</b>	<b>QC Batch</b>
<b>F2-F4 Hydrocarbons</b>				
F4G-sg (Grav. Heavy Hydrocarbons)	ug/g	170	100	5118964
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				

### ORGANOPHOSPHORUS PESTICIDES BY GC-MS (SOIL)

Maxxam ID		EWS011	EWS011	EWS012	EWS013		
Sampling Date		2017/08/04	2017/08/04	2017/08/04	2017/08/04		
COC Number		81273	81273	81273	81273		
	UNITS	PEST 1	PEST 1 Lab-Dup	PEST 2	PEST 3	RDL	QC Batch
<b>Pesticides &amp; Herbicides</b>							
Bendiocarb	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Demeton-S	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Dichlorvos	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Dimethoate	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Fenchlorphos (Ronnel)	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Fonofos	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Metolachlor	ug/g	<10	<10	<10	<10	10	5119959
Mevinphos	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Phosmet	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Triallate	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Trifluralin	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Fenthion	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Ethion	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Guthion (Azinphos-methyl)	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Phorate	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Terbufos	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Aldicarb	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Atrazine	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Carbaryl	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Carbofuran	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Cyanazine (Bladex)	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Diazinon	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Parathion Ethyl	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Parathion Methyl	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Prometryne	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Malathion	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Simazine	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
Chlorpyrifos (Dursban)	ug/g	<5.0	<5.0	<5.0	<5.0	5.0	5119959
<b>Surrogate Recovery (%)</b>							
2-Fluorobiphenyl	%	60	62	71	72		5119959
D14-Terphenyl (FS)	%	92	95	92	91		5119959
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate							

### ORGANOPHOSPHORUS PESTICIDES BY GC-MS (SOIL)

Maxxam ID		EWS011	EWS011	EWS012	EWS013		
Sampling Date		2017/08/04	2017/08/04	2017/08/04	2017/08/04		
COC Number		81273	81273	81273	81273		
	UNITS	PEST 1	PEST 1 Lab-Dup	PEST 2	PEST 3	RDL	QC Batch
D5-Nitrobenzene	%	48	40	60	53		5119959
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate							

## TEST SUMMARY

**Maxxam ID:** EWS008  
**Sample ID:** BH2-SS1  
**Matrix:** Soil

**Collected:** 2017/08/04  
**Shipped:**  
**Received:** 2017/08/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5110555	N/A	2017/08/09	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5111761	2017/08/09	2017/08/10	Zhiyue (Frank) Zhu
F4G (CCME Hydrocarbons Gravimetric)	BAL	5118964	2017/08/14	2017/08/15	Debra Deslandes
Moisture	BAL	5110927	N/A	2017/08/09	Valentina Kaftani

**Maxxam ID:** EWS011  
**Sample ID:** PEST 1  
**Matrix:** Soil

**Collected:** 2017/08/04  
**Shipped:**  
**Received:** 2017/08/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5113195	N/A	2017/08/10	Valentina Kaftani
OC Pesticides (Selected) & PCB	GC/ECD	5108946	2017/08/08	2017/08/09	Joy Zhang
OC Pesticides Summed Parameters	CALC	5107927	N/A	2017/08/11	Automated Statchk
GC/MS Analysis of OP Pesticides	GC/MS	5119959	2017/08/15	2017/08/16	May Yin Mak

**Maxxam ID:** EWS011 Dup  
**Sample ID:** PEST 1  
**Matrix:** Soil

**Collected:** 2017/08/04  
**Shipped:**  
**Received:** 2017/08/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
GC/MS Analysis of OP Pesticides	GC/MS	5119959	2017/08/15	2017/08/16	May Yin Mak

**Maxxam ID:** EWS012  
**Sample ID:** PEST 2  
**Matrix:** Soil

**Collected:** 2017/08/04  
**Shipped:**  
**Received:** 2017/08/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5113195	N/A	2017/08/10	Valentina Kaftani
OC Pesticides (Selected) & PCB	GC/ECD	5108946	2017/08/08	2017/08/09	Joy Zhang
OC Pesticides Summed Parameters	CALC	5107927	N/A	2017/08/11	Automated Statchk
GC/MS Analysis of OP Pesticides	GC/MS	5119959	2017/08/15	2017/08/16	May Yin Mak

