May 2018

MCCARTHY QUARRY

Environmental Compliance Approval Quarterly Monitoring Report February 2018 to May 2018

Submitted to:
Cindy Hood
Ontario Ministry of Environment
Barrie District Office
1203-54 Cedar Pointe Drive
Barrie ON L4N 5R7

REPORT

Report Number: 1407634

Distribution:

1 Copy - Ontario Ministry of Environment Barrie District Office
1 Copy - Coco Aggregates Inc.
1 Copy - Golder Associates Ltd.

Golder Associates

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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 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 QUARRY DISCHARGE MONITORING RESULTS

Weekly monitoring of the quarry discharge 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 quarry discharge 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 quarry discharge samples (Section 7(2)) are collected by staff at the McCarthy Quarry. The weekly water quality samples are 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 2018. Additionally, the monthly lethality samples were collected by Golder and sent to AGAT Laboratories Ltd.

Quarry staff reported there was no discharge from the McCarthy Pond or the pond was frozen in February to April 2018 and therefore the weekly water quality sample was not collected.

4.0 QUARRY DISCHARGE MONITORING RESULTS

All laboratory certificates of analysis for the February 2018 to May 2018 monitoring period are included in Appendix B. Results of the quarry discharge monitoring are summarize below:

- The quarry discharge between February 2018 and May 2018 was found to be non-lethal to rainbow trout and Daphnia magna (Table 1); and,
- The discharge rate between February 2018 and May 2018 was below the permitted rate of 4,545 L/min (76 L/sec) (Table 2).

5.0 SUMMARY

- All samples met the daily and monthly concentration limits of the ECA No. 4731-987KM8.
- The quarry discharge was non-lethal to rainbow trout and Daphnia magna at all times. Zero rainbow trout and zero Daphnia died during lethality testing during the past quarter.
- The discharge rate between February 2018 and May 2018 was below the permitted rate of 4,545 L/min.

Report Signature Page

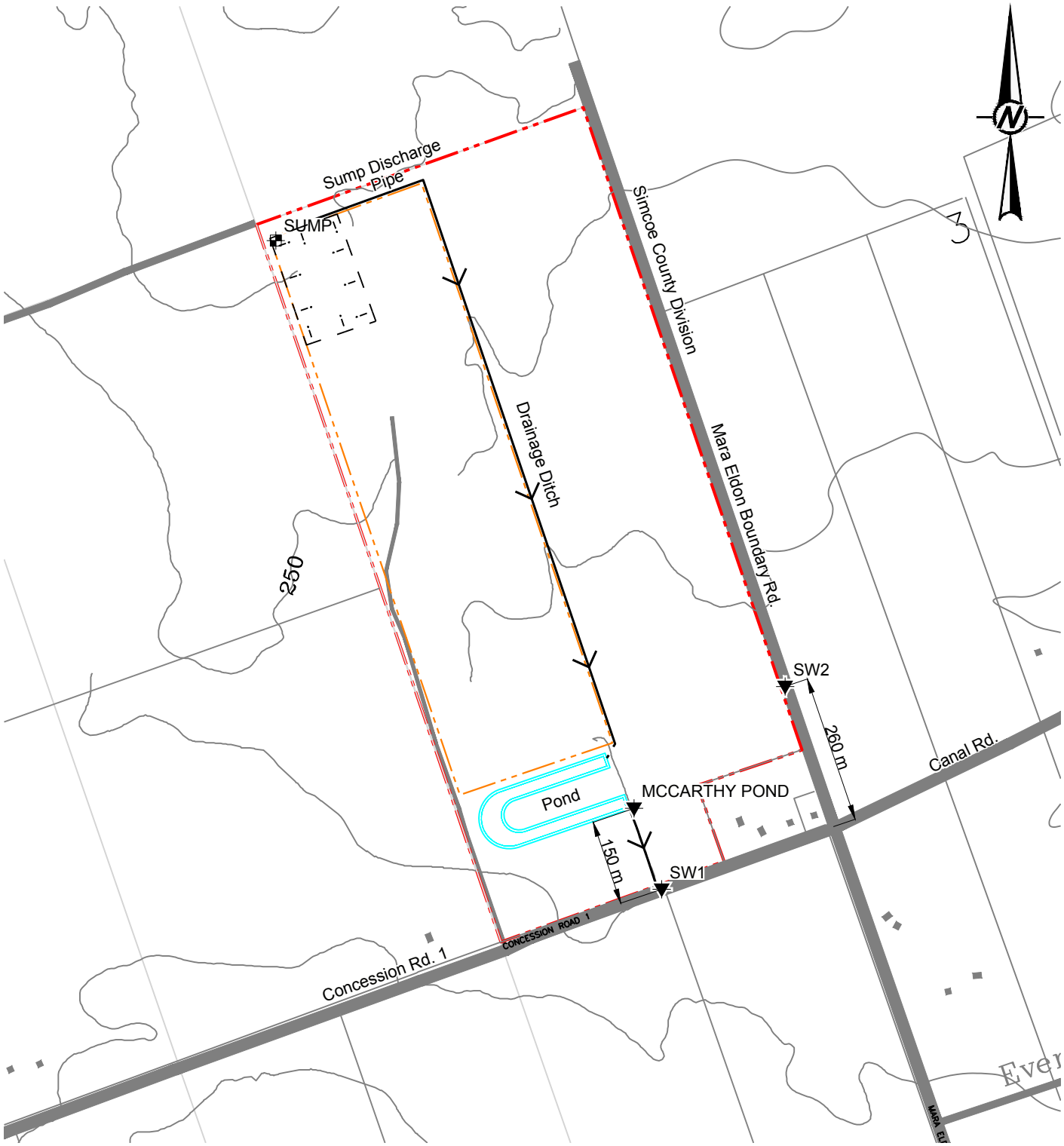
GOLDER ASSOCIATES LTD.

