

# **APPENDIX E**

Surface Water Quality Sampling

- E-1 Surface Water Quality Sampling Protocol
- **E-2 Laboratory Results**
- E-3 In Situ Measurements
- E-4 Year 1 Surface Water Quality Sampling Results
- E-5 Year 2 Surface Water Quality Sampling Results





### E-1 Surface Water Quality Sampling Protocol





DATE June 12, 2012 Revision 1 April 25, 2013 **PROJECT No.** 12-1151-0155

- TO Jim Delaney Covanta Durham York Renewable Energy L.P.
- CC Jeff Bedard and Janice Campbell Courtice Power Partners; and Terry Winhold Golder Associates

FROM Steve Auger

EMAIL Steve\_Auger@golder.com

### DURHAM-YORK ENERGY CENTER SURFACE WATER SAMPLING PROTOCOL DURING CONSTRUCTION PERIOD – Starting June 2012 to approximately May 2014

#### 1.0 INTRODUCTION

This memorandum outlines the Surface Water Sampling protocol for the on and off-site sampling activities for the Durham-York Energy Center ('the Site') during construction activities in support of the overall Groundwater and Surface Water Sampling Monitoring Plan as per Condition 20 of the Site's Environmental Assessment Notice of Approval. The Site Plan Agreement was executed with the Corporation of the Municipality of Clarington and Regional Municipality of Durham on January 24, 2012. Since then, Site construction activities are underway. Operation for the facility is scheduled to commence in May, 2014. Golder Associates Ltd. ('Golder') performed the initial site reconnaissance for this program on May 29, 2012. Covanta Durham York Renewable Energy Limited ('Covanta') commissioned Golder to carry-out this program on May 25, 2012.

#### 2.0 SURFACE WATER SAMPLING

The surface water sampling stations (SWM-E-IN, SWM-E-OUT, SWM-W-IN SWM-W-OUT, and SW1 to SW4) for all on and off-site efforts are shown on Figure 1.

#### Frequency

At least one inter-event (dry period) surface water sampling grab will occur per season (at minimum, approximately 48 hours after a significant rainfall event of 5 mm or greater). Two more rainfall-runoff sampling grabs will occur for rainfall events of approximately 5 mm or greater.

The surface water sampling grabs will be initiated after direction is received from Covanta. The decision will occur after Covanta consults with the on-site contractor, Courtice Power Partners ('CPP', and Golder.

#### Sampling Grabs and In Situ Measurements

 Four (4), 500 mL sampling bottles will be filled at each location with surface water grabs. Two (2) of the sampling bottles from each location will be submitted to the laboratory for Total Suspended Solids ('TSS')

Golder Associates Ltd.

Tel: Fax: www.golder.com

Golder Associates: Operations in Africa, Asia, Australasia, Europe, North America and South America

and Turbidity analyses. The bottles submitted will be labelled with the appropriate analysis identified, the date and time of sampling, sampling grab location and Golder project number. An additional two (2) bottles will act as duplicates and be stored off-site at the local Golder-Whitby office until lab results are received, reviewed and discussed with Covanta. The duplicate samples will be discarded every season once this review and follow-up discussion is complete. If there is any question or concern regarding the initial laboratory results, the duplicate samples will be submitted to the laboratory for additional analysis after Covanta provides consent for this additional expense.

 In situ measurements for pH, temperature and conductivity will also be taken by Golder staff when on-site. The instrument used for these measurements will be calibrated before each use, to ensure accurate results are provided.

#### **On-Site Stormwater Management Ponds**

Grab samples will be taken during rainfall-runoff event periods at the inlet and outlet of the East and West stormwater management ('SWM') Ponds.

#### Rainfall-Runoff-Discharge Sampling

Every reasonable effort, while ensuring safety of the Golder staff, will be taken to sample during a significant rainfall-runoff event (approximately 5 mm or greater of total rainfall) after Golder receives direction to proceed from Covanta.

Grab samples at the inlet and outlet of the SWM Ponds will be taken during the rising and falling limbs of the inflow and outflow to and from these SWM Ponds, respectively. The coordination of these sample grabs will be based on experience and the specific storm characteristics (e.g., intensity, duration, total volume) and Site conditions (e.g., antecedent conditions).

#### Controlled Discharge Sampling

During a controlled pump-out sampling scenario, the East and West SWM Pond outlet stations, along with the upstream and downstream receiving swale (SW1 and SW2) and Tooley Creek grabs will be performed (at the very least) following a significant rainfall event of approximately 5 mm or greater. Considering this 'controlled' sampling scenario, it is not anticipated that inflow conditions at the SWM-E-IN and SWM-W-IN sampling locations will be suitable for grab samples. However, if there is still reasonable inflow into the ponds during these controlled discharge events, grab samples will also be taken at these locations.

#### Off-Site Receiving Swale and Tooley Creek

Grab sampling at the upstream and downstream receiving swale locations (SW1 and SW2), along with the upstream and downstream Tooley Creek stations (SW3 and SW4), will occur after all on-site sampling is complete. These samples will be taken in numerical sequence.

The following general good practices for surface water grab sampling will also be followed by Golder staff.

#### Grab Sampling Technique

Surface Water sampling will occur via a grab sample from identified, consistent sampling locations that are considered representative of 'well-mixed' surface water conditions at the sampling station. Typically, these grabs will be taken in the centre-line zone of the receiving swale or creek, or the centre of the inlet or outlet location for the SWM Ponds. These samples should be grabbed from depths slightly below the surface of the water, is the water depths at the time of sampling is accommodating (Burton and Pitt, 2002).



 Care must be taken to not to disturb the substrate at the sampling station, to avoid any increase in TSS or Turbidity measurements while sampling efforts occur. If depths are too shallow, every effort will be taken for a 'well-mixed' sample, while avoiding any disturbance (e.g., shallow sampling scoops using control bottle).

#### Field Forms and Reporting

- Golder has developed a surface water sampling field form that should be filled out in it's entirety for each station during the sampling effort (Attachment 1). Along with the recorded *in situ* measurements, visual observations will be made during the sampling periods.
- A technical memorandum will be prepared each season, outlining the surface water sampling results along with a summary of the Erosion and Sediment Control ('E&SC') weekly reviews. This memo will also highlight any additional E&SC measures recommended for consideration, if there are any concerns with surface water impacts off-site based on the surface water sampling results and/or the E&SC inspection reviews.

#### Site Photographic Record

A photographic record of conditions at the eight surface water quality sampling locations and other notable view points will developed by Golder to illustrate study area conditions during the surface water sampling visits.

#### Sample Submission to Laboratory

- Grab samples will be packaged in ice and sent to the laboratory for analysis immediately after the sampling event. Approximately two (2) bags of ice will be required to fill the cooler box provided with the bottles. Ice bags should entirely surround the sample bottles by being placed on the bottom of the cooler below the sample bottles, as well as between, on all sides and above the sample bottles. If the temperature of the bottles is below 10 °C when it is received at the laboratory, the analysis results are less reliable and this will be noted in the laboratory results.
- Golder will follow the chain-of-custody protocol from the laboratory of choice, and provide a copy of the grab sample set exchange with the laboratory to Covanta for their records.
- When analytical results are complete, they will be forwarded via e-mail to the Golder Surface Water Certified Environmental Practitioner ('CEP').

#### 3.0 HEALTH AND SAFETY

#### Site Training and Communication

All Golder staff involved with the Site's Surface Water Sampling program will receive Health and Safety orientation from CPP. As part of the training requirement, Golder staff will ensure both Workplace Hazardous Materials Information System ('WHMIS') and Fall Protection Awareness training/qualifications are current.

Upon arrival to the Site, Golder staff must back vehicles safely into a parking spot in the eastern control area near the contractors and consultants offices. Golder staff must check in with the CPP Environmental Monitor and Inspector (EMI) or Janice Campbell (CPP Health and Safety Coordinator) for a Health and Safety briefing outlining the specific Site activities and notable hazards for the day. A sign-in sheet within the CPP training must also be filled. Upon departure, a check-out confirmation with the CPP representative originally contacted, along with signing out must also occur.

Jim Delaney or Dave Haldenby (Covanta) will also be informed of each site visit by the Golder Surface Water CEP or designate ahead of the Golder team's arrival.



#### Golder Health and Safety Environment Plan

The Golder staff will be following a separate Health and Safety Environment Plan ('HaESP'), that outlines the risks and preventative strategies to ensure safety on and off Site (Attachment 2). The appropriate Health and Safety personal protection equipment for the on and off-site work include a construction hat, goggles, steel toed construction boots (while on-site), and waders for the off-site sampling work in Tooley Creek at stations SW3 and SW4.

For the surface water sampling efforts, a check-in and out contact will also be made with the Golder project manager or alternative Health & Safety point of contact for the site visit.

#### CN Railway Line

There are two sampling stations off-site (SW1 and SW2) that are located north of and in close proximity to the CN Railway line as shown on Figure 1.

The SW1 station is located just northwest of the Osbourne Road crossing, within approximately 15 m of the gate and lights signal system for the CN railway line. Golder staff should never venture south of the swale or this station. If there is any indication that a train is coming (i.e., the signal lights start flashing and the gates come down, along with horn blasting heard from a distance), the Golder sampling team will walk away from the sampling equipment and efforts to a control point along and outside of the southeastern side of the Site's perimeter fence where they will wait until the train has passed.

At the SW2 station, this sampling station has been selected so Golder staff can reach within the receiving swale to take the sample while still being north of the farmer's fence and CN Railway line right-of-way for grabs at this station.

## Attachment 1:Surface Water Sampling Field Form Attachment 2:Golder's HAESP

N.B. For Attachment 1, see Appendix E-3 in Surface Water Monitoring Program Annual Report.

Attachment 2 is not provided .

\\golder.gds\gal\markham\active\projects 2005 to 2014\2012\1151 environmental\12-1151-0155\_covanta-esc-sw-monitoring-program\reports\draft\yr3\appe\_sw sampling\e-1\_sw-sampling\_protocol\e-1\_tech-memo\_covanta-during-constr\_sw-sampling-protocol\_13'04'25.docx

#### 4.0 REFERENCES

Burton, G.A. and Pitt, R.E. (2002). Stormwater Effects Handbook: A Tool for

Watershed Managers, Scientists, and Engineers, Lewis Publishers. pp. 247-251, 307, 313,

337, 357





### **E-2 Laboratory Results**





Your Project #: 12-1151-0155 Site#: 12-1151-0155 Site Location: CONVANTA Your C.O.C. #: C#464950, C#464950-04-01

#### Attention:Steve Auger

Golder Associates Ltd 140 Renfrew Dr Suite 110 Markham, ON L3R 6B3

> Report Date: 2014/06/19 Report #: R3063789 Version: 1

#### **CERTIFICATE OF ANALYSIS**

#### MAXXAM JOB #: B4A4330

Received: 2014/06/18, 14:20

Sample Matrix: Water # Samples Received: 3

	Date	Date		
Analyses	Quantity Extrac	ed Analyzed	Laboratory Method	Reference
Total Metals Analysis by ICPMS	3 N/A	2014/06/19	CAM SOP-00447	EPA 6020

\* 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. 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.



Golder Associates Ltd Client Project #: 12-1151-0155 Site Location: CONVANTA Sampler Initials: DW

#### **ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)**

Maxxam ID		002216	002217	002218					
Sampling Date		2014/06/17 11:36	2014/06/17 11:45	2014/06/17 11:26					
COC Number		C#464950-04-01	C#464950-04-01	C#464950-04-01					
	Units	E-SWMP(OUTLET)	W-SWMP	E-SWMP(FOREBAY)	RDL	QC Batch			
Metals									
Total Iron (Fe)	ug/L	280	420	490	100	3647020			
RDL = Reportable Detection Limit									
QC Batch = Quality Control Ba	atch								



Golder Associates Ltd Client Project #: 12-1151-0155 Site Location: CONVANTA Sampler Initials: DW

#### **TEST SUMMARY**

Maxxam ID: Sample ID: Matrix:	002216 E-SWMP(OUTLET) Water					Collected: Shipped: Received:	2014/06/17 2014/06/18
Width IX.	water					Receiveu.	2014/00/18
Test Description		Instrumentation	Batch	Extracted	Date Analyzed	Analyst	
Total Metals Analysis by I	CPMS	ICP/MS	3647020	N/A	2014/06/19	Prempal B	hatti
Maxxam ID: Sample ID:	002217 W-SWMP					Collected: Shipped:	2014/06/17
Matrix:	Water					Received:	2014/06/18
Test Description		Instrumentation	Batch	Extracted	Date Analyzed	Analyst	
Total Metals Analysis by I	CPMS	ICP/MS	3647020	N/A	2014/06/19	Prempal B	hatti
Maxxam ID: Sample ID:	002218 E-SWMP(FOREBAY)					Collected: Shipped:	2014/06/17
Matrix:	Water					Received:	2014/06/18
Test Description		Instrumentation	Batch	Extracted	Date Analyzed	Analyst	
Total Metals Analysis by I	CPMS	ICP/MS	3647020	N/A	2014/06/19	Prempal B	hatti



Report Date: 2014/06/19

Golder Associates Ltd Client Project #: 12-1151-0155 Site Location: CONVANTA Sampler Initials: DW

#### **GENERAL COMMENTS**

Results relate only to the items tested.



Golder Associates Ltd Client Project #: 12-1151-0155 Site Location: CONVANTA Sampler Initials: DW

#### **QUALITY ASSURANCE REPORT**

QA/QC				Date				
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	Units	QC Limits
3647020	PBA	Matrix Spike	Total Iron (Fe)	2014/06/19		106	%	80 - 120
3647020	PBA	Spiked Blank	Total Iron (Fe)	2014/06/19		106	%	80 - 120
3647020	PBA	Method Blank	Total Iron (Fe)	2014/06/19	<100		ug/L	

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

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

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



Golder Associates Ltd Client Project #: 12-1151-0155 Site Location: CONVANTA Sampler Initials: DW

#### VALIDATION SIGNATURE PAGE

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

Eve R SCOUTER Eva Pranji

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.



### E-3 In Situ Measurements



Notes:

SIT



ROJEC							Date:	30-	Apr-14
Proje	ect Number: _ Client: _						Sampled By:		
Si	ite Location:	E JW	HP-01	u					
ITE DA	TA								
		Time					Location ID	J-SWH	POUT
	Surveyed r	eference point							
Wate	er Depth at St	taff Gauge (m)	NO	5m			Logger	Number	
	Stre	eam Width (m)	30	m			Loger Downloa	ad Time	
		Stagnant	Yes	(No)	- 1		Photos	Taken Yes	No (#
		Flow Rate	Me	a Pok	18h		Photo L	ocation	
	NG PARAM	ETER						all and the state	
Time	Dissolved Oxygen	Conductivity	pН	Redox Potential	Temperature	Turbidity	Colour		Odour
	mg/L	mS or $\mu$ S	pH Units	m∨	<u>°C</u>				
							<u></u>		
	ING RECOR	RD	5	/	i vir		Sample ID:		/
Samp	ling Method:	18				Dup tal	Sample ID:		/
Samp Sa	iling Method: ample Depth:	3k		/		Dup tal			/
Samp Sa Tin	ample Depth: me Sampled:			/	- - -	Dup tal	ken? / Dup ID:		High
Samp Sa Tin	ample Depth: me Sampled:				- - -	Dup tal	ken? / Dup ID:	/	High
Samp Sa Tin Sample A	ample Depth: ne Sampled: Appearance: Colour: Odour:		/		- - - -	Dup ta	ken? / Dup ID:	/	High
Samp Sa Tin Sample A	ample Depth: ne Sampled: Appearance: Colour: Odour:		/		-	Dup tak	ken? / Dup ID:	/	High
Samp Sa Tin Sample A	ample Depth: ne Sampled: Appearance: Colour: Odour:		/			Dup tai	ken? / Dup ID:	/	High
Samp Sa Tin Sample A	ample Depth: ne Sampled: Appearance: Colour: Odour:		/		- - - -	Dup tak	ken? / Dup ID:	/	High
Samp Sa Tin Sample A Sample (	ample Depth: ample Depth: ne Sampled: Appearance: Colour: Odour: Container an	d Preservation:				Dup tal	ken? / Dup ID:	/	High
Samp Sa Tin Sample A Sample ( OBSER	Appearance: Colour: Container an	d Preservation:				Dup tai	ken? / Dup ID:	/	High
Samp Sa Tin Sample A Sample ( OBSER	ample Depth: ample Depth: ne Sampled: Appearance: Colour: Odour: Container an	d Preservation:					ken? / Dup ID:	/	High

S

m

0

.....

2

Chi

Ź

k

20m

RA

poin



ROJECT INFORM	ATION						
Project Number:	12-1151	-0155			5		30-Apr-14
Client:	Cova	nta				Sampled By:	E.Marsch / L.Macleod
Site Location:	E -SL	UMP-	N				
TE DATA							
	Time	10:5	10			Location ID	E-SWMP-IN
		10.3	Ø				L'SWIG - IV
Surveyed	reference point						
Water Depth at S	taff Gauge (m)	3				Logge	r Number
Str	eam Width (m)		$\frown$			Loger Downl	oad Time
	Stagnant	Yes	No	1		Phote	os Taken Yes No (#/
	Flow Rate			1			
		L		]		Photo	Location
AMPLING PARAM	IFTER						
Dissolved			Redox		_	i.	1
Time Oxygen	Conductivity	pH	Potential	Temperature	Turbidity	Colou	r Odour
mg/L	mS or µS	pH Units	m∨	°C			1
0:36 /	147.6	12.68		5.6	MARO	light	from none
Time Sampled: ample Appearance: Colour Odour ample Container an	ligh	y bra	NM	-		Turbidity: L	.ow / Medium / High
las pri	nidlo						
BSERVATIONS		~	· /				
Weather Conditions	: Temperature	<u></u>	<u> </u>		-1	1	
Weather Conditions	Temperature ant Precipitation	<u> </u>	ht re to the the	nn nn i pm	d m	wind	s <del>wels Kicz</del>
Weather Conditions Curre Precipitation of	Temperature ant Precipitation	<u> </u>	hd rains	n n pinds	d m ual	wind wind wind	s wels high
Weather Conditions Curre Precipitation of	Temperature ant Precipitation	<u> </u>	hd Ac to ta urbic h aj	nn pinds	d m ual	wind wind er lle	s This ty funds wels high



PROJECT INFORMATION		
Project Number: 12-1151-0155	Date: _	30-Apr-14
Client: Covanta	Sampled By: _	E.Marsch / L.Macleod
Site Location		
SITE DATA		
Time	Location ID	IN-KIND NIT

Time	11:15
Surveyed reference point	
Water Depth at Staff Gauge (m)	~ DolDm
Stream Width (m)	41m
Stagnant	Yes No
Flow Rate	med.

\*

Location ID	UMP-OUT
Logger Number	
Loger Download Time	
Photos Taken	Yes No (#)
Photo Location	

No. 41 V

ž

Time	Dissolved Oxvgen	Conductivity	рН	Redox Potential	Temperature	Turbidity	Colour	Odour
	mg/L	mS or $\mu$ S	pH Units	mV	°C	0.1		
11:15		578	3.9	/	51	816	J.br	
	IG RECOR	4	7.97					
	ng Method:	nal	5 m	0	-		Sample ID: // )~~~	UMP-out
	nple Depth:	1	Pace/	nitte	1 disch	Malup tak	en? / Dup ID: DU	P2
	e Sampled:		5			đ		
Sample A	ppearance:	lici	Itho	um	-			
	Colour: Odour:			~~~~			Turbidity: Low 7 Med	dium / High
	5 pra		/		<u></u>			
	Conditions:	Temperature:	5°C				En de	
	Conditions:		5°C Ligk	trai	in hi	ch w	inds	
Weather	Conditions: Curren	Temperature:	5°C ligh	trai	in hi	gh w	linds	st la cula
Weather	Conditions: Curren	Temperature:	5°C Ligk	trai	m hi m ou	gh w erfla	inds Upipe n	st from swar
Weather Precip	Conditions: Curren	Temperature:	5°C Ligh taine e sha	trai o.m. trai trai trai	m hi m m ou ty g si	gh w wrfla	inds Upipe n ugs gries	st from Sular
Weather Precip	Conditions: Curren	Temperature:	5°C Ligh taine e sh	trai o.m. fiz fiz fiz fiz fiz fiz fiz fiz fiz fiz	m hu m m ou ty g su h g su	sh w erfla yart s fu	inds Upipe M uns. grins ubid u/L	tot franswan Hinalle due