**Maxxam ID:** EWS013  
**Sample ID:** PEST 3  
**Matrix:** Soil

**Collected:** 2017/08/04  
**Shipped:**  
**Received:** 2017/08/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5113195	N/A	2017/08/10	Valentina Kaftani
OC Pesticides (Selected) & PCB	GC/ECD	5108946	2017/08/08	2017/08/09	Joy Zhang
OC Pesticides Summed Parameters	CALC	5107927	N/A	2017/08/11	Automated Statchk
GC/MS Analysis of OP Pesticides	GC/MS	5119959	2017/08/15	2017/08/16	May Yin Mak

## TEST SUMMARY

**Maxxam ID:** EWS018  
**Sample ID:** MW1-SS5  
**Matrix:** Soil

**Collected:** 2017/08/04  
**Shipped:**  
**Received:** 2017/08/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5110555	N/A	2017/08/09	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5111761	2017/08/09	2017/08/10	Zhiyue (Frank) Zhu
Moisture	BAL	5110927	N/A	2017/08/09	Valentina Kaftani

**Maxxam ID:** EWS019  
**Sample ID:** MW1-SS6  
**Matrix:** Soil

**Collected:** 2017/08/04  
**Shipped:**  
**Received:** 2017/08/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	5110847	2017/08/10	2017/08/10	Tahir Anwar

**Maxxam ID:** EWS020  
**Sample ID:** BH7-01  
**Matrix:** Soil

**Collected:** 2017/08/04  
**Shipped:**  
**Received:** 2017/08/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	5110847	2017/08/10	2017/08/10	Tahir Anwar

**Maxxam ID:** EWS021  
**Sample ID:** BH5-SS1  
**Matrix:** Soil

**Collected:** 2017/08/04  
**Shipped:**  
**Received:** 2017/08/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5112346	2017/08/10	2017/08/14	Daniel Teclu

### GENERAL COMMENTS

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

Package 1	11.0°C
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**Results relate only to the items tested.**



## QUALITY ASSURANCE REPORT

Pinchin Ltd  
Client Project #: 208402.001  
Sampler Initials: VN

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5108946	2,4,5,6-Tetrachloro-m-xylene	2017/08/09	74	50 - 130	69	50 - 130	77	%		
5108946	Decachlorobiphenyl	2017/08/09	120	50 - 130	102	50 - 130	118	%		
5110555	1,4-Difluorobenzene	2017/08/09	102	60 - 140	102	60 - 140	98	%		
5110555	4-Bromofluorobenzene	2017/08/09	109	60 - 140	107	60 - 140	89	%		
5110555	D10-Ethylbenzene	2017/08/09	107	60 - 140	97	60 - 140	87	%		
5110555	D4-1,2-Dichloroethane	2017/08/09	104	60 - 140	103	60 - 140	99	%		
5111761	o-Terphenyl	2017/08/10	87	60 - 130	87	60 - 130	88	%		
5119959	2-Fluorobiphenyl	2017/08/15	76	30 - 130	88	30 - 130	78	%		
5119959	D14-Terphenyl (FS)	2017/08/15	91	30 - 130	93	30 - 130	91	%		
5119959	D5-Nitrobenzene	2017/08/15	61	30 - 130	81	30 - 130	75	%		
5108946	a-Chlordane	2017/08/09	107	50 - 130	98	50 - 130	<0.0020	ug/g	NC	40
5108946	Aldrin	2017/08/09	76	50 - 130	83	50 - 130	<0.0020	ug/g	NC	40
5108946	Aroclor 1242	2017/08/09					<0.015	ug/g	NC	40
5108946	Aroclor 1248	2017/08/09					<0.015	ug/g	NC	40
5108946	Aroclor 1254	2017/08/09					<0.015	ug/g	NC	40
5108946	Aroclor 1260	2017/08/09					<0.015	ug/g	NC	40
5108946	Dieldrin	2017/08/09	114	50 - 130	126	50 - 130	<0.0020	ug/g	NC	40
5108946	Endosulfan I (alpha)	2017/08/09	91	50 - 130	98	50 - 130	<0.0020	ug/g	NC	40
5108946	Endosulfan II (beta)	2017/08/09	111	50 - 130	106	50 - 130	<0.0020	ug/g	NC	40
5108946	Endrin	2017/08/09	97	50 - 130	116	50 - 130	<0.0020	ug/g	NC	40
5108946	g-Chlordane	2017/08/09	94	50 - 130	94	50 - 130	<0.0020	ug/g	NC	40
5108946	Heptachlor epoxide	2017/08/09	90	50 - 130	102	50 - 130	<0.0020	ug/g	NC	40
5108946	Heptachlor	2017/08/09	71	50 - 130	80	50 - 130	<0.0020	ug/g	NC	40
5108946	Hexachlorobenzene	2017/08/09	80	50 - 130	76	50 - 130	<0.0020	ug/g	NC	40
5108946	Hexachlorobutadiene	2017/08/09	61	50 - 130	83	50 - 130	<0.0020	ug/g	NC	40
5108946	Hexachloroethane	2017/08/09			65	50 - 130	<0.0020	ug/g	NC	40
5108946	Lindane	2017/08/09	74	50 - 130	76	50 - 130	<0.0020	ug/g	NC	40
5108946	Methoxychlor	2017/08/09	167 (1)	50 - 130	153 (1)	50 - 130	<0.0050	ug/g	NC	40
5108946	o,p-DDD	2017/08/09	101	50 - 130	115	50 - 130	<0.0020	ug/g	NC	40
5108946	o,p-DDE	2017/08/09	84	50 - 130	84	50 - 130	<0.0020	ug/g	NC	40
5108946	o,p-DDT	2017/08/09	96	50 - 130	99	50 - 130	<0.0020	ug/g	NC	40