Jamie Bonany, M.A.Sc.
Project Scientist

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

JEB/JAE/plc

FIGURE



LEGEND

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

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

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PREPARED	STB
DESIGN	
REVIEW	
APPROVED	

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

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TABLES

Table 1: Lethality Monitoring at McCarthy Pond

	Unit	Mortality Limit	McCarthy Quarry		
Sample ID			**Pond**		
Date			**22-Feb-18**	**29-Mar-18**	**30-Apr-18**
Daphnia Magna	% Mortality Rate*	<50%	0	0	0
Rainbow Trout	% Mortality Rate*	<50%	0	0	0

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

Table 2: 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-18	NO PUMP		0	0	-	-	-
2-Feb-18	NO PUMP		0	0	-	-	-
3-Feb-18	NO PUMP		0	0	-	-	-
4-Feb-18	NO PUMP		0	0	-	-	-
5-Feb-18	7AM	5PM	36000	600	1,260,000	35	2,100
6-Feb-18	9AM	5PM	28800	480	1,008,000	35	2,100
7-Feb-18	NO PUMP		0	0	-	-	-
8-Feb-18	NO PUMP		0	0	-	-	-
9-Feb-18	7AM	3PM	28800	480	1,008,000	35	2,100
10-Feb-18	NO PUMP		0	0	-	-	-
11-Feb-18	NO PUMP		0	0	-	-	-
12-Feb-18	NO PUMP		0	0	-	-	-
13-Feb-18	NO PUMP		0	0	-	-	-
14-Feb-18	8AM	5PM	32400	540	1,134,000	35	2,100
15-Feb-18	7AM	5PM	36000	600	1,260,000	35	2,100
16-Feb-18	7AM	3PM	28800	480	1,008,000	35	2,100
17-Feb-18	NO PUMP		0	0	-	-	-
18-Feb-18	NO PUMP		0	0	-	-	-
19-Feb-18	NO PUMP		0	0	-	-	-
20-Feb-18	7AM	5PM	36000	600	1,260,000	35	2,100
21-Feb-18	NO PUMP		0	0	-	-	-
22-Feb-18	7AM	5PM	36000	600	1,260,000	35	2,100
23-Feb-18	NO PUMP		0	0	-	-	-
24-Feb-18	NO PUMP		0	0	-	-	-
25-Feb-18	NO PUMP		0	0	-	-	-
26-Feb-18	NO PUMP		0	0	-	-	-
27-Feb-18	NO PUMP		0	0	-	-	-
28-Feb-18	NO PUMP		0	0	-	-	-
1-Mar-18	7AM	5PM	36000	600	1,260,000	35	2,100
2-Mar-18	7AM	5PM	36000	600	1,260,000	35	2,100
3-Mar-18	NO PUMP		0	0	-	-	-
4-Mar-18	NO PUMP		0	0	-	-	-
5-Mar-18	7AM	5PM	36000	600	1,260,000	35	2,100
6-Mar-18	7AM	5PM	36000	600	1,260,000	35	2,100
7-Mar-18	NO PUMP		0	0	-	-	-
8-Mar-18	8AM	5PM	32400	540	1,134,000	35	2,100
9-Mar-18	7AM	3PM	28800	480	1,008,000	35	2,100
10-Mar-18	NO PUMP		0	0	-	-	-

