Appendix E3

Document: Stack Sampling Test Report

Exova Canada Inc.
1390, Hocquart Street
St-Bruno-de-Montarville
Quebec
J3V 6E1
Canada

T : +1 (450) 441 5880
F : +1 (450) 441 4316
E : Reception.St-Bruno@exova.com
W: www.exova.com

Report
Stack sampling tests

Stack sampling tests
Outlet of the incinerator

Presented to: Agnico-Eagle Mines Ltd.

Our Reference: R14-034R01 (14-076-279748)

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Testing
Advising
Assuring

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1 SUMMARY

Exova Canada Inc. was requested by **Agnico-Eagle Mines ltd. – Meadowbank Division** to sample atmospheric emissions at the outlet of the incinerator for its plant located in Baker Lake, Nunavut at the following address.

Agnico-Eagle Mines Ltd. - Meadowbank Division
P.O. Box 540,
Baker Lake, Nunavut
X0C 0A0

Contact: Mr. Jeffrey Pratt, Environmental coordinator
Telephone: (819) 759-3555, ext. 6728
Cell: (819) 856-1475
Email: Jeffrey.pratt@agnico-eagle.com

1.1 Purposes of the study

The tests were done to demonstrate the performance of the incinerator to meet the standards for mercury (Hg) and dioxins and furans (PCDD/F).

Field testing was carried out from July 11 to July 13, 2014 by a team of two technicians. Stack gas properties such as velocity, volumetric flow rates, temperature, moisture content, molecular weight and pressure were all measured concurrently to stack sampling. Three runs were performed for each contaminant with the exception that four grab samples were taken for the NO_x. The test matrix is shown in the following table.

Table 1.1-1 – Overall Test Matrix

Pollutants	Sampling methods
Particulate matter (PM)	EPS 1/RM/8
Anion - Hydrogen chloride (HCl)	EPS 1/RM/1
Metals	EPA 29
SVOC (PCDD/F)	EPS 1/RM/2
Nitrogen oxides (NO_x)	EPS 1-AP-77-3

The list of metals includes Al, Sb, As, Ba, Be, Bi, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mn, Hg, Mo, Ni, P, K, Se, Si, Ag, Na, Sr, Te, Tl, Sn, Ti, U, V, Zn.

The manual sampling procedure for the particulate matter / anion / metals (PAM) test and the semi-volatile organic compounds (SVOC) test were as shown in table 1.1-2 hereafter.

Table 1.1-2 – Sampling procedures

Sources	# of sampling points (total)	# of sampling points (per traverse)	Sampling time per point (min.)	Total sampling time (min)	Notes
PAM # 1, 2, 3	36	18	5	180	Isokinetic adjustments each 5 minutes
SVOC # 1, 2, 3	36	18	5	180	Isokinetic adjustments each 5 minutes

1.2 Summary of results

All the tests results are summarized in the summary tables appearing below and on the next page and represent the average of three runs with the exception for the NO_x results that represent the average of four grab samples. Complete results of the sampling program are presented in section 5.0 of this report.

A comprehensive internal Quality Assurance/Quality Control (QA/QC) plan was designed and implemented by Exova regarding the gaseous emissions. The quality of the sampling data and results is good for all measurements. All the data are consistent and reliable.

The operating conditions were maintained stable throughout each day of the tests.

All computer print-outs, field data, analytical results and calibration reports are presented in appendix # 1.

For this project, the applicable standards are shown below with the tests results. The applicable standard for dioxins and furans (PCDD/F) was met during each test. The applicable standard for mercury (Hg) was met only during test # 3.

Table 1.2-1 – Summary of results

Contaminants	Average test results	Standards
Mercury (Hg)	64.09 µg / Rm^3 @ 11 % v/v O_2	20 µg / Rm^3 @ 11 % v/v O_2
Dioxins and furans (PCDD/F)	53.6 pg TEQ / Rm^3 @ 11 % v/v O_2	80 pg TEQ / Rm^3 @ 11 % v/v O_2

R: Reference conditions, 25 °C, 101.3 kPa, dry basis.