## QUALITY ASSURANCE REPORT(CONT'D)

Pinchin Ltd  
Client Project #: 208402.001  
Sampler Initials: VN

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5108946	p,p-DDD	2017/08/09	112	50 - 130	96	50 - 130	<0.0020	ug/g	NC	40
5108946	p,p-DDE	2017/08/09	98	50 - 130	93	50 - 130	<0.0020	ug/g	NC	40
5108946	p,p-DDT	2017/08/09	115	50 - 130	97	50 - 130	<0.0020	ug/g	NC	40
5110555	Benzene	2017/08/09	91	60 - 140	95	60 - 140	<0.020	ug/g	NC	50
5110555	Ethylbenzene	2017/08/09	98	60 - 140	100	60 - 140	<0.020	ug/g	NC	50
5110555	F1 (C6-C10) - BTEX	2017/08/09					<10	ug/g	NC	30
5110555	F1 (C6-C10)	2017/08/09	99	60 - 140	95	80 - 120	<10	ug/g	NC	30
5110555	o-Xylene	2017/08/09	97	60 - 140	100	60 - 140	<0.020	ug/g	NC	50
5110555	p+m-Xylene	2017/08/09	100	60 - 140	103	60 - 140	<0.040	ug/g	NC	50
5110555	Toluene	2017/08/09	90	60 - 140	93	60 - 140	<0.020	ug/g	NC	50
5110555	Total Xylenes	2017/08/09					<0.040	ug/g	NC	50
5110847	Available (CaCl2) pH	2017/08/10			100	97 - 103			0.47	N/A
5110927	Moisture	2017/08/09							1.4	20
5111761	F2 (C10-C16 Hydrocarbons)	2017/08/10	93	50 - 130	86	80 - 120	<10	ug/g	NC	30
5111761	F3 (C16-C34 Hydrocarbons)	2017/08/10	89	50 - 130	86	80 - 120	<50	ug/g	NC	30
5111761	F4 (C34-C50 Hydrocarbons)	2017/08/10	86	50 - 130	86	80 - 120	<50	ug/g	NC	30
5112346	Acid Extractable Antimony (Sb)	2017/08/14	92	75 - 125	98	80 - 120	<0.20	ug/g	NC	30
5112346	Acid Extractable Arsenic (As)	2017/08/14	101	75 - 125	105	80 - 120	<1.0	ug/g	16	30
5112346	Acid Extractable Barium (Ba)	2017/08/14	NC	75 - 125	96	80 - 120	<0.50	ug/g	3.0	30
5112346	Acid Extractable Beryllium (Be)	2017/08/14	103	75 - 125	101	80 - 120	<0.20	ug/g	2.9	30
5112346	Acid Extractable Boron (B)	2017/08/14	97	75 - 125	100	80 - 120	<5.0	ug/g	5.3	30
5112346	Acid Extractable Cadmium (Cd)	2017/08/14	97	75 - 125	95	80 - 120	<0.10	ug/g	13	30
5112346	Acid Extractable Chromium (Cr)	2017/08/14	99	75 - 125	102	80 - 120	<1.0	ug/g	0.91	30
5112346	Acid Extractable Cobalt (Co)	2017/08/14	96	75 - 125	104	80 - 120	<0.10	ug/g	2.6	30
5112346	Acid Extractable Copper (Cu)	2017/08/14	98	75 - 125	102	80 - 120	<0.50	ug/g	1.8	30
5112346	Acid Extractable Lead (Pb)	2017/08/14	99	75 - 125	102	80 - 120	<1.0	ug/g	2.1	30
5112346	Acid Extractable Mercury (Hg)	2017/08/14	91	75 - 125	93	80 - 120	<0.050	ug/g	13	30
5112346	Acid Extractable Molybdenum (Mo)	2017/08/14	99	75 - 125	97	80 - 120	<0.50	ug/g	NC	30
5112346	Acid Extractable Nickel (Ni)	2017/08/14	96	75 - 125	104	80 - 120	<0.50	ug/g	1.6	30
5112346	Acid Extractable Selenium (Se)	2017/08/14	97	75 - 125	105	80 - 120	<0.50	ug/g	NC	30
5112346	Acid Extractable Silver (Ag)	2017/08/14	98	75 - 125	96	80 - 120	<0.20	ug/g	NC	30