197



Client: Covarta   Site Location: Stapped     Time 11:30     Time 11:30     Surveyed reference point     Water Depth at Staff Gauge (m)     Stream Width (m)     Stream Width (m)     Stagnant     Yes     Plow Rate     AMPLING PARAMETER     Time   Dissolved   Onductivity   pH   Redox		
Client:       Coventa       Sample:         Site Location:       ID       Surveyed reference point       Icocation         Water Depth at Staff Gauge (m)       SM       Icocation         Water Depth at Staff Gauge (m)       SM       Icocation         Stream Width (m)       Icocation       Icocation         Stream Width (m)       Icocation       Icocation         Stream Width (m)       Icocation       Icocation         MMPLING PARAMETER       Flow Rate       Icocation         AMPLING PARAMETER       PH Units       Temperature       Turbidity         May       A.J       Stream Width       Stream Width         Sample Depth:	ate: 30-Aj	or-14
Site Location:       Display=1N         TE DATA         Location         Surveyed reference point         Water Depth at Staff Gauge (m)       B         Stream Width (m)       B         Stream Width (m)	By: E.Marsch /	L.Macleod
Surveyed reference point         Water Depth at Staff Gauge (m)         Stream Width (m)         Stream Width (m)         Stagnant       Yes foo         Flow Rate         Dissolved         Conductivity       pH         Potential       Temperature         Time       Oxygen         mg/L       mS of µS         PH Units       mV         "C       Turbidity         mg/L       mS of µS         PH Units       mV         "C       Turbidity         "MAPLING RECORD       Sample Depth:         Sample Depth:       Sufface         Sample Appearance:       Click         Colour:       Lick         Sample Container and Preservation:       Dup taken? / Du         Masther Conditions:       Temperature:         Stage Appearance:       Stage Appearance:         Colour:       Lick         Destrive Conditions:       Temperature:         Stage Appearance:       Stage Appearance:         Colour:       Stage Appearance:         Colour:       Stage Appearance:         Colour:       Stage Appearance:         Codour:       Stage Appearance:		
Time       11:30       Location         Surveyed reference point       Image: Surveyed reference point       Image: Surveyed reference point         Water Depth at Staff Gauge (m)       Image: Surveyed reference point       Image: Surveyed reference point         Stream Width (m)       Image: Surveyed reference point       Image: Surveyed reference point       Image: Surveyed reference point         Stream Width (m)       Stream Width (m)       Image: Surveyed reference point       Image: Surveyed reference point       Image: Surveyed reference point         Stream Width (m)       Stream Width (m)       Image: Surveyed reference point       Image: Surveyee point       Image: Surveyed refer		
Surveyed reference point       IIIISO         Water Depth at Staff Gauge (m)       Sm         Stream Width (m)       Iogen         Stagnant       Yes for         Flow Rate       Power Rate         Dissolved       Conductivity         mg/L       ms of us         mg/L       ms of us         mg/L       ms of us         pH Units       Potential         mg/L       ms of us         MAR       gas         J1130       Mark         Sampling Method:       Stagnant         Sample Depth:       Super conductivity         Sample Appearance:       Colour:         Colour:       Sample Appearance:         Colour:       Sample Container and Preservation:         Mark       Stage         Sample Container and Preservation:       Stage         Mark       Stage         Current Precipitation:       Stage         Meather Conditions:       Temperature:         Current Precipitation:       Stage         Mark       Mark         Stage       Stage         Stage       Stage         Stage       Stage         Stage       Stage		
Surveyed reference point         Water Depth at Staff Gauge (m)         Stream Width (m)         Stagnant         Yes (No)         Flow Rate         Dissolved         Onvoren         mg/L         Dissolved         Onvoren         mg/L         Stream Width (m)         Loge         Stagnant         Yes (No)         Flow Rate         Dissolved         Onductivity         pH Units         mg/L         mg/L         Stream Bart         Yes (No)         Flow Rate         Dissolved         Onductivity         pH Units         my         Conductivity         pH Units         my         Sample Record         Sample Appearance:         Colour:         Sample Appearance:         Colour:         Mather Conditions:         Colour:         Sample Container and Preservation:         Colour:         Sample Container and Preservation:         Current Precipitation:         Temperature:	10 WSWM	P-dat:
Stream Width (m)       Loger         Stagnant       Yes. No         Flow Rate       Flow Rate         AMPLING PARAMETER       Provember 2000         Time       Dissolved         Oxygen       Conductivity         mg/L       mS or us         pH Units       PH         my       sc         Time       Dissolved         Oxygen       mS or us         pH Units       mV         sc       Turbidity         pH Units       mV         sc       Turbidity         sc       Turbidity         pH Units       mV         sc       Turbidity         sc       Turbidity      <		
Stream Width (m)       Loger         Stagnant       Yes. No         Flow Rate       Flow Rate         Time       Dissolved Oxygen       Conductivity ms or us mg/L       pH         Redox       Temperature       Turbidity         1130       MM       R. 3       516         SAMPLING RECORD       Sampling Method:       Staff of the pole       Sampling Method:         Sample Depth:       Staff of the pole       Sample       Sample Appearance:         Colour:       If the sample Appearance:       Staff of the pole       Sample Container and Preservation:         Sample Container and Preservation:       Staff of the pole       Turb         Deservations:       Temperature:       Staff of the pole         Current Precipitation:       If the pole       Staff of the pole         Precipitation of page 24 / 48 hrs:       Weather Conditions       Turb         Precipitation of page 24 / 48 hrs:       Weather Conditions       Turb	Logger Number	
Stagnant       Yes       No         Flow Rate       Flow Rate         AMPLING PARAMETER       Flow Rate         Time       Dissolved       Conductivity       pH         mg/L       mS or µS       pH Units       Temperature       Turbidity         11/30       MM       R       3       516       88%       (7)         SAMPLING RECORD       Sample Record       Sample       Sample       Sample       Sample Depth:       SUPPO       Sumple         Sample Appearance:       Colour:       Supple Appearance:       Supple Container and Preservation:       Turb         Sample Container and Preservation:       Supple Appearance:       Supple Appearance:       Supple Appearance:         Colour:       Supple Container and Preservation:       Supple Appearance:       Supple Appearance:       Supple Appearance:         Colour:       Supple Container and Preservation:       Supple Appearance:       Supple Appearance:       Supple Appearance:         Destructions:       Temperature:       SC       Supple Appearance:       Supple Appearance:         Colour:       If GAP       Supple Appearance:       Supple Appearance:       Supple Appearance:         Destructions:       Temperature:       SC       Supple Appearance: <t< td=""><td></td><td></td></t<>		
Flow Rate         Time       Dissolved       Conductivity       pH       Redox       Temperature       Turbidity         11730       MM       R       A       516       888       (1.1)         11730       MM       R       A       516       888       (1.1)         SAMPLING RECORD       Simpling Method:       (1.1)       (1.1)       Simplify       Simplify         Sampling Method:       (1.1)       (1.1)       (1.1)       Simplify       Simplify         Sample Depth:       (1.1)       (1.1)       (1.1)       Simplify       Dup taken? / Du         Time Sampled:       (1.1)       (1.1)       (1.1)       Dup taken? / Du       Dup taken? / Du         Time Sample Appearance:       (1.1)       (1.1)       (1.1)       Dup taken? / Du         Golour:       (1.1)       (1.1)       (1.1)       (1.1)       Dup taken? / Du         Sample Container and Preservation:       (1.1)       (1.1)       (1.1)       (1.1)         Sample Container and Preservation:       (1.1)       (1.1)       (1.1)       (1.1)         DESERVATIONS       (2.1)       (2.1)       (2.1)       (2.1)       (2.1)         DESERVATIONS       (2.1)       <	Download Time	
SAMPLING PARAMETER         Time       Dissolved       Conductivity       pH       Redox       Temperature       Turbidity         11/30       mS or µ3       pH Units       Potential       Temperature       Turbidity         11/30       mS or µ3       pH Units       Potential       Temperature       Turbidity         11/30       mS or µ3       pH Units       Potential       Temperature       Turbidity         11/30       mS or µ3       pH Units       Potential       Temperature       Turbidity         11/30       mS or µ3       pH Units       pH Units       Potential       Turbidity         SAMPLING RECORD       Sample       Sample Depth:       Sumple       Sumple       Sumple         Sample Depth:       Sumple       Sumple       Dup taken? / Du       Dup taken? / Du         Time Sampled:       11/1/30       Sumple       Sumple       Dup taken? / Du         Golour:       Sumple Appearance:       Sumple       Sumple       Sumple         Colour:       Sumple Appearance:       Sumple       Sumple       Sumple         Sample Container and Preservation:       Sumple       Sumple       Sumple       Sumple         DBSERVATIONS       Temperatu	Photos Taken Yes	<u>lo (#)</u>
Time       Dissolved Oxygen mg/L       Conductivity mS or uS       pH       Redox Patential mV       Temperature C       Turbidity         11/30       MM       R.2       516       888       (1)         11/30       MM       R.2       516       888       (1)         SAMPLING RECORD       563       Sampling Method:       563       Sampling Method:       563         Sample Depth:       564       Sample       Dup taken?       Turb         Sample Appearance:       11/1/30       Sample Container and Preservation:       Sample Container and Preservation:       Turb       Sample Container and Preservation:       Turb         Sample Container and Preservation:       560       Sample Container and Preservation:         Deservations:       Temperature:       560       Sample Container and Preservation:       Sample Container and Preservation:         Current Precipitation:       Integration:       Integration:       Integration:       Sample Container and Preservation: <t< td=""><td>Photo Location</td><td></td></t<>	Photo Location	
Time       Dissolved Oxygen mg/L       Conductivity mS or US pH Units       pH pH Units       Redox Potential mV       Temperature oc       Turbidity         11/30       MM       A.A       516       888       (1)         560       560       560       560       560         Sampling Method:       07.05       000         Sample Depth:       516       888       (1)         Sample Depth:       560       560       560         Sample Depth:       560         Sample Depth:       560         Sample Appearance:       000       Dup taken? / Du         Colour:       11 t 30         Sample Container and Preservation:         0dour:       0dour:       0dour:       0dour:         Sample Container and Preservation:         10.5       10.5       10.5       10.5         0DESERVATIONS       Temperature:       5°C       10.5         Current Precipitation:       10.6         Precipitation of page 24 / 48 hrs:		
Time       Oxygen       Conductivity       pH       Potential       Turbidity         11/30       IND       IIII       PH       Units       IIIIIII       IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		The second s
III30       III30 <td< td=""><td>Colour</td><td>Odour</td></td<>	Colour	Odour
Sampling Method: <u>Simple</u> <u>Simple</u> <u>Simple</u> Depth: <u>Simple</u> <u>Simpl</u>		/
Sampling Method: <u>Simple</u> <u>Simple</u> <u>Simple</u> Depth: <u>Simple</u> <u>Simpl</u>	brown,	
Sampling Method:Sample Depth:Dup taken? / Dup taken? /		
Sample Depth: <u>Stundo</u> Time Sampled: <u>11130</u> Sample Appearance: Colour: <u>LiGh</u> <u>brann</u> Odour: <u>Sample Container and Preservation:</u> <u>Sample Container and Preservation:</u> <u>Container and Preservation:</u> <u>Sample Container and Preservation:</u> <u>Container and Preservation:</u> <u>Sample Container and Preservation:</u> <u>Sample Container and Preservation:</u> <u>Sample Container and Preservation:</u> <u>Sample Container and Preservation:</u> <u>Container and Preservation:</u> <u>Sample Container and Preservation:</u> <u>Sample Container and Preservation:</u> <u>Container and Preservation:</u> <u>Sample Container and Preservation:</u> <u>Container and Preservation:</u> <u>Container and Preservation:</u> <u>Sample Container and Preservation:</u> <u>Container and Preservation:</u> <u>Sample Container and</u>		
Time Sampled: 1/130 Sample Appearance: Colour: 1/16/ bmm Turt Odour: Sample Container and Preservation: Lab provided DBSERVATIONS Weather Conditions: 5°C Current Precipitation: Light Main Aught with Precipitation of page 24/48 hrs:	ID: W-SWM	PTA
Sample Appearance: Colour: C	DID: NUP	3
Sample Appearance: Colour: C		
Colour: <u>ACK</u> <u>OVMM</u>		$\frown$
Sample Container and Preservation:	dity: Low / Medium / I	High
Deservations Temperature: 5°C Current Precipitation: 11Gh 101m 115h 100m Precipitation of past 24 / 48 hrs: 110m 101m 101m 101m		
Weather Conditions: Temperature: 5 <sup>c</sup> C Current Precipitation: <u>Light nain-high</u> wind Precipitation of past 24 / 48 hrs: <u>han han han han han han han han han han </u>		
Weather Conditions: Temperature: 5 <sup>c</sup> C Current Precipitation: <u>Light nain-high</u> wind Precipitation of past 24 / 48 hrs: <u>han han han han han han han han han han </u>		
Weather Conditions: Temperature: 5°C Current Precipitation: <u>Light Apim high</u> wind Precipitation of past 24 / 48 hrs: <u>homo</u>		
Weather Conditions: Temperature: 5°C Current Precipitation: <u>Light Naim-high</u> wind Precipitation of past 24 / 48 hrs: <u>homm</u>		
Weather Conditions: Temperature: 5°C Current Precipitation: <u>Light Apim high</u> wind Precipitation of past 24 / 48 hrs: <u>https://www.apim.com/apim</u>		
Weather Conditions: Temperature: 5 <sup>c</sup> C Current Precipitation: <u>Light nain-high</u> wind Precipitation of past 24 / 48 hrs: <u>han han han han han han han han han han </u>		
Temperature: Current Precipitation: <u>Light Apim high</u> Liston Precipitation of past 24 / 48 hrs:AD		
Precipitation of past 24 / 48 hrs:	12	
Precipitation of past 24 / 48 hrs: 4/0 mm	LS	
self and the first of las at his	,	
wink with and the the	and A	cherel i
A	et and in	5 Mart
recurry ma over the prop p	yre m IN	INORY_
graviou fla · to small malle		
SITE SKETCH		



							Associate
PROJECT INFORM							
Project Number:						Date:	
Client:		nta				Sampled By:	E.Marsch / L.Macleod
Site Location:	Swi	_ ` `					
	1114						
	Time	11:4	้วิ			Location ID	Swi
Surveyed n	eference point			]			
Water Depth at St	aff Gauge (m)	no-	15m	1		Logger N	lumber
Stre	am Width (m)	30	λ.	1		Loger Downioa	
	Stagnant	Yes	No	1			Taken Yes No (#
	Flow Rate	high	10 m	al			
		Jugn	<u>_10 jin</u>	RAA		Photo L	ocation
AMPLING PARAM	ETER			5. S.			
Time Dissolved Time Oxvgen mg/L	Conductivity mS or $\mu$ S	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
1:45/	3150	8,19	56	5,6	160	ti br	- 1
Sample Depth: _ Time Sampled: _ ample Appearance: Colour: _ Odour: _	fu 11:4 Lizk	Lace 5 Lon	nUM.	- -	Dup tak	xen? / Dup ID: Turbidity: Low	/ Medium High
ample Container and	Preservation:	1					
BSERVATIONS		A	-				
/eather Conditions:	Temperature:	50		<u> </u>	3	1.0	
Current	Precipitation:	Lish	1 rai	n-Li	sh w.	Inds	ubid;
Precipitation of pas	· · · · ·	R	115 M	Lon	/		
Notes: LICIO	- leno	le a	10111	Lich	and 1	10000 to	upid:
	C STORE	w 10	eng	My I		very or	<u>molly)</u>
TE SKETCH							

1

 ${{{\boldsymbol{\xi }}}}$ 



PROJECT INFORMATION		
Project Number: 12-1151-0155	Date:	30-Apr-14
Client: Covanta	Sampled By:	E.Marsch / L.Macleod
Site Location: <u>SIU 2</u>		

SITE DATA

Time	12:00
Surveyed reference point	
Water Depth at Staff Gauge (m)	~0.50m
Stream Width (m)	3 m
Stagnant	Yes No
Flow Rate	med to high

Location ID SW	2
Logger Number	
Loger Download Time	
Photos Taken	Yes / No (#)
Photo Location	

Time	Dissolved Oxygen mg/L	Conductivity mS or $\mu$ S	рН pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
12:00		1927	8.21		あつ	376	ti. bram	

SAMPLING RECORD	
Sampling Method: Stan Dol	Sample ID: <u>SW2</u>
Sample Depth:	Dup taken? / Dup ID:
Time Sampled:	
Sample Appearance: Lisht bnum	Turbidity: Low / Medium / High
Odour:	9
Sample Container and Preservation:	
OBSERVATIONS	
Weather Conditions: Temperature: _5 <sup>C</sup>	
Current Precipitation:	thigh winds
Precipitation of past 24 / 48 hrs; 10, mn	
Notes: MGh WCher UNPICF	Ligh tunbidity.
	/ /
SITE SKETCH	



PROJECT INFORMATION		
Project Number: 12-1151-0155	Date:	30-Apr-14
Client: <u>Covanta</u> Site Location: <u>SU</u> 3	Sampled By:	E.Marsch / L.Macleod

SITE DATA

Time	12:15
Surveyed reference point	•
Water Depth at Staff Gauge (m)	1.5m
Stream Width (m)	8 m
Stagnant	Yes / No
Flow Rate	Kigh

Location ID 5U	13
Logger Number	
Loger Download Time	
Photos Taken	Yes No (#)
(	

Photo Location

Time	Dissolved Oxvaen mg/L	Conductivity	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
12:17		722	8.21		5.6	90.2	li.hr	

SAMPLING RECORD	
Sampling Method: Stab pole	Sample ID: 5W3
Sample Depth:	Dup taken? / Dup ID:
Time Sampled: 12:15	
Sample Appearance: Litt brann	Turbidity: Low / Medium
Odour:	
Sample Container and Preservation.	
OBSERVATIONS	
Weather Conditions: Temperature: 5 C	
Current Precipitation:	nchigh winds
Precipitation of past 24/48 hrs:	Tavels and turbidity - construction
Notes: ( engright and in	the constraints the second states
aching the moder into	1 respect of after for the
FUCKDAINA MINO GRAN	West of Kmping ADOM



		Associates
PROJECT INFORMATION		
Project Number: 12-1151-0155	Date:	30-Apr-14
Client:Covanta	Sampled By:	E.Marsch / L.Macleod
Site Location:SW 4		

#### SITE DATA

Time	12:30	Location ID Set 4		
Surveyed reference point				
Water Depth at Staff Gauge (m)	1.5m	Logger Number		
Stream Width (m)	3m	Loger Download Time		
Stagnant	Yes No	Photos Taken,	Yes No (# )	
Flow Rate	high	( Photo Location		

Time	Dissolved Oxvgen mg/L	Conductivity mS or uS	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
12:30		978	8.33		5,9	j14	li bri	

SAMPLING RECORD	
Sampling Method: STG5 DBC	Sample ID: 5W4
Sample Depth: <u>Mugaco</u>	Dup taken? / Dup ID:
Time Sampled: 12:34	
Sample Appearance:	Turbidity: Low / Medium / High
Odour:	
Sample Container and Preservation:	
(Las provide)	
OBSERVATIONS	
Weather Conditions:	
Temperature:	$T \rightarrow -1c$
Current Precipitation:	Figh winds
Precipitation of past 24 / 48 hrs: // // mmm	
Notes: Alley high Wicker Well	" and turbidity's construction
centuries rolched to	Stream re-fuchin and
creekin abserged usest	a Amotine Poration
ENTRIUMICIA CLARADON	
1 DI COLOGICO COVILINA INA	

#### Macleod, Linda

From: Macleod, Linda Sent: Wednesday, April 30, 2014 3:17 PM To: Auger, Steve Witheridge, Devon (Devon\_Witheridge@golder.com); Marsch, Evelyn Cc: Subject: **Covanta Sampling** 

Hi Steve.

Evelyn and I met with Jim Delaney this morning. He escorted us to E-SWMP-IN and indicated the gravity feed was operational. The water levels and turbidity were very high (NTU 188). Samples and photos were obtained.

We proceed to W-SWMP-OUT (NTU 816) where overflow discharge was occurring due to very high water levels W-SWMP-IN. Samples and photos were obtained. Water levels and turbidity were very high in W-SWMP-IN (NTU 888) and the gravity feed was operational.

We were discouraged from entering the swale to obtain photos due to the very deep muddy conditions. Photos were obtained from above and turbid water was observed entering the ditch/swale from the gravity feed out pipe. We were advised to not attempt to obtain photos of the E-SWMP-OUT from the south side of the swale due to the muddy conditions.

SW1. 2. 3. and 4 were all more turbid than normal. Water levels were also much higher and faster than normal. Samples and photos were obtained from all locations.

**SW1 NTU 160** SW2 NTU 376 SW3 NTU 90.2 SW4 NTU 114

All field notes and photos have been uploaded them to the project folder. Maxim has been notified to pick-up the turbidity meter. Please advise if a you would like samples to be submitted. Calibrated pH/EC pens. Note: attempte

Thanks, Linda	Calibrated pH/EC pens. Note: attempted several times during a 25 minute period of time to calibrate conductivity without success. The pen was reading very high values and would not accept colibration.
100 Scotia C T: +1 (905) 7	wod   Environmental Technologist   Golder Associates Ltd.       for 130, 2014         wod Whitby, Ontario, Canada L1N 8Y6       for 130, 723 2727 ext 6967   F: +1 (905) 723 2182   C: +1 (905) 809 0396   E: Model         wod@golder.com   www.golder.com       www.golder.com

#### Work Safe, Home Safe

Please consider the environment before printing this email.



ENVIRONMENTAL AND SAFETY INC. "Exceptional Customer Service!"

Certificat	e of (	~~ Ialib	ration
This certifies that Hach M and meets the M	odel 2100 <b>@</b> s/ anufacturer's o	'n <b>7714</b> ha operating para	is been calibrated
PRI	MARY TURBIDITY	STANDARDS	- ( -
	Lot#	NTU	
A	2307 exp. Oct-14	0.1	K
А	2305 exp. Oct-14	20.0	
А	2286 exp. Oct-14	100.0	
	2269 exp. Sept-14	800	
<u>Apr. 29</u> , 2014	Certified	T#	

### RENTALS, SALES, SERVICE, SUPPORT

12 - 170 AMBASSADOR DR., MISSISSAUGA, ONTARIO L5T 2H9 PHONE: (905) 507-8412 TOLL FREE: (888) 285-2324 E-MAIL: SALES@MAXIMENVIRONMENTAL.COM 3104 BETA AVE., BURNABY, BRITISH COLUMBIA V5G 4K4 PHONE: (778) 330-7740 TOLL FREE: (888) 285-2324 E-MAIL: SALESBC@MAXIMENVIRONMENTAL.COM

WWW.MAXIMENVIRONMENTAL.COM



PROJECT INFORMATION	
Project Number: 12-1151-015K	
Client: CONVANTA	
Site Location: <u>5w</u> (	- -

		201			100	••••
Date:	MA	13	D	114		
Sampled By:	De	20		W		
	Le	200	2 1	2		

TE DATA			
Time	12:30	Location ID	
Surveyed reference point	/		
Water Depth at Staff Gauge (m)	/	Logger Number	
Stream Width (m)		Loger Download Time	
Stagnant	(Yes) No		
Flow Rate	InW	Photo Location	

Logger Number	
Loger Download Time	
Photos Taken	Yes / No (#)
Photo Location	

Time	Oxygen mg/L	Conductivity mS or µS	pH pH Units	Potential mV	Temperature °C	Turbidity	Colour	Odour	
12:30		4.09	7.25		19.4	925	No.	No	

SAMPLING RECORD	
Sampling Method: ORAB	Sample ID: SW/
Sample Depth: SCI-GC	Dup taken? / Dup ID: SWI DW
Time Sampled: 1230	
Sample Appearance: Colour: Clar	Turbidity:
Odour: 10	Turbidity Low Medium / High
Sample Container and Preservation:	
6 x plastic boffers	
OBSERVATIONS	
Weather Conditions: Temperature:	
Current Precipitation:	<u>_</u>
Precipitation of past 24 / 48 hrs:	
Notes: - calibraled Hanne	rombo DON with 7012
4 pl calibook clubs	walk har a late 14/7 1
The allowing plants	* Can man solar 11/2 ys/Ch
- man m conduction	1.0

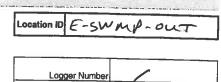


PROJECT INFORMATION	
Project Number: 12-1152-0155	<pre>Value</pre>
Client: COMANTA	
Site Location: E-SWMP-0	ut

----Date: MAY 30/14 Sampled By: Dw/L2

SITE DATA

Time	1310
Surveyed reference point	/
Water Depth at Staff Gauge (m)	/
Stream Width (m)	1.25
Stagnant	Yes / No
Flow Rate	Low



		Logger Number	
		Loger Download Time	
)	Yes No (#	Photos Taken	
		Photo Location	

#### SAMPLING PARAMETER

Time	Dissolved Oxygen mg/L	Conductivity mS or $\mu$ S	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Coiour	Odour
13.10		11-35	7.67		18.3	8,32	NO	NO

Sampling Method: <u>GLAB</u> Sample Depth: <u>SuRFACE</u> Time Sampled: ) 3'. \ O	Sample ID: E-SWMP-OUT Dup taken? / Dup ID: E-SWMP-OUT-DL
Colour:	Turbidity: Low Medium / High
ample Container and Preservation: TDS - 553 PPM	
- 6 x plastic botiles	
BSERVATIONS	
Veather Conditions: Temperature:	
Current Precipitation:	
Precipitation of past 24 / 48 hrs:	
Precipitation of past 24 / 48 hrs:	



PROJECT INFORMATION Project INFORMATION Project Number: <u>12-1151-0155</u> Client: <u>CONVANTA</u> Site Location: <u>W-SWMP-0</u> MLST

Date: MAY 30/14 Sampled By: Dw

SITE DATA
Time 13 2-(
Surveyed reference point
Water Depth at Staff Gauge (m)
Stream Width (m)
Stagnant
Yes / No
Flow Rate
PDM

ocation ID	ć		
		 	-

Logger Number	
Loger Download Time	
Photos Taken	Yes / No (#)
Photo Location	

#### SAMPLING PARAMETER

-----

Time	Dissolved Oxygen mg/L	Conductivity mS or μS	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour	
1	-	1	~	-	-	-	/	/	

a track

SAMPLING HEGUN			
Sampling Method:	DRY	Semple ID:	NOT SAMPLED
Sample Depth:		Dup taken? / Dup ID:	. e
Time Sampled:			
Sample Appearance: Colour:		Turbidity: I	Low / Medium / High
Odour:			

Sample Container and Preservation:

NOT SAMPLOD - DRY

OBSERVATIONS	
Weather Conditions:	ورويا والمحاوية والمراجعة والمحاوية والمحاوية والمحاوية والمحاوية والمحاوية والمحاوية والمحاوية والمحاوية والم
Temperature:	
Current Precipitation:	
Precipitation of past 24 / 48 hrs:	
Notes:	



PROJECT INFORMATION	
Project Number: 12-1151-0155	
Client: CONVANTA	
Site Location: SW 2	

Date: MA7 30 Sampled By: DW

SITE DATA Time / 3 4 5 Surveyed reference point Water Depth at Staff Gauge (m) Stream Width (m) / M Stagnant Yes / D Flow Rate LOW

ı

Location ID	SW	2	
Logge	er Number		
Loger Down	lood Time		

SAMPLING PARAMETER ...... Dissolved Oxygen mg/L Redox Potential Conductivity pН Temperature Time Turbidity Colour Odour mS or µS pH Units mV °C 19.0 8.86 1345 1099 8,19 Clear No /

SAMPLING RECORD	
Sampling Method: <u>LRAB</u> Sample Depth: Surfaci	Sample ID: SW 2 Dup taken? / Dup ID: SW 2 DVP
Time Sampled: 1375	Dup taken? / Dup ID: 5w2 DVP
Sample Appearance: Colour:	Turbidity Low Medium / High
Odour:	•
Sample Container and Preservation:	
6x plastic	
OBSERVATIONS	
Weather Conditions: Temperature:	
Current Precipitation:	
Precipitation of past 24 / 48 hrs:	
Notes:	



PROJECT INFORM	ATION
Project Number:	12-1151-0155
Client:	CONVANTA
Site Location:	543

Date: Ma 30/14 Dw/ Sampled By: 1

DATA	
Time	1400
Surveyed reference point	/
Water Depth at Staff Gauge (m)	
Stream Width (m)	1.2m
, Stagnant	Yes / No
Flow Rate	Med.