Table 1.2-2 – Summary of results (Cont'd)

Parameters		PAM tests	SVOC tests	NO_x tests
Concentrations				
PM	(mg/Rm^3)	28.2	---	---
HCl	(mg/Rm^3)	29.7	---	---
Hg	($\mu g/Rm^3$)	29.9	---	---
PCDD/F	(pg/Rm^3 TEQ)	---	24.1	---
NO_x	(mg/Rm^3 - eq. NO_2)	---	---	< 5.6
Emission rates				
PM	(kg/h)	0.202	---	---
HCl	(kg/h)	0.211	---	---
Hg	(mg/h)	210.312	---	---
PCDD/F	(ng/h TEQ)	---	163.8	---
NO_x	(kg/h – eq. NO_2)	---	---	< 0.038
Stack gas properties				
Velocity	(m/s)	7.1	6.7	---
Actual flow rate	(m^3/h)	18591	17706	---
Reference flow rate	(Rm^3/h)	7183	6848	6840
Temperature	(°C)	465	468	---
Moisture	(% v/v, wet basis)	4.6	4.2	---
Static pressure	(inch H_2O)	- 0.10	- 0.10	---
O_2	(% v/v, dry basis)	16.54	16.54	---
CO_2	(% v/v, dry basis)	3.11	3.11	---
CO	(ppmv, dry basis)	3.7	3.7	---
Average isokineticity	(%)	98.8	95.7	---

R : Reference conditions, 25 °C, 101.3 kPa and dry basis.

2 INTRODUCTION

Exova Canada Inc. was requested by **Agnico-Eagle Mines ltd. – Meadowbank Division** to sample the atmospheric emissions at the outlet of an incinerator for its plant located in Baker Lake, Nunavut.

The report describes the purposes of the study, the field work schedule, the sampling location and the sampling methods employed. All the results are summarized in table form. All field data, analytical results and calibration reports are appended.

2.1 Objective and test matrix

A comprehensive stack testing program was adopted by Exova to determine qualitatively and quantitatively the contents of the stack emissions. Table # 2.1-1 shows the parameters measured during the test program. Three runs were performed for each contaminant during the sampling program with the exception that four grab samples were taken for the NO_x.

Table 2.1-1 – Overall Test Matrix

Pollutants	Sampling methods
Particulate matter (PM)	EPS 1/RM/8
Anion - Hydrogen chloride (HCl)	EPS 1/RM/1
Metals	EPA 29
SVOC (PCDD/F)	EPS 1/RM/2
Nitrogen oxides (NO_x)	EPS 1-AP-77-3

The list of metals includes Al, Sb, As, Ba, Be, Bi, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mn, Hg, Mo, Ni, P, K, Se, Si, Ag, Na, Sr, Te, Tl, Sn, Ti, U, V, Zn.

2.2 Schedule of test work

The sampling program was carried out from July 11 to July 13, 2014 by a team of two technicians. Table # 2.2-1 appearing in this section shows the test schedule.

Table 2.2-1 – Test schedule

Source	Date	Time	Tests
Outlet of the incinerator	July 11, 2014	12:59 – 16:35	PAM # 1 & SVOC # 1
	July 12, 2014	11:22 – 16:00	PAM # 2 & SVOC # 2
	July 12, 2014	17:34 – 17:36	NO_x # 1, 2
	July 13, 2014	09:48 – 14:18	PAM # 3 & SVOC # 3
	July 13, 2014	15:15 – 18:30	NO_x # 3, 4

2.3 Project personnel

The following is a list of the direct contributors to this test program.