Table 2: 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**
11-Mar-18	NO PUMP		0	0	-	-	-
12-Mar-18	7AM	5PM	36000	600	1,260,000	35	2,100
13-Mar-18	7AM	5PM	36000	600	1,260,000	35	2,100
14-Mar-18	7AM	5PM	36000	600	1,260,000	35	2,100
15-Mar-18	7AM	5PM	36000	600	1,260,000	35	2,100
16-Mar-18	7AM	3PM	28800	480	1,008,000	35	2,100
17-Mar-18	NO PUMP		0	0	-	-	-
18-Mar-18	NO PUMP		0	0	-	-	-
19-Mar-18	7AM	5PM	36000	600	1,260,000	35	2,100
20-Mar-18	NO PUMP		0	0	-	-	-
21-Mar-18	7AM	5PM	36000	600	1,260,000	35	2,100
22-Mar-18	NO PUMP		0	0	-	-	-
23-Mar-18	NO PUMP		0	0	-	-	-
24-Mar-18	NO PUMP		0	0	-	-	-
25-Mar-18	NO PUMP		0	0	-	-	-
26-Mar-18	NO PUMP		0	0	-	-	-
27-Mar-18	NO PUMP		0	0	-	-	-
28-Mar-18	NO PUMP		0	0	-	-	-
29-Mar-18	7AM	5PM	36000	600	1,260,000	35	2,100
30-Mar-18	7AM	5PM	36000	600	1,260,000	35	2,100
31-Mar-18	NO PUMP		0	0	-	-	-
1-Apr-18	NO PUMP		0	0	-	-	-
2-Apr-18	NO PUMP		0	0	-	-	-
3-Apr-18	7AM	5PM	36000	600	1,260,000	35	2,100
4-Apr-18	7AM	5PM	36000	600	1,260,000	35	2,100
5-Apr-18	7AM	5PM	36000	600	1,260,000	35	2,100
6-Apr-18	7AM	5PM	36000	600	1,260,000	35	2,100
7-Apr-18	NO PUMP		0	0	-	-	-
8-Apr-18	NO PUMP		0	0	-	-	-
9-Apr-18	7AM	5PM	36000	600	1,260,000	35	2,100
10-Apr-18	NO PUMP		0	0	-	-	-
11-Apr-18	7AM	5PM	36000	600	1,260,000	35	2,100
12-Apr-18	7AM	5PM	36000	600	1,260,000	35	2,100
13-Apr-18	7AM	3PM	28800	480	1,008,000	35	2,100
14-Apr-18	NO PUMP		0	0	-	-	-
15-Apr-18	NO PUMP		0	0	-	-	-
16-Apr-18	7AM	5PM	36000	600	1,260,000	35	2,100