## QUALITY ASSURANCE REPORT(CONT'D)

Pinchin Ltd  
Client Project #: 208402.001  
Sampler Initials: VN

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5112346	Acid Extractable Thallium (Tl)	2017/08/14	101	75 - 125	102	80 - 120	<0.050	ug/g	11	30
5112346	Acid Extractable Uranium (U)	2017/08/14	99	75 - 125	100	80 - 120	<0.050	ug/g	0.96	30
5112346	Acid Extractable Vanadium (V)	2017/08/14	NC	75 - 125	103	80 - 120	<5.0	ug/g	0.87	30
5112346	Acid Extractable Zinc (Zn)	2017/08/14	NC	75 - 125	100	80 - 120	<5.0	ug/g	0.74	30
5113195	Moisture	2017/08/10							16	20
5118964	F4G-sg (Grav. Heavy Hydrocarbons)	2017/08/15	101	65 - 135	101	65 - 135	<100	ug/g		
5119959	Aldicarb	2017/08/16	90	30 - 130	94	30 - 130	<5.0	ug/g	NC	50
5119959	Atrazine	2017/08/16	93	30 - 130	97	30 - 130	<5.0	ug/g	NC	50
5119959	Bendiocarb	2017/08/16	104	30 - 130	100	30 - 130	<5.0	ug/g	NC	40
5119959	Carbaryl	2017/08/16	111	30 - 130	102	30 - 130	<5.0	ug/g	NC	50
5119959	Carbofuran	2017/08/16	107	30 - 130	101	30 - 130	<5.0	ug/g	NC	50
5119959	Chlorpyrifos (Dursban)	2017/08/16	98	30 - 130	101	30 - 130	<5.0	ug/g	NC	50
5119959	Cyanazine (Bladex)	2017/08/16	95	30 - 130	98	30 - 130	<5.0	ug/g	NC	50
5119959	Demeton-S	2017/08/16	80	30 - 130	89	30 - 130	<5.0	ug/g	NC	50
5119959	Diazinon	2017/08/16	94	30 - 130	96	30 - 130	<5.0	ug/g	NC	50
5119959	Dichlorvos	2017/08/16	82	30 - 130	93	30 - 130	<5.0	ug/g	NC	50
5119959	Dimethoate	2017/08/16	92	30 - 130	95	30 - 130	<5.0	ug/g	NC	50
5119959	Ethion	2017/08/16	94	30 - 130	94	30 - 130	<5.0	ug/g	NC	50
5119959	Fenchlorphos (Ronnel)	2017/08/16	97	30 - 130	99	30 - 130	<5.0	ug/g	NC	50
5119959	Fenthion	2017/08/16	86	30 - 130	89	30 - 130	<5.0	ug/g	NC	50
5119959	Fonofos	2017/08/16	98	30 - 130	101	30 - 130	<5.0	ug/g	NC	50
5119959	Guthion (Azinphos-methyl)	2017/08/16	117	30 - 130	114	30 - 130	<5.0	ug/g	NC	50
5119959	Malathion	2017/08/16	94	30 - 130	95	30 - 130	<5.0	ug/g	NC	50
5119959	Metolachlor	2017/08/16	99	30 - 130	102	30 - 130	<10	ug/g	NC	50
5119959	Mevinphos	2017/08/16	91	30 - 130	93	30 - 130	<5.0	ug/g	NC	50
5119959	Parathion Ethyl	2017/08/16	98	30 - 130	94	30 - 130	<5.0	ug/g	NC	50
5119959	Parathion Methyl	2017/08/16	93	30 - 130	93	30 - 130	<5.0	ug/g	NC	50
5119959	Phorate	2017/08/16	88	30 - 130	92	30 - 130	<5.0	ug/g	NC	50
5119959	Phosmet	2017/08/16	93	30 - 130	94	30 - 130	<5.0	ug/g	NC	50
5119959	Prometryne	2017/08/16	98	30 - 130	100	30 - 130	<5.0	ug/g	NC	50
5119959	Simazine	2017/08/16	91	30 - 130	96	30 - 130	<5.0	ug/g	NC	50

