May 2016

MCCARTHY QUARRY

Environmental Compliance Approval Quarterly Monitoring Report (February 2016 to May 2016)

Submitted to:
Cindy Hood
MOECC, Barrie District Office
1203-54 Cedar Pointe Drive
Barrie ON L4N 5R7

REPORT

Report Number: 1407634

Distribution:

1 Copy - Ontario MOECC Barrie District Office
1 Copy - Coco Aggregates Inc.
1 Copy - Golder Associates Ltd.

Golder Associates

Table of Contents

1.0 INTRODUCTION

Golder Associates Ltd. (Golder) was retained by QBJR/Coco Aggregates Inc. (Coco) to prepare a quarterly compliance report for the McCarthy Quarry (Site) located in the Township of Ramara, County of Simcoe (Figure 1). The Environmental Compliance Approval (ECA) No. 4731-987KM8 issued on October 15, 2013 requires this task. A copy of the ECA No. 4731-987KM8 is found in Appendix A.

The following report addresses the requirements described in Sections 7 and 8 of the ECA. Included herein are a brief background, summary and discussion of the sampling results and data collected on-Site during each sampling event.

2.0 BACKGROUND

The McCarthy Quarry dewatering system consists of the collection of groundwater and surface water at the base of the quarry floor in a quarry sump which is pumped to a settling pond, at grade, to the south of the active quarry area (Figure 1). The sump is equipped with a 4-inch Grindex pump which is rated at 35 L/sec and is attached to a 4-inch (101 mm) diameter discharge line. Water is pumped from the quarry floor up the quarry face to a 4-inch (101 mm) diameter pipeline that directs the water to the 14,000 m^3 settling pond. The water in the settling pond is equipped with a Hickenbottom control structure that discharges the water to the roadside ditch along Concession Road 1. The water flows eastward along the north side of Concession Road 1 to a municipal drain and eventually to the Talbot River, which discharges into Lake Simcoe.

The dewatering activities from the McCarthy Quarry are currently carried out under the existing ECA No. 4731-987KM8 issued on October 15, 2013. Under the current ECA Coco is permitted to pump water from the quarry sump at a rate of 4,545 L/min (76 L/sec).

3.0 EFFLUENT MONITORING RESULTS

Weekly monitoring of the effluent is required by the ECA at three locations, as shown on Figure 1:

- The outfall of the settling pond (labelled as McCarthy Pond);
- The culvert along Concession Road 1 at the McCarthy property (SW1) downstream of the McCarthy Pond discharge location; and,
- 260 m north of the intersection of Concession Road 1 and the Mara Eldon Boundary Road (labelled as SW2) representing upstream conditions.

Weekly effluent monitoring is required per Section 7(2) for Total Suspended Solids (TSS), Oil and Grease, Phenolics (4AAP) and pH at the McCarthy Pond. Additional water quality sampling is required under Section 7(3) at a semi-annual frequency at all three locations, recognizing that, as of April 24, 2014 this monitoring was reduced from weekly sampling frequency to a semi-annual frequency following one year of quarry operation according to Section 7(7). The parameters required for semi-annual water quality monitoring at all three locations are listed in Table 3 of the ECA. Monthly acute lethality is also required at the McCarthy Pond under Section 8.

As per Section 7(8) an inline flow meter is installed in the discharge line of the sump pump in order to measure continuous flow rates. The flow rates are recorded and provided to Golder by staff at McCarthy Quarry.

The weekly effluent samples (Section 7(2)) were collected by staff at the McCarthy Quarry. The weekly water quality samples were sent to Maxxam Analytics Laboratory for analysis. The semi-annual water quality samples (Section 7(3) and Section 7(7)) are collected by Golder; the next semi-annual monitoring round will occur in May of 2016. Additionally, the monthly lethality samples were collected by Golder and sent to AGAT Laboratories Ltd.

There was no discharge from the McCarthy Pond on the weeks of February 8 to 12, 2016 and February 22 to 26, 2016 and therefore the weekly water quality sample was not collected. In addition, during the February monthly Site visit, the McCarthy Pond was frozen and there was no discharge, therefore a lethality sample was not collected.

4.0 EFFLUENT MONITORING RESULTS

Results of the weekly effluent monitoring are presented in Table 1; the monthly averages for the effluent monitoring are presented in Table 2 and the acute lethality results are presented in Table 3. All laboratory certificates of analysis for the February to May 2016 monitoring period are included in Appendix B.

The TSS, pH, Oil and Grease and Phenol (4AAP) concentrations were all below the daily and monthly concentration limits of the ECA. The effluent between February and May 2016 was found to be non-lethal to rainbow trout and Daphnia magna (Table 4).

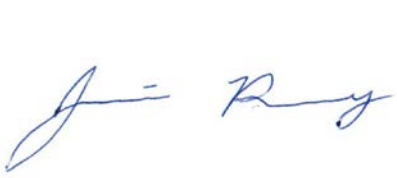
The rate and volume of discharge from the quarry is measured on-Site by an inline flow meter in the discharge line from the quarry sump. The pump records are provided by McCarthy Quarry staff. The pump records for February to May 2016 are found in Table 6. The discharge rate between February and May 2016 was below the permitted rate of 4,545 L/min (76 L/sec).

5.0 SUMMARY AND RECOMMENDATIONS

All samples met the daily concentration limits of the ECA No. 4731-987KM8. The pH of the effluent was maintained between 6.0 and 9.5 and the effluent was non-lethal to rainbow trout and Daphnia magna at all times.

Report Signature Page

GOLDER ASSOCIATES LTD.

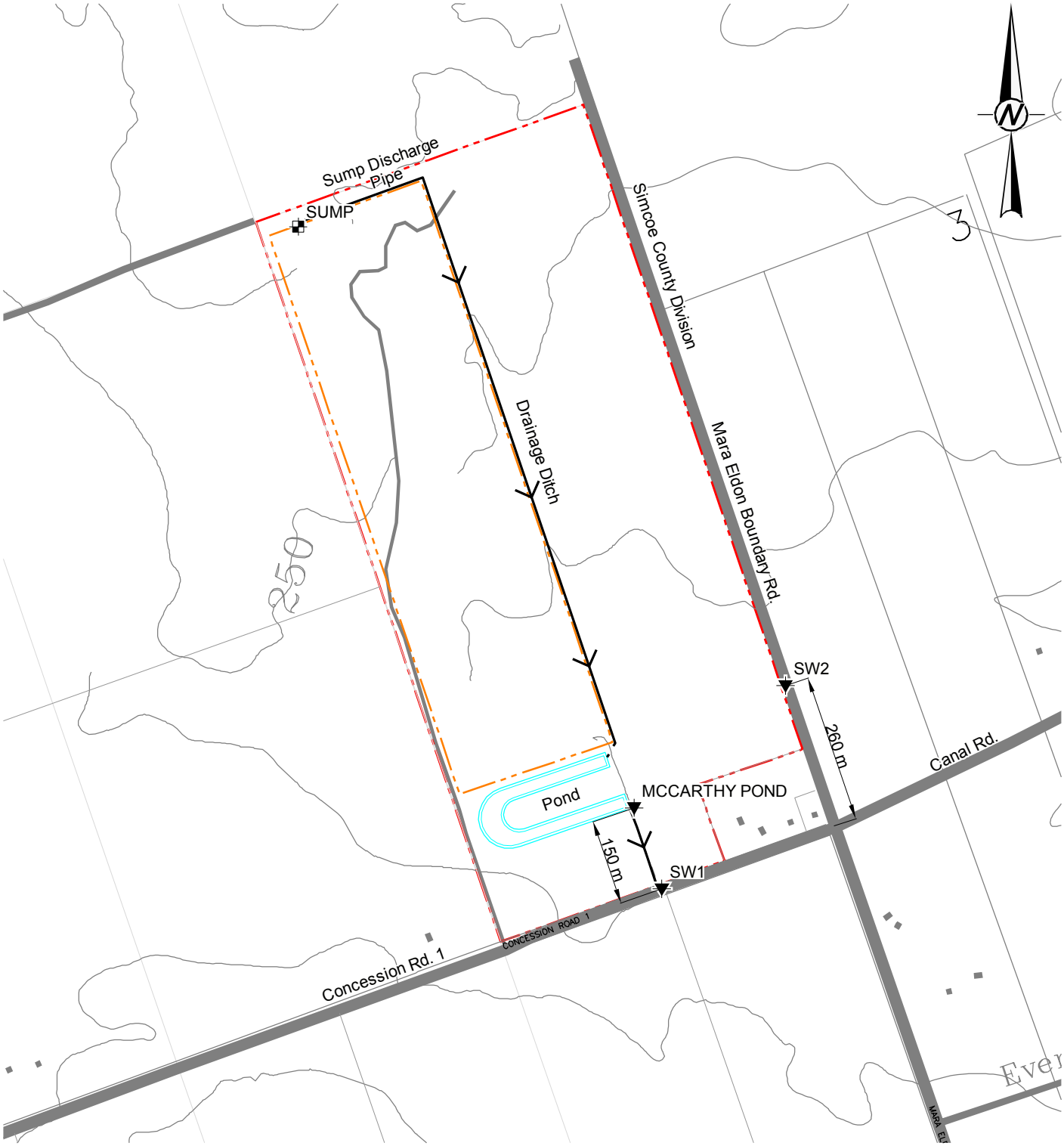


Jamie Bonany, M.A.Sc.
Project Scientist

John Easton, M.Sc., P.Geo.
Associate Senior Hydrogeologist

JEB/JAE/plc

FIGURE



LEGEND

- Approximate Property Boundary
- Approximate Licenced Boundary
- 5 m Contour Line
- Surface Water Sampling Location

REFERENCES AND NOTES

1. Projection UTM NAD83 Zone 17
2. Mapping based on ESRI Geography Network OBM Features and Bing Orthophotos

0 200 400 600 m

1:10000

CLIENT
COCO / QBJR AGGREGATES INC.

PROJECT
STAN MCCARTHY QUARRY

TITLE
LOCATION MAP

CONSULTANT
Golder Associates

YYYY-MM-DD	2014-09-02
PREPARED	STB
DESIGN	
REVIEW	
APPROVED	

PROJECT No.	SCALE	Rev.	Figure
14-07634	AS SHOWN	AB	1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A

25 mm

0

Path: \\golder.gds\gal\Barrie\CAD\Projects\2014\14-07634 (Brechin, Coco Enviro and HydroG)\AB\ | File Name: 1407634ABSITE.dwg

TABLES

Table 1: McCarthy Pond Weekly Water Quality Results (February 2016 to May 2016)

	Unit	Reportable Detection Limit (RDL)	PWQO [1]	Daily Concentration Limit[2]	McCarthy Quarry										
Sample ID					Pond										
Date					4-Feb-16	18-Feb-16	3-Mar-16	10-Mar-16	17-Mar-16	24-Mar-16	31-Mar-16	7-Apr-16	15-Apr-16	21-Apr-16	28-Apr-16
pH	pH	n/a		6.0-9.5	7.57	7.63	7.89	7.57	8.00	8.13	8.09	8.09	8.16	8.27	8.29
Total Suspended Solids	mg/L	1		30	2	<1	3	<1	5	2	2	<10	<10	4	<10
Total Oil and Grease	mg/L	0.5	Note 3	30	<0.5	0.9	<0.5	0.9	<0.5	1.1	<0.5	0.7	0.7	0.8	<0.5
Phenols (4AAP)	mg/L	<0.0010		0.04	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NM	<0.001	<0.001

Notes

1. Provincial Water Quality Objectives (PWQO); shaded cells denote PWQO exceedance; some PWQOs are dependent on other water quality parameters hence the range in guideline values, refer to PWQO notes.
2. Daily Concentration Limit; bolded values denote exceedances in the Permit to Take Waters daily concentration limits.
3. The PWQO for Oil and Grease indicates that oil or petrochemicals should not be present in concentrations that: can be detected as a visible film, sheen or discolouration on the surface, can be detected by odour, can cause tainting of edible organisms, can form detectable deposits on shorelines and bottom sediments.
4. Results that are preceeded by "<" denote concentrations that are below the laboratory Reportable Detection Limit (RDL).

Table 2: McCarthy Pond Monthly Water Quality Results (February 2016 to May 2016)

	Unit	Reportable Detection Limit (RDL)	PWQO [1]	Monthly Concentration Limit[2]	McCarthy Quarry		
Sample ID					**Pond**		
Date					February	March	April
Total Suspended Solids	mg/L	1		15	1.5	2.6	8.5
Total Oil and Grease	mg/L	0.5	Note 3	15	0.7	0.7	0.7
Phenols (4AAP)	mg/L	<0.0010		0.02	<0.001	<0.001	<0.001

Notes

1. Provincial Water Quality Objectives (PWQO); shaded cells denote PWQO exceedance; some PWQOs are dependent on other water quality parameters hence the range in guideline values, refer to PWQO notes.
2. Monthyl Concentration Limit; bolded values denote exceedances in the Permit to Take Waters monthly concentration limits.
3. The PWQO for Oil and Grease indicates that oil or petrochemicals should not be present in concentrations that: can be detected as a visible film, sheen or discolouration on the surface, can be detected by odour, can cause tainting of edible organisms, can form detectable deposits on shorelines and bottom sediments.
4. Results that are preceeded by "<" denote concentrations that are below the laboratory Reportable Detection Limit (RDL).