.....

	Location ID 5	N	3	
	Logger Numb	er		
	Loger Download Tin	e		
1	Photos Take		AND (#	

1

n internet en en anna a

الدار وروسا وجار المراجع والمرور المتحروب تحاديا والمأر يتساور الروايين والارتباع

Photo Location

Time	Dissolved Oxygen mg/L	Conductivity mS or (LIS)	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
1400	/	828	8.47	/	16.6	4.13	NO	NO

SAMPLING RECORD		
Sampling Method: Grab	Sample ID:	Sin 3
Sample Depth: Sir full	Dup taken? / Dup ID:	SWW7-Dus
Time Sampled: 1400		
Sample Appearance: Colour:	Turbidity Le	Wedium / High
Odour: 10	-	
Sample Container and Preservation:		
- 6× plustic potters		
- TDS- 400 DDm		
///////////////////////////////////////		
OBSERVATIONS		
Weather Conditions:		
Temperature:		
Current Precipitation:		
Precipitation of past 24 / 48 hrs:		
Notes:		
	<u></u>	
		······



PROJECT INFORMATION Project Number: 12-1(SI-0155 Client: COMANTA Site Location: 5W4

30114 MAY Date: Sampled By:

SITE DATA Time | 4 '. 30 Surveyed reference point Water Depth at Staff Gauge (m) Stream Width (m) /. 0 Stagnant Yes / No Flow Rate Med Man

Location ID	SW4	1
	;	
Lanna	Number	

Loger Download Time	
Photos Taken	Yes (No)(# )
Photo Location	

Time	Dissolved Oxygen mg/L	Conductivity mS or μS	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
1-130	/	864	8,16	/	16.8	2.93	NO	NO

SAMPLING RECORD	
Sampling Method: OFAB	Sample ID:Y
Sample Depth: SUF (KS2	Dup taken? / Dup iD: SWY - DUF
Time Sampled: 4'.30	
Sample Appearance: Colour:	Turbidity: Low/ Medium / High
Odour:0	
Sample Container and Preservation:	

6 × plashi +55-432 101-1125

BSERVATIONS	
Weather Conditions: Temperature:	
Current Precipitation:	
Precipitation of past 24 / 48 hrs:	
Notes:	

4. 5



Project Number: <u>12-1151</u> Client: <u>COWVA</u> Site Location: <u>E-5w</u>	- 015 5 n î A- n P.	3	Date:_ Sampled By:_	Du	4y 1	30/14
TE DATA	1500	]	Location ID	0-9	inv	N
Surveyed reference point	/					
Water Depth at Staff Gauge (m)	/	] [	Logg	er Number	N	$\overline{\ }$
<u>Stream Wid</u> th (m)	58%		Loger Dowr		-	
Stagnant	Yes / 10			tos Taken	Kes	No (#
		1 -				

#### SAMPLING PARAMETER Dissolved Redox Conductivity pН Temperature Oxygen Time Potential Turbidity Colour Odour mS or µS mg/L pH Units mV °C 7.7.6 1500 clar 9.16 22.6 004 N 1.70

SAMPLING RECORD Sampling Method: Sample ID: Sample Depth: ζı Dup taken? / Dup ID: 1.1 500 Time Sampled: No. Sample Appearance: brown Colour: Turbidity: Kowy Medium / High Odour: NÌ Sample Container and Preservation: 504 . . . OBSERVATIONS Temperature: Weather Conditions: Current Presipitation: ,÷ Precipitation of past 24 / 48 hrs: Notes: 1



14

30

------

PROJECT INFORMATION	
Project Number: 12-1151-0155	Date:
Client: CONVANTA	Sampled By:
Site Location: W-SWMP	

Time	1515	
Surveyed reference point	/	
Water Depth at Staff Gauge (m)	/	
Stream Width (m)	85% P.	mp
Stagnant	No No	
Flow Rate	-	

-----Location ID W-Swmp

L

MAN

Logger Number Loger Download Time Photos Taken Yes / No (# Photo Location

#### SAMPLING PARAMETER

Ŧ

OTTO DATA

Time	Dissolved Oxygen mg/L	Conductivity	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
1515	/	457	9.30	/	21.6	9.99	clew	NO

SAMPLING RECORD	
Sampling Method: 6/AB Sample Depth: SAP FULT	Sample ID: USump Dup taken? / Dup ID: WSump - ULT
Time Sampled: 1515	
Sample Appearance:	Turbidity Low Medium / High
Sample Container and Preservation: Maghic	
220 pl	
OBSERVATIONS	
Weather Conditions: Temperature:	
Current Precipitation:	
Precipitation of past 24 / 48 hrs:	
Notes:	



"Exceptional Customer Service!"

Certifica	te of	Cali	bration
This certifies that Hac		′n <b>380</b> 30 operating f	has been calibrated parameters.
			-
	Lot#	NTU	
	A2307 exp. Oct-14	0.1	
	A2305 exp. Oct-14	20.0	
	A2286 exp. Oct-14	100.0	
	A2269 exp. Sept-14	800	
<u>May 26</u> , 2014	Certified		

### RENTALS, SALES, SERVICE, SUPPORT

12 - 170 AMBASSADOR DR., MISSISSAUGA, ONTARIO L5T 2H9 PHONE: (905) 507-8412 TOLL FREE: (888) 285-2324 E-MAIL: SALES@MAXIMENVIRONMENTAL.COM 3104 BETA AVE., BURNABY, BRITISH COLUMBIA V5G 4K4 PHONE: (778) 330-7740 TOLL FREE: (888) 285-2324 E-MAIL: SALESBC@MAXIMENVIRONMENTAL.COM

WWW.MAXIMENVIRONMENTAL.COM



PROJECT INFORMATION Project Number: <u>12-1151-0155</u> Client: <u>CONVAWTA</u> Site Location: 5W1

JUNE Date: Sampled By:

SITE DATA Time / 05 / Surveyed reference point Water Depth at Staff Gauge (m) Stream Width (m) / . Stagnant Yes / No

Flow Rate

Mpd-HI

Logger Number Loger Download Time Photos Taken Photo Locatio

SWI

Location ID

Time	Dissolved Oxygen mg/L	Conductivity mS or μS	pH pH Units	Redox Potential mV	₹emperature °C	Turbidity	Colour	Odour
1051	/	971	7.87	/	17.4	24.7	ND	1.0.

SAMPLING RECORD	
Sampling Method:	Sample ID: 5w /
Sample Depth:	Dup taken? / Dup ID: 5W1 - DW
Time Sampled: / 0 5 /	
Sample Appearance: Colour: Odour: ND	Turbidity: Low / Medium / High
Sample Container and Preservation:	
OBSERVATIONS	
Weather Conditions:	
Temperature:	
Current Precipitation:	
Precipitation of past 24 / 48 hrs:	
Notes:	



PROJECT INFORMATION Project Number: <u>12-1151-0155</u> Client: <u>CONVANTA</u> Site Location: \_SM2

TUNE Date: Sampled By:

SITE DATA	
Time	1131
Surveyed reference point	
Water Depth at Staff Gauge (m)	
Stream Width (m)	4.5
Stagnant	Yes / No
Flow Rate	LOW

Location ID 2 100

Logger Number	
Loger Download Time	
Photos Taken	Nes No (#
Photo Location	1.

SAMPLING PARAMETER

Time	Dissolved Oxygen mg/L	Conductivity mS or µS	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
1131	/	859	8,00	/	18.4°C	120	Li.Br	NO

SAMPLING RECORD Sampling Method: 1.19 547 Sample ID: 542 Sample Depth: 100 Dup taken? / Dup ID: Time Sampled: Sample Appearance: Colour: Turbidity: Low / Medium / High Odour:

Sample Container and Preservation:

plast it un prosived

OBSERVATIONS

Weather Conditions: Temperature:

Current Precipitation:

Precipitation of past 24 / 48 hrs:

Notes: \_\_\_



PROJECT INFORMATION Project Number: 12-1151-0155 Client: CONVANTA Site Location: 5W 3

2 .... Date: JUNE Sampled By:

STE DATA					· ·· · · · · · · · · · · · · · · ·
Time	1150		Location ID	Sw	3
Surveyed reference point					
Water Depth at Staff Gauge (m)	-	÷	Logger N	lumber	
Stream Width (m)	1.5		Loger Download	d Time	
Stagnant	Yes No		Photos	Taken	Yes No (#
Flow Rate	med high		Photo Lo	cation	Past

 
 SAMPLING PARAMETER

 Time
 Dissolved Oxygen
 Conductivity
 pH
 Redox Potential
 Temperature
 Turbidity
 Colour
 Odour

	Time	Oxygen mg/L	mS or uS	pH Units	Potential mV	°C	Turbidity	Colour	Odour
1	150	/	866	8,12	/	16.9	33.0	Libr.	10

SAMPLING RECORD	
Sampling Method: <u>Stab</u>	Sample ID:
Sample Depth:	Dup taken? / Dup ID: 5413 PW
Time Sampled: // 5 U	
Sample Appearance: //br S/yh Upnty Colour: <u>ND</u>	Turbidity Low / Medium / Hian
Sample Container and Preservation: 	
OBSERVATIONS	
Weather Conditions: Temperature:	
Current Precipitation:	2
Precipitation of past 24 / 48 hrs:	
Notes:	



PROJECT INFORMATION Project Number: 12-1151-0155 Client: CONVANTA Site Location: <u>SW 4</u>

Date: JUNE Sampled By

SITE DATA Time 1200 Surveyed reference point Water Depth at Staff Gauge (m) Zon Stream Width (m) Yes / No Stagnant

Flow Rate

Location ID 544

Logger Number	
Loger Download Time	
Photos Taken	Yes No (#
Photo Location	east.

en

SAMPLING PARAMETER

Dissolved Redox Conductivity pН Temperature Time Oxygen Potential Turbidity Colour Odour mg/L mS or  $\mu$ S pH Units m٧ °C 315 48.7 3.5 1 1700 17.0 Mr. P.V.

SAMPLING RECORD Sampling Method: A. " Sample ID: ¥ Sample Depth:

200

Med.

Dup taken? / Dup ID;

Turbidity/ Low // Medium / High

Odour: Sample Container and Preservation:

Colour:

Time Sampled:

Sample Appearance:

plastic SV 11



PROJECT INFORMATION Project Number:  $\underline{12-1151-0155}$ Client:  $\underline{CONVANTA}$ Site Location:  $\underline{E-SWM}$ 

The Date: JUNE Sampled By:

SITE DATA	
Time	1013
Surveyed reference point	/
Water Depth at Staff Gauge (m)	/
Stream Width (m)	POND
Stagnant	Yes No
Flow Rate	N

Location ID SWMP-Þ

Logger Number	
Loger Download Time	
Photos Taken	(Yes) No (#)
Photo Location	D. I.D. Ali

Time	Dissolved Oxygen mg/L	Conductivity	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
1013	/	958	7.41		18.3°C	427	brown	NI

Sampling Method: <u>gran b - poll</u> Sample Depth: <u>Surfue</u> Time Sampled: /0/3	Sample ID: <u>E-SWW</u> Dup taken? / Dup ID: <u>E-SWW</u> - <i>DW</i>
ample Appearance: brown, sligh (10) Colour: N	Turbidity: Low / Medium / High
ample Container and Preservation: <u>6 X un prosented pla</u>	stič
Veather Conditions:	
يسري مستشرقين من مركب المركب المستقد الألم المراجب المراجب المراجب المراجب المراجب المراجب	



PROJECT INFORMATION Project Number: 12-1151-0155 Client: CONVANTA-Site Location: W- SMMP

Date: JUNE Sampled By

simply

SITE DATA

Time	1021
Surveyed reference point	/
Water Depth at Staff Gauge (m)	/
Stream Width (m)	PONP
Stagnant	Yes) No
Flow Rate	No

Logger Number Loger Download Time Photos Taken Photo Location

W-

Location ID

SAMPLING PARAMETER

Time	Dissolved Oxygen mg/L	Conductivity mS of μS	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
1021		543	7.76		20,2	51.4	li br.	Nº.

SAMPLING RECORD sry b. Sampling Method: Sample ID: IN-Sample Depth: Dup taken? / Dup ID: \_\_\_\_\_/ M ~ Time Sampled:

brown, very sligh cloud Turbidity for Medium / High Sample Appearance: Colour: Odour:

Sample Container and Preservation:

6× uppresend.

OBSERVATIONS

Weather Conditions: Temperature:

Current Precipitation:

Precipitation of past 24 / 48 hrs:

Notes:



Dist

PROJECT INFORMATION Project Number: <u>12-1151-0155</u> Client: <u>CONVANTA</u> Site Location E-SwmP-

Date: JUNE Sampled By

Swnp-

-

SITE DATA Time 110 Surveyed reference point Water Depth at Staff Gauge (m) Stream Width (m) 7 .1.1 Stagnant Yes / No) Flow Rate A. t. h.

AA O

Logger Number Loger Download Time Photos Taken/ Photo Location

Location ID

SAMPLING PARAMETER Dissolved Redox Conductivity pН Temperature Oxygen Time Potential Turbidity Colour Odour mS or JUS mg/L pH Units m٧ °C 1110 7,77 8.7 21.9 Clov No 25 SAMPLING RECORD gran Sampling Method: 1-Swing-Sample ID: AL 500 Sample Depth: Dup taken? / Dup ID; Ũ Time Sampled: Sample Appearance: cler Colour: Turbidity: Low Medium / High Odour:

Sample Container and Preservation: lastic M. Presh 1d

OBSERVATIONS . . . . . . . . . Weather Conditions: Temperature: Current Precipitation: Precipitation of past 24 / 48 hrs:\_\_ Notes:

5.



PROJECT INFORMATION Project Number: <u>12-1151-0155</u> Client: <u>CONVANTA</u> Site Location: <u>N-SWMP-0</u>MT Date: JUNE Sampled By

SITE DATA Time 1121 ocation ID Sul Surveyed reference point 1 Water Depth at Staff Gauge (m) Logger Number Stream Width (m) 3m Loger Download Time Yes No Stagnant Photos Taken Yes Flow Rate med- 6 hall Photo Location

SAMPLING PARAMETER

Time	Dissolved Oxygen mg/L	Conductivity	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
1121	/	520	8.42	/	19.2	539	Li.Br	NO

SAMPLING RECORD Sampling Method: Sample ID: 11- Swam der Swta onp Ser Den

plastic

Sample Depth: 112 Time Sampled:

son

NU

clou

\_\_\_\_ Dup taken? / Dup ID: <u>/// \*</u>

Sample Appearance: Colour:

Odour:

12.

Turbidity, Lor Medium Hiah

Container and Pressrvation

OBSERVATIONS

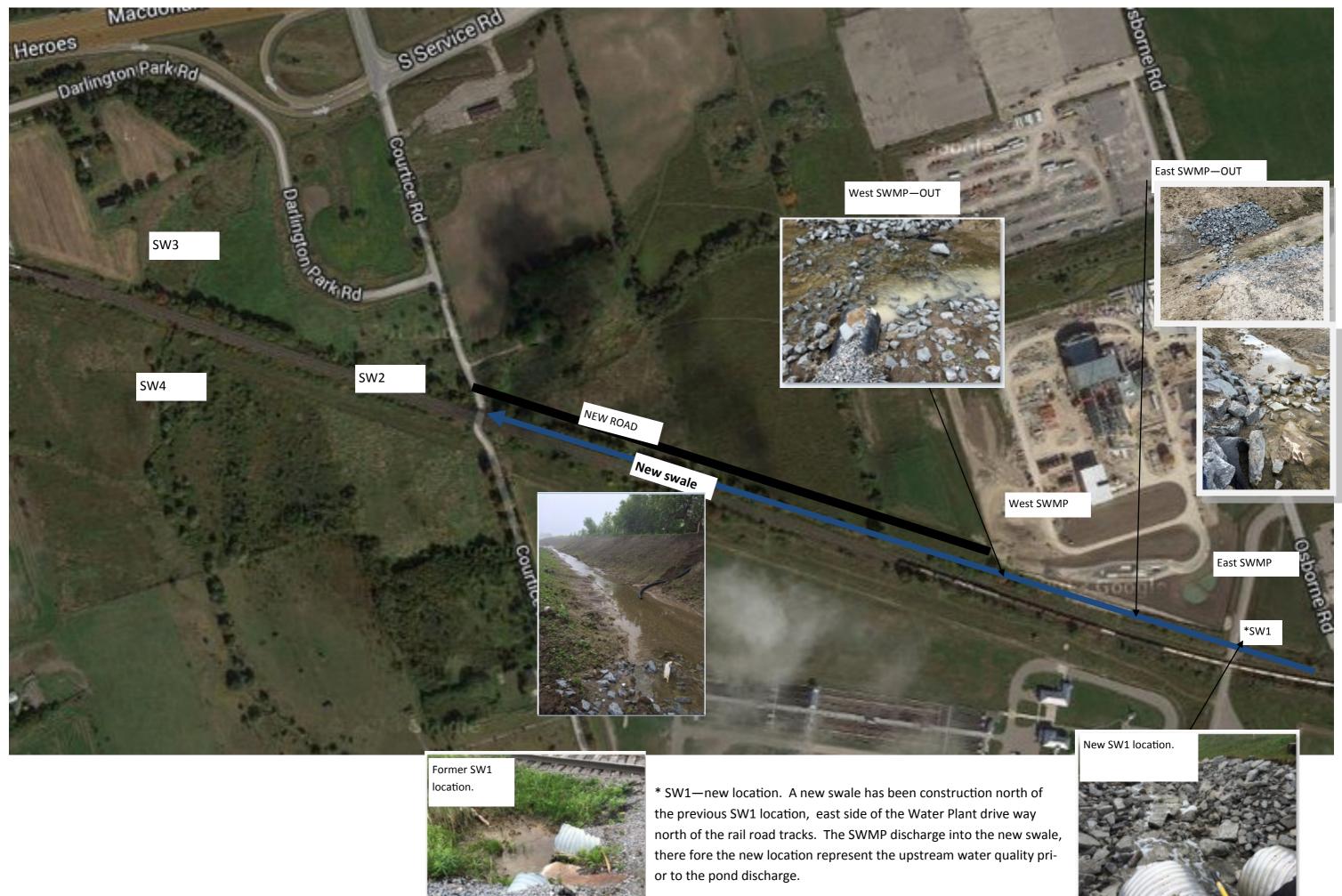
Weather Conditions:

Temperature:

Current Precipitation:

Precipitation of past 24 / 48 hrs:

Notes:







-1A

PROJECT INFORMATION Project Number: 12-1151-0155 Date: Client: COUANTA Sampled By Site Location: <u>FSWHP-IN</u>

 SITE DATA

 Time
 / : / ?

 Surveyed reference point
 Iocation ID

 Water Depth at Staff Gauge (m)
 ?