Table 2: 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**
17-Apr-18	7AM	5PM	36000	600	1,260,000	35	2,100
18-Apr-18	7AM	5PM	36000	600	1,260,000	35	2,100
19-Apr-18	7AM	5PM	36000	600	1,260,000	35	2,100
20-Apr-18	7AM	3PM	28800	480	1,008,000	35	2,100
21-Apr-18				0	-	-	-
22-Apr-18				0	-	-	-
23-Apr-18				0	-	-	-
24-Apr-18	7AM	5PM	36000	600	1,260,000	35	2,100
25-Apr-18	7AM	5PM	36000	600	1,260,000	35	2,100
26-Apr-18	7AM	5PM	36000	600	1,260,000	35	2,100
27-Apr-18	7AM	4PM	32400	540	1,134,000	35	2,100
28-Apr-18				0	-	-	-
29-Apr-18				0	-	-	-
30-Apr-18	7AM	5PM	36000	600	1,260,000	35	2,100

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

AGAT Laboratories

9770 ROUTE TRANSCANADIENNE
ST. LAURENT, QUEBEC
CANADA H4S 1V9
TEL (514)337-1000
FAX (514)333-3046
http://www.agatlabs.com

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

ATTENTION TO: **Jamie Bonany**

PROJECT: **1407634**

AGAT WORK ORDER: **18M314072**

ECOTOX ANALYSIS REVIEWED BY: **Marie-Lou Cuerrier, Lab Coordinator**

DATE REPORTED: **2018-03-15**

VERSION*: **1**

PAGES (INCLUDING COVER): **4**

Should you require any information regarding this analysis please contact your client services representative at (514) 337-1000

*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

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ST. LAURENT, QUEBEC
CANADA H4S 1V9
TEL (514)337-1000
FAX (514)333-3046
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 18M314072

PROJECT: 1407634

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Jamie Bonany

SAMPLED BY:

SAMPLING SITE:

Daphnia Lethality (D.magna) single concentration-48h

DATE RECEIVED: 2018-02-23

DATE REPORTED: 2018-03-15

				SAMPLE DESCRIPTION:	POND
				SAMPLE TYPE:	SW
				DATE SAMPLED:	2018-02-22
Parameter	**Unit**	**G / S**	**RDL**	**9082439**	
Mortality 100% v/v	% mortality-48h			0	
Acute Lethality				NO	

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

9082439 Refer to the annex for analysis details.
Conclusion legend:
Acute lethality: NO (mortality: 50% or less)
Acute lethality: YES (mortality: more than 50%

Certified By:

AGAT Laboratories

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ST. LAURENT, QUEBEC
CANADA H4S 1V9
TEL (514)337-1000
FAX (514)333-3046
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 18M314072

PROJECT: 1407634

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Jamie Bonany

SAMPLED BY:

SAMPLING SITE:

Rainbow Trout Lethality (O. mykiss) single concentration-96h

DATE RECEIVED: 2018-02-23

DATE REPORTED: 2018-03-15

				SAMPLE DESCRIPTION:	POND
				SAMPLE TYPE:	SW
				DATE SAMPLED:	2018-02-22
Parameter	**Unit**	**G / S**	**RDL**	**9082439**	
Mortality 100% v/v	% mortality-96h			0	
Acute Lethality				NO	

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

9082439 Refer to the annex for analysis details.
Conclusion legend:
Acute lethality: NO (mortality: 50% or less)
Acute lethality: YES (mortality: more than 50%)

Certified By:

AGAT Laboratories

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ST. LAURENT, QUEBEC
CANADA H4S 1V9
TEL (514)337-1000
FAX (514)333-3046
http://www.agatlabs.com

Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 18M314072

PROJECT: 1407634

ATTENTION TO: Jamie Bonany

SAMPLED BY:

SAMPLING SITE:

PARAMETER	DATE PREPARED	DATE ANALYZED	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
ECOTOX Analysis					
Mortality 100% v/v					
Acute Lethality					
Mortality 100% v/v			ECO-152-20000F	EPS1/RM/13	
Acute Lethality					

AGAT Laboratories

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TEL (514)337-1000
FAX (514)333-3046
http://www.agatlabs.com