Table 3: Lethality Monitoring at McCarthy Pond

	Unit	Mortality Limit	McCarthy Quarry	
Sample ID			**Pond**	
Date			**31-Mar-16**	**29-Apr-16**
Daphnia Magna	% Mortality Rate*	<50%	0	3
Rainbow Trout	% Mortality Rate*	<50%	0	0

* Test results represent accute lethality (100% effluent) of toxicants to Daphnia Magna and Rainbow Trout

Table 4: Measured Water Volume and Rate of Discharge from Quarry Sump

Date	Start	Stop	Total Sec.	Total Min.	Total Litres	Rate of Taking (L/sec)	Rate of Taking (L/min)
ECA Permitted Rate					**6,550,000**	**76**	**4,545**
1-Feb-16	NO PUMP		0	0	-	-	-
2-Feb-16	NO PUMP		0	0	-	-	-
3-Feb-16	NO PUMP		0	0	-	-	-
4-Feb-16	NO PUMP		0	0	-	-	-
5-Feb-16	NO PUMP		0	0	-	-	-
6-Feb-16	NO PUMP		0	0	-	-	-
7-Feb-16	NO PUMP		0	0	-	-	-
8-Feb-16	6:30AM	5PM	37800	630	1,323,000	35	2,100
9-Feb-16	NO PUMP		0	0	-	-	-
10-Feb-16	6:30AM	5PM	37800	630	1,323,000	35	2,100
11-Feb-16	NO PUMP		0	0	-	-	-
12-Feb-16	NO PUMP		0	0	-	-	-
13-Feb-16	NO PUMP		0	0	-	-	-
14-Feb-16	NO PUMP		0	0	-	-	-
15-Feb-16	6AM	3PM	32400	540	1,134,000	35	2,100
16-Feb-16	NO PUMP		0	0	-	-	-
17-Feb-16	6AM	4PM	36000	600	1,260,000	35	2,100
18-Feb-16	NO PUMP		0	0	-	-	-
19-Feb-16	NO PUMP		0	0	-	-	-
20-Feb-16	NO PUMP		0	0	-	-	-
21-Feb-16	NO PUMP		0	0	-	-	-
22-Feb-16	6AM	5PM	39600	660	1,386,000	35	2,100
23-Feb-16	NO PUMP		0	0	-	-	-
24-Feb-16	6AM	5PM	39600	660	1,386,000	35	2,100
25-Feb-16	NO PUMP		0	0	-	-	-
26-Feb-16	6:30AM	5PM	37800	630	1,323,000	35	2,100
27-Feb-16	NO PUMP		0	0	-	-	-
28-Feb-16	NO PUMP		0	0	-	-	-
29-Feb-16	6AM	6PM	43200	720	1,512,000	35	2,100
1-Mar-16	6AM	6:30PM	45000	750	1,575,000	35	2,100
2-Mar-16	NO PUMP		0	0	-	-	-
3-Mar-16	6:30AM	5:30PM	39600	660	1,386,000	35	2,100
4-Mar-16	NO PUMP		0	0	-	-	-
5-Mar-16	NO PUMP		0	0	-	-	-
6-Mar-16	NO PUMP		0	0	-	-	-
7-Mar-16	6:30AM	5:30PM	39600	660	1,386,000	35	2,100
8-Mar-16	6:30AM	5:30PM	39600	660	1,386,000	35	2,100
9-Mar-16	6:30AM	5:30PM	39600	660	1,386,000	35	2,100

Table 4: Measured Water Volume and Rate of Discharge from Quarry Sump

Date	Start	Stop	Total Sec.	Total Min.	Total Litres	Rate of Taking (L/sec)	Rate of Taking (L/min)
ECA Permitted Rate					**6,550,000**	**76**	**4,545**
10-Mar-16	6:30AM	5:30PM	39600	660	1,386,000	35	2,100
11-Mar-16	6:30AM	5:30PM	39600	660	1,386,000	35	2,100
12-Mar-16	NO PUMP		0	0	-	-	-
13-Mar-16	NO PUMP		0	0	-	-	-
14-Mar-16	6:30AM	5:30PM	39600	660	1,386,000	35	2,100
15-Mar-16	NO PUMP		0	0	-	-	-
16-Mar-16	6:30AM	5PM	37800	630	1,323,000	35	2,100
17-Mar-16	NO PUMP		0	0	-	-	-
18-Mar-16	NO PUMP		0	0	-	-	-
19-Mar-16	NO PUMP		0	0	-	-	-
20-Mar-16	NO PUMP		0	0	-	-	-
21-Mar-16	8AM	5PM	32400	540	1,134,000	35	2,100
22-Mar-16	8AM	4PM	28800	480	1,008,000	35	2,100
23-Mar-16	8AM	4:30PM	30600	510	1,071,000	35	2,100
24-Mar-16	8AM	4PM	28800	480	1,008,000	35	2,100
25-Mar-16	NO PUMP		0	0	-	-	-
26-Mar-16	NO PUMP		0	0	-	-	-
27-Mar-16	NO PUMP		0	0	-	-	-
28-Mar-16	8AM	6AM	79200	1320	2,772,000	35	2,100
29-Mar-16	7AM	7AM	86400	1440	3,024,000	35	2,100
30-Mar-16	7AM	7AM	86400	1440	3,024,000	35	2,100
31-Mar-16	7AM	7AM	86400	1440	3,024,000	35	2,100
1-Apr-16	7AM	7AM	86400	1440	3,024,000	35	2,100
2-Apr-16	7AM	7AM	86400	1440	3,024,000	35	2,100
3-Apr-16	7AM	7AM	86400	1440	3,024,000	35	2,100
4-Apr-16	7AM	7AM	86400	1440	3,024,000	35	2,100
5-Apr-16	7AM	7AM	86400	1440	3,024,000	35	2,100
6-Apr-16	7AM	5PM	36000	600	1,260,000	35	2,100
7-Apr-16	NO PUMP		0	0	-	-	-
8-Apr-16	NO PUMP		0	0	-	-	-
9-Apr-16	NO PUMP		0	0	-	-	-
10-Apr-16	NO PUMP		0	0	-	-	-
11-Apr-16	7AM	7AM	86400	1440	3,024,000	35	2,100
12-Apr-16	NO PUMP		0	0	-	-	-
13-Apr-16	7AM	7AM	86400	1440	3,024,000	35	2,100
14-Apr-16	NO PUMP		0	0	-	-	-
15-Apr-16	NO PUMP		0	0	-	-	-

Table 4: Measured Water Volume and Rate of Discharge from Quarry Sump

Date	Start	Stop	Total Sec.	Total Min.	Total Litres	Rate of Taking (L/sec)	Rate of Taking (L/min)
ECA Permitted Rate					**6,550,000**	**76**	**4,545**
16-Apr-16	NO PUMP		0	0	-	-	-
17-Apr-16	NO PUMP		0	0	-	-	-
18-Apr-16	7AM	7AM	86400	1440	3,024,000	35	2,100
19-Apr-16	NO PUMP		0	0	-	-	-
20-Apr-16	7AM	3PM	28800	480	1,008,000	35	2,100
21-Apr-16	7AM	1PM	21600	360	756,000	35	2,100
22-Apr-16	NO PUMP		0	0	-	-	-
23-Apr-16	NO PUMP		0	0	-	-	-
24-Apr-16	NO PUMP		0	0	-	-	-
25-Apr-16	7AM	7AM	86400	1440	3,024,000	35	2,100
26-Apr-16	NO PUMP		0	0	-	-	-
27-Apr-16	NO PUMP		0	0	-	-	-
28-Apr-16	7AM	5PM	36000	600	1,260,000	35	2,100
29-Apr-16	7AM	2PM	25200	420	882,000	35	2,100
30-Apr-16	NO PUMP		0	0	-	-	-

APPENDIX A

Environmental Compliance Approval No. 4731-987KM8

- AKossi
- GQ.

Ontario

Ministry of the Environment
Ministère de l'Environnement

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 4731-987KM8
Issue Date: October 15, 2013

QBJR Aggregates Inc.
949 Wilson Ave
Toronto, Ontario, M3K 1G2

Site Location: McCarthy Quarry
Lot 1, Concession 1, Original Township of Mara
Lot 1, Concession 1
Ramara Township, County of Simcoe, L0K 1B0

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

a sewage works for the collection, transmission, treatment and disposal of quarry water effluent from an aggregate quarry consisting of the following:

- one (1) sump, measuring 20 metres long, 10 metres wide and 3 metres deep, located at the base of the quarry floor, equipped with two (2) submersible pumps each rated at 38 litres per second with a suction intake approximately one (1) metre above the bottom of the sump, discharging to a settling pond via a 203 millimetre diameter pipeline;

- one (1) horse-shoe shaped settling pond with an approximate volume of 14,000 cubic metres (at elevation 248.2 metres), with a Hickenbottom control structure equipped with a 150 millimetre diameter orifice plate, discharging to the roadside ditch along Concession Road 1 with ultimate discharge to the Talbot River via a private ditch;

- all other controls, electrical equipment, instrumentation, piping, pumps, valves and appurtenances essential for the proper operation of the aforementioned sewage works;

all in accordance with supporting documents listed in **Schedule A**.

For the purpose of this environmental compliance approval, the following definitions apply:

"Approval" means this entire document and any schedules attached to it, and the application;

"Director" means a person appointed by the Minister pursuant to section 5 of the *EPA* for the purposes of Part II.1 of the *EPA;*

"District Manager" means the District Manager of the Barrie District Office of the Ministry;

"EPA" means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended;

"Ministry" means the ministry of the government of Ontario responsible for the *EPA* and *OWRA* and includes all officials, employees or other persons acting on its behalf;

"Owner" means QBJR Aggregates Inc.and its successors and assignees;

"*OWRA* " means the Ontario Water Resources Act, R.S.O. 1990, c. O.40, as amended;

"Quarterly" means all or part of a period of three consecutive months beginning on the first day of January, April, July or October;

"Semi-annually" means all or part of a period of six months beginning on the first day of January or July;

"Weekly" means a period of seven days, starting on Sunday and ending on Saturday; and

"Works" means the sewage works described in the Owner's application, this *Approval* and in the supporting documentation referred to herein, to the extent approved by this *Approval* .

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL CONDITION

(1) Except as otherwise provided by these Conditions, the *Owner* shall design, build, install, operate and maintain the *Works* in accordance with the description given in this *Approval* , the application for approval of the *Works* and the submitted supporting documents and plans and specifications as listed in this *Approval* .

(2) Where there is a conflict between a provision of any submitted document referred to in this *Approval* and the Conditions of this *Approval* , the Conditions in this *Approval* shall take precedence, and where there is a conflict between the listed submitted documents, the document bearing the most recent date shall prevail.

2. CHANGE OF OWNER

(1) The *Owner* shall notify the *District Manager* and the *Director* , in writing, of any of the following changes within **seven (7) days** of the change occurring:

(a) change of *Owner* or operating authority, or both;

(b) change of address of *Owner* or operating authority or address of new owner or operating authority;

(c) change of partners where the *Owner* or operating authority is or at any time becomes a partnership, and a copy of the most recent declaration filed under the *Partnerships Registration Act* ;

(d) change of name of the corporation where the *Owner* or operator is or at any time becomes a corporation, and a copy of the most current "Initial Notice or Notice of Change" (Form 1, 2 or 3 of O. Reg. 189, R.R.O. 1980, as amended from time to time), filed under the *Corporations Informations Act* shall be included in the notification to the *District Manager* ;

(2) In the event of any change in ownership of the *Works* , the *Owner* shall notify in writing the succeeding owner of the existence of this certificate, and a copy of such notice shall be forwarded to the *District Manager* .

(3) The *Owner* shall ensure that all communications made pursuant to this condition will refer to this Approval's number.

3. CHANGES IN PROCESSES OR PROCESS MATERIALS

The *Owner* shall give written notice to the *District Manager* of any plans to change the processes or process materials in the Owner's enterprise serviced by the *Works* where the change may significantly alter the quantity or quality of the influent to or effluent from the *Works* , and no such changes shall be made unless with the written concurrence or approval of the *District Manager* .