 Stream Width (m)
 Ioger Dow

 Stagnant
 Yes / No

 Flow Rate
 / M

Logger Number Loger Download Time

Photos Taken Yes / No (#

Photo Location

UM

Time	Dissolved Oxygen mg/L	Conductivity mS of us	pH pH Units	Redox Potentiał mV	Temperature °C	Turbidity	Colour	Odour
1:15		534	7.45		21.4	233	librow	MIN

SAMPLING RECORD		
Sampling Method:	Airect	Sample ID: E-SILIAD-INI
Sample Depth:	surdace	Dup taken? / Dup ID:
Time Sampled:	1:15	14
Sample Appearance: Colour:	19. hours	Turbidity: Low / Medium / High
Odour:		

Sample Container and Preservation: 6x unpreserved plastic

Weather Conditions: Temperature:	30°C						
Current Precipitation:	minu	2	_				
Precipitation of past 24 / 48 hrs:	<1	mm	_				
Notes: Auch with	stor h	und , i	Unen t	unbid.	Alte	A mainst	1
a Marchelp	cino d	relere	1 Adr.	Water	A to	6 SULL	2-18
01	1 Ø .	the states of	i i i		K. Com		11

PROJECT INFORMATION			87.5 T.		Associa
Project Number: 12-11-	51-0155			Date: (11)	4 28.201
Client: COUA	NTA			Sampled By:	LANK K
Site Location:	HP-1N				
SITE DATA					· · · · · · · · · · · · · · · · · · ·
Time	1:25			Leasting ID	
Surveyed reference point	1.67	-		Location ID	SW/4P-11
Water Depth at Staff Gauge (m)					
	ZM	4		Logger Numbe	r
Stream Width (m)		_		Loger Download Time	
Stagnant	Yes / No	_		Photos Taken	Fest No (# 6-5
Flow Rate	1 loui			Photo Location	
SAMPLING PARAMETER					
Disselver	Redox				
Time Oxygen Conductivity	Potentia		Turbidity	Colour	Odour
1	pH Units mV	°C			
112 / 505,	1.55 /	22,9	157	libr	mon
/	*				<u>}</u>
SAMPLING RECORD	A				
Sampling Method:	120 - 41	<u>6</u> 5		Sample ID:	SWHIP -
Sample Depth:		_	Dup tak	en? / Dup ID:	es Olif
Time Sampled:	2	-		Ŀ	
Sample Appearance:	A TARA A				$\wedge$
Odour:	rd.	-		Turbidity: Low / Medi	ium / High
Sample Container and Preservation:		-			
6X umpreservation:	ind along	5,			
un un un un	a pust	16			
					·····
OBSERVATIONS					
Weather Conditions:	23'0				
Temperature:					
Current Precipitation:	mine				
Precipitation of past 24 / 48 hrs:	C2m	m,	<i>J</i> .	· · · ·	
in the at to.	whid is	vetor	frees	oks hig	k
Notes: Man Tu	C C P LA	XY F. M C.			

\_\_\_\_\_

oider sociates

PROJECT INFORMATION Project Number: 12-1151-0155 Client: COUANTA Site Location: Sup

Date: Sampled By:

SITE DATA :45 Time ocation ID SWI Surveyed reference point Water Depth at Staff Gauge (m) Logger Number Stream Width (m) Loger Download Time Stagnant Yes / No 9-10 Photos Taken Yes No (# Flow Rate Photo Location

SAMPLING PARAMETER

Time	Dissolved Oxygen mg/L	Conductivity mS or AS	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
		214	8.13		19.6	11	clean	Amm!

SAMPLING RECORD 8.00 Sampling Method: Sample (D: W Gint Sample Depth: Dup taken? / Dup ID: 2 5 Time Sampled: ø. Sample Appearance: Colour: Turbidity: Low Medium / High 19.00

Sample Container and Preservation: 6x unpreserved plastic

Odour:

OBSERVATIONS					
Weather Conditions: Temperature: _	20°(			a an	en en antier e de la constante e de la constante en antier en antier en antier en antier en antier en antier e
Current Precipitation:	mine				
Precipitation of past/24 / 48 hrs: _	<2mi	1			
Notes: <u>Clor</u>	strady.	lipni	low	turbidi	the
may lime	stone this	Ind	Sent	cloat	11
	й. И.	1	ê	U	



KHP-OU

PROJECT INFORMATION 0155 Project Number: Client: COLIANTA Site Location:

Date: Sampled By

Surveyed reference point	1
Water Depth at Staff Gauge (m)	1 and the second
Stream Width (m)	of 1 1
Stagnant	Yes / No
Flow Rate	standy

Logger Number Loger Download Time Photos Taken Yes / No (# 11-Photo Location

Location ID

SAMPLING PARAMETER

Dissolved Conductivity Redox pН Temperature Time Oxygen Potential Turbidity Colour Odour mS or µS mg/L pH Units mν °C þ 2 Om 1 2 There cloce ě 28 hind

SAMPLING RECORD Sampling Method: 1P-DU Sample ID: Sample Depth: é Dup taken? / Dup !D: # -Time Sampled:

Sample Appearance:

Colour: Odour:

Turbidity: Low / Medium / High

Sample Container and Preservation: unpreserved plastic 6X

 OBSERVATIONS

 Weather Conditions:

 Temperature:
 20° L

 Current Precipitation:
 M/MC

 Precipitation of past 24 / 48 hrs:
 C mm

 Notes:
 C mm

 Notes:
 C mm

 Mail
 M/MC

 Notes:
 C mm

 C multiple
 Model

 Model
 Model

PROJECT INFORMATION
Project Number: 12-1151-0155
Client: COUANTA
Site Location: M-SWMI-OM

Date: Sampled By:

Golder ssociates

SITE DATA Time 2 16 Location ID 9-1/1 Surveyed reference point 4 Water Depth at Staff Gauge (m) M Logger Number Stream Width (m) 1 Loger Download Time Stagnant Yes / No Photos Taken Yes / No (# Flow Rate r, 16 Photo Location

SAMPLING PARAMETER

Dissolved Redox Conductivity pН Temperature Time Oxygen Potential Turbidity Colour Odour mg/L mS or  $\mu {\rm S}$ pH Units m٧ °C 3:5. 1610 ng Q Wn

e 1

SAMPLING RECORD

Sampling Method: Sample Depth:

Time Sampled: Sample Appearance:

Colour:

Sample ID:	W-SUI
Dup taken? / Dup ID:	Mide

Turbidity: Low / Medium / High

Odour: Sample Container and Preservation:

1 20

1 2

6x unpreserved plastic

OBSERVATIONS	na ti perena menerali na seconda da seconda de la seconda de
Weather Conditions: Temperature:	xic
Current Precipitation:	mint
Precipitation of past 24 / 48 hrs: _	L2mm
Notes: <u>Standy</u>	some textbudity
/	



PROJECT INFORMATION Project Number: 12-1151-0155 Client:

Date: \_( Sampled By:

Time	2:45	Location ID
Surveyed reference point		
Water Depth at Staff Gauge (m)	10	
Stream Width (m)	2. Sam	Logge Loger Down
Stagnant	Yes No	
Flow Rate	pres by	Phot

Time	Dissolved Oxygen mg/L	Conductivity mS or US	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
2:45		668	7,69		19,4	48.1	bream	mint
0.00001								

SAMPLING RECORD	
Sampling Method: 975.6	Sample ID: SIN 4
Sample Depth: Surface	Dup taken? / Dup ID; DUP (6
Time Sampled:	
Sample Appearance: Colour:	Turbidity: Low / Medium High
Odour:	

Sample Container and Preservation: 6x unpreserved plastic

OBSERVATIONS	
Weather Conditions:	يرويون ومتركبين وكالمتعام
Current Precipitation: 21/n/	
Precipitation of past 24 / 48 hrs:	
Notes: turbed Fest mount Doventy over	9 Bun
Enable to locate state address	1 prost
Sefely 2	No and the



PROJECT INFORM	ATION
Project Number:	12-1151-0155
Client:	COUANTA
Site Location:	Sul 2

11 Date: Sampled By:

SW2

.....

Time	3:04	Location ID
Surveyed reference point		
Water Depth at Staff Gauge (m)	Tim	Logger Number
Stream Width (m)	3 m	Loger Download Time
Stagnant	Yes No	Photos Taken
Flow Rate	11en your	Photo Location

hotos Taken Yes/ No (# 20-23 noto Location SAMPLING PARAMETER 

ł

1

Time	Dissolved Oxygen mg/L	Conductivity mS or $\mu$ S	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
3:04		34/9	5.07		21,1	55,4	hour	Num!

SAMPLING RECORD	
Sampling Method:	Sample ID: <u>5001</u>
Sample Depth:	Dup taken? / Dup ID: DU / 🖓
Time Sampled: 3	
Sample Appearance: Colour:	
	Turbidity: Low / Medium / High
Odour: <u>M/M</u>	
Sample Container and Preservation:	
OBSERVATIONS	
Weather Conditions: Temperature:	
Current Precipitation:	
Precipitation of past 24 / 48 hrs:	m m -
Notes: Man ford C	metruchin imapled
ability to such	uced Dender Wechen -
Sendid Oble in Onl	them regest ride of ment
Cinesola culture	10 30 month of holder



PROJECT INFORMATION
Project Number: 2 11 31 - 21 53
Client: Collan Ta
Site Location: 5(1)3

. Date: hates manager Sampled By: LH

SITE DATA		
Time	3:20	Location ID Stul3
Surveyed reference point		
Water Depth at Staff Gauge (m)	0,30 m	Logger Number
Stream Width (m)	1 m	Loger Download Time
Stagnant	Yes Mo	Photos Taken Nes / No (#24-26
Flow Rate	Fast	Photo Location

Time	Dissolved Oxygen mg/L	Conductivity	pH <sup>)</sup> pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
Z		805	8.1	/	18,1	21,9	translusce	I reddink

Sampling Method: SUME.CO-GIAS	Sample ID:3U_3
Sample Depth:	Dup taken? / Dup ID: NuP 8
Time Sampled: <u>3/20</u>	
Sample Appearance: Colour: <u>Interstascent redist</u> Odour: <u>Non</u>	Turbidity: Low Medium / High
Sample Container and Preservation:	fic

OBSERVATIONS				
Weather Conditions: Temperature:_	2.6			مستعمر معروب والمستعمر والمستعمر والمستعمر والمستعمر والمستعمر والمستعمر والمستعمر والمستعمر والمستعم
Current Precipitation:	mang			
Precipitation of past 24 / 48 hrs:	< 2 mr	Tan tur	hidity, e	arass had
been but in	He Anera	n west	d He	tream
Slages were a	KeeD		0	
- /	/			

÷ 4.,

			-					
		12-115		55			Date: An	1. 29/19
							Sampled By:	pr
Site Location:								
TE DAT	A		0 0 0 0 0 0 0 0 0 0 0					
		Tim	100	5.			Location ID E-S	wmp.
Surveyed reference point Water Depth at Staff Gauge (m)			-		Г·····-	1		
AA STOL		ream Width (m			-		Logger Numbe	r
		Stagnan		/ No			Loger Download Time	A
		Flow Rate		/	-		Photos Taken Photo Location	
	G PARAN		70					<u> </u>
0	Dissolved	Conductivity	pH	Redox	Temperature			a - Andrew Constraints of the second s
lime	Oxygen mg/L	mS o (LS)	pH Units	Potential mV	°C	Turbidity	Colour	Odour
		100	A	ł	177 Z			
Sampling Samp	<b>3 RECOR</b> g Method: ble Depth:	755 pol Sw	6.67	F	66.	Dup take	Sample ID:	sump
Sampling Samp Time S nple Appe	g Method: ble Depth: Sampled: earance: Colour: Odour:	fol 5w (05	6.67	<i>P</i>	66.	Dup tak	en? / Dup ID:	Sum ium / High
Sampling Samp Time S nple Appe	g Method: ble Depth: Sampled: earance: Colour: Odour:	755 pol GW COS	6.5 fue		-	Dup take	en? / Dup ID:	
Sampling Samp Time S nple Appe	g Method: ble Depth: Sampled: earance: Colour: Odour:	fol 5w (05	6.6. 6.6. Fue		-	Dup take	en? / Dup ID:	
Sampling Samp Time S nple Appe	g Method: ble Depth: Sampled: earance: Colour: Odour: tainer and	fol 5w (05	6.5 6.5 fue		-		en? / Dup ID:	ium / High
Sampling Samp Time S nple Appe	g Method: ble Depth: Sampled: earance: Colour: Odour: tainer and TONS	Preservation:	fue				en? / Dup ID: )	ium / High
Sampling Samp Time S nple Appe ople Cont SERVAT ather Cor	g Method: ple Depth: Sampled: earance: Colour: Colour: tainer and tainer and notitions: Current I	Preservation:	fue				en? / Dup ID:	ium / High
Sampling Samp Time S nple Appe ople Cont SERVAT ather Cor	g Method: ble Depth: Sampled: earance: Colour: Colour: tainer and node the second node to second control to second to seco	Preservation:	fue				en? / Dup ID:	ium / High
Sampling Samp Time S nple Appe ople Content SERVAT ather Cor	g Method: ble Depth: Sampled: earance: Colour: Colour: tainer and node the second node to second control to second to seco	Preservation:	fue				en? / Dup ID:	ium / High
Sampling Samp Time S nple Appe ople Content SERVAT ather Cor	g Method: ble Depth: Sampled: earance: Colour: Colour: tainer and node the second node to second control to second to seco	Preservation:	fue				en? / Dup ID:	ium / High

5 20

j.



Photo Location

PROJECT INFORMATION	the second s
Project Number: 2- 1151-0155	Date: Anc. 29/14
Cilent: CONVANTR	Sampled By: NW/LZ
Site Location:	

SITE DATA
Time 10:25
Surveyed reference point
Water Depth at Staff Gauge (m)
Stream Width (m)
Stagnant
(res) / No
Flow Rate

#### SAMPLING PARAMETER

Time	Dissolved Oxygen mg/L	Conductivity mS or 1.5	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
10.75	/	777	7.82	/	20.9	29.4	NA	NA

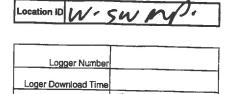
SAMPLING RECORD	
Sampling Method:	Sample ID: E-SWMP-ONT
Sample Depth:	Dup taken? / Dup ID:
Time Sampled:	
Sample Appearance: Colour:	Turbidity: Low / Medium / High
Odour:	
Sample Container and Preservation:	
- uot enout	writer to collect
canll ,	
- water	seens to be real to in
outlet Dene -	na diechan.
OBSERVATIONS	Usur -
Weather Conditions:	
Temperature:	
Current Precipitation:	
Precipitation of past 24 / 48 hrs:	
Notes:	
I only in set	is lest comple - no
Suan	4 collored

Golder ssociates

PROJECT INFORMATION Project Number: <u>12-1155-01</u>55 Client: <u>CONVANTA</u> Site Location:

2 Date: Sampled By:

Time	1106
Surveyed reference point	1
Vater Depth at Staff Gauge (m)	
Stream Width (m)	
Stagnant	Yes / No
Flow Rate	1



Photos Taken Yes No (#

Photo Location

SAMPLING PARAMETER

Time	Dissolved Oxygen mg/L	Conductivity mS or μS	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
1106	/	497	6.78	/	21.7	12.2	NO	NO

SAMPLING RECORD	
Sampling Method:	Sample ID: <u>// - Sw //</u> Dup taken? / Dup ID:Y
Sample Depth: 500 th	Dup taken? / Dup ID:
Time Sampled:	-
Sample Appearance:	Turbidity: Low Medium / High
Odour:	
Sample Container and Preservation:	
OBSERVATIONS	
Weather Conditions:	والربيان ويهارك المراجب ويرونه فيتعدان المترور بالمتام مرام والمراجب والأربي المراجب ومعراهم المساويين
Temperature:	
Current Precipitation:	
Precipitation of past 24 / 48 hrs:	
	(mel and
Notes:	and and
£	
3	



Site Location:	Project Number: 12-1151-0155 Client: 00.0 AV						Date:		
Time       / 0 3 2         Surveyed reference point       I.cocation ID         Water Depth at Staff Gauge (m)       DP44         Stagnant       C0 / No         Prove Rate       NO         Map: ING PARAMETER       Photo Location         Ime       Oxygen         Order       Odour         mgL.       Points Taken         Observed       Conductivity         pH Units       Protos Taken         MMPLING PARAMETER       Turbidity         Colour       Odour         MMPLING PARAMETER       Turbidity         Colour       Odour         MMPLING PARAMETER       Turbidity         Colour       Odour         MMPLING RECORD       Sample RD:         Sample Depth:       Dup taken? / Dup ID:         Time Sampled:       Turbidity: Low / Medium / High         Odour       Odour         mple Appearance:       Colour         Colour:       Out May		Site Location	: <u></u>						
Surveyed reference point         Water Depth at Staff Gauge (m)         Stream Width (m)       DP-4         Stream Width (m)       DP-4         Stagnart       Color         Photos Taken       Photos Taken         MMPLING PARAMETER       Photos Taken         Time       Dissolved mgL       Conductivity         pH       Pedox         my       Temperature       Turbidity         Colour       Odour         MMPLING PARAMETER       Turbidity         Time       Conductivity       pH         mgli       ms or µS       pH Units         my       Sample Conductivity       pH         Sampling Method:       Sample ID:       Dup taken? / Dup ID:         Time Sampled:       Turbidity: Low / Medium / High         Odour:       Odour       Turbidity: Low / Medium / High         Odour:       Odour       Odour       Sample ID:         phe Container and Preservation:       Turbidity: Low / Medium / High       Odour         -       OMAUL       -       August         -       Out May       May       -         -       Out May       May       -         pH Units       May	SITE D	ATA							SWA
Water Depth at Staff Gauge (m)       Logger Number         Stream Width (m)       Diff         Stagnant       Color         Plow Rate       NO         Plow Rate       NO         MAPLING PARAMETER       Photos Taken         Ime       Oxygen       Conductivity         pt       pt         mgt.       mS or µS         pt       Units         mV       stample         Sample Depth:       Dup taken? / Dup ID:         Time Sampled:       Dup taken? / Dup ID:         mple Appearance:       Colour         Colour.       Odur.         mple Container and Preservation:       Turbidity: Low / Medium / High         colour.					٢			Location ID W-2	MANP - OUST
Stream Width (m)       DPM         Stagnant       Color         Piow Rate       NO             Pioto State       Pional Taine             Pioto Colour       Odour             Pioto Colour       Odour             Sample Depth:       Dup taken? / Dup ID:             Time Sampled:       Turbidity: Low / Medium / High           Odour: <td></td> <td>Surveyed</td> <td>reference point</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		Surveyed	reference point						
Stream Width (m)       Diff         Stagnant       Stagnant         Plow Rate       NO         Plow Rate       NO         AMPLING PARAMETER       Photo Location         Time       Dissolved mgL       Conductivity         Dissolved mgL       Conductivity       pH         Photo Location       Photo Location         MPLING PARAMETER       Turbidity       Colour         Time       Dissolved mgL       Conductivity       pH         Photo Location       Mile       Odour         MPLING RECORD       Sample ID:       Dup taken?         Sample Depth:       Dup taken?       Dup taken?         Time Sampled:       Dup taken?       Turbidity: Low / Medium / High         Odour:       Odour       Turbidity: Low / Medium / High         Odour:       Outlet       MARAGE         Photo Sature       Gatter       Colour         Odour:       Outlet       Mag         Odour:       Outlet       Mag         Photo Sature       Gatter       Turbidity: Low / Medium / High         Odour:       Outlet       Mag         Odour:       Other       Other         Steprotines       Temperature:       <	Water Depth at Staff Gauge (m)				Logger Numbe	r.			
Photos Taten       Career         Photos Taten       Career         AMPLING PARAMETER       Photos Conductivity         Time       Dissolved         Oxygan       Conductivity         pH       Pledox         mgL       mS or µS         pHUnits       mV         scample difference       Colour         Odour       Odour         Sampling Method:		Str	eam Width (m)	Pr-	4			1	
Prov Rate       NO       Photo Location         AMPLING PARAMETER			Stagnant		/ No	m			
AMPLING PARAMETER         Time       Dissolved Oxygen       Conductivity       pH       Pederstal       Temperature       Turbidity       Colour       Odour         MPLING RECORD			Flow Rate	<u></u>	2				
Sampling Point Price         Time       Dissolved mg/L       pH       Pledox potential       Temperature mV       Turbidity       Colour       Odour         MPLING RECORD       Sample Depth:			***						·····
Time       Oxygen       Conductivity       pH       Potential       Temperature       Turbidity       Colour       Odour         MAPLING RECORD	AMPLI			_					
MPLING RECORD         Sampling Method:         Sample Depth:         Dup taken? / Dup ID:         Time Sampled:         mple Appearance:         Colour:         mode Container and Preservation:         -         Odour:         mple Container and Preservation:         -         -         SERVATIONS         sather Conditions:         Temperature:         Current Precipitation:         Precipitation of past 24 / 48 hrs:	Time	Oxygen			Potential		Turbidity	Colour	Odour
Sampling Method:		ing/L			mv				
Sampling Method:									
mple Appearance:   Colour:   Odour:   mple Container and Preservation:   -   -   Outlitt   Turbidity: Low / Medium / High   Odour:   mple Container and Preservation:   -   -   Outlitt   was   dVg.   SERVATIONS   seather Conditions:   Temperature:   Current Precipitation:   Precipitation of past 24 / 48 hrs:		•		-		Dup taken? / Dup ID:			
Colour: Turbidity: Low / Medium / High Odour: mple Container and Preservation: Outlet was dVy	Tim	e Sampled:							
Odour:				/		-			
- Outlet was dry. - Do Same - servations: Temperature: Current Precipitation: Precipitation of past 24 / 48 hrs:	imple A		/	/		-		Turbidity: Low / Med	ium / Hich
Current Precipitation: Precipitation of past 24 / 48 hrs:	imple A	Colour:	/			-		Turbidity: Low / Med	lium / High
Current Precipitation: Precipitation of past 24 / 48 hrs:		Colour:		/ 		- - -		Turbidity: Low / Med	ium / High
SERVATIONS eather Conditions: Temperature: Current Precipitation: Precipitation of past 24 / 48 hrs:		Colour:		tut	- w	as	dv		ium / High
SERVATIONS eather Conditions: Temperature: Current Precipitation: Precipitation of past 24 / 48 hrs:		Colour:		Hut	- w	<u>as</u>	dry		lium / High
eather Conditions: Temperature: Current Precipitation: Precipitation of past 24 / 48 hrs:		Colour:		t let Se	- w	as	dry		lium / High
Current Precipitation:	imple Co	Colour: Odour: ontainer and		t let Şi	- w		_/		ium / High
Precipitation of past 24 / 48 hrs:	mple Co	Colour: Odour: ontainer and ATIONS Conditions:	Preservation:	t let Şi	- w		_/		lium / High
	mple Co	Colour: Odour: ontainer and ATIONS Conditions:	Preservation:				_/		lium / High
lotes:	mple Co	Colour: Odour: ontainer and ATIONS Conditions:	Preservation:				_/		ium / High
	ample Co SSERV	Colour: Odour: ontainer and ATIONS Conditions:	Preservation:				_/		lium / High
	ample Co SSERV. Veather ( Precip	Colour: Odour: ontainer and ATIONS Conditions: Current I sitation of pas	Preservation: OUX A.O Temperature: Precipitation: at 24 / 48 hrs:				_/		ium / High
	SSERV.	Colour: Odour: ontainer and ATIONS Conditions: Current I sitation of pas	Preservation: OUX A.O Temperature: Precipitation: at 24 / 48 hrs:				_/		lium / High
	ISERV.	Colour: Odour: ontainer and ATIONS Conditions: Current I sitation of pas	Preservation: OUX A.O Temperature: Precipitation: at 24 / 48 hrs:				_/		lium / High



PROJECT INFORM	ATION			
Project Number:	12-	1151	-01	55
Client:	con	IVA	Nt	A

Site Location:

Date: Sampled By:

SITE DATA ------Time Surveyed reference point

Water Depth at Staff Gauge (m)	DRY
Stream Width (m)	
Stagnant	Yes / No
Flow Rate	

Location ID, 50	
Logger Number	
Loger Download Time	

No /#

Photos Taken

Photo Location

SAMPLING PARAMETER

Jime	Dissolved Oxygen mg/L	Conductivity mS or µS	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
			· .					