## QUALITY ASSURANCE REPORT(CONT'D)

Pinchin Ltd  
Client Project #: 208402.001  
Sampler Initials: VN

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5119959	Terbufos	2017/08/16	88	30 - 130	91	30 - 130	<5.0	ug/g	NC	50
5119959	Triallate	2017/08/16	96	30 - 130	97	30 - 130	<5.0	ug/g	NC	50
5119959	Trifluralin	2017/08/16	89	30 - 130	91	30 - 130	<5.0	ug/g	NC	50

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.

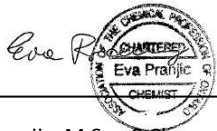
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

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  $\leq 2 \times \text{RDL}$ ).

(1) The recovery was above the upper control limit. This may represent a high bias in some results for flagged analytes. For results that were not detected (ND), this potential bias has no impact.

### VALIDATION SIGNATURE PAGE

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



Ewa Pranjić, M.Sc., C.Chem, Scientific Specialist

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

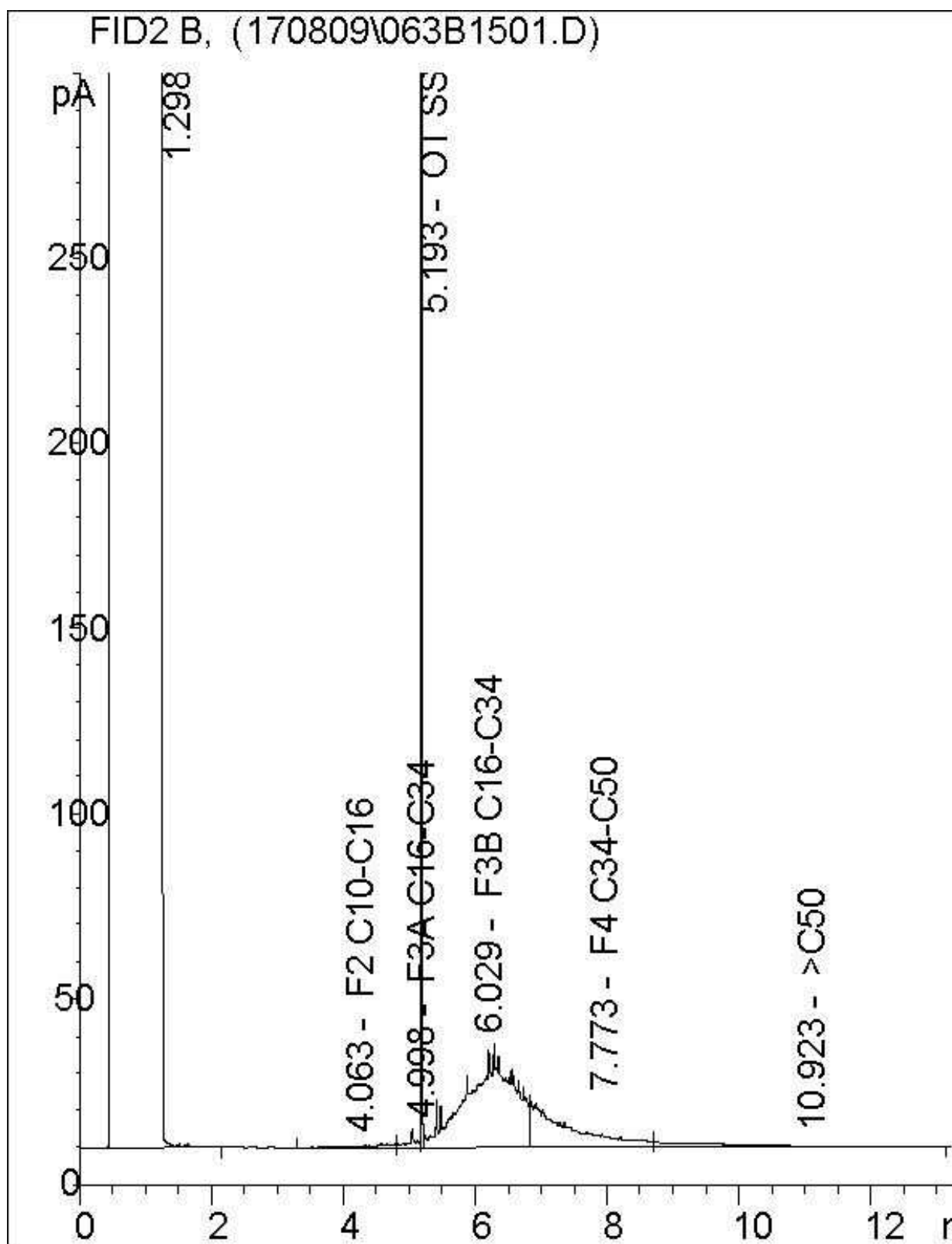
Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required									
Company Name: <b>#303 Pincim Ltd</b>	Company Name:	Quotation #: <b>A70927</b>	<input checked="" type="checkbox"/> Regular TAT (5-7 days) Most analyses		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS										
Contact Name: <b>Accounts Payable</b>	Contact Name: <b>Gagan Singh / Vince Ng</b>	P.O. #/ AFER:													
Address: <b>2470 Milltown Crt</b>	Address:	Project #:	Rush TAT (Surcharges will be applied)		<input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3-4 Days										
City: <b>Mississauga, ON L5N 7W5</b>	City:	Site Location:													
Phone: <b>(905) 363-0676</b> Fax: <b>(905) 363-0681</b>	Phone: Fax:	Site #:			Date Required:										
Email: <b>ap@pincim.com</b>	Email: <b>gsingh@pincim.com / vince@pincim.com</b>	Sampled By:			Rush Confirmation #:										
MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY															