4. OPERATIONS MANUAL

(1) The *Owner* shall prepare an operations manual prior to the commencement of operation of the sewage *Works* , that includes, but not necessarily limited to, the following information:

(a) operating procedures for routine operation of the *Works* ;

(b) inspection programs, including frequency of inspection, for the *Works* and the methods or tests employed to detect when maintenance is necessary;

(c) repair and maintenance programs, including the frequency of repair and maintenance for the *Works* ;

(d) contingency plans and procedures for dealing with potential spill, bypasses and any other abnormal situations and for notifying the *District Manager* ; and

(e) complaint procedures for receiving and responding to public complaints.

(2) The *Owner* shall maintain the operations manual up to date through revisions undertaken from time to time and retain a copy at the location of the sewage works. Upon request, the *Owner* shall make the manual available for inspection and copying by Ministry personnel.

(3) A copy of the operations manual required by subsection (1) shall be provided to the *Director* no later than **three (3) months** prior to the commencement of operation of the sewage works.

5. EFFLUENT LIMITS

(1) The *Owner* shall design, construct and operate the *Works* such that the concentrations of the materials named below as effluent parameters are not exceeded in the effluent from the *Works* .

Table 1 - Effluent Limits

Effluent Parameter	Daily Concentration Limit (mg/L)	Monthly Average Concentration Limit (mg/L)
Column 1	Column 2	Column 3
Total Suspended Solids	30	15
Oil and Grease	30	15
Phenolics (4AAP)	0.04	0.02

(2) pH of the effluent maintained between 6.0 to 9.5, inclusive, at all times.

(3) The *Owner* shall ensure that the quarry water effluent shall be non-lethal to rainbow trout and *Daphnia magna* at all times.

(4) For the purposes of determining compliance with and enforcing subsection (1), exceedance of a daily concentration is deemed to have occurred when any daily single grab sample, analyzed for a parameter named
in Column 1 of Table 1, is greater than the corresponding daily concentration set in Column 2 of Table 1.

(5) For the purposes of determining compliance with and enforcing subsection (1), exceedance of a monthly average concentration is deemed to have occurred when the arithmetic mean concentration of all samples taken in a calendar month, analyzed for a parameter named in Column 1 of Table 1, is greater than the corresponding monthly average concentration set in Column 3 of Table 1.

(6) Non-compliance with respect to pH is deemed to have occurred when any single measurement is outside of the indicated range.

(7) For the purposes of determining compliance with and enforcing subsection (3), the effluent is deemed to be non-lethal if the test results, required pursuant to Condition 8, show mortality for no more than 50 percent of either test organism in each sample of undiluted effluent.

6. EFFLUENT - VISUAL OBSERVATIONS

Notwithstanding any other condition in this *Approval* , the *Owner* shall ensure that the effluent from the *Works* is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film, sheen or foam on the receiving waters.

7. EFFLUENT MONITORING AND RECORDING

The *Owner* shall, upon commencement of operation of the sewage works, carry out the following sampling from the final effluent control point (i.e. the outfall of the settling pond which is approximately 150 metres north of Concession 1) at the commencement of effluent discharge and for the duration of the discharge period, as follows:

(1) All samples and measurements taken for the purposes of this *Approval* are to be taken at a time and in a location characteristic of the quality and quantity of the effluent stream over the time period being monitored.

(2) Samples shall be collected and analyzed at the following sampling point, at the sampling frequencies and using the sample type specified for each parameter listed:

Table 2 - Effluent Monitoring - (End of Pipe Discharge Point)

Effluent Parameter	Frequency	Sample Type
Total Suspended Solids	Weekly	Grab
Oil and Grease	Weekly	Grab
Phenolics (4AAP)	Weekly	Grab

(3) The *Owner* shall collect effluent samples at the following locations and analyze for the parameters listed in Table 3 at a frequency of once per week:

(a) Outfall of settling pond approximately 150 metres north of Concession 1(i.e. end of pipe discharge);

(b) Box culvert on Eldon-Ramara Townline approximately 260 metres north of intersection of Ramara Concession 1 and Eldon-Ramara Townline (i.e. upgradient of end of pipe discharge);

(c) 80 centimetre CSP located at Concession 1 Road on McCarthy property (i.e. downgradient of end of pipe discharge).

Table 3 - Effluent and Surface Water Monitoring	
Frequency	Weekly
Sample Type	Grab
Parameters	Total Suspended Solids, Copper, Lead, Nickel, Zinc, Arsenic, Oil and Grease, Phenolics (4AAP), Hardness (as CaCO3), Alkalinity(as CaCO3), Conductivity, pH, Fluoride, Chloride, Nitrate (N), Nitrite (N), Sulphate, Calcium, Magnesium, Sodium, Potassium, Ammonia (N), Dissolved Organic Carbon, Iron, Total Kjeldahl Nitrogen, Phosphorus (Total), Cadmium, Chromium, Manganese, Anion (Sum), Cation (Sum) and Total Dissolved Solids

(4) There shall be at least **four days** between successive sampling.

(5) The methods and protocols for sampling, analysis, and recording shall conform, in order of precedence, to the methods and protocols specified in the following:

(a) the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" (August 1994), ISBN 0-7778-1880-9, as amended from time to time by more recently published editions;

(b) the publication "Standard Methods for the Examination of Water and Wastewater" (17th edition) as amended from time to time by more recently published editions; and,

(c) in respect of any parameters not mentioned in (a) and (b), the written approval of the *District Manager* , shall be obtained prior to sampling.

(6) The measurement frequencies specified in subsection (2) in respect of any parameter are minimum requirements which may, **after 48 months** of monitoring in accordance with this Condition, be modified by the *District Manager* in writing from time to time.

(7) The measurement frequencies specified in subsection (3) in respect of any parameter shall be changed to semi-annually after one year of quarry operation.

(8) A continuous flow measuring device shall be installed and maintained to measure the flowrate of the effluent from the sewage works, with an accuracy to within plus or minus 15 per cent of the actual flowrate for the entire design range of the flow measuring device and the *Owner* shall measure, record and calculate the flowrate for each effluent stream on each day of sampling.

(9) The *Owner* shall retain for a minimum of **three (3) years** from the date of their creation, all records

and information related to or resulting from the monitoring activities required by this *Approval* .

8. LETHALITY MONITORING

(1) The *Owner* shall perform rainbow trout acute lethality test and *Daphnia magna* acute lethality test at least once a month on the quarry water effluent according to procedures published in Environment Canada publications entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout", dated July 1990 and "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* ", dated July 1990 and as updated from time to time.

(2) The acute lethality tests shall be carried out on a grab sample as a single concentration test using 100 per cent quarry water effluent.

(3) A minimum of two samples shall be tested for either test animal per each discharge period.

9. RECEIVER INSPECTION

The *Owner* shall, at least once per year, undertake a visual inspection of the downstream ditches for evidence of erosion and/or flooding and shall report the observations in the annual report.

10. REPORTING

(1) One week prior to the start up of the operation of the *Works* , the *Owner* shall notify the *District Manager* (in writing) of the pending start up date.

(2) The *Owner* shall report to the *District Manager* or designate, any exceedance of any parameter specified in Condition 5 orally, forthwith, and in writing within **seven (7) days** of the exceedance.

(3) In addition to the obligations under Part X of the *Environmental Protection Act* , the *Owner* shall, within **10 working days** of the occurrence of any spill, bypass or loss of any product, by product, intermediate product, oils, solvents, waste material or any other polluting substance into the environment, submit a full written report of the occurrence to the *District Manager* describing the cause and discovery of the spill or loss, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation.

(4) The *Owner* shall submit quarterly reports of the information obtained under Conditions 7 and 8 within **30 days** of the end of each quarter.

(5) The *Owner* shall prepare and submit a performance report to the *District Manager* on an annual basis within **sixty (60) days** following the end of the period being reported upon. The first such report shall cover the first annual period following the commencement of operation of the *Works* and subsequent reports shall be submitted to cover successive annual periods following thereafter. The reports shall contain, but shall not be limited to, the following information:

(a) a summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Condition 5, including an overview of the success and adequacy of the sewage works;

(b) a description of any operating problems encountered and corrective actions taken;

(c) a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the sewage works;

(d) a summary of any effluent quality assurance or control measures undertaken in the reporting period; and

(e) a summary of the calibration and maintenance carried out on all effluent monitoring equipment.

Schedule A

Environmental Compliance Approval (ECA) supporting documents:

1. Application for Approval of Industrial Sewage Works submitted by Thomas S. McCarthy dated July 21, 2001 and revised January 25, 2002;

2. McCarthy Property - Certificate of Approval Application prepared by Dixon Hydrogeology Limited dated July 2001;

3. Revised Permit to Take Water - McCarthy Property prepared by Dixon Hydrogeology Limited dated April 11, 2002;

4. Letter and attachments dated January 25, 2002 from John Easton of Dixon Hydrogeology Limited to Mohamed Dhalla of the Ministry of the Environment;

5. Letter and attachments dated April 1, 2002 from Dave Hulme of Dave T. Hulme Enterprises Inc. to Stefanos Habtom of the Ministry of the Environment;

6. Letter dated April 10, 2002 from John Easton of Dixon Hydrogeology Limited to Stefanos Habtom of the Ministry of the Environment;

7. Environmental Review Amended Tribunal Decision: 02-214/02-217 and 03-188/03-189, dated May 25, 2006 - Trent Talbot River Property Owners Association, Marchand Lamarre and Jodi McIntosh v. Director, Ministry of the Environment; and

8. Notification of Change of Address/Ownership dated June 29, 2012, MOE Reference Number 3620-8VQPTZ acknowledging change in company address/ownership from Thomas S. McCarty, Rural Route No.1 Brechin, Ontario, L0K 1B0 to QBJR Aggregates Inc., 949 Wilson Ave., Toronto, Ontario, M3K 1G.

1. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Director appointed for the purposes of
Part II.1 of the Environmental Protection Act
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 314-4506 or www.ert.gov.on.ca**

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 15th day of October, 2013

Edgardo Tovilla
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

APPENDIX B

Water Quality Results

Maxxam
A Bureau Veritas Group Company

Your Project #: 1407634
Site#: 1407634
Site Location: MCCARTHY
Your C.O.C. #: 533889-02-01

Attention:Dawn Hoyle/Jamie Bonany

Golder Associates Ltd
121 Commerce Park Drive
Unit L
Barrie, ON
L4N 8X1

Report Date: 2016/02/12
Report #: R3893158
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B624636
Received: 2016/02/05, 09:58

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Animal and Vegetable Oil & Grease	1	N/A	2016/02/11	CAM SOP-00326	EPA1664B m,SM5520B m
Total Oil and Grease	1	2016/02/11	2016/02/11	CAM SOP-00326	EPA1664B m,SM5520A m
pH	1	N/A	2016/02/07	CAM SOP-00413	SM 4500H+ B m
Phenols (4AAP)	1	N/A	2016/02/09	CAM SOP-00444	OMOE E3179 m
TPH (Heavy Oil) (1)	1	2016/02/11	2016/02/11	CAM SOP-00326	EPA1664B m,SM5520F m
Low Level Total Suspended Solids	1	N/A	2016/02/09	CAM SOP-00428	SM 22 2540D m

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) Note: TPH (Heavy Oil) is equivalent to Mineral / Synthetic Oil & Grease

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.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B624636
Report Date: 2016/02/12

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

RESULTS OF ANALYSES OF WATER

Maxxam ID		BUN558	BUN558		
Sampling Date		2016/02/04 13:30	2016/02/04 13:30		
COC Number		533889-02-01	533889-02-01		
	UNITS	542302-POND	542302-POND Lab-Dup	RDL	QC Batch
Calculated Parameters					
Total Animal/Vegetable Oil and Grease	mg/L	ND		0.50	4371473
Inorganics					
pH	pH	7.57			4372965
Phenols-4AAP	mg/L	ND		0.0010	4373160
Total Suspended Solids	mg/L	2	2	1	4375068
Petroleum Hydrocarbons					
Total Oil & Grease	mg/L	ND		0.50	4378336
Total Oil & Grease Mineral/Synthetic	mg/L	ND		0.50	4378337

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not detected

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B624636
Report Date: 2016/02/12

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

GENERAL COMMENTS

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

Package 1	9.3°C

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B624636
Report Date: 2016/02/12

QUALITY ASSURANCE REPORT

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
4372965	pH	2016/02/07			102	98 - 103			0.026	N/A		
4373160	Phenols-4AAP	2016/02/09	101	80 - 120	104	85 - 115	ND, RDL=0.0010	mg/L	NC	20		
4375068	Total Suspended Solids	2016/02/09					ND,RDL=1	mg/L	NC	25	98	85 - 115
4378336	Total Oil & Grease	2016/02/11			95	85 - 115	ND, RDL=0.50	mg/L	3.6	25		
4378337	Total Oil & Grease Mineral/Synthetic	2016/02/11			92	85 - 115	ND, RDL=0.50	mg/L	2.7	25		

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.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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.