1.1

-----

Г

محاجر والمراجع ومحاجر والمراجع المتحم مستحدين ويستحدن ومتعاديها SAMPLING RECORD ----Contailing Mathead

Sampling Method:	
Sample Depth:	
Time Sampled:	
Sample Appearance: Colour:_	

Dup taken? / Dup ID:\_\_\_\_

Sample ID:

Turbidity: Low / Medium / High

Odour: Sample Container and Preservation:

NA	Sawall	collected

OBSERVATIONS	مور بار مراجع برایم این بر این این می مراجع این م والور بر کرار ایر بروی این این ایشور محمد تاریخ			
Weather Conditions: Te	emperature:			and an
Current Pi	recipitation:		¥.	
Precipitation of past	24 / 48 hrs:			
Nctes:				
	- sample	location	was dry.	



PROJECT INFORMATION Project Number: 12 -1(51-0155 Client: CONANTA Site Location: SUD

Date Sampled By

SITE DATA Time Surveyed reference point Water Depth at Staff Gauge (m) Stream Width (m) Stagnant Yes / No Flow Rate

		-
Location ID	SWZ	

Logger Number	
Loger Download Time	
Photos Taken	Yes No (#
Photo Location	

Turbidity Low Medium / High

SAMPLING PARAMETER

Time	Dissolved Oxygen mg/L	Conductivity mS or $\mu$ S	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
-								
	NG RECOR	DI	24			8	ample ID:	
	-				•		and to 10.	

Sample Appearance:

Colour: Odour: Sample Container and Preservation nough wales to collect Ð

OBSERVATIONS	
Weather Conditions:	
Temperature:	
Current Precipitation:	
Precipitation of past 24 / 48 hrs:	
Notes:	
	- unable to obtain samples



PROJECT INFORMATION ..... Project Number: 12-1151-0155 Ciient: <u>/ ONVANT</u> Site Location: <u>SW 3</u>

us. 27 Date: Sampled By: \_\_\_

E DATA	
Time	914
Surveyed reference point	
Water Depth at Staff Gauge (m)	/
Stream Width (m)	0,3m
Stagnant	Yes / No
Flow Rate	laid

e.

-14

Location ID Sw 3

Logger Number	/
Loger Download Time	
Photos Taken	Yes No (#)
Photo Location	

SAMPLING PARAMETER -Dissolved Redox Conductivity pН Temperature Oxygen Time Potential Turbidity Colour Odour mS o μS mg/L pH Units mν °C 9/4 6.75 '34 15.7 8.75 NA NA 0

SAMPLING RECORD		
Sampling Method:	grab	Sample ID:SW 3
Sample Depth:	sur face	Dup taken? / Dup ID: VES
Time Sampled:	914	10
Sample Appearance: Colour:	NA	Turbidity: row)/ Medium / High
Odour:	NA	

Sample Container and Preservation:

 OBSERVATIONS

 Weather Conditions:

 Temperature:

 Current Precipitation:

 Precipitation of past 24 / 48 hrs:

 Notes:



PROJECT INFORMATION		
Project Number: 2-11		Date:
Cilent: CON	WANTH	Sampled By:
Site Location:		

TE DATA	
Time	952
Surveyed reference point	
Water Depth at Staff Gauge (m)	1
Stream Width (m)	2m
Stagnant	Yes No
Flow Rate	Low

Location ID w

Logger Number	
Loger Download Time	
Photos Taken	(es No (#
Photo Location	

SAMPLING PARAMETER

Υ.

SAMPLING PARAMETER								
Time	Dissolved Oxygen mg/L	Conductivity mS or uS	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
952	/	1 26	6.62		15.3	11.5	clew	po.

SAMPLING RECORD ----L Sampling Method: Sample ID: < surf Sample Depth: Dup taken? / Dup ID: 0 Time Sampled: Sample Appearance: NO Colour: Turbidity: Low / Medium / High ND Odour:

Sample Container and Preservation:

OBSERVATIONS	
Weather Conditions: Temperature:	
Current Precipitation:	
Precipitation of past 24 / 48 hrs:	
Notes:	



ENVIRONMENTAL AND SAFETY INC. "Exceptional Customer Service!"