<b>Regulation 153</b> <input type="checkbox"/> Table 1 <input type="checkbox"/> Res/Park <input type="checkbox"/> Med/ Fine <input type="checkbox"/> Table 2 <input type="checkbox"/> Ind/Comm <input type="checkbox"/> Coarse <input type="checkbox"/> Table 3 <input type="checkbox"/> Agri/ Other <input type="checkbox"/> Table _____ FOR RSC (PLEASE CIRCLE) Y / <b>N</b>		<b>Other Regulations</b> <input type="checkbox"/> CCME <input type="checkbox"/> Sanitary Sewer Bylaw <input type="checkbox"/> MISA <input type="checkbox"/> Storm Sewer Bylaw <input type="checkbox"/> PWQO <input type="checkbox"/> Region _____ <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/> REG 558 (MIN. 3 DAY TAT REQUIRED)		<b>Analysis Requested</b> REFER TO BACK OF COC REG 153 METALS & INORGANICS REG 153 ICPMS METALS REG 153 METALS (Hf, Cr, V, ICPMS Metals, HWS - B) PH <b>Pesticides (OC30P)</b>				<b>LABORATORY USE ONLY</b> CUSTODY SEAL: Y / N COOLER TEMPERATURES Present Intact <b>10/12/11</b> COOLING MEDIA PRESENT: <b>(Y)</b> / N							
Include Criteria on Certificate of Analysis: Y / N SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM															
SAMPLE IDENTIFICATION	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH-MM)	MATRIX	# OF CONTAINERS SUBMITTED	FIELD FILTERED (CIRCLE) Metals / Hg / Cu / Pb	BTX / PHC F1	PHC F2 - F4	VOCS	REG 153 METALS & INORGANICS	REG 153 ICPMS METALS	REG 153 METALS (Hf, Cr, V, ICPMS Metals, HWS - B)	PH	Pesticides (OC30P)	HOLD - DO NOT ANALYZE	COMMENTS
1 BH2-SS1	2017/08/04	AM	Soil	3	✓	✓									
2 BH2-SS2				3											
3 BH2-SS3				3											
4 Pest 1		AM		1											
5 Pest 2				1											
6 Pest 3				1											
7 MW1-SS1		PM		3											
8 MW1-SS2				3											
9 MW1-SS3				3											
10 MW1-SS4				3											
RELINQUISHED BY: (Signature/Print)		DATE: (YYYY/MM/DD)	TIME: (HH-MM)	RECEIVED BY: (Signature/Print)		DATE: (YYYY/MM/DD)	TIME: (HH-MM)								
<b>Vincent Ng</b>		<b>2017/08/04</b>	<b>15:35</b>	<b>Antonella Brasil</b>		<b>2017/08/04</b>	<b>15:35</b>								