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 (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B624636
Report Date: 2016/02/12

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

VALIDATION SIGNATURE PAGE

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

Brad Newman, Scientific Specialist

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, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Analytics International Corporation o/a Maxxam Analytics

IMMEDIATE TEST

6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel:(905) 817-5700 Toll-Free:(800) 563-6266 Fax:(905) 817-5777 www.maxxam.ca

CHAIN OF CUSTODY RECORD

Page of

INVOICE TO:	REPORT TO:	PROJECT INFORMATION:	Laboratory Use Only:
Company Name: #26238 Coco Paving Inc	Company Name:	Quotation #: B47292	Maxxam Job #: / Bottle Order #: 533889
Attention: Anthony Rossi/Dave Sanders	Attention: Dawn Hoyle	P.O. #:	
Address: 949 Wilson Ave, Toronto ON M3K 1G2	Address:	Project: 1407634	COC #: C#533889-02-01 / Project Manager: Hongmei Zhao (Grace)
Tel: (416) 570-7052 x Fax:	Tel: Fax:	Project Name: McCarthy	
Email: ARossi@cocogroup.com;DSanders@cocogroup.com	Email: Dawn_Hoyle@golder.com	Site #:	
		Sampled By: Daryl Landry	

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)
- ☐ Table 1 ☐ Res/Park ☐ Medium/Fine
- ☐ Table 2 ☐ Ind/Comm ☐ Coarse
- ☐ Table 3 ☐ Agri/Other ☐ For RSC
- ☐ Table ___

Other Regulations
- ☐ CCME ☐ Sanitary Sewer Bylaw
- ☐ Reg 558 ☐ Storm Sewer Bylaw
- ☐ MISA Municipality ___
- ☐ PWQO
- ☐ Other ___

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? ___

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

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.

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	Field Filtered (please circle): Metals / Hg / Cr VI	Oil & Grease - AVI/MT	pH	Phenols (4AAP)	Low Level Total Suspended Solids	± Q						# of Bottles	Comments
1	542302	POND	Feb4/16	130pm	SW	N/A	✓	✓	✓	✓								
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

05-Feb-16 09:58
Hongmei Zhao (Grace)
B624636
AKP ENV-602

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Teresa Crank	16/02/04	2:00pm	[illegible] ASAD BHADSW	2016/02/05	09:58	
Teresa Crank						

Laboratory Use Only

Time Sensitive	Temperature (°C) on Receipt	Custody Seal	Yes	No
	9/9/10	Present	✓	
		Intact	✓	

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

Maxxam
A Bureau Veritas Group Company

Your Project #: 1407634
Site#: 1407634
Site Location: MCCARTHY
Your C.O.C. #: 542301-01-01

Attention:Dawn Hoyle/Jamie Bonany

Golder Associates Ltd
121 Commerce Park Drive
Unit L
Barrie, ON
L4N 8X1

Report Date: 2016/02/25
Report #: R3908602
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B634315
Received: 2016/02/19, 10:12

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Animal and Vegetable Oil & Grease	1	N/A	2016/02/24	CAM SOP-00326	EPA1664B m,SM5520B m
Total Oil and Grease	1	2016/02/24	2016/02/24	CAM SOP-00326	EPA1664B m,SM5520A m
pH	1	N/A	2016/02/24	CAM SOP-00413	SM 4500H+ B m
Phenols (4AAP)	1	N/A	2016/02/24	CAM SOP-00444	OMOE E3179 m
TPH (Heavy Oil) (1)	1	2016/02/24	2016/02/24	CAM SOP-00326	EPA1664B m,SM5520F m
Low Level Total Suspended Solids	1	N/A	2016/02/24	CAM SOP-00428	SM 22 2540D m

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) Note: TPH (Heavy Oil) is equivalent to Mineral / Synthetic Oil & Grease

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.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B634315
Report Date: 2016/02/25

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

RESULTS OF ANALYSES OF WATER

Maxxam ID		BWQ217	BWQ217		
Sampling Date		2016/02/18 11:30	2016/02/18 11:30		
COC Number		542301-01-01	542301-01-01		
	UNITS	542302/POND	542302/POND Lab-Dup	RDL	QC Batch
Calculated Parameters					
Total Animal/Vegetable Oil and Grease	mg/L	0.90		0.50	4387782
Inorganics					
pH	pH	7.63			4392779
Phenols-4AAP	mg/L	ND	ND	0.0010	4392984
Total Suspended Solids	mg/L	ND		1	4392644
Petroleum Hydrocarbons					
Total Oil & Grease	mg/L	0.90		0.50	4393043
Total Oil & Grease Mineral/Synthetic	mg/L	ND		0.50	4393044

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not detected

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B634315
Report Date: 2016/02/25

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

GENERAL COMMENTS

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

Package 1	11.7°C

Samples received with temp > 10 C and analyses conducted with client's consent.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B634315
Report Date: 2016/02/25

QUALITY ASSURANCE REPORT

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
4392644	Total Suspended Solids	2016/02/24					ND,RDL=1	mg/L	NC	25	96	85 - 115
4392779	pH	2016/02/24			102	98 - 103			0.19	N/A		
4392984	Phenols-4AAP	2016/02/24	96	80 - 120	98	85 - 115	ND, RDL=0.0010	mg/L	NC	20		
4393043	Total Oil & Grease	2016/02/24			98	85 - 115	ND, RDL=0.50	mg/L	1.0	25		
4393044	Total Oil & Grease Mineral/Synthetic	2016/02/24			92	85 - 115	ND, RDL=0.50	mg/L	1.1	25		

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.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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.

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 (one or both samples < 5x RDL).

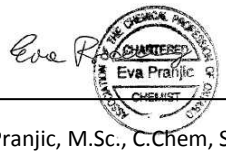
Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B634315
Report Date: 2016/02/25

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

VALIDATION SIGNATURE PAGE

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



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

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, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Analytics International Corporation o/a Maxxam Analytics
A Bureau Veritas Group Company
5740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel:(905) 817-5700 Toll-Free:(800) 563-6266 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:	#26238 Coco Paving Inc	Company Name:	#17930 Golder Associates Ltd	Quotation #:	B47292	Maxxam Job #:	Bottle Order #: 542301
Attention:	Teresa Cronk	Attention:	Dawn Hoyle/Jamie Bonany	P.O. #:			
Address:	949 Wilson Ave Toronto ON M3K 1G2	Address:	121 Commerce Park Drive Unit L Barrie, ON L4N 8X1	Project:	1407634	COC #: C#542301-01-01	Project Manager: Antonella Brasil
Tel:	(416) 633-9670 Fax:	Tel:	(705) 722-4492 Fax:	Project Name:			
Email:	TCronk@cocogroup.com	Email:	Dawn_Hoyle@golder.com;Jamie_Bonany@golder.com	Site #:	McCarthy		
				Sampled By:	DARYL LANDRY		

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)
- ☐ Table 1 ☐ Res/Park ☐ Medium/Fine
- ☐ Table 2 ☐ Ind/Comm ☐ Coarse
- ☐ Table 3 ☐ Agri/Other ☐ For RSC
- ☐ Table ___

Other Regulations
- ☐ CCME ☐ Sanitary Sewer Bylaw
- ☐ Reg 558 ☐ Storm Sewer Bylaw
- ☐ MISA Municipality ___
- ☐ PWQO
- ☐ Other ___

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? ___

ANALYSIS REQUESTED (PLEASE BE SPECIFIC):

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

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.

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	Field Filtered (please circle): Metals / Hg / Cr VI	Low Level Total Suspended Solids	Oil & Grease - AV/MMT	Phenols (4AAP)	pH	# of Bottles	Comments
1	542302	POND	FEB 18	11:30 Am	SW	N/A	✓	✓	✓	✓		
2	[illegible]											
3												
4												
5												
6												
7												
8												
9												
10												

19-Feb-16 10:12
Antonella Brasil
B634315
GK1 ENV-1083

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
[illegible] JODI PASCOE	16/02/18	11:30 Am	[illegible] MUSKAT NAL	2016/02/19	10:15	

Laboratory Use Only: Time Sensitive; Temperature (°C) on Receipt: 11/12/12; Custody Seal: Present ✓, Intact ✓

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

Notice

Maxxam
A Bureau Veritas Group Company

Your Project #: 1407634
Site#: 1407634
Site Location: MCCARTHY
Your C.O.C. #: 542304-01-01

Attention:Dawn Hoyle/Jamie Bonany

Golder Associates Ltd
121 Commerce Park Drive
Unit L
Barrie, ON
L4N 8X1

Report Date: 2016/03/09
Report #: R3922968
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B644370
Received: 2016/03/04, 09:30

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Animal and Vegetable Oil & Grease	1	N/A	2016/03/09	CAM SOP-00326	EPA1664B m,SM5520B m
Total Oil and Grease	1	2016/03/09	2016/03/09	CAM SOP-00326	EPA1664B m,SM5520A m
pH	1	N/A	2016/03/07	CAM SOP-00413	SM 4500H+ B m
Phenols (4AAP)	1	N/A	2016/03/07	CAM SOP-00444	OMOE E3179 m
TPH (Heavy Oil) (1)	1	2016/03/09	2016/03/09	CAM SOP-00326	EPA1664B m,SM5520F m
Low Level Total Suspended Solids	1	N/A	2016/03/08	CAM SOP-00428	SM 22 2540D m

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) Note: TPH (Heavy Oil) is equivalent to Mineral / Synthetic Oil & Grease

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.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B644370
Report Date: 2016/03/09

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: JP

RESULTS OF ANALYSES OF WATER

Maxxam ID		BYS481		
Sampling Date		2016/03/03 11:55		
COC Number		542304-01-01		
	UNITS	**542302-POND**	**RDL**	**QC Batch**
Calculated Parameters				
Total Animal/Vegetable Oil and Grease	mg/L	ND	0.50	4405042
Inorganics				
pH	pH	7.89		4406967
Phenols-4AAP	mg/L	ND	0.0010	4406965
Total Suspended Solids	mg/L	3	1	4407591
Petroleum Hydrocarbons				
Total Oil & Grease	mg/L	ND	0.50	4410594
Total Oil & Grease Mineral/Synthetic	mg/L	ND	0.50	4410597

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B644370
Report Date: 2016/03/09

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: JP

GENERAL COMMENTS

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

Package 1	11.3°C

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B644370
Report Date: 2016/03/09

QUALITY ASSURANCE REPORT

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: JP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
4406965	Phenols-4AAP	2016/03/07	98	80 - 120	98	85 - 115	ND, RDL=0.0010	mg/L	NC	20		
4406967	pH	2016/03/07			101	98 - 103			0.041	N/A		
4407591	Total Suspended Solids	2016/03/08					ND,RDL=1	mg/L	NC	25	98	85 - 115
4410594	Total Oil & Grease	2016/03/09			94	85 - 115	ND, RDL=0.50	mg/L	3.9	25		
4410597	Total Oil & Grease Mineral/Synthetic	2016/03/09			91	85 - 115	ND, RDL=0.50	mg/L	4.3	25		

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.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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.

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 (one or both samples < 5x RDL).

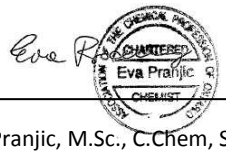
Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B644370
Report Date: 2016/03/09

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: JP

VALIDATION SIGNATURE PAGE

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



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

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, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

IMMEDIATE TEST

Maxxam Analytics International Corporation o/a Maxxam Analytics
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel:(905) 817-5700 Toll-Free:(800) 563-6266 Fax:(905) 817-5777 www.maxxam.ca

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#26238 Coco Paving Inc	Company Name:	#17930 Golder Associates Ltd	Quotation #:	B47292	Maxxam Job #:	Bottle Order #: 542304
Attention:	Teresa Cronk	Attention:	Dawn Hoyle/Jamie Bonany	P.O. #:			
Address:	949 Wilson Ave Toronto ON M3K 1G2	Address:	121 Commerce Park Drive Unit L Barrie ON L4N 8X1	Project:	1407634	COC #: C#542304-01-01	Project Manager: Antonella Brasil
Tel:	(416) 633-9670 Fax:	Tel:	(705) 722-4492 Fax:	Project Name:			
Email:	TCronk@cocogroup.com	Email:	Dawn_Hoyle@golder.com;Jamie_Bonany@golder.com	Site #:	McCarthy		
				Sampled By:			

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)	Other Regulations	Special Instructions
☐ Table 1 ☐ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ For RSC ☐ Table ___	☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ___ ☐ PWQO ☐ Other ___	

Include Criteria on Certificate of Analysis (Y/N)? ___

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

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.