Certifica	te of	Cali	bration
This certifies that Hac		′n <b>31733</b> operating þ	has been calibrated
17		I STANDARDS	
	Lot#	NTU	
	A2307 exp. Oct-14	0.1	(
	A2305 exp. Oct-14	20.0	
	A2286 exp. Oct-14	100.0	/
~~~~~	A2269 exp. Sept-14	800	
<u>Aug. 15</u> , 2014	Certified		

# RENTALS, SALES, SERVICE, SUPPORT

12 - 170 AMBASSADOR DR., MISSISSAUGA, ONTARIO L5T 2H9 PHONE: (905) 507-8412 TOLL FREE: (888) 285-2324 E-MAIL: SALES@MAXIMENVIRONMENTAL.COM 3104 BETA AVE., BURNABY, BRITISH COLUMBIA V5G 4K4 PHONE: (778) 330-7740 TOLL FREE: (888) 285-2324 E-MAIL: SALESBC@MAXIMENVIRONMENTAL.COM

WWW.MAXIMENVIRONMENTAL.COM



BOA ISAD INTO DIA AND AND AND AND AND AND AND AND AND AN	~~~~
PROJECT INFORMATION	
Project Number: 12-1151-0155	
Date: Date:	14
Client: CONVANTA	
Site Location:	

SITE DATA

1115	Time
1	Surveyed reference point
1	Water Depth at Staff Gauge (m)
-	Stream Width (m)
Yes / No	Stagnant
N	Flow Rate

-----

Location ID E-Swimp

Logger Number	
Loger Download Time	
Photos Taken	Ges DNo (#
Photo Location	

Time	Dissolved Oxygen mg/L	Conductivity mS or uS	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
1115	- C	7.17	7.92		20.3	Ø	-	-

SAMPLING RECORD Pole Sampling Method: Sample ID: E- SWMP Sample Depth: Surtace 0, Dup taken? / Dup ID: alin l Time Sampled: 5

Sample Appearance:

clant Colour: Odour: no

Turbidity Low / Medium / High

Sample Container and Preservation:

and the	
BSERVATIONS	
Weather Conditions: Temperature:	
Current Precipitation:	
Precipitation of past 24 / 48 hrs:	
Notes:	



PROJECT INFORMATION	
Project Number: 2-1	151-0155
Client ON	VVANTA.
Site Location:	

SITE DATA

Timo	10.0
	1210
Surveyed reference point	
Water Depth at Staff Gauge (m)	
Stream Width (m)	
Stagnant	Yes /No
Flow Rate	Mad

001 Date: 11 Sampled By:

Location ID E-Swinf. Out

Logger Number	
Loger Download Time	
Photos Taken	Yes / No (# )
Photo Location	

----

#### SAMPLING PARAMETER

SAMPLI	NG PARAN	IETER						
Time	Dissolved Oxygen mg/L	Conductivity	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
1210	/	605	8.13	/	18.82	0	cler	nore

Sampling Method:	grab	Sample 10: E- Swort- Out
Sample Depth:	Sir Free	Dup taken? / Dup ID: 6 5 5 5 mm 2
Time Sampled:	1210	
Sample Appearance: Colour:	clear	Turbidity: Low Medium / High
Odour:	rond	
Sample Container and Pre	servation:	

OBSERVATIONS

Weather Conditions: Temperature:

Current Precipitation:

. . . . . . . . .

----

Precipitation of past 24 / 48 hrs:

Notes:



PROJECT INFORMATIO	N
Project Number: 12-	1151-0155
Client: CO	NVANTA.
Site Location:	

Date: Sept. 11/14 Sampled By: DW/LZ

Time	1125
Surveyed reference point	
Water Depth at Staff Gauge (m)	
Stream Width (m)	
Stagnant	Yes No
Flow Rate	

Location ID W-Swint.

Logger Number	
Loger Download Time	
Photos Taken	Yes/ No (#
Photo Location	

SAMPLING PARAMETER

Time	Dissolved Oxygen mg/L	Conductivity mS or (µS)	рН pH Units	Redox Potential mV	Tamperature °C	Turbidity	Colour	Odour
1/25	-	GIS	3.001	/	20.1	0	r).	N

-----

Sampling Method: palp Sample ID: W-Sup m/f

Sur Face Sample Depth: 25 11 Time Sampled:

Dup taken? / Dup ID: \_\_\_\_\_\_ Sty May

Turbidity; Low / Medium / High

Sample Appearance:

Colour: Nord

Odour:\_ 1.ors

Sample Container and Preservation:

the second second second second second

OBSERVATIONS	
and the second	
	a sense and an one of the set of
Weather Conditions:	
Temperature;	

Current Precipitation:	
Precipitation of past 24 / 48 hrs:	

Notes:



PROJECT INFORMA	TION		
Project Number:	12-1	151-0155	
Client	ON	VANTA	
Site Location:			

SITE DATA Time [200 Surveyed reference point Water Depth at Staff Gauge (m) Stream Width (m) Stagnant Yes / Flow Rate M.e.d.

Date: Sampled By:

Location ID W-SWMP- OUT

Logger Number	
Loger Download Time	
Photos Taken	(Yes) No (#)
Photo Location	

Time	Dissolved Oxygen mg/L	Conductivity mS or uS	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
1200		670	8,33		18,4	0	clear	none

Sampling Method: grob	Sample ID: W-SWMP-OUZ
Sample Depth: Sur fue	Sample ID: W-SWMP-OUZ Dup taken? / Dup ID: W-SWMP-OUT
Time Sampled: 1200	
Sample Appearance: Colour: Odour:	Turbidity
Odour: NSNA ·	
Sample Container and Preservation:	
2	
DBSERVATIONS	
Weather Conditions:	
Weather Conditions: Temperature: Current Precipitation:	
Temperature:	
Temperature:	
Temperature: Current Precipitation: Precipitation of past 24 / 48 hrs:	
Temperature: Current Precipitation: Precipitation of past 24 / 48 hrs:	
Temperature: Current Precipitation: Precipitation of past 24 / 48 hrs:	



PROJECT INFORMATION -----Project Number: 2-1151-0155 Client: CONVANTA Site Location:

Date: Sampled By:

SITE DATA

Time	1140
Surveyed reference point	
Water Depth at Staff Gauge (m)	
Stream Width (m)	
Stagnant	Yes No
Flow Rate	

Logger Numbe	r
Loger Download Time	
Photos Taken	Xes) No (#)
Photo Location	

SWI

Location ID

SAMPLING PARAMETER

Time	Dissolved Oxygen mg/L	Conductivity mS or (3)	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
11:40	-	569	7.98	/	17.8	0	NO	NO

SAMPLING RECORD

and a second of a state of a second

Sampling Method: gro. su fa Sample Depth:\_ Q. 1140 Time Sampled:

Sample ID:  $\leq \omega$  ] Dup taken? / Dup ID:  $\leq \omega$  ]

Turbidity: 🕼 / Medium / High

And water and another best made it is

----

Sample Appearance: Colour:

Colour:	100	
Odour:	NO	

Sample Container and Preservation:

Weather Conditions:

OBSERVATIONS

Temperature:

Precipitation of past 24 / 48 hrs:\_\_\_\_

Notes:



PROJECT INFORMATION	-
Project Number: 12-1151-0155	
Clien BNVANTA	
Site Location:	

Date: Sampled By:

SITE DATA

Time	1245
Surveyed reference point	
Water Depth at Staff Gauge (m)	
Stream Width (m)	
Stagnant	Yes / No
Flow Rate	

Control and an end of the second second second second

where the second s Location ID SWZ

Logger Number	
Longr Download Time	
Loger Download Time	
Photos Taken	Yes7)No (#)
	$\bigcirc$
Photo Location	

Time	Dissolved Oxygen mg/L	Conductivity mS or US	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
1245	-	4.89	8.26	-	17.5	0	NO	No

0.10	والارتيان ويعطون المتعود والارتبار التربين فالمتعاد والاعترار المروميتين والمتعاقف والمتعارك المتعادي والمغار تعامله
Sampling Method: Dole	Sample ID: SW 2
Sample Depth: <u>Sur Foce</u>	Dup taken? / Dup ID: SW Z
Time Sampled: 1245	
Sample Appearance:	
Cdour: NO	Turbidity Lov / Medium / High
Sample Container and Preservation:	
OBSERVATIONS	
DBSERVATIONS Weather Conditions:	
ADCEAVATIONO	
DBSERVATIONS Weather Conditions: Temperature:	
OBSERVATIONS Weather Conditions: Temperature: Current Precipitation:	
OBSERVATIONS Weather Conditions: Temperature: Current Precipitation: Precipitation of past 24 / 48 hrs:	
OBSERVATIONS Weather Conditions: Temperature: Current Precipitation:	
OBSERVATIONS Weather Conditions: Temperature: Current Precipitation: Precipitation of past 24 / 48 hrs:	
OBSERVATIONS Weather Conditions: Temperature: Current Precipitation: Precipitation of past 24 / 48 hrs:	



PROJECT INFORMATION Project Number: 12-115(-015 Client: DN/V # Site Location:

SITE DATA

Time	1:00pm
Surveyed reference point	
Water Depth at Staff Gauge (m)	
Stream Width (m)	
Stagnant	Yes /No
Flow Rate	

Date: Sampled By

----523 Location ID

Logger Number	
Loger Download Time	
Photos Taken	Yes / No (#)
Photo Location	

SALIPLING PARAMETER

Time	Dissolved Oxygen mg/L	Conductivity mS o		Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
1:00	-	1171	8.16	/	17.7	12	light brown	no

SAMPLING RECORD		
Sampling Method:	pole	Sample ID: S~3
Sample Depth:	Surface_	Dup taken? / Dup ID: SW3
Time Sampled:	1:00 pm	
Sample Appearance: Colour:	light brown / yella	Turbidity Low Medium / High
Odour	no	

Sample Container and Preservation:

DESERVATIONS
Weather Conditions: Temperature:
Current Precipitation:
Precipitation of past 24 / 48 hrs:
Notes:

PROJECT INFORMATION Project Number: 12-1151-0155 Client: CONVANTA Site Location:

Golder ssociates

Selt Date: Sampled By:

SITE DATA

Time	1230
Surveyed reference point	
Water Depth at Staff Gauge (m)	
Stream Width (m)	
Stagnant	Yes No
Flow Rate	med

Location ID SW 4 Logger Number Loger Download Time

Photos Taken Yes No (#

Photo Location

# SAMPLING PARAMETER

Time	Dissolved Oxygen mg/L	Conductivity mS or $\mu$ S	pH pH Units	Redox Potential mV	Temperature	Turbidity	Colour	Odour
12.30	/	1112	3.17	/	17.70	21	br.	

SAMPLING RECORD	
Sampling Method: pale	Sample ID:SW 4
Sample Depth:	Dup taken? / Dup ID: Shu) 4
Time Sampled: 1230	
Sample Appearance: brown - 1 an Colour: Norl	Turbidity: Low / Medium High
Odour: Nork	
Sample Container and Preservation:	
OBSERVATIONS	
Weather Conditions:	ووالارتجاب والمراجعين والمحمور بالمحمد المراجي المراجعين والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع
Tamara	
I emperature:	
Temperature:	
Current Precipitation:	

21



"Exceptional Customer Service!"

Certifica	te of	~~ Cali	bration
This certifies that Hac		/n 78116	has been calibrated
	PRIMARY TURBIDIT	Y STANDARDS	2
	Lot#	NTU	N
	A2307 exp. Oct-14	0.1	
	A2305 exp. Oct-14	<b>2</b> 0.0	
	A2286 exp. Oct-14	100.0	
5	A2269 e <del>xp. Sep</del> t-14 A3010 Twif/IS	800	2
2014	Certified	TH+	{
		$\sim$	

# RENTALS, SALES, SERVICE, SUPPORT

12 - 170 AMBASSADOR DR., MISSISSAUGA, ONTARIO L5T 2H9 PHONE: (905) 507-8412 TOLL FREE: (888) 285-2324 E-MAIL: SALES@MAXIMENVIRONMENTAL.COM 3104 BETA AVE., BURNABY, BRITISH COLUMBIA V5G 4K4 PHONE: (778) 330-7740 TOLL FREE: (888) 285-2324 E-MAIL: SALESBC@MAXIMENVIRONMENTAL.COM

WWW.MAXIMENVIRONMENTAL.COM



SQJECT PHORNATION       Date: COLOURS         Project Number: C. LOX CALL       Sampled By: C. MC CSC M. I         Site Location: SUD       Iconstitution         Time       12:30         Surveyed reference point       Locaston ID         Water Depth at Staff Gauge (m)       M/A         Stream Width (m)       2 m         Bite Location:       Stream Width (m)         Stream Width (m)       2 m         Prove Rate       Docential         Dissolved       Conclusivity         Photo Location       Sampled By: Key / No (#         Photo Location       Photo Location         ms       Dissolved       Conclusivity         Objectived       Conclusivity       PH         model       Photo Location       Photo Location         ms       Dissolved       Conclusivity       Photo Location         ms       Concolusivity       PH       Photon       Photon         Sampling Method:       NOX Sampled       Dup taken? / Dup ID:       Dup									Golder
Client: Could a Sampled By: C. Marsch 1 Ste Location: Sta Cauge (n) Marsch 2 Surveyed reference point Water Depth at Staff Cauge (n) Marsch 2 Stream Width (m) Am Stream Width (m) Am Stream Width (m) Am Stagnard Yes (No) Photos Taken Yes (No) (# Photos Taken Yes (No) (# Dup taken? / Dup ID: Turbidity: Low / Medium / High Odour: Dup taken? / Dup ID: Turbidity: Low / Medium / High Odour: Dup taken? / Dup ID: Turbidity: Low / Medium / High Odour: Dup taken? / Dup ID: Turbidity: Low / Medium / High Odour: Dup taken? / Dup ID: Turbidity: Low / Medium / High Odour: Dup taken? / Dup ID: Dup				-				P. M1	<u>OU Sand</u>
Sile Location:	EU				<u>.</u>				<u>ar 2014</u>
Time       2:30         Surveyed reference point       Mater Depth at Staff Gauge (m)         Water Depth at Staff Gauge (m)       MA         Stream Width (m)       2m         Stagnert       Yes (No)         Flow Rate       0m         Dissolved       Conductivity         pH       Pleadow         me       Dissolved         Oxygen       MV         mode       Conductivity         pH       Pleadow         Sample       Deptendia         Time Sampled:		Site Location			-			Comprove Dy. Prove VVI	uson/1_e
Time       2:30         Surveyed reference point       Mater Depth at Staff Gauge (m)         Water Depth at Staff Gauge (m)       MA         Stream Width (m)       2m         Stagnert       Yes (No)         Flow Rate       0m         Dissolved       Conductivity         pH       Pleadow         me       Dissolved         Oxygen       MV         mode       Conductivity         pH       Pleadow         Sample       Deptendia         Time Sampled:	ITE D	TA							
Surveyed reference point         Water Depth at Staff Gauge (m)         Stream Width (m)         Stream Width (m)         Stagnant         Yes (No)         Flow Plate         JONG         MPLING PAPAMETER         Sample Depth:			Time	10.0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				
Water Depth at Staff Gauge (m)       D/Q         Stream Width (m)       Dm         Stagnant       Yes (NO)         Flow Rate       Down         MPLING PARAMETER       Down         MPLING PECORD       Sample Depth:         Sampling Method:       Dot Samded         Sample Depth:       Dup taken? / Dup ID:         Disparance:       Dup taken? / Dup ID:         Disparance:       Dup taken? / Dup ID:         ple Container and Preservation:       Codur:         VET US WARK WHANT ACCURACY       Dup taken?         MAT Sce MAPA       Dup taken?         Mathematical Conduction:       Turbidity: Low / Medium / High         Odour:       Disparance         Interview       Coduction         The Conditions:       Temperature:         Current Precipitation:       Current Precip	<u> </u>	Surveyed		10/2		-			とめ
Stream Width (m)       Image: Conductivity       Image: Conductivity       Image: Conductivity       Photo Location         MPLING PARAMETER       Stagnant       Yes (No)       Photo Location         MPLING PARAMETER       Stagnant       Protocontained       Photo Location         MPLING PARAMETER       Stagnant       Pedox       Temperature       Photo Location         Image: Discoved Conductivity       pH       Pladox       Temperature       Turbidity       Colour       Odour         MPLING RECORD       Sample Depth:	Wa					{			
Stagnant       Yes (No)         Flow Rate       JOW         Protos Taken       Yes / No (#			· · · · · · · · · · · · · · · · · · ·		<u> </u>	4		Logger Number	
Flow Rate       Photos Taken       Yes / No (#						-		Loger Download Time	
MPLING PARAMETER       Discoved       Conductivity       pH       Predox       Temperature       Turbidity       Colour       Odour         ime       Oxygen       Conductivity       pH       Predox       Temperature       Turbidity       Colour       Odour         ime       Oxygen       mS or µS       pH Units       mV       °C       Turbidity       Colour       Odour         MPLING RECORD						-		Photos Taken	Yes / No (#
Dissolved Oxygen mg/L       Conductivity pH       pH pH       Redox Potential mV       Temperature °C       Turbidity       Colour       Odour         MPLING RECORD				101	)	]		Photo Location	
Imme       Oxygen       Conductivity       pH       Potential       Temperature       Turbidity       Colour       Odour         MPLING RECORD	AMPL	NG PARAN		ot-	Sa	mde	R		
Imp       Oxygen       ImS or µS       pH Units       Potential       oc       Turbidity       Colour       Odour         MPLING RECORD		Dissolved		pН		Temperature			
Sampling Method:       Not sampled         Sample Depth:       Dup taken? / Dup ID:         Time Sampled:       Dup taken? / Dup ID:         nple Appearance:       Turbidity: Low / Medium / High         Odour:       Dup taken? / Dup ID:         ple Container and Preservation:       Turbidity: Low / Medium / High         Odour:       Dup taken?         ple Container and Preservation:       0.03 m - could         NAT       Sample Dut Matt disfunding att         Matter Conditions:       Temperature:         Current Precipitation:	une		mS or $\mu$ S	pH Units		· ·	Turbidity	Colour	Odour
Sampling Method:       Not sampled         Sample Depth:       Dup taken? / Dup ID:         Time Sampled:       Dup taken? / Dup ID:         nple Appearance:       Turbidity: Low / Medium / High         Odour:       Dup taken? / Dup ID:         ple Container and Preservation:       Turbidity: Low / Medium / High         Odour:       Dup taken?         ple Container and Preservation:       0.03 m - could         NAT       Sample Dut Matt disfunding att         Matter Conditions:       Temperature:         Current Precipitation:									
Colour: Turbidity: Low / Medium / High Odour: ple Container and Preservation:  Very Low water level (0.03 m) - could  Mat sample with at disturbing alt  FERVATIONS  ather Conditions:  Temperature: Current Precipitation:  Precipitation of past 24 / 48 hrs:							Dup tak	en? / Dup ID:	
ple Container and Preservation: VCTY 10W water level (0.03m) - could not sample without disturbing silt ERVATIONS ather Conditions: Temperature: Current Precipitation: Precipitation of past 24 / 48 hrs:	Imple A	Colour:						Turbidity: Low / Media	ım / High
Very low water level (0.03 m) - could not sample without disturbing alt ERVATIONS ather Conditions: Temperature: Current Precipitation: Precipitation of past 24 / 48 hrs:		-		<u></u>					
Mat Sample       with at disturbing alt         SERVATIONS         ather Conditions:         Temperature:         Current Precipitation:         Precipitation of past 24 / 48 hrs:	mple C	ontainer and	Preservation:		0	-1	1 1		( D
ERVATIONS ather Conditions: Temperature: Current Precipitation: Precipitation of past 24 / 48 hrs:	_	nal	y lou		<u>save</u>	<u>r veve</u>	.0 - 7	<u>1.03m</u>	- could
ather Conditions: Temperature: Current Precipitation: Precipitation of past 24 / 48 hrs:		1.13+	Sam	pro	WH	not (	Ust	mong si	t
ather Conditions: Temperature: Current Precipitation: Precipitation of past 24 / 48 hrs:									
Ather Conditions: Temperature: Current Precipitation: Precipitation of past 24 / 48 hrs:	SERV	ATIONS							-
Current Precipitation:	eather						و بوانو و دانو و محمد ان		
Precipitation of past 24 / 48 hrs:									
	_								
tes:									
	Notes:								
			·						



PROJECT INFORMATION Project Number: 2-1152-0155 Client: Covanta Site Location: SNMP-E-IN

Time	10:20
Surveyed reference point	
Water Depth at Staff Gauge (m)	
Stream Width (m)	
Stagnant	Yes/ No
Flow Rate	

Date: Oct 24 iU  $\mathbf{\lambda}$ Zdanassa Sampled By: EMars

Location ID SW 1 IN

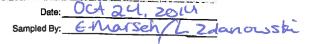
Logger Number	
Loger Download Time	
Photos Taken	Yes / No (#)
Photo Location	

Time	Dissolved Oxygen mg/L	Conductivity	pH pH Units	Redox Potential mV	Temperature °C		Colour	Odour
10.30	,	362	7.15		10.7	36.4	murlay	None

SAMPLING RECORD	يقور فالبار بأنب كالماكس بارا بالقرب المتحا	an entered a second and a second a second a second a second second second second second second second second s
Sampling Method:	pole	Sample ID: SUMP-E-IN
Sample Depth:	6.2 am	Dup taken? / Dup ID: Ves - same
Time Sampled:	10:30	
Sample Appearance: Colour: Odour:	none	Turbidity: ow/ Medium / High
Sample Container and P	reservation:	
<u></u>		
· · · · · · · · · · · · · · · · · · ·		
OBSERVATIONS		
Weather Conditions:	emperature: 15°C s	inny
	Precipitation: None	
Precipitation of past		
	· · · · · · · · · · · · · · · · · · ·	
	· · · · · · · · · · · · · · · · · · ·	



<b>PROJECT INFORM</b>	ATION		 		1
Project Number:	12-1152-0155			 	
Client:	Covanta				
Site Location:	Shong-w-IN	2			



Time	11:00am	Location ID SUMP-W.
Surveyed reference point		. <u></u>
Nater Depth at Staff Gauge (m)	_	Logger Number
Stream Width (m)		Loger Download Time
Stagnant	Yes / No	Photos Taken Yes / No (#
Flow Rate	NA	Photo Location

SAMPLING PARAMETER Dissolved Oxygen Redox Conductivity pН Temperature Time Potential Turbidity Colour Odour mS or µS) pH Units mg/L m٧ °C 14.9 3 3 am 7.2 10. unk 1 l none

SAMPLING RECORD	
Sampling Method: Pole	Sample ID: STUMP - W-1D
Sample Depth: 0 · 2 m	Dup taken? / Dup ID: Yes same
Time Sampled: 11 am	
Sample Appearance: Norky	Turbidity: Low Medium / High
Odour: nohe	

Sample Container and Preservation:

DBSERVATIONS		
Weather Conditions: Temperature:	15°C	
Current Precipitation:	none	
Precipitation of past 24 / 48 hrs:	none	
Notes:		 



PROJECT INFORM	ATION	
Project Number:	12-102-0155	Da
Client:	(ovanta	Sampled
Site Location:	5W92.3	

	and an end of the second state of the second s
Date:	Octay 2014
Sampled By:	C.Mapch/L. Zolange

DATA			
Time	lom		N3
Surveyed reference point	centre		
Vater Depth at Staff Gauge (m)	0.3m	Logger Number	
Stream Width (m)	1.5	Loger Download Time	
Stagnant	Yes No	Photos Taken	
Flow Rate	medium	Photo Location	

	and the second s		
Location ID	Sw	3	

Logger Number	
Loger Download Time	
Photos Taken	Yes / No (#)
Photo Location	

Time	Dissolved Oxygen mg/L	Conductivity	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
		847	8.32		<b>9</b> ,5	8.34	c lear	none.

SAMPLING RECORD		
Sampling Method:	pole	Sample ID: 503
Sample Depth:	0.3M	Dup taken? / Dup ID: 195 - 1900 Soume
Time Sampled:	1:15pm	
Sample Appearance: Colour:	clear	Turbidity: Low / Medium / High

Odour: 0000

OBSERVA	TIONS				
Weather Co	onditions: Temperature:	1500	somy		
	Current Precipitation:	no	ne '	-	
Precipita	ation of past 24 / 48 hrs:	none		<u> </u>	~
Notes:	Fairly	low	water	Cevel.	stream flouing
	regula	ily.		<i>k</i> .	
	0	J			



PROJECT INFORMATION	
Project Number: 12-1(52-0175	Date: Oct 24 2014
Client: <u>(ovanda</u>	Sampled By: EMOUSCH & Zolowosti
Site Location: Sog	
U	
SITE DATA	
Time /2:00	Location ID SW9

	10.00
Surveyed reference point	
Water Depth at Staff Gauge (m)	0.20
Stream Width (m)	Qm
Stagnant	Yes No
Flow Rate	med the

Logger Number	
Loger Download Time	
Photos Taken	Yes / No (#)
Photo Location	

Time	Dissolved Oxygen mg/L	Conductivity mS or μS	pH pH Units	Redox Potentiał mV	Temperature °C	Turbidity	Colour	Odour
12:00		南	8.24	/	9.2	147	NONE	NONE
SAMPLI	NG RECOR	807	7					
Samp	ling Method:	Dal	0			···	Sample ID:	a na na airtean an an an an an an airtean an an an an airtean an a
Sa	mple Depth:	0! Z.	m			Dup tak	en? / Dup ID:	's = same
Tin	e Sampled:	12:6	0		_	-		
Sample A	ppearance: Colour:	none			-		Turbidity: Low / N	fedium / High
	Odour:	nono			_			
BSERV	ATIONS							
Weather	Conditions:	Temperature:	15	oc _	Sunny			
		Dessistations	10	one				
	Current	-						
		st 24 / 48 hrs:		re				



-----

٨

ROJECT INFORMATION	
Project Number: 12-1152-0155	Date: Oct 24, 2001
Client: Covarda	Sampled By: <u>EMarsch/L. Zdondusk</u>
Site Location: SUMP-W-OUT	
Time 12000	Location ID SwmP-w-aut
Surveyed reference point	
Water Depth at Staff Gauge (m)	

Logger Number	
Loger Download Time	
Photos Taken	Yes / No (# )
Photo Location	

# Flow Rate 56

Stagnant

Stream Width (m)

h 

Yes / No

SAMPLING PARAMETER

Time	Dissolved Oxygen mg/L	Conductivity mS or $\mu$ S	рН pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
	C and a second				Quarante and a second			

SAMPLING RECORD Sampling Method: Sample ID: Sample Depth: Dup taken? / Dup ID:\_ Time Sampled: Sample Appearance: Colour: Turbidity: Low / Medium / High Odour:

Sample Container and Preservation:

OBSERVATIONS
Weather Conditions:
Temperature:
Current Precipitation:
Precipitation of past 24 / 48 hrs:
Notes: Very little water ~ 0.03m at deepest
No flow from pipe. clear and flowing shortly
arrind rocks ptenting sampler from accessing
wader



PROJECT INFORM	ATION	 
Project Number:	2-(152-0155	
Client:	Covanta	Sample
Site Location:	SUMP-E-OUT	·

Date: Oct 24-2014 L. Zdaravsh Sampled By: G. Marsch

Time	11:35			
Surveyed reference point	Centre			
Water Depth at Staff Gauge (m)	0.3m			
Stream Width (m)	am			
Stagnant	Yes No			
Flow Rate	none			

Location ID SUMP-E-Qut

Logger Number	
Loger Download Time	
Photos Taken	Yes / No (#)
Photo Location	

SAMPLING PARAMETER

Time	Dissolved Oxygen mg/L	Conductivity mS or $\mu$ S	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
11:40		6as	ର <b>ଖ୍ୟ</b> %		11.5	5.38		

SAMPLING RECO	RD	
Sampling Method	Pole	Sample ID: SUMP - E- OUT
Sample Depth:	0.20m	Dup taken? / Dup ID: Ues - some
Time Sampled:	11:45	
Sample Appearance: Colour:		
Odour:	none	

Sample Container and Preservation:

OBSERVATIONS	
Weather Conditions:	
Temperature:	
Current Precipitation:	
Precipitation of past 24 / 48 hrs:	
Notes:	
_	



		10					· · · · · · · · · · · · · · · · · · ·	the design of the second
Pro		12-1150		5			Date: Oct	24,2014