Table 2.3-1 – Key personnel involved in the project

Name	Experience and responsibilities
Agnico-Eagle Mines Ltd.	
Mr. Jeffrey Pratt – Environmental coordinator	➢ Project coordinator.
Exova Canada Inc.	
Mr. Simon Demers, Technician	➢ SVOC and NO_x sampling.
Mr. Sylvain Lapointe, Technician	➢ PAM sampling.
Mr. Christian St-Pierre, Chemist	➢ Analyses of PM and NO_x samples.
Mr. Geneviève Sévigny, Chemist	➢ Analyses of HCl and metals samples.
Mr. Pierre Duguay, P.Eng. – Supervisor	➢ Report writing.
Mr. Claude Bélanger, Chemist – Operations manager	➢ Report verification.
Agat Laboratories	
Mr. Marc-André Desjardins – Chemist	➢ Analyses of SVOC samples.

2.4 Process operating conditions

Process operating conditions of the incinerator were under Agnico-Eagle's responsibility. The operating conditions were maintained stable throughout each day of the test program.

2.5 Applicable standards

For this project, the applicable standards are shown below.

Table 2.5-1 – Applicable standards

Contaminants	Standards
Mercury (Hg)	20 µg / Rm^3 @ 11 % v/v O_2
Dioxins and furans (PCDD/F)	80 pg TEQ / Rm^3 @ 11 % v/v O_2

R: Reference conditions, 25 °C, 101.3 kPa, dry basis.

3 METHODS

3.1 Sampling methods

The following sections give more details on the stack sampling methods used during the test program and their application.

Table 3.1-1 – Sampling methods

Parameters	Methods	Sampling duration (min.)
Manual sampling methods		
Temperature	Thermometer or thermocouple	Ponctual
Gas flow	EPS 1/RM/8, method B – Environment Canada	Ponctual
O_2, CO_2, CO	EPS 1/RM/8, method C – Environment Canada	Ponctual
Moisture content	EPS 1/RM/8, method D – Environment Canada	Ponctual
Particulate matter (PM)	EPS 1/RM/8, method E – Environment Canada	180
Anions (HCl)	EPS 1/RM/1 – Environment Canada	
Metals	Method 29 - USEPA	
SVOC	EPS 1/RM/2 – Environment Canada	180
NO_x	EPS 1-AP-77-3 – Environment Canada	2

3.2 Sampling acceptance criteria

Isokinetic sampling means that the linear velocity of the stack gases entering the nozzle of the sampling probe is equal to the stack gas velocity at the sampling point. Acceptance criteria for a sampling run related to the reference methods that are used are as in the following table.

Table 3.2-1 – Sampling validity criteria

Parameters / Methods	Acceptance criteria
PM / Anion / Metals / SPE 1/RM/8 – Environment Canada & 29 - USEPA	➢ Isokinetic rate comprised between 90 % and 110 % ➢ Less than 10% of the sampled points out of the 90 % to 110 % range ➢ Minimum sampling duration : 120 minutes ➢ Minimum sampled volume : 2.80 Rm^3
SVOC / SPE 1/RM/2 – Environment Canada	➢ Isokinetic rate comprised between 90 % and 110 % ➢ Less than 10% of the sampled points out of the 90 % to 110 % range ➢ Minimum sampling duration : 180 minutes ➢ Minimum sampled volume : 3.00 Rm^3

3.3 Particulate matter (PM), hydrogen chloride and metals

Particulate matter (PM), hydrogen chloride (HCl) and metals were sampled in accordance with the requirements of Environment Canada EPS 1/RM/8 sampling method entitled: "Reference methods for source testing: measurement of releases of particulate from stationary sources". This method was combined with Environment Canada EPS 1/RM/1 sampling method entitled: "Reference methods for source testing: measurement of releases of hydrogen chloride from stationary sources" and USEPA method 29 entitled “Metals emissions from stationary sources" in order to allow for anion and metals sampling. Sampling lasted 180 minutes and a minimal volume of at least 2.80 Rm³ was sampled for each run. Three PM / HCl / metals tests were conducted simultaneously to the SVOC tests during each run.

Particulate matter (PM), anion (HCl), and metals (including mercury) are sampled isokinetically using a single sampling train. This is recognized as the standard method for obtaining representative samples of particulate matter.

Two complete sampling trains were prepared for this project and were transported to the worksite. Sampling nozzles, pitot tubes, dry gas meters and orifice flow meters were calibrated in accordance with the Environment Canada testing code. A standard Method 5 sampling module was used, with a 5 foot probe with a glass liner. The sampling train was as follows.