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	Field Filtered (please circle): Metals / Hg / Cr VI	Low Level Total Suspended Solids	Oil & Grease - AVI/MT	Phenols (4AAP)	pH	# of Bottles	Comments
1	542302	POND	MAR. 3	11:55 AM	SW	N/A	✓	✓	✓	✓		
2												
3												
4												
5												
6												
7												
8												
9												
10												

04-Mar-16 09:30
Antonella Brasil
B644370
AKP ENV-645

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Jodi Pascoe	16/03/03	11:55 AM	Antonella Brasil	2016/03/04	08:30	
JODI PASCOE	16/03/03	11:55 AM	ASHLEIGH SUKHDEO			

Laboratory Use Only				
Time Sensitive	Temperature (°C) on Receipt	Custody Seal	Yes	No
	11/11/12	Present	✓	
		Intact	✓	

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

Maxxam
A Bureau Veritas Group Company

Your Project #: 1407634
Site#: 1407634
Site Location: MCCARTHY
Your C.O.C. #: 517466-04-01

Attention:Dawn Hoyle/Jamie Bonany

Golder Associates Ltd
121 Commerce Park Drive
Unit L
Barrie, ON
L4N 8X1

Report Date: 2016/03/16
Report #: R3932161
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B649754
Received: 2016/03/11, 09:42

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Animal and Vegetable Oil & Grease	1	N/A	2016/03/15	CAM SOP-00326	EPA1664B m,SM5520B m
Total Oil and Grease	1	2016/03/15	2016/03/15	CAM SOP-00326	EPA1664B m,SM5520A m
pH	1	N/A	2016/03/12	CAM SOP-00413	SM 4500H+ B m
Phenols (4AAP)	1	N/A	2016/03/15	CAM SOP-00444	OMOE E3179 m
TPH (Heavy Oil) (1)	1	2016/03/15	2016/03/15	CAM SOP-00326	EPA1664B m,SM5520F m
Low Level Total Suspended Solids	1	N/A	2016/03/14	CAM SOP-00428	SM 22 2540D m

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) Note: TPH (Heavy Oil) is equivalent to Mineral / Synthetic Oil & Grease

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.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B649754
Report Date: 2016/03/16

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: JD

RESULTS OF ANALYSES OF WATER

Maxxam ID		BZU557	BZU557		
Sampling Date		2016/03/10 09:30	2016/03/10 09:30		
COC Number		517466-04-01	517466-04-01		
	UNITS	533889-POND	533889-POND Lab-Dup	RDL	QC Batch
Calculated Parameters					
Total Animal/Vegetable Oil and Grease	mg/L	0.90		0.50	4414003
Inorganics					
pH	pH	7.57			4415981
Phenols-4AAP	mg/L	ND		0.0010	4415988
Total Suspended Solids	mg/L	ND	ND	1	4416499
Petroleum Hydrocarbons					
Total Oil & Grease	mg/L	0.90		0.50	4418463
Total Oil & Grease Mineral/Synthetic	mg/L	ND		0.50	4418465

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not detected

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B649754
Report Date: 2016/03/16

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: JD

GENERAL COMMENTS

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

Package 1	11.0°C

Sample containers received with temp > 10 C and analyses conducted with client's consent.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B649754
Report Date: 2016/03/16

QUALITY ASSURANCE REPORT

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: JD

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
4415981	pH	2016/03/12			101	98 - 103			0.12	N/A		
4415988	Phenols-4AAP	2016/03/15	99	80 - 120	98	85 - 115	ND, RDL=0.0010	mg/L	NC	20		
4416499	Total Suspended Solids	2016/03/14					ND,RDL=1	mg/L	NC	25	100	85 - 115
4418463	Total Oil & Grease	2016/03/15			97	85 - 115	ND, RDL=0.50	mg/L	0.78	25		
4418465	Total Oil & Grease Mineral/Synthetic	2016/03/15			94	85 - 115	ND, RDL=0.50	mg/L	1.1	25		

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.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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.

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 (one or both samples < 5x RDL).

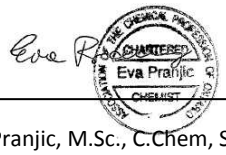
Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B649754
Report Date: 2016/03/16

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: JD

VALIDATION SIGNATURE PAGE

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



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

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, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

11-Mar-16 09:42
Antonella Brasil
B649754
AKP ENV-992

Maxxam Analytics International Corporation o/a Maxxam Analytics
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Page of

INVOICE TO:
Company Name: #26238 Coco Paving Inc
Attention: Anthony Rossi/Dave Sanders
Address: 949 Wilson Ave
Toronto ON M3K 1G2
Tel: (416) 570-7052 x Fax:
Email: ARossi@cocogroup.com;DSanders@cocogroup.com

REPORT TO:
Company Name:
Attention: Alicia Kimberly
Address:
Tel: (705) 722-4492 x Fax:
Email: Alicia_Kimberley@golder.com

PROJECT INFORM
Quotation #: B47292
P.O. #:
Project: 1407634
Project Name:
Site #: McCarthy
Sampled By: Darrell McCarthy

ry Use Only:
Bottle Order #: 517466
COC #: C#517466-04-01
Project Manager: Antonella Brasil

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)
☐ Table 1 ☐ Res/Park ☐ Medium/Fine
☐ Table 2 ☐ Ind/Comm ☐ Coarse
☐ Table 3 ☐ Agri/Other ☐ For RSC
☐ Table ___

Other Regulations
☐ CCME ☐ Sanitary Sewer Bylaw
☐ Reg 558 ☐ Storm Sewer Bylaw
☐ MISA Municipality
☐ PWQO
☐ Other

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? ___

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	Oil & Grease - AV/MT	pH	Phenols (4AAP)	Low Level Total Suspended Solids							# of Bottles	Comments
1	533889	POND	MAR 10	9:30 AM	SW	✓	✓	✓	✓	✓								
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects
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.
Job Specific Rush TAT (if applies to entire submission)
Date Required: Time Required:
Rush Confirmation Number: *(call lab for #)*

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Jodi Pascoe	16/03/10	9:30 AM		16/03/11	09:42	
Jodi PASCOE	16/03/10	9:30 AM				

Laboratory Use Only

Time Sensitive	Temperature (°C) on Receipt	Custody Seal	Yes	No
	11/11/11 Notice	Present	✓	
		Intact	✓	

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

Your Project #: 1407634
Site#: 1407634
Site Location: MCCARTHY
Your C.O.C. #: 56404

Attention:Dawn Hoyle/Jamie Bonany

Golder Associates Ltd
121 Commerce Park Drive
Unit L
Barrie, ON
L4N 8X1

Report Date: 2016/03/23
Report #: R3940160
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B654989
Received: 2016/03/18, 09:45

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Animal and Vegetable Oil & Grease	1	N/A	2016/03/22	CAM SOP-00326	EPA1664B m,SM5520B m
Total Oil and Grease	1	2016/03/22	2016/03/22	CAM SOP-00326	EPA1664B m,SM5520A m
pH	1	N/A	2016/03/22	CAM SOP-00413	SM 4500H+ B m
Phenols (4AAP)	1	N/A	2016/03/22	CAM SOP-00444	OMOE E3179 m
TPH (Heavy Oil) (1)	1	2016/03/22	2016/03/22	CAM SOP-00326	EPA1664B m,SM5520F m
Low Level Total Suspended Solids	1	N/A	2016/03/22	CAM SOP-00428	SM 22 2540D m

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) Note: TPH (Heavy Oil) is equivalent to Mineral / Synthetic Oil & Grease

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.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B654989
Report Date: 2016/03/23

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

RESULTS OF ANALYSES OF WATER

Maxxam ID		CAV889		
Sampling Date		2016/03/17 10:00		
COC Number		56404		
	UNITS	**542305-POND**	**RDL**	**QC Batch**
Calculated Parameters				
Total Animal/Vegetable Oil and Grease	mg/L	ND	0.50	4423637
Inorganics				
pH	pH	8.00		4427706
Phenols-4AAP	mg/L	ND	0.0010	4425241
Total Suspended Solids	mg/L	5	1	4425840
Petroleum Hydrocarbons				
Total Oil & Grease	mg/L	ND	0.50	4427821
Total Oil & Grease Mineral/Synthetic	mg/L	ND	0.50	4427837

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B654989
Report Date: 2016/03/23

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

GENERAL COMMENTS

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

Package 1	12.3°C

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B654989
Report Date: 2016/03/23

QUALITY ASSURANCE REPORT

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
4425241	Phenols-4AAP	2016/03/22	99	80 - 120	100	85 - 115	ND, RDL=0.0010	mg/L	NC	20		
4425840	Total Suspended Solids	2016/03/22					ND,RDL=1	mg/L	NC	25	95	85 - 115
4427706	pH	2016/03/22			101	98 - 103			0.93	N/A		
4427821	Total Oil & Grease	2016/03/22			96	85 - 115	ND, RDL=0.50	mg/L	1.3	25		
4427837	Total Oil & Grease Mineral/Synthetic	2016/03/22			94	85 - 115	ND, RDL=0.50	mg/L	1.6	25		

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.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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.

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 (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B654989
Report Date: 2016/03/23

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

VALIDATION SIGNATURE PAGE

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

Cristina Carriere

Cristina Carriere, Scientific Services

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, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam
A Bureau Veritas Group Company

6740 Campobello Road, Mississauga, Ontario L5N 2L8
Phone: 905-817-5700 Fax: 905-817-5779 Toll Free: 800-563-6266
CAM FCD-01191/2

CHAIN OF CUSTODY RECORD 56404

Page ____ of ____

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: #262238 COCO PAVING INC.	Company Name:	Quotation #: B47292	☐ Regular TAT (5-7 days) Most analyses
Contact Name: ANTHONY ROSSI/DALE SANDERS	Contact Name: ALICIA KIMBERLY	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 949 WILSON AVE TORONTO, ON M3K 1G2	Address:	Project #: 1407634	Rush TAT (Surcharges will be applied) ☐ 1 Day ☐ 2 Days ☐ 3-4 Days
Phone: 416.570.7052 Fax:	Phone: 705.722.4492 Fax:	Site Location:	
Email: AROSSI@COCOGROUP.COM	Email: ALICIA-KIMBERLY@GOLDER.COM	Site #: MCCARTHY	Date Required:
		Sampled By: DARRYL LANDRY	

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Rush Confirmation #:

Regulation 153	Other Regulations
☐ Table 1 ☐ Res/Park ☐ Med/ Fine	☐ CCME ☐ Sanitary Sewer Bylaw
☐ Table 2 ☐ Ind/Comm ☐ Coarse	☐ MISA ☐ Storm Sewer Bylaw
☐ Table 3 ☐ Agri/ Other	☐ PWQO Region ____
☐ Table ____	☐ Other (Specify) ____
FOR RSC (PLEASE CIRCLE) Y / N	☐ REG 558 (MIN. 3 DAY TAT REQUIRED)

Include Criteria on Certificate of Analysis: Y / N

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

LABORATORY USE ONLY

CUSTODY SEAL Y / N: Present 4, Intact 4

COOLER TEMPERATURES: 12/13/12, melted

COOLING MEDIA PRESENT: (Y) / N

	SAMPLE IDENTIFICATION (SAMPLE BARCODE)	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX	# OF CONTAINERS SUBMITTED	FIELD FILTERED (CIRCLE) Metals / Hg / CrVI	BTEX/ PHC F1	PHCs F2 - F4	VOCs	REG 153 METALS & INORGANICS	REG 153 ICPMS METALS	REG 153 METALS (Hg, Cr VI, ICPMS Metals, HWS - B)	OIL & GREASE - (AN/M/T)	PH	PHENOLS (4AAP)	LOW LEVEL TOTAL CYANIDES SCOS					HOLD- DO NOT ANALYZE	COMMENTS
										REFER TO BACK OF COC												
1	542305 - POND	2016/03/17	10 AM	S/W		N/A							✓	✓	✓	✓						
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

18-Mar-16 09:45
Antonella Brasil
B654989
SEL ENV-698

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
JODI PASCOE	2016/03/17	10 AM	[illegible] MISSISSAUGA	2016/03/18	09:45	
Jodi Pascoe	2016/03/17	10 AM.				

COC-1004 (10/14) - ENV. ENG.