	Client: Site Location:		und _	-			Sampled By: <u>6. M</u>	ersch/1.2do
	Site Location:	_24	(	-				
SITE D	ATA							
		Time			7		Location ID 5	
	Surveyed	reference point			1			
Wat	ler Depth at S	itaff Gauge (m)			1		Logger Number	
	Str	eam Width (m)			1		Loger Download Time	
		Stagnant	Yes	/ No	1		Photos Taken	
		Flow Rate					Photo Location	
					_			
SAMPLI	NG PARAM				enteron tartes or	A		
Time	Dissolved Oxygen mg/L	mS or uS	pH	Redox Potential	Temperature	Turbidity	Colour	Odour
	- mg/L		pH Units	mV	0°C	1/ 0	<u></u>	0.770.0
	1 1	781	7.78		11.3	10.2	Clear	VIONE
Samp	NG RECOR	<b>Þ</b> <b>Þ</b> 6	e				Sample ID:	JI
Samp		р Ф.С.	e 5m			Dup tak	Vac	JI - samo
Samp. Sa	ling Method:	р Ф.б. Il: 15	e 5m an		-	Dup tak	sample ID: 50 sen? / Dup ID: 465	JI - same
Sampi Sa Tirr	ling Method: mple Depth: ne Sampled: ppearance:	\$6 0.6 11:15			-	Dup tak	en? / Dup ID: Yes	
Sampi Sa Tirr	ling Method: mple Depth: ne Sampled: ppearance: Colour:	\$6 0.6 11:15	am		-	Dup tak	en? / Dup ID: Yes	um / High
Sampi Sa Tirr Sample A	ling Method: mple Depth: ne Sampled: ppearance: Colour: Odour:	ФС 0.00 11:15 се 00	am		-	Dup tak	en? / Dup ID: Yes	
Sampi Sa Tirr Sample A	ling Method: mple Depth: ne Sampled: ppearance: Colour: Odour:	\$6 0.0 11:15 се	am		-	Dup tak	en? / Dup ID: Yes	
Sampi Sa Tirr Sample A	ling Method: mple Depth: ne Sampled: ppearance: Colour: Odour:	ФС 0.00 11:15 се 00	am		-	Dup tak	en? / Dup ID: Yes	
Sampi Sa Tirr Sample A	ling Method: mple Depth: ne Sampled: ppearance: Colour: Odour:	ФС 0.00 11:15 се 00	am		-	Dup tak	en? / Dup ID: Yes	
Samp Sa Tirr Sample A Sample C	ling Method: mple Depth: ne Sampled: ppearance: Colour: Odour: ontainer and	ФС 0.00 11:15 се 00	am		-		ren? / Dup ID: (es	um / High
Samp Sa Tirr Sample A Sample C	ing Method: mple Depth: ne Sampled: ppearance: Colour: Odour: ontainer and	ФС 0.00 11:15 се 00	am		-		ren? / Dup ID: (es	um / High
Samp Sa Tirr sample A ample C	Ing Method: mple Depth: ne Sampled: Odour: Odour: ontainer and ATIONS	ФС 0.00 11:15 се 00	an ar re				ren? / Dup ID: (es	um / High
Samp Sa Tirr sample A ample C	ing Method: mple Depth: ne Sampled: Colour: Odour: Container and Container and Container and	Preservation:	ar Ne				ren? / Dup ID: (es	um / High
Samp Sa Sample A Sample C Sample C	ling Method: mple Depth: ne Sampled: Odour: Odour: Odour: Odour: Container and Container and Conditions:	Preservation:	am ne				ren? / Dup ID: (es	um / High
Sample A Sample A Sample C Sample C Sample C	Iing Method: mple Depth: ne Sampled: Odour: Odour: Odour: Odour: Container and ATIONS Conditions: Current pitation of par	Preservation: Temperature:	ar ne				ren? / Dup ID: (es	um / High
Sample A Sample A Sample C DESERV Weather Precip	Ing Method: mple Depth: ne Sampled: Odour: Odour: Odour: Odour: Container and ATIONS Conditions: Current pitation of par	Preservation: Temperature: Precipitation: St 24 / 48 hrs:	ar ne				ren? / Dup ID: (es	um / High

5

ROJECT INFORM	ATION	40. 					· · · · · · · · · · · · · · · · · · ·
Project Number:	C	0155				Date: Dec	23,2014
Client:		DIEL				Sampled By: EM	ausor 1/11 will
Site Location:							/
						· · · · · · · · · · · · · · · · · · ·	
	Time	940	7			Location ID SWY	NP-E-OMAMATIN
Surveyed	eference point						
Water Depth at S	taff Gauge (m)			_		Logger Number	
Str	earn Width (m)			_		Loger Download Time	
	Stagnant	Yes	/ No			Photos Taken	Yes / No (#)
	Flow Rate			]		Photo Location	
AMPLING PARAN	ETER						
Time Dissolved Oxygen mg/L	Conductivity	pH pH Units	Redox Potentiał mV	Temperature	Turbidity	Colour	Odour
				· · ·			
	1709	6.9		2.4	5.8	Clear	NonQ
	1709	6.9,		2.4		L'earl	
		Sile					
AMPLING RECOR Sampling Method:		Sile				Sample ID:	
Sampling Method: Sample Depth:	POT + SuR	Sile				Sample ID:	
Sampling Method: Sample Depth: Time Sampled:	POT + SuR	Sile				Sample ID:	
Sampling Method: Sample Depth: Time Sampled:	PoT + SuR	Sile				Sample ID:	
Sampling Method: Sample Depth: Time Sampled: ample Appearance:	PoT + SuR	POLE FACE	3 .	- - - -		Sample ID:	
Sampling Method: Sample Depth: Time Sampled: ample Appearance: Colour: Odour:	PoT + SuR	POLE FACE	3 .	- - - -		Sample ID:	
Sampling Method: Sample Depth: Time Sampled: ample Appearance: Colour: Odour:	PoT + SuR	POLE FACE	3 .	- - - -		Sample ID:	
Sampling Method: Sample Depth: Time Sampled: ample Appearance: Colour: Odour:	PoT + SuR	POLE FACE		-	Dup tak	Sample ID:	
Sampling Method: Sample Depth: Time Sampled: ample Appearance: Colour: Odour:	PoT + SuR	POLE FACE		- - - -	Dup tak	Sample ID:	
Sampling Method: Sample Depth: Time Sampled: ample Appearance: Colour: Odour: ample Container and	PoT + Su A Preservation:	POLE FACE			Dup tak	Sample ID:	lium / High
Sampling Method: Sample Depth: Time Sampled: ample Appearance: Colour: Odour: ample Container and	PoT + Su A Preservation:	POLE FACE			Dup tak	Sample ID:	lium / High
Sampling Method: Sample Depth: Time Sampled: ample Appearance: Colour: Odour: ample Container and BSERVATIONS Weather Conditions:	PoT + Su A Preservation: Temperature:	POLE FACE			Dup tak	Sample ID:	lium / High
Sampling Method: Sample Depth: Time Sampled: ample Appearance: Colour: Odour: ample Container and BSERVATIONS Veather Conditions:	Preservation:	POLE FACE			Dup tak	Sample ID:	lium / High
Sampling Method: Sample Depth: Time Sampled: ample Appearance: Colour: Odour: ample Container and BSERVATIONS Veather Conditions: Curren Precipitation of pa	Preservation:	POLE FACE			Dup tak	Sample ID:	lium / High
Sampling Method: Sample Depth: Time Sampled: ample Appearance: Colour: Odour: ample Container and BSERVATIONS Veather Conditions:	Preservation:	POLE FACE			Dup tak	Sample ID:	lium / High
Sampling Method: Sample Depth: Time Sampled: ample Appearance: Colour: Odour: ample Container and BSERVATIONS Weather Conditions: Curren Precipitation of pa	Preservation:	POLE			Dup tak	Sample ID:	lium / High
Sampling Method: Sample Depth: Time Sampled: ample Appearance: Colour: Odour: ample Container and BSERVATIONS Veather Conditions: Curren Precipitation of pa	Preservation:	POLE			Dup tak	Sample ID:	lium / High

i

Variation

. Are



PROJECT INFORMATION - ----Project Number: 12-1 151-0155 Date: Dec. 22/14 Client: CONVAND Site Location: SWMD-E-OUT Sampled By:\_

SITE DATA Time 035 Surveyed reference point Water Depth at Staff Gauge (m) Stream Width (m) 0 .2 Yes / No Stagnant Flow Rate Low

EM

Location IDSWIMPE-ONT

Logger Number	
Loger Download Time	
Photos Taken	(Yes (No (#
Photo Location	

SAMPLING PARAMETER

Time	Dissolved Oxygen mg/L	Conductivity	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
1035		2186	7.41		3.8	40.B	cher	N

. . . . . . . . . .

----

SAMPLING RECORD Pot + POLE Sampling Method: Sample ID: SWIND-E-OUT SURFACE Sample Depth: Dup taken? / Dup ID: 1.031 Time Sampled: Sample Appearance: Colour: Turbidity/Loy) / Medium / High Odour:

Sample Container and Preservation:

3 X

OBSERVATIONS Weather Conditions:

Temperature:

Current Precipitation:

Precipitation of past 24 / 48 hrs:

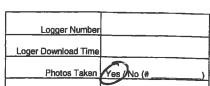
Notes:



PROJECT INFORM		 	1
Project Number:	12/15/0155		
Client:	Covanda		Se
Site Location:			

Date: ampled By

SITE DATA Time 950 Location ID Surveyed reference point Water Depth at Staff Gauge (m) Logger Number Stream Width (m) Loger Download Time Yes / No FROZEN Stagnant Photos Taken No (# Fiow Rate Photo Location



Time	Dissolved Oxygen mg/L	Conductivity mS or $\mu$ S	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour

SAMPLING RECORD .... ------

and the second second

FROZEN

Sampling Method:

Sample Depth:

Time Sampled: Sample Appearance:

Sample ID:

Dup taken? / Dup ID:

Turbidity: Low / Medium / High

Odour: Sample Container and Preservation:

Colour:

OBSERVATIONS

Weather Conditions;

Current Precipitation:

Precipitation of past 24 / 48 hrs:\_\_\_

Temperature:

Notes:

PROJECT INFORMATION Project Number 2-1151-0155 Client: <u>(0NNNTA</u> Site Location: <u>SWWP-WEST</u>-0MT

Date: Sampled By:

SITE DATA Time 1020 Surveyed reference point Water Depth at Staff Gauge (m) 0.50 Stream Width (m) Yes / Stagnant Flow Rate Med.

SURFACE

Location ID SWN 831

Logger Number	
Loger Download Time	
Photos Taken	Xes / No (#)
Photo Location	

SAMPLING PARAMETER

Time	Dissolved Oxygen mg/L	Conductivity mS or µS	pH pH Units	Redox Potentiał mV	Temperature °C	Turbidity	Colour	Odour
1 070	/		7.41		4.1	22.0		

SAMPLING RECORD +POLE

Sampling Method: 0

Sample Depth:

Sample ID: SWAP-W-OUT Dup taken? / Dup ID:

Time Sampled:

Sample Appearance: o lon Colour:

Turbidit: Low Medium / High

Odour: Sample Container and Preservation:

OBSERVATIONS	
Weather Conditions:	
Temperature:	
Current Precipitation:	
Precipitation of past 24 / 48 hrs:	
Notes:	



----

PROJECT INFORMATION Project Number: 12-1151-0155 Client: 101 VANTA Site Location: U

Dec. Date: 22 DW/EM Sampled By: \_

Time	1005	Location ID SIAL
Surveyed reference point		
Vater Depth at Staff Gauge (m)		Logger Number
Stream Width (m)	1.5	Loger Download Time
Stagnant	Yes No	Photos Taken Yes /)
Flow Rate	Mod.	Photo Location

SAMPLING PARAMETER Dissolved Redox Conductivity pН Temperature Time Oxygen Potential Turbidity Colour Odour mg/L mS or  $\mu$ S pH Units mV °C NON 1670 7.74 3.9 none. 12.2 1005

SAMPLING RECORD	
Sampling Method: \$957 + POLG	Sample ID: 5W
Sample Depth: <u>SURFACE</u>	Dup taken? / Dup ID:
Time Sampled:	
Sample Appearance: Colour:	Turbidity: Low Medium / High
Odour: NON	
Sample Container and Preservation:	Ve d.
1	
OBSERVATIONS	
OBSERVATIONS Weather Conditions:	
Temperature:	
Current Precipitation:	
Precipitation of past 24 / 48 hrs:	
Notes:	



PROJECT INFORMATION	
Project Number: 21510155	Date: Dec 23 201
Client: Covanda	Sampled By: E-Moudon /DM
Site Location:	

SITE DATA :1 Time Surveyed reference point 6.2m Water Depth at Staff Gauge (m) Stream Width (m) m

Stagnant

Flow Rate

Yes/ No

----Theridge

ocation ID

Logger Number	
Loger Download Time	
Photos Taken	Yes / No (# )
Photo Location	

- - - - - -

SAMPLING PARAMETER

Time	Dissolved Oxygen mg/L	Conductivity mS or µS	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
		1060	804		3.0	65	minky	none

SAMPLING RECORD Ø Sampling Method: Pc + OD S Sample (D: 0 0 Sample Depth: Dup taken? / Dup ID: 1:4 Time Sampled: Sample Appearance: Colour: Turbidity: Low / Medium / High Odour:

Sample Container and Preservation:

OBSERVATIONS	
Weather Conditions:	
Current Precipitation: NONC	
Precipitation of past 24 / 48 hrs: MM	
Notes:	



PROJECT INFORMATION Project Number: 12-1151-0153 Client: CONVANTA SW Site Location:

26.22 Date: Sampled By:

SITE DATA Time 100  $5W^{3}$ Location ID Surveyed reference point Water Depth at Staff Gauge (m) Logger Numbe . Om Stream Width (m) Loger Download Time Stagnant Yes / No Photos Taken Yes / No (# Flow Rate FAS Photo Location

### SAMPLING PARAMETER

Time	Dissolved Oxygen mg/L	Conductivity mS or $\mu$ S	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
100		1041	7.80		2.5	6.50	none	naro

SAMPLING RECORD OT + POLE 500 Sampling Method: Sample ID: SURFACE Sample Depth: Dup taken? / Dup ID: Time Sampled: Sample Appearance: Turbidity: Low Medium / High Coleur: Odcur:

Sample Container and Preservation:

OBSERVATIONS			
Weather Conditions:	Temperature:	0°C	
Curren	t Precipitation:	none	
Precipitation of pa	ast 24 / 48 hrs:	<u>~lmm</u>	±
Notes:			



383

		121151 Elvan		-				23 2014
:	Site Location:				Sampled By:			
SITE D/	ATA							
		Time	11-2	Dam			Location ID 56	34
Surveyed reference point CONNE		-						
Wat	Water Depth at Staff Gauge (m) 0.9 m Stream Width (m) 1.5		]		Logger Numbe	r		
					Loger Download Time	e		
		Stagnant	Yes	/ No)			Photos Taken	Yes /No (#
		Flow Rate	med	im			Photo Location	Bank
AMPLI	NG PARAN	FTER						
	Dissolved	Conductivity	рН	Redox	Temperature	<u></u>		
Time	Oxygen mg/L	mS or µS	pH Units	Potentiał mV	°C	Turbidity	Colour	Odour
		1037	1.83		2.6	4.61	Clear	None
Sa	ling Method: mple Depth: ne Sampled:	Sul.	faie		-	Dup tak	Sample ID:	
Sa Tim ample A	mple Depth: ne Sampled: ppearance: Colour: Odour:	<u>sur</u> (1.20 <u>n</u> Ohl			- - -	Dup tak	en? / Dup ID:	
Sa Tim ample A	mple Depth: ne Sampled: ppearance: Colour: Odour:	sur. (1. 20 n Ohl hun			- - -	Dup tak	en? / Dup ID:	
Sa Tim ample A ample C	mple Depth: ne Sampled: ppearance: Colour: Odour: ontainer and	sur. (1. 20 n Ohl hun	Fale 2		-	Dup tak	en? / Dup ID:	
Sa Tim ample A ample C	mple Depth: ne Sampled: Colour: Odour: ontainer and ATIONS Conditions:	Sur (I. 20 n Ohl hoh Preservation:	Fale 2 0° (		-	Dup tak	en? / Dup ID:	
Sa Tirr ample A ample C <b>BSERV</b> /eather	Artions: Conditions:	Sur (I-, 20 n Ohl Jun Preservation:	Fall E O°C None		-	Dup tak	en? / Dup ID:	
Sa Tirr ample A ample C <b>BSERV</b> /eather	Artions: Conditions:	Sur (I. 20 n Ohl hoh Preservation:	Fall E O°C None			Dup tak	en? / Dup ID:	
Sa Tirr ample A ample C <b>BSERV</b> /eather	Ample Depth: ne Sampled: Colour: Colour: Odour: ontainer and ATIONS Conditions: Current pitation of pa	Sur (I-, 20 n Ohl Jun Preservation:	Fall E O°C None	mm		Dup tak	en? / Dup ID:	
Sa Tim ample A ample C ample C SSERV /eather	Ample Depth: ne Sampled: Colour: Colour: Odour: ontainer and ATIONS Conditions: Current pitation of pa	Sur (I-, 20 n Ohl Jun Preservation:	Faile 2 0° ( Núne ~	mm		Dup tak	en? / Dup ID:	



ENVIRONMENTAL AND SAFETY INC. "Exceptional Customer Service!"

		alibration
		$3/44 \mu_{\Sigma}$ has been calibrated
	-	structions and specifications, s and standards.
	<b>2-Point pH</b> 4.00, 7.00	Spec. Cond. 1413uS/cm
	pH 4.00 Lot # 3AL369	Lot #4AG160
	pH 7.00 Lot # 3AL262	@ 20 deg C
5 DEC. 19, 3		
$\leq$ 2014 $\leq$	Calibrated	
		2
		$\sim$

# RENTALS, SALES, SERVICE, SUPPORT

12 - 170 AMBASSADOR DR., MISSISSAUGA, ONTARIO L5T 2H9 PHONE: (905) 507-8412 TOLL FREE: (888) 285-2324 E-MAIL: SALES@MAXIMENVIRONMENTAL.COM 3104 BETA AVE., BURNABY, BRITISH COLUMBIA V5G 4K4 PHONE: (778) 330-7740 TOLL FREE: (888) 285-2324 E-MAIL: SALESBC@MAXIMENVIRONMENTAL.COM

WWW.MAXIMENVIRONMENTAL.COM



ENVIRONMEN'TAL AND SAFETY INC. "Exceptional Customer Service!"

Certifica	te of	Cali	bration
This certi has been calibrated and	fies that Hach N l meets the Manı	_	
	PRIMARY TURBIDITY	-	
	Lot#	NTU	*
	A4241 Exp.Aug./16	0.1	
	A4260 Exp.Sept./16	20.0	2
	A4248 Exp.Sept./16	100.0	
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	A4259 Exp.Sept./16	800	
5 TAC 19, 7	\$		
	Certified		
	$\sim$	$\sim$	$\sim$

RENTALS, SALES, SERVICE, SUPPORT

12 - 170 AMBASSADOR DR., MISSISSAUGA, ONTARIO L5T 2H9 PHONE: (905) 507-8412 TOLL FREE: (888) 285-2324 E-MAIL: SALES@MAXIMENVIRONMENTAL.COM 3104 BETA AVE., BURNABY, BRITISH COLUMBIA V5G 4K4 PHONE: (778) 330-7740 TOLL FREE: (888) 285-2324 E-MAIL: SALESBC@MAXIMENVIRONMENTAL.COM

WWW.MAXIMENVIRONMENTAL.COM



PROJECT INFORMATION	
Project Number: 12-1151-0155 (3000)	Date: JANUARY 15,2015
Client: COVANTA	Sampled By: DW/EM
Site Location:	
SITE DATA	and the second sec

and the second s		and a second
Time	9:20	Location ID SWMP-E-IN
Surveyed reference point	NIA	
Water Depth at Staff Gauge (m)		Logger Number
Stream Width (m)		
Stagnant	Ves / No	Photos Taken, Yes / No (#
Flow Rate		Photo Location

Time	Dissolved Oxygen mg/L	Conductivity	pH pH Units	Redox Potentlai mV	Temperature °C	Turbidity	Colour	Odour
	NI	7			1 22 State and State Strength Lawrence and 7 3	AL INSTANTING PROPERTY IN 12	1.1. man yan daga ga a sa ata da da daga da 1.20	Construction of the Bank Date of the State o

Sampling Method:	Sample ID: No Sample
Time Sampled:	
Sample Appearance: Colour: Odour:	Turbidity: Low / Medium / High
ample Container and Preservation:	
DESERVATIONS	
Marther Conditions	
Weather Conditions: Temperature: - 10°C	
Marther Conditions	
Weather Conditions: Temperature: - 10°C Current Precipitation: NONC	
Weather Conditions: Temperature: - 10°C Current Precipitation: NONE Precipitation of past 24 / 48 hrs: NGNE	

Golder ssociates PROJECT INFORMATION Project Number: 12-1151-0155 (3000) 2015 Date: JANUN Client: COVANTA Sampled By: n Site Location: SITE DATA

 Time
 9
 300

 Surveyed reference point
 VA

 Water Depth at Staff Gauge (m)

 Stream Width (m)

 Stagnant
 Ygs / No

 Flow Rate

mp-W-IN Location ID Si Logger Number Loger Download Time Photos Taken Yes No (#

Photo Location

SAMPLING PARAMETER

Time	Dissolved Oxygen mg/L/1	Conductivity mS or μS	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
	N/P				Anyona da 1970 - 1970 - 1970 - 1970 - 1970 - 1970 - 1970 - 1970 - 1970 - 1970 - 1970 - 1970 - 1970 - 1970 - 19		f - Parlamentaria	

Sample Container and Preservation:

OBSERVATIONS				
Weather Conditions: Temperature:	-10°C			• • •
Current Precipitation:	none			
Precipitation of past 24 / 48 hrs:	none	24		
Notes: Pond 202	en - entrel	1 show	covered	
	(	0		



PROJECT INFORMATION	ال معتمل المراجع محد معار مثل و المراجع المنابع المراجع و المراجع المراجع المراجع المراجع المراجع الم
Project Number: 12-1151-0155 (3000)	Date: JANUARY 15, 2015
Client: COVANTA	Sampled By: DW/EM
Site Location:	

-----

E DATA				
Time	10 am	]	Location ID Sum	P-E-ONT
Surveyed reference point	NA	1	•	
Water Depth at Staff Gauge (m)	1		Logger Number	
Stream Width (m)			Loger Download Time	
Stagnant	Yes / No	_	Photos Taken	
Flow Rate	V		Photo Location	

SAMPLING PARAMETER --- - ~ 

Time	Dissolved Oxygen mg/L	Conductivity mS or µS	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
N	A	án	and a subsection of the section of t	2 - 5 - 290 - 360 - 960 - 99 - <sup>- 1</sup> - 2		anadhar 'a' Ade larg da'n g	NECTORY LTC - MARLINET, Repartment of the organization of	

SAMPLING RECORD 

Sampling Method:	Sample ID:
Sample Depth:	Dup taken? / Dup ID:
Time Sampled:	
Sample Appearance: Colour:	Turbidity: Low / Madium / High
Sample Container and Preservation:	77
	12
OBSERVATIONS	
Weather Conditions: 10 °	
Current Precipitation:	۹
Precipitation of past 24 / 48 hrs: <u>NON-</u>	
Notes: <u>PIPE FV02</u>	en, no snow cover on aree
In downstream	(west of gut) small amounts
of open water w	som algea this layer of ce



PROJECT INFORMATION	These subjects as some same to an it is the second second
And an and a second	
Project Number: 12-1151-0155 (3000)	Date: JANUATY 15,2015
Client: COVIANTA	Sampled By: DW/EM
Site Location:	7
SITE DATA	

_			
-	Time	10110	Location ID SUSMP - W-OUS
	Surveyed reference point	NA	
	Water Depth at Staff Gauge (m)	1	Logger Number
	Stream Width (m)		Loger Download Time
	Stagnant	Yes, / No	Photos Taken Yes / No (#)
	Flow Rate		Photo Location

SAMPLING PARAMETER

Time	Dissolved Oxygen mg/L	Conductivity	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
5	A		a a a a a a a a a a a a a a a a a a a	تعوا بوداري ارا با معدتت	a martine and	ta Ventaria, arcentenari, e	a - and the cost of the cost o	Canadian Transformer (AMERICATION)

SAMPLING RECORD NOS an Sampling Method: Sample ID: Sample Depth: Dup taken? / Dup ID: Time Sampled: Sample Appearance: Colour: Turbidity: Low / Medium / High Odour:

Sample Container and Preservation:

OBSERVATIONS				
Weather Conditions: Temperature:	-10°C			
Current Precipitation:	none			
Precipitation of past 24 / 48 hrs:	none			
Notes: Locast	on Froze	n, c	neek fro	2.001-3
no show	J cover on	crel	4	



PROJECT INFORMATION	and a second
Project Number: 12-1151-0155 (3000)	Date: JANUATY 15, 2015
Client: COVIANTA	Sampled By: DW/EM
Site Location:	

Time	9:45
Surveyed reference point	NA
er Depth at Staff Gauge (m)	1
Stream Width (m)	
Stagnant	Yes / No
Flow Rate	$\overline{\mathbf{V}}$

Time	Dissolved Oxygen mg/L	Conductivity mS or µS	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour	].
K	AL				1920-1940-1940-1940-1940-1940-1940-1940-194	ke jejina se so jeji in Dang in 194	an an the second se	a.}	

SAMPLING RECORD	
Sampling Method:	Sample ID: NO Sample
Sample Depth:	Dup taken? / Dup ID:
Time Sampled:	×
Sample Appearance: Colour:	Turbidity: Low / Medium / High
Odour:	
Sample Container and Preservation:	

BSERVATIONS	a ana ana ang ang ang ang ang ang ang an			
Weather Conditions: Temperature	-10°C			
Current Precipitation:	none			
Precipitation of past 24 / 48 hrs:	none			
Notes: Creek	frozen,	00	snow	cover
Notes: Creek		no	Snow	cover



PROJECT INFORMATION	المحمد الجد يتبعد والمحمد والمرجع والمحمد المراجع المحمد والمحمد الم
Project Number: 12-1151-0155 (3000)	Date: JANUATY 15,2015
Client: COVIANTA	Sampled By: DW/ISM
Site Location:	
	·
SITE DATA	

Time	10:45	
Surveyed reference point	NA	
Water Depth at Staff Gauge (m)		
Stream Width (m)		
Stagnant	Yes / No	
Flow Rate		

Location ID	S	22	
Logg	er Number		
Loger Dowr	load Time		
Pho	tos Taken	Yes / No (#	)
	o Location		

Time	Dissolved Oxygen mg/L	Conductivity mS or μS	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
N	A	مستحمصي	alita antanalati balahar	- 2649990010 18 <sup>10</sup> , 1950-19	e "Pathatista, ar fitatemaailte: to	e ( 1. altanes i 400 - 100 janeire		
SAMPLI	NG RECOR	D						
Samp	ling Method:							
Sa	mple Depth:		····	<u> </u>		Dup take		
Tin	ne Sampled:				-			
Sample A	ppearance: Colour:						Turbidity: Low / Med	lum / High
	Odour:							
Sample C	ontainer and	Preservation:						
CBSERV	ATIONS							
		the second second second second					<u> </u>	
	Current	Temperature: _	<u>^</u>	me				
Precij		st 24 / 48 hrs:_		one				
Notes:	Fr	ozen	WH	n sh	102	Cove	*	
NULUS.		<u>c copi</u>	~		· Und		<u> </u>	



PROJECT INFORMATION	a na ana ana ana ana ana ana ana ana an
Project Number: 12-1151-0155 (3000)	Date: JANUARY 15, 2015
Client: COVIANTA	Sampled By: DW/EM
Site Location:	

Stream Width (m)         Loger Downlog           Stagnant         Yes / No         Photo	Time	10:30	Location ID SUNS
Stream Width (m)         Loger Downlog           Stagnant         Yes / No         Photo	Surveyed reference point	NA	
Stream Width (m) Loger Downlo Stagnant Yes / No Photo	ater Depth at Staff Gauge (m)	1	Logger Number
Stagnant Yes / No Photo	Stream Width (m)		Loger Download Time
	Stagnant	Yes / No	Photos Taken Yes / No
	Flow Rate -	-V	Photo Location

Time	Dissolved Oxygen mg/L	Conductivity mS or $\mu$ S	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour
N	A	-				ananggan tanakanan kuka	The second state of the se	ATTING STORE
	NG RECOR	D						
Samp	ling Method:	noni	2		-		Sample ID: 🔊 🖓 🍶	ample.
Sa	mple Depth:				-	Dup tak	en? / Dup ID:	¥
Tim	e Sampled:				-			
ample A	ppearance: Colour:				_		Turbidity: Low / Medi	um / High
							,	
Sample C	ontainer and	Preservation:						
								2
BSERV	ATIONS							
Weather	Conditions:	Temperature:						
	Current	Precipitation:		ne				
Precip	itation of pay	st 24 / 48 hrs:	nor	R				

Notes: Frozen - some show cover

PROJECT INFORMATION



Project Number: <u>12-1151-0155</u> (3000) Client: <u>COVANTA</u> Site Location:

Date: JANUATY 15, 2015 Sampled By: DW/ EM

SITE DATA SWY Time 10:25, Location ID Surveyed reference point Water Depth at Staff Gauge (m) Logger Number Stream Width (m) Loger Download Time Stagnant Yes / No Photos Takeny Yes / No (# Flow Rate Photo Location

	Dissolved Oxygen mg/L	Conductivity	pH pH Units	Redox Potential mV	Temperature °C	Turbidity	Colour	Odour			
N	A	nator i plant tradici i di anti	n a fairman an a	ang		MATTERN CONTRACTOR CONTRACTOR	Comparison and Anti-States Inc. States	and the second sec			
SAMPLI	IG RECOR	D						and Have a second and a second a			
Sampi	ing Method:	NOS	anopt	Q.	-		Sample ID:	ne			
Sar	nple Depth:		•		-	Dup take	en? / Dup ID:				
Sample A	e Sampled: opearance: Colour: Odour: ontainer and	Preservation:		·	-	Turbidity: Low / Medium / High					
								2			
	Conditions:	Temperature:	- 10	)°C				8			
D <b>BSERV</b> Weather (	Conditions:	Temperature: _	- 10	p°C Re							
Weather (	Conditions: Current	_		)°C				2			
Weather (	Conditions: Current	Precipitation:	n	ve ae		Same	lina	bcahan			
Weather ( Precip Notes:	Conditions: Current	Precipitation: _	ne Go	ne ne			ling h and	beation			



# E-4 Year 1 – Surface Water Quality Sampling Results



Table 1: Total Suspended Solids Sampling Results
--

	TSS	RDL <sup>3</sup> Stations								