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

ATTENTION TO: **Jamie Bonany**

PROJECT: **1407634**

AGAT WORK ORDER: **18M325121**

ECOTOX ANALYSIS REVIEWED BY: **Virginie Bérubé, biologiste**

DATE REPORTED: **2018-04-11**

VERSION*: **1**

PAGES (INCLUDING COVER): **4**

Should you require any information regarding this analysis please contact your client services representative at (514) 337-1000

*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

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ST. LAURENT, QUEBEC
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TEL (514)337-1000
FAX (514)333-3046
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 18M325121

PROJECT: 1407634

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Jamie Bonany

SAMPLED BY:

SAMPLING SITE:

Daphnia Lethality (D. magna) LC50-48h

DATE RECEIVED: 2018-03-31

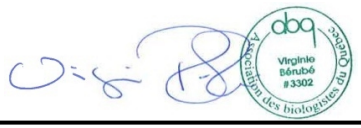
DATE REPORTED: 2018-04-11

				SAMPLE TYPE:	SW
				DATE SAMPLED:	2018-03-29
Parameter	Unit	G / S	RDL		9157695
Mortality 100% v/v	% mortality-48h				0
LC50-48h	% v/v				>100
95% LCL	% v/v				NA
95% UCL	% v/v				NA
Statistics					NONE
Toxic Unit	T.U.				<1.0
Acute Lethality					NO

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

9157695 Refer to the annex for analysis details.
Acute lethality: NO (mortality: 50% or less)
Acute lethality: YES (mortality: more than 50%)

Certified By:



AGAT Laboratories

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ST. LAURENT, QUEBEC
CANADA H4S 1V9
TEL (514)337-1000
FAX (514)333-3046
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 18M325121

PROJECT: 1407634

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Jamie Bonany

SAMPLED BY:

SAMPLING SITE:

Rainbow Trout Lethality (O. mykiss) single concentration-96h

DATE RECEIVED: 2018-03-31

DATE REPORTED: 2018-04-11

				SAMPLE TYPE:	SW
				DATE SAMPLED:	2018-03-29
Parameter	Unit	G / S	RDL	9157695	
Mortality 100% v/v	% mortality-96h			0	
Acute Lethality				NO	

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

9157695 Refer to the annex for analysis details.
Acute lethality: NO (mortality: 50% or less)
Acute lethality: YES (mortality: more than 50%)

Certified By:

AGAT Laboratories
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ST. LAURENT, QUEBEC
CANADA H4S 1V9
TEL (514)337-1000
FAX (514)333-3046
http://www.agatlabs.com

Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 18M325121

PROJECT: 1407634

ATTENTION TO: Jamie Bonany

SAMPLED BY:

SAMPLING SITE:

PARAMETER	DATE PREPARED	DATE ANALYZED	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
ECOTOX Analysis					
Mortality 100% v/v					
LC50-48h				EPS1/RM/11, 05/1996; EPS1/RM/14, 12/2000	
95% LCL				EPS1/RM/11, 05/1996; EPS1/RM/14, 12/2000	
95% UCL				EPS1/RM/11, 05/1996; EPS1/RM/14, 12/2000	
Statistics				EPS1/RM/11, 05/1996; EPS1/RM/14, 12/2000	
Toxic Unit				EPS1/RM/11, 05/1996; EPS1/RM/14, 12/2000	
Acute Lethality					
Mortality 100% v/v			ECO-152-20000F	EPS1/RM/13	
Acute Lethality					

AGAT Laboratories

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TEL (514)337-1000
FAX (514)333-3046
http://www.agatlabs.com

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

ATTENTION TO: Jamie Bonany

PROJECT: 1407634

AGAT WORK ORDER: 18M335117

DATE REPORTED: 2018-05-15

VERSION*: 1

PAGES (INCLUDING COVER): 5

Should you require any information regarding this analysis please contact your client services representative at (514) 337-1000

*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

9770 ROUTE TRANSCANADIENNE
ST. LAURENT, QUEBEC
CANADA H4S 1V9
TEL (514)337-1000
FAX (514)333-3046
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 18M335117

PROJECT: 1407634

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Jamie Bonany

SAMPLED BY:

SAMPLING SITE:

Daphnia Lethality (D.magna) single concentration-48h

DATE RECEIVED: 2018-05-03

DATE REPORTED: 2018-05-15

		SAMPLE DESCRIPTION:		**POND**
		SAMPLE TYPE:		**SW**
		DATE SAMPLED:		**2018-04-30**
Parameter	**Unit**	**G / S**	**RDL**	**9217741**
Mortality 100% v/v	% mortality-48h			0
Acute Lethality				NO

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

9217741 Refer to the annex for analysis details.
Conclusion legend:
Acute lethality: NO (mortality: 50% or less)
Acute lethality: YES (mortality: more than 50%

Certified By:

AGAT Laboratories

9770 ROUTE TRANSCANADIENNE
ST. LAURENT, QUEBEC
CANADA H4S 1V9
TEL (514)337-1000
FAX (514)333-3046
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 18M335117

PROJECT: 1407634

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Jamie Bonany

SAMPLED BY:

SAMPLING SITE:

Rainbow Trout Lethality (O. mykiss) single concentration-96h

DATE RECEIVED: 2018-05-03

DATE REPORTED: 2018-05-15

			SAMPLE DESCRIPTION:	**POND**
			SAMPLE TYPE:	**SW**
			DATE SAMPLED:	**2018-04-30**
Parameter	**Unit**	**G / S**	**RDL**	**9217741**
Mortality 100% v/v	% mortality-96h			0
Acute Lethality				NO

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

9217741 Refer to the annex for analysis details.
Conclusion legend:
Acute lethality: NO (mortality: 50% or less)
Acute lethality: YES (mortality: more than 50%)

Certified By:

AGAT Laboratories

9770 ROUTE TRANSCANADIENNE
ST. LAURENT, QUEBEC
CANADA H4S 1V9
TEL (514)337-1000
FAX (514)333-3046
http://www.agatlabs.com

Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 18M335117

PROJECT: 1407634

ATTENTION TO: Jamie Bonany

SAMPLED BY:

SAMPLING SITE:

PARAMETER	DATE PREPARED	DATE ANALYZED	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
ECOTOX Analysis					
Mortality 100% v/v					
Acute Lethality					
Mortality 100% v/v			ECO-152-20000F	EPS1/RM/13	
Acute Lethality					

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 #: 18433S 117

Cooler Quantity:

Arrival Temperatures: 20.8°C.

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes:

Report Information:

Company: Golder Associates
Contact: & Jamie Bonany
Address: 121 Commerce Park Drive unit C, Barrie, ON
Phone: 705 722 4492 Fax:
Reports to be sent to:
1. Email: Jamie-bonany@golder.com
2. Email: Scott-patrick@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)

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

For 'Same Day' analysis, please contact your AGAT CPM

Project Information:

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

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

Report Guideline on Certificate of Analysis ☒ Yes ☐ No

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact: Patti Chypde
Address:
Email:

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	Field Filtered - Metals, Hg, CrVI (Y/N)	O. Reg 153: Metals and Inorganics (☐ All Metals ☐ 153 Metals (excl. Hydrides) ☐ Hydride Metals)	O. Reg 153: ORPs: ☐ B-HWS ☐ Cl⁻ ☐ CN ☐ Cr⁶⁺ ☐ EC ☐ FOC ☐ Hg ☐ pH ☐ SAR	Full Metals Scan	Regulation/Custom Metals	Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3+NO_2	Volatiles: ☐ VOC ☐ BTEX ☐ THM	CCME Fractions 1 to 4	ABNs	PAHs	PCBs: ☐ Total ☐ Aroclors	Organochlorine Pesticides	TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Sewer Use	X Single Daphnia	X Single C. Trout
POND	30-April-18	2:00 PM	1	SW																	

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
SCOTT PATRICK	30-Apr-18	8:00pm			
			SP.	18-05-01	9H00

Page 1 of 1

Nº: T 068249

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

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Europe	+ 44 1628 851851
North America	+ 1 800 275 3281
South America	+ 56 2 2616 2000

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Golder Associates