White: Maxxam ~ Yellow: Client

Maxxam
A Bureau Veritas Group Company

Your Project #: 1407634
Site#: 1407634
Site Location: MCCARTHY
Your C.O.C. #: 497410-06-01

Attention:Dawn Hoyle/Jamie Bonany

Golder Associates Ltd
121 Commerce Park Drive
Unit L
Barrie, ON
L4N 8X1

Report Date: 2016/03/31
Report #: R3947180
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B660043
Received: 2016/03/28, 09:52

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Animal and Vegetable Oil & Grease	1	N/A	2016/03/30	CAM SOP-00326	EPA1664B m,SM5520B m
Total Oil and Grease	1	2016/03/30	2016/03/30	CAM SOP-00326	EPA1664B m,SM5520A m
pH	1	N/A	2016/03/29	CAM SOP-00413	SM 4500H+ B m
Phenols (4AAP)	1	N/A	2016/03/29	CAM SOP-00444	OMOE E3179 m
TPH (Heavy Oil) (1)	1	2016/03/30	2016/03/30	CAM SOP-00326	EPA1664B m,SM5520F m
Low Level Total Suspended Solids	1	N/A	2016/03/29	CAM SOP-00428	SM 22 2540D m

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) Note: TPH (Heavy Oil) is equivalent to Mineral / Synthetic Oil & Grease

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.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B660043
Report Date: 2016/03/31

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

RESULTS OF ANALYSES OF WATER

Maxxam ID		CBW651	CBW651		
Sampling Date		2016/03/24 13:00	2016/03/24 13:00		
COC Number		497410-06-01	497410-06-01		
	UNITS	POND	POND Lab-Dup	RDL	QC Batch
Calculated Parameters					
Total Animal/Vegetable Oil and Grease	mg/L	1.1		0.50	4433376
Inorganics					
pH	pH	8.13			4434312
Phenols-4AAP	mg/L	ND		0.0010	4434285
Total Suspended Solids	mg/L	2	2	1	4435310
Petroleum Hydrocarbons					
Total Oil & Grease	mg/L	1.1		0.50	4436488
Total Oil & Grease Mineral/Synthetic	mg/L	ND		0.50	4436491

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not detected

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B660043
Report Date: 2016/03/31

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

GENERAL COMMENTS

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

Package 1	10.0°C

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B660043
Report Date: 2016/03/31

QUALITY ASSURANCE REPORT

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
4434285	Phenols-4AAP	2016/03/29	98	80 - 120	98	85 - 115	ND, RDL=0.0010	mg/L	NC	20		
4434312	pH	2016/03/29			101	98 - 103			0.060	N/A		
4435310	Total Suspended Solids	2016/03/29					ND,RDL=1	mg/L	NC	25	97	85 - 115
4436488	Total Oil & Grease	2016/03/30	97	75 - 125	98	85 - 115	ND, RDL=0.50	mg/L	12	25		
4436491	Total Oil & Grease Mineral/Synthetic	2016/03/30			96	85 - 115	ND, RDL=0.50	mg/L	2.6	25		

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.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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.

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 (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B660043
Report Date: 2016/03/31

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

VALIDATION SIGNATURE PAGE

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

Cristina Carriere

Cristina Carriere, Scientific Services

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, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Analytics International Corporation o/a Maxxam Analytics
674(obello Road, Mississauga, Ontario, Canada L5N 2L8 Tel:(905) 817-5700 Toll-Free:800-563-6266 Fax:(905 5777 www.maxxam.ca

IMMEDIATE TEST

CHAIN OF CUSTODY RECORD

Page of

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#26238 COCO PAVING INC	Company Name:	#17930 Golder Associates Ltd	Quotation #:	B47292	Maxxam Job #:	Bottle Order #:
Attention:	Anthony Rossi/Dave Sanders	Attention:	Alicia Beynon	P.O. #:			497410
Address:	949 Wilson Ave Toronto ON M3K 1G2	Address:	121 Commerce Park Drive Unit L Barrie ON L4N 8X1	Project:	1407634	COC #:	Project Manager:
Tel:	(416) 570-7052 x Fax:	Tel:	(705) 722-4492 Fax:	Project Name:		C#497410-06-01	Antonella Brasil
Email:	ARossi@cocogroup.com;DSanders@cocogroup.com	Email:	Alicia_Beynon@golder.com	Site #:	MCCARTHY		
				Sampled By:			

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)
☐ Table 1 ☐ Res/Park ☐ Medium/Fine
☐ Table 2 ☐ Ind/Comm ☐ Coarse
☐ Table 3 ☐ Agri/Other ☐ For RSC
☐ Table ___

Other Regulations
☐ CCME ☐ Sanitary Sewer Bylaw
☐ Reg 558 ☐ Storm Sewer Bylaw
☐ MISA Municipality ___
☐ PWQO
☐ Other ___

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? ___

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

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.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___
Rush Confirmation Number: ___ *(call lab for #)*

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	Low Level Total Suspended Solids	Phenols (4AAP)	Oil & Grease - AV/MT	pH						# of Bottles	Comments
1	542304	POND	3/24/16	1:00 pm	SW	✓	✓	✓	✓	✓							
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

28-Mar-16 09:52
Antonella Brasil
B660043
SEL ENV-1103

* 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				
Teresa Cronk	16/03/24	2:00pm	ASAD BHATTI	2016/03/28	09:52		Time Sensitive	Temperature (°C) on Receipt	Custody Seal	Yes	No
Teresa Cronk							:	10/2/10	Present	✓	
									Intact	✓	

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

Maxxam
A Bureau Veritas Group Company

Your Project #: 1407634
Site#: 1407634
Site Location: MCCARTHY
Your C.O.C. #: 56427

Attention:Dawn Hoyle/Jamie Bonany

Golder Associates Ltd
121 Commerce Park Drive
Unit L
Barrie, ON
L4N 8X1

Report Date: 2016/04/07
Report #: R3953586
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B663971
Received: 2016/04/01, 09:10

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Animal and Vegetable Oil & Grease	1	N/A	2016/04/06	CAM SOP-00326	EPA1664B m,SM5520B m
Total Oil and Grease	1	2016/04/05	2016/04/06	CAM SOP-00326	EPA1664B m,SM5520A m
pH	1	N/A	2016/04/02	CAM SOP-00413	SM 4500H+ B m
Phenols (4AAP)	1	N/A	2016/04/05	CAM SOP-00444	OMOE E3179 m
TPH (Heavy Oil) (1)	1	2016/04/05	2016/04/06	CAM SOP-00326	EPA1664B m,SM5520F m
Low Level Total Suspended Solids	1	N/A	2016/04/04	CAM SOP-00428	SM 22 2540D m

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) Note: TPH (Heavy Oil) is equivalent to Mineral / Synthetic Oil & Grease

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.

Maxxam Job #: B663971
Report Date: 2016/04/07

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

RESULTS OF ANALYSES OF WATER

Maxxam ID		CCR230	CCR230		
Sampling Date		2016/03/31 11:00	2016/03/31 11:00		
COC Number		56427	56427		
	UNITS	POND SAMPLE 520617	POND SAMPLE 520617 Lab-Dup	RDL	QC Batch
Calculated Parameters					
Total Animal/Vegetable Oil and Grease	mg/L	ND		0.50	4440038
Inorganics					
pH	pH	8.09			4441593
Phenols-4AAP	mg/L	ND		0.0010	4441568
Total Suspended Solids	mg/L	2	2	1	4442491
Petroleum Hydrocarbons					
Total Oil & Grease	mg/L	ND		0.50	4444360
Total Oil & Grease Mineral/Synthetic	mg/L	ND		0.50	4444364

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not detected

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B663971
Report Date: 2016/04/07

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

GENERAL COMMENTS

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

Package 1	14.0°C

Sample received with temp > 10 C and analyses conducted with client's consent.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B663971
Report Date: 2016/04/07

QUALITY ASSURANCE REPORT

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
4441568	Phenols-4AAP	2016/04/05	98	80 - 120	96	85 - 115	ND, RDL=0.0010	mg/L	NC	20		
4441593	pH	2016/04/02			102	98 - 103			0.17	N/A		
4442491	Total Suspended Solids	2016/04/04					ND,RDL=1	mg/L	NC	25	96	85 - 115
4444360	Total Oil & Grease	2016/04/06			98	85 - 115	ND, RDL=0.50	mg/L	4.2	25		
4444364	Total Oil & Grease Mineral/Synthetic	2016/04/06			96	85 - 115	ND, RDL=0.50	mg/L	3.2	25		

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.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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.

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 (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B663971
Report Date: 2016/04/07

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: DL

VALIDATION SIGNATURE PAGE

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

Brad Newman, Scientific Specialist

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, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam ANALYTE TEST
A Bureau Veritas Group Company
6740 Campobello Road, Mississa
Phone: 905-817-5700 Fax: 905
CAM FCD-01191/2

01-Apr-16 09:10
Antonella Brasil
B663971

NNA ENV-578

CHAIN OF CUSTODY RECORD 56427 Page ____ of ____

Invoice Information		Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: #26238 0000 PAVING INC	Company	Quotation #: B47292	☐ Regular TAT (5-7 days) Most analyses
Contact Name: ANTHONY ROSSI / DALE SANDERS	Contact Name: ALICIA KIMBERLY	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 949 WILSON AVE TORONTO, ON, M3K 1G2	Address:	Project #: 1407634	Rush TAT (Surcharges will be applied) ☐ 1 Day ☐ 2 Days ☐ 3-4 Days
Phone: 416-570-7052 Fax:	Phone: 705-722-4492 Fax:	Site Location:	Date Required:
Email: ARossi@cocogroup.com	Email: ALICIA_KIMBERLEY@GOLDER.COM	Site #: MCCARTHY	Rush Confirmation #:
		Sampled By:	

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
☐ Table 1 ☐ Res/Park ☐ Med/ Fine	☐ CCME ☐ Sanitary Sewer Bylaw
☐ Table 2 ☐ Ind/Comm ☐ Coarse	☐ MISA ☐ Storm Sewer Bylaw
☐ Table 3 ☐ Agri/ Other	☐ PWQO Region
☐ Table ____	☐ Other (Specify)
FOR RSC (PLEASE CIRCLE) Y / N	☐ REG 558 (MIN. 3 DAY TAT REQUIRED)

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 / CrVI	BTEX/ PHC F1	PHCs F2 - F4	VOCs	REFER TO BACK OF COC: REG 153 METALS & INORGANICS	REG 153 ICPMS METALS	REG 153 METALS (Hg, Cr VI, ICPMS Metals, HWS - B)	Low Level Susp	Phenols	Oil & Grease	PH	HOLD- DO NOT ANALYZE
1	POND SAMPLE	2016/03/31	11:00am	SW	5	✓							✓	✓	✓	✓	
2	520617																
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
Y	Y	14/14/14

LABORATORY USE ONLY

COOLING MEDIA PRESENT: Y / (N)

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Teresa Cronk	2016/03/31	2:00pm	Per MUSRAT NAZ	2016/04/01	09:10	
Teresa Cronk	2016/03/31	2:00pm				

COC-1004 (10/14) - ENV. ENG.

White: Maxxam - Yellow: Client

Your Project #: 1407634
Site#: MCCARTHY
Site Location: MCCARTHY
Your C.O.C. #: 554700-08-01

Attention:Dawn Hoyle

Golder Associates Ltd
121 Commerce Park Drive
Unit L
Barrie, ON
L4N 8X1

Report Date: 2016/04/14
Report #: R3960470
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B669480
Received: 2016/04/08, 10:19

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Total Oil and Grease	1	2016/04/12	2016/04/12	CAM SOP-00326	EPA1664B m,SM5520A m
pH	1	N/A	2016/04/09	CAM SOP-00413	SM 4500H+ B m
Phenols (4AAP)	1	N/A	2016/04/12	CAM SOP-00444	OMOE E3179 m
Total Suspended Solids	1	N/A	2016/04/11	CAM SOP-00428	SM 22 2540D m

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.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ema Gitej, Senior Project Manager
Email: EGitej@maxxam.ca
Phone# (905)817-5829
==========
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, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B669480
Report Date: 2016/04/14

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: JC

RESULTS OF ANALYSES OF WATER

Maxxam ID		CDS740		
Sampling Date		2016/04/07 11:00		
COC Number		554700-08-01		
	UNITS	**520617,POND**	**RDL**	**QC Batch**
Inorganics				
pH	pH	8.09		4450976
Phenols-4AAP	mg/L	<0.0010	0.0010	4450760
Total Suspended Solids	mg/L	<10	10	4451633
Petroleum Hydrocarbons				
Total Oil & Grease	mg/L	0.70	0.50	4453232

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B669480
Report Date: 2016/04/14

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: JC

TEST SUMMARY

Maxxam ID: CDS740
Sample ID: 520617,POND
Matrix: Water

Collected: 2016/04/07
Shipped:
Received: 2016/04/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Oil and Grease	BAL	4453232	2016/04/12	2016/04/12	Francis Afonso
pH	AT	4450976	N/A	2016/04/09	Neil Dassanayake
Phenols (4AAP)	TECH/PHEN	4450760	N/A	2016/04/12	Faye Sabet
Total Suspended Solids	BAL	4451633	N/A	2016/04/11	Lu Wang(Alice)

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B669480
Report Date: 2016/04/14

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: JC

GENERAL COMMENTS

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

Package 1	11.0°C

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B669480
Report Date: 2016/04/14

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: JC

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4450760	FFS	Matrix Spike	Phenols-4AAP	2016/04/12		93	%	80 - 120
4450760	FFS	Spiked Blank	Phenols-4AAP	2016/04/12		97	%	85 - 115
4450760	FFS	Method Blank	Phenols-4AAP	2016/04/12	<0.0010		mg/L	
4450760	FFS	RPD	Phenols-4AAP	2016/04/12	NC		%	20
4450976	NYS	Spiked Blank	pH	2016/04/09		102	%	98 - 103
4450976	NYS	RPD	pH	2016/04/09	0.092		%	N/A
4451633	LWA	QC Standard	Total Suspended Solids	2016/04/11		100	%	85 - 115
4451633	LWA	Method Blank	Total Suspended Solids	2016/04/11	<10		mg/L	
4451633	LWA	RPD	Total Suspended Solids	2016/04/11	NC		%	25
4453232	FA	Spiked Blank	Total Oil & Grease	2016/04/12		99	%	85 - 115
4453232	FA	RPD	Total Oil & Grease	2016/04/12	3.9		%	25
4453232	FA	Method Blank	Total Oil & Grease	2016/04/12	<0.50		mg/L	

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.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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.