**CHAIN OF CUSTODY RECORD** **81275** Page **2** of **2**

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required	
Company Name: <b>Pachin Ltd</b>		Company Name:		Quotation #: <b>A70927</b>		<input type="checkbox"/> Regular TAT (5-7 days) Most analyses	
Contact Name: <b>Accounts Payable</b>		Contact Name: <b>Gagan Singh / Vincent Ng</b>		P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS	
Address:		Address:		Project #:		Rush TAT (Surcharges will be applied)	
Phone:		Phone:		Site Location:		<input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3-4 Days	
Fax:		Fax:		Site #:		Date Required:	
Email: <b>ap@pachin.com</b>		Email: <b>gsingh@pachin.com / vn@pachin.com</b>		Sampled By:		Rush Confirmation #:	
MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY							
Regulation 153		Other Regulations		Analysis Requested		LABORATORY USE ONLY	
<input type="checkbox"/> Table 1 <input type="checkbox"/> Res/Park <input type="checkbox"/> Med/ Fine <input type="checkbox"/> Table 2 <input type="checkbox"/> Ind/Comm <input type="checkbox"/> Coarse <input type="checkbox"/> Table 3 <input type="checkbox"/> Agri/ Other <input type="checkbox"/> Table _____ FOR RSC (PLEASE CIRCLE) Y / N		<input type="checkbox"/> CCME <input type="checkbox"/> Sanitary Sewer Bylaw <input type="checkbox"/> MISA <input type="checkbox"/> Storm Sewer Bylaw <input type="checkbox"/> PWQO Region <input type="checkbox"/> Other (Specify) <input type="checkbox"/> REG 558 (MIN. 3 DAY TAT REQUIRED)		REFER TO BACK OF COC REG 153 METALS & INORGANICS REG 153 ICPMS METALS REG 153 METALS (Hg, Cr, V, ICPMS Metals, HWS - B) Pesticides (COC TOP)		CUSTODY SEAL Y / N Present Intact 10/12/11 COOLING MEDIA PRESENT: <input checked="" type="checkbox"/> Y / N	
Include Criteria on Certificate of Analysis: Y / N							
SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM							
SAMPLE IDENTIFICATION		DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX	# OF CONTAINERS SUBMITTED	FIELD FILTERED (CIRCLE) Metals / Hg / Cu / Pb	FIELD FILTERED (CIRCLE) Metals / Hg / Cu / Pb
1	MW1-SS5	2017/08/04	PM	Soil	3	✓	✓
2	MW1-SS6	↓	↓	↓	4	✓	✓
3	BH7-01	↓	AM	↓	1	✓	✓
4	BH5-SS1	↓	↓	↓	2	✓	✓
5							
6							
7							
8							
9							
10							
RELINQUISHED BY: (Signature/Print)		DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)		DATE: (YYYY/MM/DD)	TIME: (HH:MM)
<b>V. Ng Vincent Ng</b>		<b>2017/08/04</b>	<b>15:35</b>	<b>HARIT G</b>		<b>2017/08/04</b>	<b>15:35</b>
MAXXAM JOB #							