Date (Type of event) <sup>1.</sup>	Limit <sup>2</sup> , CWQG <sup>3</sup> (mg/L)	(mg/ L)	<b>SW-1</b> (mg/L)	<b>SW-2</b> (mg/L)	<b>SW-3</b> (mg/L)	<b>SW-4</b> (mg/L)	E-SWMP- IN (mg/L)	W-SWMP- IN (mg/L)	E-SWMP- OUT (mg/L)	W-SWMP- OUT (mg/L)
June 5, 2012 (Inter-event)		10	54	10	<10	<10	NA	NA	NA	NA
June 27, 2012 (Inter-event)		10	230	<10	<10	<10	NA	NA	NA	<10
September 6, 2012 (Rainfall-runoff, Controlled discharge)		10	68	24	<10	15	15	17	<10	19
September 28, 2012 (Inter-event)	25	10	35	15	<10	<10	<10	ND	<10	ND
November 1, 2012 (Rainfall-runoff-discharge)		10	20	17	<10	10	1400	120	ND	31
March 12, 2013 (Freshet Conditions)		10	20	<10	64	53	19	29	ND	ND
March 19, 2013 (Controlled discharge)		10	14	14	<10	<10	<10	13	<10	<10
April 8, 2013 (Controlled discharge)		10	<10	<10	<10	<10	12	<10	13	19

Notes:

1. Inter-event (dry), controlled discharge (due to recent rainfall-runoff), rainfall-runoff-discharge (gravity drain), or freshet ('spring melt') sampling event conditions.

 There is no PWQO and {Interim PWQO} for TSS. A suitable TSS limit for various sewage (including SWM) discharges, and receiving water is accepted to be 25 mg/L (MOE, 1994b).

3. The CWQQs for TSS are the following:

i. clear flow

Maximum increase of 25 mg/L from background levels for any short-term exposure (e.g., 24-h period). Maximum average increase of 5 mg/L from background levels for longer term exposures (e.g., inputs lasting between 24 h and 30 d).

ii. high flow

Maximum increase of 25 mg/L from background levels at any time when background levels are between 25 and 250 mg/L. Should not increase more than 10% of background levels when background is ≥ 250 mg/L (CCME, 2013).

4. RDL - Reported Detection Limit.

5. Where 'NA' is entered, sample was not measured to do Health &Safety / access issues during construction.

6. Where 'ND' is entered, SWM Pond station was not sampled or provided in this table, since there was no discharge from the SWM feature during the sampling effort.

7. Exceedances of limits are in bold, with further discussion in Section 5.2, where applicable.



and the second second	
and the second sec	
and the second s	
and the second se	

 Table 2: Turbidity Sampling Results

_		<b>CWQG</b> (NTU)	<b>RDL<sup>4.</sup></b> (NTU)	Stations							
Date (Type of event) <sup>1.</sup>	<b>PWQO</b> (NTU)			<b>SW-1</b> (NTU)	<b>SW-2</b> (NTU)	<b>SW-3</b> (NTU)	<b>SW-4</b> (NTU)	E-SWMP- IN (NTU)	W-SWMP- IN (NTU)	E-SWMP- OUT (NTU)	W-SWMP- OUT (NTU)
June 5, 2012 (Inter-event)			0.2	31	5.2	3.5	2.9	NA	NA	NA	NA
June 27, 2012 (Inter-event)			0.2	70	1.7	3.4	3.2	NA	NA	NA	6.1
September 6, 2012 (Rainfall-runoff, Controlled discharge)	Surface water concentrations will change		0.2	120	27	3.2	16	6.9	11	6.0	9.6
September 28, 2012 (Inter-event)	the natural Secchi disk reading by	See Note <sup>3.</sup> for CWQG narrative for Turbidity.	0.2	5.2	5.9	4.6	4.9	1.4	ND	3.3	ND
November 1, 2012 (Rainfall-runoff-discharge)	more than 10% <sup>2.</sup>		0.2	37	28	10	9.7	910	270	ND	55
March 12, 2013 (Freshet Conditions)				0.2	25	14	32	27	41	86	ND
March 19, 2013 (Controlled discharge)			0.2	22	14	9.2	6.3	2.0	21	4.5	5.6
April 8, 2013 (Controlled discharge)			0.2	5.2	4.4	1.5	1.8	12	15	23	30

Notes:

1. Inter-event (dry), controlled discharge (due to recent rainfall-runoff), rainfall-runoff-discharge (gravity drain), or freshet ('spring melt') sampling event conditions.

2. Lab results for Turbidity analyzed only, due to challenges with accurate and consistent in situ Secchi disk measurements for turbidity.

3. The CWQQs for TSS are the following:

i. clear flow

Maximum increase of 8 NTUs from background levels for a short-term exposure (e.g., 24-h period). Maximum average increase of 2 NTUs from background levels for a longer term exposure (e.g., 30-d period).

ii. high flow or turbid waters

Maximum increase of 8 NTUs from background levels at any one time when background levels are between 8 and 80 NTUs. Should not increase more than 10% of background levels when background is > 80 NTUs (CCME, 2013).

4. RDL - Reported Detection Limit.

5. Where 'NA' is provided, sample was not measured to do Health &Safety / access issues during construction.

6. Where 'ND' is provided, SWM Pond station was not sampled or provided in this table, since there was no discharge from the SWM feature during the sampling effort.

7. Exceedances of limits are in bold, with further discussion in Section 5.2, where applicable.



# Table 3: In Situ pH Measurements

-			Stations								
Date (Type of event) <sup>1.</sup>	PWQO	CWQG	SW-1	SW-2	SW-3	SW-4	E-SWMP- IN	W-SWMP- IN	E- SWMP- OUT	W- SWMP- OUT	
June 5, 2012 (Inter-event)			7.15	7.38	7.60	7.70	NA	NA	NA	NA	
June 27, 2012 (Inter-event)			5.78	6.25	7.15	6.64	NA	NA	NA	7.47	
September 6, 2012 (Rainfall-runoff, Controlled discharge)			7.73	7.74	7.94	7.79	8.33	8.20	8.33	8.14	
September 28, 2012 (Inter-event)	6.5 to	6.5 to	7.40	7.41	7.70	7.38	8.16	ND	8.86	ND	
November 1, 2012 (Rainfall-runoff-discharge)	8.5 9	9	8.25	8.06	8.35	8.31	9.80	8.80	ND	8.62	
March 12, 2013 (Freshet Conditions)			6.28	8.00	7.70	7.76	5.83	5.94	ND	ND	
March 19, 2013 (Controlled discharge)			7.12	7.43	7.64	7.62	6.85	7.35	7.74	8.16	
April 8, 2013 (Controlled discharge)			7.16	7.30	7.54	7.79	5.59	6.27	7.08	6.98	

Notes:

1. Inter-event (dry) or rainfall-runoff sampling event indication is provided below the date.

2.

Where 'NA' is provided, sample was not measured to do Health &Safety / access issues during construction. Where 'ND' is provided, SWM Pond station was not sampled or provided in this table, since there was no discharge from the SWM feature during the sampling effort. 3.

4. Sampling results out of the PWQO and CWQG acceptable limits are in bold, with further discussion in Section 5.2, where applicable.



- California			
Property in the other	Control Stationers		
And a second sec			_
	100		_
	1		

Table 4: In Sit	<i>I</i> Temperature Measurements
-----------------	-----------------------------------

			Stations								
Date (Type of event) <sup>1.</sup>	PWQO	CWQG	SW-1 (°C)	SW-2 (°C)	SW-3 (°C)	SW-4 (°C)	E-SWMP-IN (°C)	W-SWMP- IN (°C)	E-SWMP- OUT (°C)	W-SWMP- OUT (°C)	
June 5, 2012 (Inter-event)			16.1	15.4	16.8	17.1	NA	NA	NA	NA	
June 27, 2012 (Inter-event)			18.0	17.8	17.0	15.9	NA	NA	NA	20.8	
September 6, 2012 (Rainfall-runoff, Controlled discharge)			23.1	22.3	20.1	21.2	26.8	24.0	24.4	25.4	
September 28, 2012 (Inter-event)	Note <sup>2.</sup>	Note <sup>3.</sup>	14.7	13.8	12.6	13.2	15.7	ND	15.8	ND	
November 1, 2012 (Rainfall-runoff-discharge)			7.9	8.3	8.6	8.5	8.4	8.0	ND	8.2	
March 12, 2013 (Freshet Conditions)			2.8	2.7	1.4	1.4	2.4	1.6	ND	ND	
March 19, 2013 (Controlled discharge)			1.5	0.2	0.5	1.2	4.4	0.8	5.2	5	
April 8, 2013 (Controlled discharge)			6.7	6.7	7.7	7.6	7.6	7.7	7.7	7.8	

Notes:

1. Inter-event (dry) or rainfall-runoff sampling event indication is provided below the date.

2. PWQO for Temperature (generally) states: The natural thermal regime of any body of water shall not be altered so as to impair the quality of the natural environment. In particular, the diversity, distribution and abundance of plant and animal life shall not be significantly changed (MOE, 1994).

3. CWQG for Temperature:

i.Thermal Stratification: Thermal additions to receiving waters should be such that thermal stratification and subsequent turnover dates are not altered from those existing prior to the addition of heat from artificial origins

ii. Maximum Weekly Average Temperature: Thermal additions to receiving waters should be such that the maximum weekly average temperature is not exceeded iii. Short-term Exposure to Extreme Temperature: Thermal additions to receiving waters should be such that the short-term exposures to maximum temperatures are not exceeded. Exposures should not be so lengthy or frequent as to adversely affect the important species (CCME, 2013).

4. Where 'NA' is provided, sample was not measured to do Health &Safety / access issues during construction.

5. Where 'ND' is provided, SWM Pond station was not sampled or provided in this table, since there was no discharge from the SWM feature during the sampling effort.

6. Exceedances of limits are in bold, with further discussion in Section 5.2, where applicable.



and the second s	
and the second second	-
State States	
N A. NO	

### Table 5: In Situ Conductivity Measurements

1	PWQO,		Stations							
Date <sup>1.</sup> (Type of event)	CWQG <sup>2</sup>	SW-1 (μS/cm)	SW-2 (μS/cm)	SW-3 (μS/cm)	SW-4 (μS/cm)	E-SWMP-IN (μS/cm)	W-SWMP- IN (μS/cm)	E-SWMP- OUT <sup>4.</sup> (μS/cm)	W-SWMP- OUT <sup>4.</sup> (μS/cm)	
June 5, 2012 (Inter-event)		629	602	1174	1041	NA	NA	NA	NA	
June 27, 2012 (Inter-event)		551	641	1130	998	NA	NA	NA	640	
September 6, 2012 (Rainfall-runoff, Controlled discharge)		270	480	1030	640	460	700	450	650	
September 28, 2012 (Inter-event)	N/A	615	678	1185	1052	515	ND	500	ND	
November 1, 2012 (Rainfall-runoff-discharge)		408	440	771	747	494	415	ND	457	
March 12, 2013 (Freshet Conditions)		980	1000	390	400	1280	370	ND	ND	
March 19, 2013 (Controlled discharge)		5330	3460	1420	1340	1970	360	2010	1940	
April 8, 2013 (Controlled discharge)		1960	1730	860	820	2160	650	2140	2150	

Notes:

1. Inter-event (dry) or rainfall-runoff sampling event indication is provided below the date.

2. There are no PWQO and CWQG limits for conductivity. However, higher values are often related to higher concentrations of finer suspended metals in surface water. More discussion provided in Section 5.2.

3. Where 'NA' is provided, sample was not measured to do Health &Safety / access issues during construction.

4. Where 'ND' is provided, SWM Pond station was not sampled or provided in this table, since there was no discharge from the SWM feature during the sampling effort.

n:\active\projects\2012\1151 environmental\12-1151-0155\_covanta-esc-sw-monitoring-program\reports\draft\yr3\appe\_surface water sampling\e-4 year 1 - surface water results\appendix e-4 year 1 sampling results.docx





# E-5 Year 2 – Surface Water Quality Sampling Results



and the second s	
and the second second	Contraction of the second s
	4
	alia
17 V.	10

## Table 1: In Situ Turbidity Measurements

						S	Stations			
Date <sup>1.</sup> (Type of event)	<b>PWQO</b> (NTU)	CWQG (NTU)	<b>SW-1</b> (NTU)	<b>SW-2</b> (NTU)	<b>SW-3</b> (NTU)	<b>SW-4</b> (NTU)	E-SWMP- IN (NTU)	W-SWMP- IN (NTU)	E- SWMP- OUT (NTU)	W-SWMP- OUT (NTU)
May 31, 2013 (Controlled Discharge)			22.5	15.8	4.67	5.15	36.5	40	NA	1000 <sup>5.</sup>
June 25, 2013 (Rainfall-runoff, Controlled Discharge)			101	13.9	66.1	84.8	21.9	41.3	20.9	186
July 22, 2013 (Controlled discharge)			9.10	15.37	5.92	4.67	26.64	310	180	52.4
August 28, 2013 (Inter-event)	Surface water	0	NA	NA	NA	NA	NA	235	NA	NA
September 30, 2013 (Inter-event)	concentrati ons will change the	See Note <sup>2.</sup> for	24.6	NA	12.91	9.20	ND	ND	ND	ND
October 7, 2013 (Rainfall-runoff, no discharge)	natural Secchi disk	CWQG narrative	23	43.49	26.95	25.37	39.56	86.67	39.96	55.44
November 22, 2013 (Controlled discharge)	reading by for more than Tun 10% <sup>2.</sup> .	for Turbidity	51.1	23.0	5.53	14.4	196	25.3	80	25.6
December 20, 2013 (Inter-event)			76.7	NA	13.6	12.2	ND	ND	2.85	NA
January 13, 2014 (Rainfall-runoff, no discharge)			7.63	27.8	4.76	4.48	ND	ND	NA	NA
February 28, 2014 (Inter-event)		-	10	NA	NA	NA	NA	NA	NA	NA
March 31, 2014 (Controlled Discharge)			15.9	555	374	335	NA	NA	NA	110

Notes:

1. Inter-event (dry) or rainfall-runoff sampling event indication is provided below the date.

2. The CWQQs for TSS are the following:

i. clear flow

Maximum increase of 8 NTUs from background levels for a short-term exposure (e.g., 24-h period). Maximum average increase of 2 NTUs from background levels for a longer term exposure (e.g., 30-d period).

ii. high flow or turbid waters

Maximum increase of 8 NTUs from background levels at any one time when background levels are between 8 and 80 NTUs. Should not increase more than 10% of background levels when background is > 80 NTUs (CCME, 2013).

3. Where 'NA' is indicated, sample was not measured to do Health &Safety / access issues during construction.

4. Where 'ND' is indicated, SWM Pond station was not sampled or provided in this table, since there was no discharge from the SWM feature during the sampling effort. Turbidity meter instrument measurement likely out of range.

- Chaile	-		
Statistics of the local division of the loca	an Longertenne		
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	8 C		
	145		
			-
	the state		
	W . 1910		

### Table 2: Turbidity Sampling Results

								Stations			
Date (Type of event) <sup>1.</sup>	<b>PWQO</b> (NTU)	CWQG (NTU)	<b>RDL<sup>₄.</sup></b> (NTU)	<b>SW-1</b> (NTU)	<b>SW-2</b> (NTU)	<b>SW-3</b> (NTU)	<b>SW-4</b> (NTU)	E-SWMP- IN (NTU)	W-SWMP- IN (NTU)	E-SWMP- OUT (NTU)	W-SWMP- OUT (NTU)
May 31, 2013 (Controlled Discharge)			0.2	10	9	2.5	2.9	20	130	NA	460
June 25, 2013 (Rainfall-runoff, Controlled Discharge)			0.2	28	7.7	17	20	8.2	19	9.3	52
July 22, 2013 (Controlled discharge)			0.2	9.0	16	5.4	5.2	33	450	280	390
August 28, 2013 (Inter-event)	Surface water	Ill change the atural Secchi for CWQG narrative for cwqg for wore than for	0.2	NA	NA	NA	NA	NA	NA	NA	NA
September 30, 2013 (Inter-event)	concentrations will change the		0.2	NA	NA	NA	NA	NA	NA	ND	ND
October 7, 2013 (Rainfall-runoff, no discharge)	natural Secchi disk reading by more than		0.2	24	24	25	29	28	130	32	47
November 22, 2013 (Controlled discharge)	10% <sup>2.</sup>		0.2	29	18	5.1	16	89	36	110	35
December 20, 2013 (Inter-event)			0.2	ND	ND	ND	ND	ND	ND	ND	ND
January 13, 2014 (Rainfall-runoff, no discharge)			0.2	NA	10	NA	NA	ND	ND	ND	ND
February 28, 2014 (Inter-event)			NA	NA	NA	NA	NA	NA	NA	NA	NA
March 31, 2014 (Controlled Discharge)			0.2	9.8	220	87	100	NA	NA	NA	66

Notes:

1. Inter-event (dry), controlled discharge (due to recent rainfall-runoff), rainfall-runoff-discharge (gravity drain), or freshet ('spring melt') sampling event conditions.

2. The CWQQs for TSS are the following:

i. clear flow

Maximum increase of 8 NTUs from background levels for a short-term exposure (e.g., 24-h period). Maximum average increase of 2 NTUs from background levels for a longer term exposure (e.g., 30-d period).

ii. high flow or turbid waters

Maximum increase of 8 NTUs from background levels at any one time when background levels are between 8 and 80 NTUs. Should not increase more than 10% of background levels when background is > 80 NTUs (CCME, 2013).

3. RDL - Reported Detection Limit.

4. Where 'NA' is indicated, sample was not measured to do Health &Safety / access issues during construction.

5. Where 'ND' is indicated, SWM Pond station was not sampled or provided in this table, since there was no discharge from the SWM feature during the sampling effort. Exceedances of limits are in bold, with further discussion in Section 5.2, where applicable.



100 March 100	No. No. of the second sec	-
and the second second	Con days	
and the second se		
	10-	
	dia.	
	and a	

### **Table 3: Total Suspended Solids Sampling Results**

	TSS Limit <sup>2</sup> ,						Stations			
Date (Type of event) <sup>1.</sup>	CWQG <sup>3</sup> (mg/L)	RDL <sup>3</sup> (mg/L)	<b>SW-1</b> (mg/L)	<b>SW-2</b> (mg/L)	<b>SW-3</b> (mg/L)	<b>SW-4</b> (mg/L)	E-SWMP- IN (mg/L)	W-SWMP-IN (mg/L)	E-SWMP- OUT (mg/L)	W-SWMP- OUT (mg/L)
May 31, 2013 (Controlled Discharge)		10	<10	10	<10	<10	<10	17	NA	92
June 25, 2013 (Rainfall-runoff, Controlled discharge)	]	10	81	10	28	44	<10	12	<10	87
July 22, 2013 (Controlled discharge)	]	10	8	5	3	2	18	49	240	130
August 28, 2013 (Inter-event)	]	10	NA	NA	NA	NA	NA	NA	NA	NA
September 30, 2013 (Inter-event)	]	10	NA	NA	NA	NA	ND	ND	ND	ND
October 7, 2013 (Rainfall-runoff, no discharge)	25	10	40	49	31	22	31	81	69	150
November 22, 2013 (Controlled discharge)	]	10	28	28	7	18	430	45	300	30
December 20, 2013 (Inter-event)		10	ND	ND	ND	ND	ND	ND	ND	ND
January 13, 2014 (Rainfall-runoff, no discharge)		10	NA	26	NA	NA	ND	ND	ND	ND
February 28, 2014 (Inter-event)		10	NA	NA	NA	NA	NA	NA	NA	NA
March 31, 2014 (Controlled Discharge)	]	10	10	330	540	590	NA	NA	NA	36

Notes:

1. Inter-event (dry), controlled discharge (due to recent rainfall-runoff), rainfall-runoff-discharge (gravity drain), or freshet ('spring melt') sampling event conditions.

2. There is no PWQO and {Interim PWQO} for TSS. A suitable TSS limit for various sewage (including SWM) discharges, and receiving water is accepted to

be 25 mg/L (MOE, 1994b). 3. The CWQQs for TSS are the following:

i. clear flow - Maximum increase of 25 mg/L from background levels for any short-term exposure (e.g., 24-h period). Maximum average increase of 5 mg/L from background levels for longer term exposures (e.g., inputs lasting between 24 h and 30 d).
 ii. bigh flow - Maximum increase of 25 mg/L from background levels at any time when background levels are between 25 and 250 mg/L. Should not increase more

ii. high flow - Maximum increase of 25 mg/L from background levels at any time when background levels are between 25 and 250 mg/L. Should not increase more than 10% of background levels when background is ≥ 250 mg/L (CCME, 2013).

4. RDL - Reported Detection Limit.

5. Where 'NA' is entered, sample was not measured to do Health &Safety / access issues during construction.

6. Where 'ND' is entered, SWM Pond station was not sampled or provided in this table, since there was no discharge from the SWM feature during the sampling effort.

7. Exceedances of limits are in bold, with further discussion in Section 5.2, where applicable.

	1012 0.5	
	and the second se	27
and a state		0

# Table 4: In Situ pH Measurements

Date	PWQO	CWQG					Stations				
(Type of event) <sup>1.</sup>	FWQU	CWQG	SW-1	SW-2	SW-3	SW-4	E-SWMP- IN	W-SWMP- IN	E-SWMP- OUT	W-SWMP-OUT	
May 31, 2013 (Controlled Discharge)			8.07	8.07	8.26	8.16	8.13	8.62	NA	8.58	
June 25, 2013 (Rainfall-runoff Controlled Discharge)			6.96	7.01	7.53	7.33	6.46	6.58	7.07	7.20	
July 22, 2013 (Controlled discharge)	]		7.25	7.80	7.38	7.57	8.58	8.03	7.45	7.58	
August 28, 2013 (Inter-event)			NA	NA	NA	NA	NA	8.79	NA	NA	
September 30, 2013 (Inter-event)			6.38	NA	6.63	6.68	ND	ND	ND	ND	
October 7, 2013 (Rainfall-runoff, no discharge)	6.5 to 8.5	6.5 to 9	7.83	7.87	7.92	7.83	8.08	8.40	8.25	8.26	
November 22, 2013 (Controlled discharge)			8.49	8.26	8.35	8.32	8.57	9.41	9.30	9.35	
December 20, 2013 (Inter-event)			7.96	NA	8.14	7.96	ND	ND	8.33	NA	
January 13, 2014 (Rainfall-runoff, no discharge)				8.13	7.98	8.17	8.25	ND	ND	NA	NA
February 28, 2014 (Inter-event)			7		NA	NA	NA	NA	NA	NA	NA
March 31, 2014 (Controlled Discharge)			8.83	8.22	8.24	8.28	NA	NA	NA	8.90	

Notes:

1.

Inter-event (dry) or rainfall-runoff sampling event indication is provided below the date. Where 'NA' is indicated, sample was not measured to do Health &Safety / access issues during construction. 2.

3. Where 'ND' is indicated, SWM Pond station was not sampled or provided in this table, since there was no discharge from the SWM feature during the sampling effort.

Sampling results out of the PWQO and CWQG acceptable limits are in bold, with further discussion in Section 5.2, where applicable. 4.



101 F 10 10	
A CONTRACTOR	1
	5
and the second s	
	16
	1. F

### Table 5: In Situ Temperature Measurements

Dete	DWOO	014/00					Stations				
Date PWQO (Type of event) <sup>1.</sup>	PWQO	CWQG	SW-1 (°C)	SW-2 (°C)	SW-3 (°C)	SW-4 (°C)	E-SWMP-IN (°C)	W-SWMP-IN (°C)	E-SWMP-OUT (°C)	W-SWMP-OUT (°C)	
May 31, 2013 (Controlled Discharge)			20.1	17.4	18.9	17.7	22.7	22.3	NA	14.9	
June 25, 2013 (Rainfall-runoff, Controlled Discharge)			21.0	18.6	19.1	19.0	23.4	23.8	23.3	21.6	
July 22, 2013 (Controlled discharge)			23.5	21.4	22.3	21.6	25.2	24.4	24.9	24.9	
August 28, 2013 (Inter-event)			NA	NA	NA	NA	NA	24.3	NA	NA	
September 30, 2013 (Inter-event)			22.4	NA	20.5	26.5	ND	ND	ND	ND	
October 7, 2013 (Rainfall-runoff, no discharge)	Note <sup>2.</sup>	Note <sup>3.</sup>	15.2	14.1	14.2	14.8	16.3	15.5	16.0	15.9	
November 22, 2013 (Controlled discharge)	-		5.9	5.8	5.6	5.6	7.8	3.5	4.4	3.8	
December 20, 2013 (Inter-event)			0.0	NA	0.0	0.9	ND	ND	3.9	NA	
January 13, 2014 (Rainfall-runoff, no discharge)				1.4	0.3	0.5	0.3	ND	ND	NA	NA
February 28, 2014 (Inter-event)				NA	NA	NA	NA	NA	NA	NA	NA
March 31, 2014 (Controlled Discharge)			6.7	2.3	2.1	1.7	NA	NA	NA	2.2	

Notes:

1. Inter-event (dry) or rainfall-runoff sampling event indication is provided below the date.

2. PWQO for Temperature (generally) states: The natural thermal regime of any body of water shall not be altered so as to impair the quality of the natural environment. In particular, the diversity, distribution and abundance of plant and animal life shall not be significantly changed (MOE, 1994).

### 3. CWQG for Temperature:

i.Thermal Stratification: Thermal additions to receiving waters should be such that thermal stratification and subsequent turnover dates are not altered from those existing prior to the addition of heat from artificial origins

ii. Maximum Weekly Average Temperature: Thermal additions to receiving waters should be such that the maximum weekly average temperature is not exceeded iii. Short-term Exposure to Extreme Temperature: Thermal additions to receiving waters should be such that the short-term exposures to maximum temperatures are not exceeded. Exposures should not be so lengthy or frequent as to adversely affect the important species (CCME, 2013).

4. Where 'NA' is indicated, sample was not measured to do Health &Safety / access issues during construction.

5. Where 'ND' is indicated, SWM Pond station was not sampled or provided in this table, since there was no discharge from the SWM feature during the sampling effort.

6. Exceedances of limits are in bold, with further discussion in Section 5.2, where applicable.



100 Mar 100 Mar	
	107
200 200 10	
	Tri -
	6

# Table 6: In Situ Conductivity Measurements

						Stations			
Date <sup>1.</sup> (Type of event)	PWQO, CWQG <sup>2</sup>	SW-1 (µS/cm)	SW-2 (µS/cm)	SW-3 (µS/cm)	SW-4 (µS/cm)	E-SWMP-IN (μS/cm)	W-SWMP-IN (µS/cm)	E-SWMP-OUT <sup>4.</sup> (μS/cm)	W-SWMP- OUT <sup>4.</sup> (μS/cm)
May 31, 2013 (Controlled Discharge)		610	700	920	860	1080	320	NA	280
June 25, 2013 (Rainfall-runoff, Controlled Discharge)	]	630	740	860	820	940	410	840	400
July 22, 2013 (Controlled discharge)		670	590	1270	1080	750	280	420	290
August 28, 2013 (Inter-event)	]	NA	NA	NA	NA	NA	318	NA	NA
September 30, 2013 (Inter-event)	1	>20	NA	>20	>20	ND	ND	ND	ND
October 7, 2013 (Rainfall-runoff, no discharge)	N/A	520	860	960	850	2150	1140	1080	1020
November 22, 2013 (Controlled discharge)		449	577	930	834	943	551	598	548
December 20, 2013 (Inter-event)		3999 <sup>5.</sup>	NA	3999 <sup>5.</sup>	3999 <sup>5.</sup>	ND	ND	2756	NA
January 13, 2014 (Rainfall-runoff, no discharge)		3999 <sup>5.</sup>	3160	1116	1440	ND	ND	NA	NA
February 28, 2014 (Inter-event)		NA	NA	NA	NA	NA	NA	NA	NA
March 31, 2014 (Controlled Discharge)	]	1635	1065	505	552	NA	NA	NA	615

Notes:

1. Inter-event (dry) or rainfall-runoff sampling event indication is provided below the date.

2. There are no PWQO and CWQG limits for conductivity. However, higher values are often related to higher concentrations of finer suspended metals in surface water. More discussion provided in Section 5.2.

3. Where 'NA' is indicated, sample was not measured to do Health &Safety / access issues during construction.

4. Where 'ND' is indicated, SWM Pond station was not sampled or provided in this table, since there was no discharge from the SWM feature during the sampling effort.

5. Exceeding range of Hana probe, most likely due to freezing conditions / stagnant water.

n:\active\projects\2012\1151 environmental\12-1151-0155\_covanta-esc-sw-monitoring-program\reports\draft\yr3\appe\_surface water sampling\e-5 year 2 - surface water results\appendix e-5 year 2 sampling results.docx