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 (one or both samples < 5x RDL).

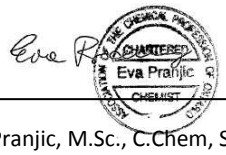
Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B669480
Report Date: 2016/04/14

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: JC

VALIDATION SIGNATURE PAGE

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



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

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, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Your Project #: 1407634
Site Location: MCCARTHY
Your C.O.C. #: 554700-07-01

Attention:Dawn Hoyle/Jamie Bonany

Golder Associates Ltd
121 Commerce Park Drive
Unit L
Barrie, ON
L4N 8X1

Report Date: 2016/04/21
Report #: R3968051
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B675015
Received: 2016/04/15, 10:25

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Total Oil and Grease	1	2016/04/20	2016/04/20	CAM SOP-00326	EPA1664B m,SM5520A m
pH	1	N/A	2016/04/20	CAM SOP-00413	SM 4500H+ B m
Total Suspended Solids	1	N/A	2016/04/19	CAM SOP-00428	SM 22 2540D m

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.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ema Gitej, Senior Project Manager
Email: EGitej@maxxam.ca
Phone# (905)817-5829
==========
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, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B675015
Report Date: 2016/04/21

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: TC

RESULTS OF ANALYSES OF WATER

Maxxam ID		CET474	CET474		
Sampling Date		2016/04/15 12:00	2016/04/15 12:00		
COC Number		554700-07-01	554700-07-01		
	UNITS	**POND**	**POND Lab-Dup**	**RDL**	**QC Batch**
Inorganics					
pH	pH	8.16			4463961
Total Suspended Solids	mg/L	ND	ND	10	4463805
Petroleum Hydrocarbons					
Total Oil & Grease	mg/L	0.70		0.50	4464294

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not detected

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B675015
Report Date: 2016/04/21

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: TC

GENERAL COMMENTS

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

Package 1	13.7°C

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B675015
Report Date: 2016/04/21

QUALITY ASSURANCE REPORT

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: TC

			SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
4463805	Total Suspended Solids	2016/04/19			ND, RDL=10	mg/L	NC	25	100	85 - 115
4463961	pH	2016/04/20	101	98 - 103			0.57	N/A		
4464294	Total Oil & Grease	2016/04/20	98	85 - 115	ND, RDL=0.50	mg/L	1.5	25		

N/A = Not Applicable

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

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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.

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 (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B675015
Report Date: 2016/04/21

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: TC

VALIDATION SIGNATURE PAGE

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

Cristina Carriere

Cristina Carriere, Scientific Services

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, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

IMMEDIATE TAT

Maxxam Analytics International Corporation o/a Maxxam Analytics
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel (905) 817-5700 Toll-Free (800) 563-6266 Fax (905) 817-5777 www.maxxam.ca

CHAIN OF CUSTODY RECORD

Page of

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#12323 Golder Associates Ltd	Company Name:		Quotation #:	B52596	Maxxam Job #:	Bottle Order #:
Attention:	Central Accounting	Attention:	Dawn Hoyle	P.O. #:			554700
Address:	121 Commerce Park Drive Unit L Barrie ON L4N 8X1	Address:		Project:	1407634	COC #:	Project Manager:
Tel:	(705) 722-4492 Fax: (705) 722-3786	Tel:	Fax:	Project Name:		C#554700-07-01	Ema Gitej
Email:	AccountsPayable_Maxxam@golder.com, Patricia_Cha	Email:	Dawn_Hoyle@golder.com	Site #:	MCCARTHY		
				Sampled By:			

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)	Other Regulations	Special Instructions
☐ Table 1 ☐ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ For RSC ☐ Table ___	☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ___ ☐ PWQO ☐ Other ___	

Include Criteria on Certificate of Analysis (Y/N)? ___

ANALYSIS REQUESTED (PLEASE BE SPECIFIC):

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	Total Suspended Solids	Total Oil and Grease	Phenols (4AAP)	pH	# of Bottles	Comments
1	554700	POND	Apr 14/16	12:00pm	SW	✓	✓	✓	✓	✓		
2												
3												
4												
5												
6												
7												
8												
9												
10												

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

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.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___
Rush Confirmation Number: ___ *(call lab for #)*

15-Apr-16 10:25
Ema Gitej
B675015
RGN ENV-953

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Teresa Cronk Teresa Cronk	16/04/14		RACHEL DENIN	2016/04/15	10:25	

Laboratory Use Only				
Time Sensitive	Temperature (°C) on Receipt	Custody Seal	Yes	No
	14/14/13 OH ICE	Present	✓	
		Intact	✓	

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxam , Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

Maxxam
A Bureau Veritas Group Company

Your Project #: 1407634
Site#: 1407634
Site Location: MCCARTHY
Your C.O.C. #: 554700-09-01

Attention:Dawn Hoyle/Jamie Bonany

Golder Associates Ltd
121 Commerce Park Drive
Unit L
Barrie, ON
L4N 8X1

Report Date: 2016/04/28
Report #: R3975834
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B680301
Received: 2016/04/22, 09:40

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Animal and Vegetable Oil & Grease	1	N/A	2016/04/28	CAM SOP-00326	EPA1664B m,SM5520B m
Total Oil and Grease	1	2016/04/27	2016/04/28	CAM SOP-00326	EPA1664B m,SM5520A m
pH	1	N/A	2016/04/25	CAM SOP-00413	SM 4500H+ B m
Phenols (4AAP)	1	N/A	2016/04/26	CAM SOP-00444	OMOE E3179 m
TPH (Heavy Oil) (1)	1	2016/04/27	2016/04/28	CAM SOP-00326	EPA1664B m,SM5520F m
Low Level Total Suspended Solids	1	N/A	2016/04/27	CAM SOP-00428	SM 22 2540D m

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) Note: TPH (Heavy Oil) is equivalent to Mineral / Synthetic Oil & Grease

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.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B680301
Report Date: 2016/04/28

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: TC

RESULTS OF ANALYSES OF WATER

Maxxam ID		CFT576		
Sampling Date		2016/04/21 12:00		
COC Number		554700-09-01		
	UNITS	**554700-POND**	**RDL**	**QC Batch**
Calculated Parameters				
Total Animal/Vegetable Oil and Grease	mg/L	0.80	0.50	4468384
Inorganics				
pH	pH	8.27		4471505
Phenols-4AAP	mg/L	ND	0.0010	4470935
Total Suspended Solids	mg/L	4	2	4472721
Petroleum Hydrocarbons				
Total Oil & Grease	mg/L	0.80	0.50	4475774
Total Oil & Grease Mineral/Synthetic	mg/L	ND	0.50	4475775

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B680301
Report Date: 2016/04/28

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: TC

GENERAL COMMENTS

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

Package 1	4.0°C

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B680301
Report Date: 2016/04/28

QUALITY ASSURANCE REPORT

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: TC

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
4470935	Phenols-4AAP	2016/04/26	93	80 - 120	94	85 - 115	ND, RDL=0.0010	mg/L	NC	20		
4471505	pH	2016/04/25			102	98 - 103			0.13	N/A		
4472721	Total Suspended Solids	2016/04/27					ND,RDL=1	mg/L	0	25	97	85 - 115
4475774	Total Oil & Grease	2016/04/28			93	85 - 115	ND, RDL=0.50	mg/L	5.0	25		
4475775	Total Oil & Grease Mineral/Synthetic	2016/04/28			95	85 - 115	ND, RDL=0.50	mg/L	1.1	25		

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.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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.

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 (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B680301
Report Date: 2016/04/28

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: TC

VALIDATION SIGNATURE PAGE

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

Cristina Carriere

Cristina Carriere, Scientific Services

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, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

IMMEDIATE TEST

Maxxam
A Bureau Veritas Group Company

Maxxam Analytics International Corporation o/a Maxxam Analytics
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel:(905) 817-5700 Toll-Free:(800) 563-6266 Fax:(905) 817-5777 www.maxxam.ca

CHAIN OF CUSTODY RECORD

Page of

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#12323 Golder Associates Ltd COCO PAVING	Company Name:		Quotation #:	B52596	Maxxam Job #:	Bottle Order #:
Attention:	Central Accounting 449 Wilson AV	Attention:	Dawn Hoyle	P.O. #:			554700
Address:	121 Commerce Park Drive Unit L	Address:		Project:	1407634	COC #:	Project Manager:
	Barrie ON L4N 8X1 email tcronk@cocogroup.com			Project Name:			
Tel:	(705) 722-4492 Fax: (705) 722-3786	Tel:	Fax:	Site #:	MCCARTHY	C#554700-09-01	Ema Gitej
Email:	AccountsPayable_Maxxam@golder.com, Patricia_Cha	Email:	Dawn_Hoyle@golder.com	Sampled By:			

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)	Other Regulations	Special Instructions
☐ Table 1 ☐ Res/Park ☐ Medium/Fine	☐ CCME ☐ Sanitary Sewer Bylaw	
☐ Table 2 ☐ Ind/Comm ☐ Coarse	☐ Reg 558 ☐ Storm Sewer Bylaw	
☐ Table 3 ☐ Agri/Other ☐ For RSC	☐ MISA Municipality	
☐ Table ___	☐ PWQO	
	☐ Other	

Include Criteria on Certificate of Analysis (Y/N)? ____

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

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.

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	Field Filtered (please circle): Metals / Hg / Cr VI	Total Suspended Solids	Total Oil and Grease	Phenols (4AAP)	pH	PH					# of Bottles	* Comments
1	554700	POND	Apr.12/21	12:00	SW	N/A	✓	✓	✓	✓	✓						
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

22-Apr-16 09:40
Ema Gitej
B680301
AKP ENV-1173

* 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				
Teresa Cronk	16/04/21	12:00	~~AMA~~ AMA PATEL	2016/04/22	09:40		Time Sensitive	Temperature (°C) on Receipt	Custody Seal	Yes	No
Teresa Cronk	16/04/21	1200						4 1 4 1 4	Present		✓
									Intact		✓

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

Your Project #: 1407634
Site Location: MCCARTHY
Your C.O.C. #: 554700-06-01

Attention:Dawn Hoyle/Jamie Bonany

Golder Associates Ltd
121 Commerce Park Drive
Unit L
Barrie, ON
L4N 8X1

Report Date: 2016/05/06
Report #: R3984446
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B686084
Received: 2016/04/29, 10:30

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Total Oil and Grease	1	2016/05/04	2016/05/04	CAM SOP-00326	EPA1664B m,SM5520A m
pH	1	N/A	2016/04/30	CAM SOP-00413	SM 4500H+ B m
Phenols (4AAP)	1	N/A	2016/05/04	CAM SOP-00444	OMOE E3179 m
Total Suspended Solids	1	N/A	2016/05/02	CAM SOP-00428	SM 22 2540D m

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.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ema Gitej, Senior Project Manager
Email: EGitej@maxxam.ca
Phone# (905)817-5829
==========
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 Job #: B686084
Report Date: 2016/05/06

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: RT

RESULTS OF ANALYSES OF WATER

Maxxam ID		CGV506		
Sampling Date		2016/04/28 12:30		
COC Number		554700-06-01		
	UNITS	**POND**	**RDL**	**QC Batch**
Inorganics				
pH	pH	8.29		4480069
Phenols-4AAP	mg/L	ND	0.0010	4479771
Total Suspended Solids	mg/L	ND	10	4481326
Petroleum Hydrocarbons				
Total Oil & Grease	mg/L	ND	0.50	4483641

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B686084
Report Date: 2016/05/06

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: RT

GENERAL COMMENTS

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

Package 1	5.3°C

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B686084
Report Date: 2016/05/06

QUALITY ASSURANCE REPORT

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: RT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
4479771	Phenols-4AAP	2016/05/04	95	80 - 120	102	85 - 115	ND, RDL=0.0010	mg/L	NC	20		
4480069	pH	2016/04/30			102	98 - 103			0.16	N/A		
4481326	Total Suspended Solids	2016/05/02					ND, RDL=10	mg/L	NC	25	99	85 - 115
4483641	Total Oil & Grease	2016/05/04	93	75 - 125	96	85 - 115	ND, RDL=0.50	mg/L	5.2	25		

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.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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.