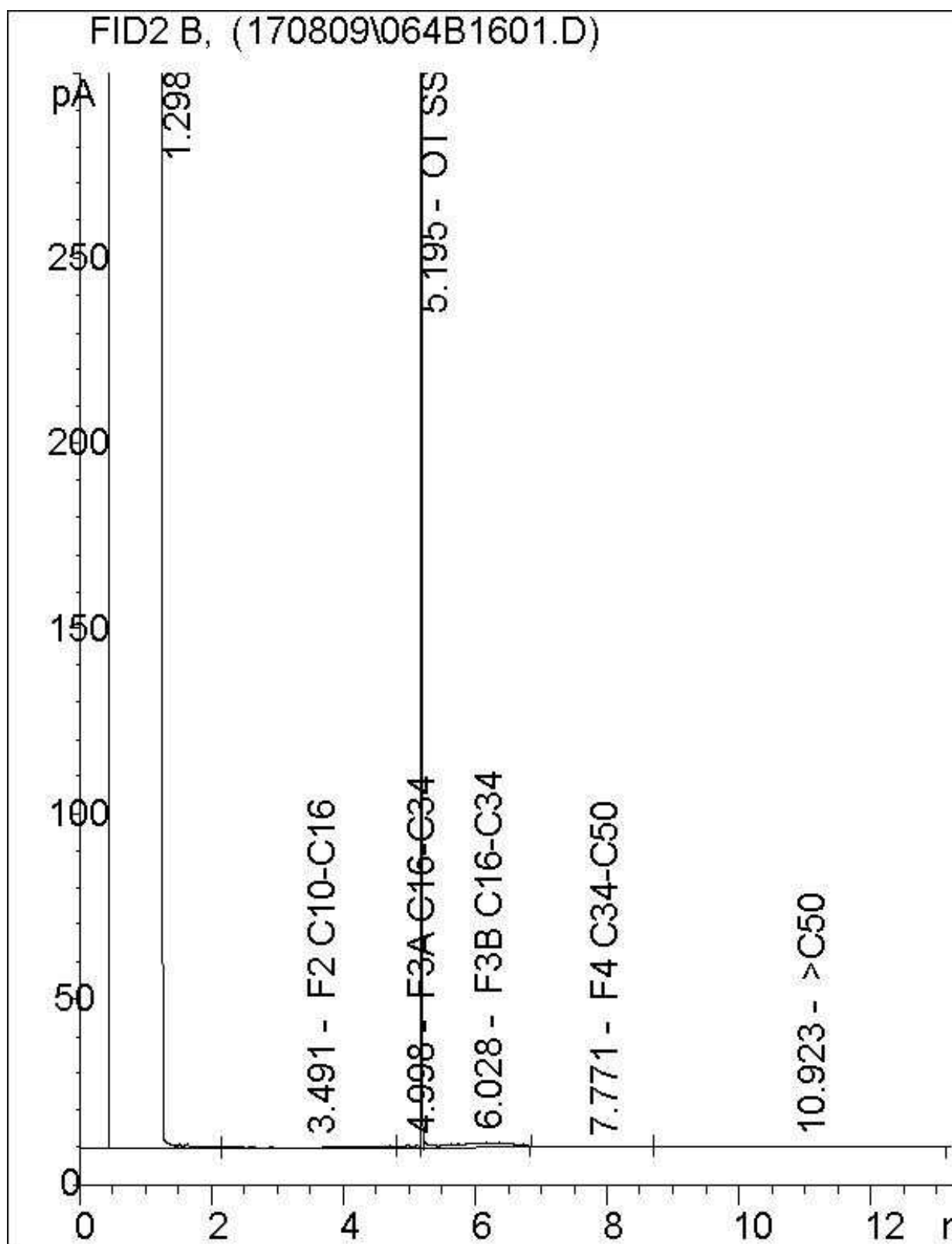
Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.



Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.