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 (one or both samples < 5x RDL).

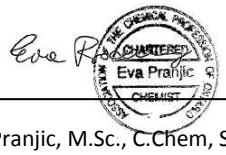
Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B686084
Report Date: 2016/05/06

Golder Associates Ltd
Client Project #: 1407634
Site Location: MCCARTHY
Sampler Initials: RT

VALIDATION SIGNATURE PAGE

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



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

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, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

IMMEDIATE TEST

Maxxam

Maxxam Analytics International Corporation o/a Maxxam Analytics
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel (905) 817-5700 Toll-Free (800) 563-6266 Fax (905) 817-5777 www.maxxam.ca

CHAIN OF CUSTODY RECORD

Page of

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#12323 Golder Associates Ltd	Company Name:		Quotation #:	B52596	Maxxam Job #:	Bottle Order #: 554700
Attention:	Central Accounting	Attention:	Dawn Hoyle	P.O. #:			
Address:	121 Commerce Park Drive Unit L Barrie ON L4N 8X1	Address:		Project:	1407634	COC #: C#554700-06-01	Project Manager: Ema Gitej
Tel:	(705) 722-4492 Fax: (705) 722-3786	Tel:	Fax:	Project Name:			
Email:	AccountsPayable_Maxxam@golder.com, Patricia_Cha	Email:	Dawn_Hoyle@golder.com	Site #:	MCCARTHY		
				Sampled By:	Robert Tooze		

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)	Other Regulations	Special Instructions
☐ Table 1 ☐ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ For RSC ☐ Table ___	☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ___ ☐ PWQO ☐ Other ___	

Include Criteria on Certificate of Analysis (Y/N)? ___

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

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.

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	Field Filtered (please circle): Metals / Hg / Cr VI	Total Suspended Solids	Total Oil and Grease	Phenols (4AAP)	pH	H A	# of Bottles	Comments
1	554700	POND	Apr.28	1230pm	SW	N/A	✓	✓	✓	✓	✓		
2													
3													
4													
5													
6													
7													
8													
9													
10													

29-Apr-16 10:30
Ema Gitej
B686084
SEL ENV-857

* 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: Time Sensitive	Temperature (°C) on Receipt	Custody Seal	Yes	No
Teresa Cronk	Apr 28/16	100pm	RACHEL DEVLIN	2016/04/28	10:30			0/5/5	Present		✓
Teresa Cronk	Apr 28/16	100pm		2016/04/29					Intact		✓

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: GOLDER ASSOCIATES LTD.
121 COMMERCE PARK DRIVE, UNIT L
BARRIE, ON L4N8X1
(705) 722-4492

ATTENTION TO: Dawn Hoyle

PROJECT: 1407634

AGAT WORK ORDER: 16T081982

ECOTOX ANALYSIS REVIEWED BY: Virginie Bérubé, biologiste

DATE REPORTED: Apr 18, 2016

PAGES (INCLUDING COVER): 5

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*NOTES

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

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 16T081982

PROJECT: 1407634

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Dawn Hoyle

SAMPLING SITE:McCarthy (Coco)

SAMPLED BY:AJM

Daphnia magna toxicity - single concentration

DATE RECEIVED: 2016-04-01

DATE REPORTED: 2016-04-18

				SAMPLE DESCRIPTION:	Pond
				SAMPLE TYPE:	Water
				DATE SAMPLED:	3/31/2016
Parameter	Unit	G / S	RDL	7468594	
Mortality 100% v/v	% mortality-48h			0	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

7468594 Refer to the annex for analysis details.

Certified By:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 16T081982

PROJECT: 1407634

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Dawn Hoyle

SAMPLING SITE:McCarthy (Coco)

SAMPLED BY:AJM

Rainbow trout toxicity - single concentration

DATE RECEIVED: 2016-04-01

DATE REPORTED: 2016-04-18

				SAMPLE DESCRIPTION:	Pond
				SAMPLE TYPE:	Water
				DATE SAMPLED:	3/31/2016
Parameter	Unit	G / S	RDL	7468594	
Mortality 100% v/v	% mortality-96h			0	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

7468594 Refer to the annex for analysis details.

Certified By:

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 16T081982

PROJECT: 1407634

ATTENTION TO: Dawn Hoyle

SAMPLING SITE:McCarthy (Coco)

SAMPLED BY:AJM

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
ECOTOX Analysis			
Mortality 100% v/v			NA

AGAT Laboratories
5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
www.agatlabs.com webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water intended for human consumption)

Laboratory Use Only

Work Order #: 16T081982

Cooler Quantity: 1 Pail

Arrival Temperatures:

Custody Seal Intact: ☐Yes ☐No ☐N/A

Notes:

Report Information:

Company: Golder Associates Ltd.
Contact: Dawn Hoyle
Address: 121 Commerce Park Drive Unit L
Phone: 705-722-4492 Fax: 705-722-3786

Reports to be sent to:

1. Email: Dawn_Hoyle@golder.com
2. Email: Jamie_Bonny@golder.com

Regulatory Requirements:

☐ No Regulatory Requirement

(Please check all applicable boxes)

☐ Regulation 153/04
Table ____ *Indicate One*
☐ Ind/Com
☐ Res/Park
☐ Agriculture

Soil Texture *(Check One)*
☐ Coarse
☐ Fine

☐ Sewer Use
☐ Sanitary
☐ Storm

Region ____ *Indicate One*

☐ Regulation 558
☐ CCME
☒ Prov. Water Quality Objectives (PWQO)
☐ Other ____ *Indicate One*

Is this submission for a **Record of Site Condition?** ☐ Yes ☒ No

Report Guideline on Certificate of Analysis ☐ Yes ☒ No

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ 1 Business Day

OR Date Required (Rush Surcharges May Apply): ____

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

Project Information:

Project: 1407634
Site Location: McCarthy (Coco)
Sampled By: AJM
AGAT Quote #: 60738

Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company: Golder Associates
Contact: Patti Chapple
Address: 121 Commerce Park Dr. Unit L Barrie ON
Email: Patricia_Chapple@golder.com

Sample Matrix Legend

B	Biota
GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Metals and Inorganics	Metal Scan	Hydride Forming Metals	Client Custom Metals	(Check Applicable) ORPs: ☐B-HWS ☐Cl ☐CN ☐Cr^{6+} ☐EC ☐FOC ☐NO_3/NO_2 ☐Total N ☐Hg ☐pH ☐SAR	Nutrients: ☐TP ☐NH_3 ☐TKN ☐NO_3 ☐NO_2 ☐NO_3/NO_2	Volatiles: ☐VOC ☐BTEX ☐THM	CCME Fractions 1 to 4	ABNs	PAHs	Chlorophenols	PCBs	Organochlorine Pesticides	TCLP Metals/Inorganics	Sewer Use	X Rainbow & Daphnia Simple C
Pond.	31 Mar 16	10:00	1	SW																X

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Dawn Hoyle Hoyle.	31 march 16	2:00	Rou	2016-4-1	8:54
Rou	2016-4-1	5:14	Shazmin A Apr 1/16.	5:14	

Page 1 of 1

N°: T000829

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: GOLDER ASSOCIATES LTD.
121 COMMERCE PARK DRIVE, UNIT L
BARRIE, ON L4N8X1
(705) 722-4492

ATTENTION TO: Dawn Hoyle

PROJECT: 1407634

AGAT WORK ORDER: 16T090402

ECOTOX ANALYSIS REVIEWED BY: Virginie Bérubé, biologiste

DATE REPORTED: May 11, 2016

PAGES (INCLUDING COVER): 5

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*NOTES

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

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 16T090402

PROJECT: 1407634

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Dawn Hoyle

SAMPLING SITE:

SAMPLED BY:DEH

Daphnia Lethality (D. magna) UC-48h

DATE RECEIVED: 2016-05-02

DATE REPORTED: 2016-05-11

				SAMPLE DESCRIPTION:	Pond
				SAMPLE TYPE:	Water
				DATE SAMPLED:	4/29/2016
Parameter	Unit	G / S	RDL	7524095	
Mortality 100% v/v	% mortality-48h			3	
Conclusion				NON LETHAL	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

7524095 Refer to the annex for analysis details.
Conclusion Legend:
Non lethal: mortality: 10% and less
Acceptable: mortality: between 10% and 50%
Acute lethality: more than 50%

Certified By:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 16T090402

PROJECT: 1407634

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Dawn Hoyle

SAMPLING SITE:

SAMPLED BY:DEH

Rainbow Trout Lethality (O. mykiss) UC-96h

DATE RECEIVED: 2016-05-02

DATE REPORTED: 2016-05-11

				SAMPLE DESCRIPTION:	Pond
				SAMPLE TYPE:	Water
				DATE SAMPLED:	4/29/2016
Parameter	Unit	G / S	RDL	7524095	
Mortality 100% v/v	% mortality-96h			0	
Conclusion				NON LETHAL	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

7524095 Refer to the annex for analysis details.
Conclusion Legend:
Non lethal: mortality: 10% and less
Acceptable: mortality: between 10% and 50%
Acute lethality: more than 50%

Certified By:

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 16T090402

PROJECT: 1407634

ATTENTION TO: Dawn Hoyle

SAMPLING SITE:

SAMPLED BY:DEH

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
ECOTOX Analysis			
Mortality 100% v/v			NA
Conclusion			
Mortality 100% v/v	ECO-152-20000F	SPE1/RM/13	

AGAT Laboratories
5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water intended for human consumption)

Laboratory Use Only

Work Order #: 16T090402

Cooler Quantity:

Arrival Temperatures: 9.6

Custody Seal Intact: ☐Yes ☐No ☐N/A

Notes:

Report Information:

Company: Golder Associates Ltd.
Contact: Dawn Hayle
Address: 121 Commerce Park Dr. Unit L
Barrie ON L4N 8X1
Phone: 705-722-4492 Fax: 705-722-3786
Reports to be sent to:
1. Email: dawn_hayle@golder.com
2. Email: jamie_bonany@golder.com

Regulatory Requirements:

☐ No Regulatory Requirement

(Please check all applicable boxes)

☐ Regulation 153/04
Table ____ *Indicate One*
☐ Ind/Com
☐ Res/Park
☐ Agriculture

Soil Texture *(Check One)*
☐ Coarse
☐ Fine

☐ Sewer Use
☐ Sanitary
☐ Storm

Region ____ *Indicate One*

☐ Regulation 558
☐ CCME
☒ Prov. Water Quality Objectives (PWQO)
☐ Other
Indicate One

Is this submission for a **Record of Site Condition?** ☐ Yes ☒ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☒ No

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ 1 Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

Project Information:

Project: 1407634
Site Location: McCarthy (Brechin, ON)
Sampled By: DEH
AGAT Quote #: 60738 PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company: Golder Associates Ltd.
Contact: Patti Chapple
Address: 121 Commerce Park Dr. Unit L
Email: Patricia-Chapple@golder.com

Sample Matrix Legend

B	Biota
GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Metals and Inorganics	Metal Scan	Hydride Forming Metals	Client Custom Metals	(Check Applicable) ORPs: ☐B-HWS ☐Cl ☐CN ☐Cr^{6+} ☐EC ☐FOC ☐NO_3/NO_2 ☐Total N ☐Hg ☐pH ☐SAR	Nutrients: ☐TP ☐NH_3 ☐TKN ☐NO_3 ☐NO_2 ☐NO_3/NO_2	Volatiles: ☐VOC ☐BTEX ☐THM	CCME Fractions 1 to 4	ABNs	PAHs	Chlorophenols	PCBs	Organochlorine Pesticides	TCLP Metals/Inorganics	Sewer Use	Rainbow trout & Daphnia Simple C.
Pond.	29-Apr-16	12:00	1	SW																	X

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Dawn Hayle	29-Apr-16	6:00	Shawn	May 2/2016	9:15am
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page 1 of 1

N°: T 018136

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

As a global, employee-owned organisation with over 50 years of experience, Golder Associates is driven by our purpose to engineer earth's development while preserving earth's integrity. We deliver solutions that help our clients achieve their sustainable development goals by providing a wide range of independent consulting, design and construction services in our specialist areas of earth, environment and energy.

For more information, visit golder.com

Africa	+ 27 11 254 4800
Asia	+ 86 21 6258 5522
Australasia	+ 61 3 8862 3500
Europe	+ 44 1628 851851
North America	+ 1 800 275 3281
South America	+ 56 2 2616 2000

solutions@golder.com
www.golder.com

Golder Associates Ltd.
121 Commerce Park Drive, Unit L
Barrie, Ontario, L4N 8X1
Canada
T: +1 (705) 722 4492

Golder Associates