Table 3.3-1 – Main components of the sampling system – PM / HCl / metals

Components	Description
Sampling probe	➢ A stainless steel nozzle of a precisely measured diameter to allow isokinetic sampling ; ➢ a stainless steel water-cooled probe with a heated glass liner to avoid moisture condensation ; ➢ this probe is fastened to an "S" type Pitot tube for gas velocity measurement and to a thermocouple for temperature measurement.
Sampling train	➢ A 0.3 µm porosity pre-weighted quartz filter mounted on an accurate holder and placed in a heated oven to avoid moisture condensation ; ➢ eight impingers placed in series and containing : ➢ # 1 and # 2: 100 ml demineralized water ; ➢ # 3 and # 4: 100 ml HNO_3 (5%) / H_2O_2 (10%) solution ; ➢ # 5 : empty ; ➢ # 6 and # 7 : 100 ml $KMnO_4$ (4%) / H_2SO_4 (10%) solution ; ➢ # 8: 200 g silica gel ; ➢ the impingers are placed in an ice bath to condense all the flue gas moisture.
Control unit	➢ A diaphragm leak free vacuum pump ; ➢ a dry gas meter ; ➢ an orifice flow meter ; ➢ probe and oven temperature controllers ; ➢ temperature display (stack, gas meter, impingers, resin).

At the end of each sampling run the sampling train was brought back to the field laboratory to process with sample recovery. The procedure followed for sample recovery is as in the following table.

Table 3.3-2 – Sample recovery – PM / HCl / metals

Components	Description
Nozzle and probe	➢ The nozzle and probe are rinsed and brushed with acetone ; ➢ the rinses are kept in polyethylene with a Teflon lid ; ➢ the nozzle and probe are rinsed and brushed with the HNO_3 0.1 N solution ; ➢ the rinses are kept in another polyethylene container with a Teflon lid.
Filter	➢ The filter is placed in a plastic petri dish ; ➢ the pieces of the filter stuck to the rubber are carefully replaced with the filter.
Impingers # 1 and # 2	➢ The volume of solution is measured for moisture content determination ; ➢ the solution is transferred in a polyethylene container with a Teflon lid ; ➢ the glassware is rinsed with demineralized water ; ➢ the rinses are added to the same container in which the impingers solution have been placed ; ➢ the solution is acidified.
Impingers # 3 and # 4	➢ The volume of the solution is measured for moisture content determination ; ➢ the solution is transferred in a polyethylene container with a Teflon lid ; ➢ the glassware is rinsed with the HNO_3 solution ; ➢ the rinses are added to the same container in which the impingers solution have been placed ; ➢ the total volume of the solution is noted.
Impingers # 5, # 6 and # 7	➢ The volume of the solution is measured for moisture content determination ; ➢ the solution is transferred in an amber glass container with a Teflon lid ; ➢ the glassware is rinsed with the acidified permanganate solution ; ➢ the rinses are added to the same container in which the impingers solution have been placed ; ➢ the total volume of the solution is noted.
Impinger # 8	➢ The silica gel is weighted in order to determine the moisture content.

Analyses of the different components of the sampling train were done as in the following table.

Exova performed the analyses for particulate matter on the probe wash and on the filter. Exova was responsible as well for the metals analyses.

Table 3.3-3 – Samples analyses – PM / metals

Components	Description
Nozzle and probe	➢ Washing of the nozzle and probe are evaporated to dryness ; ➢ The residue's weight is noted constitutes one part of the particulate matter.
Filter	➢ The filter is placed in a dessiccator for a period of 24 hours ; ➢ the filter is weighted and the weight is noted; ➢ the residue constitutes another part of the particulate matter.
Particulate matter and HNO_3 0.1 N washings of probe-nozzle and filter holder front half	➢ particulate matter are combined with the HNO_3 washings for digestion and analysed for metals.
Impingers # 1 and # 2	➢ Part of the acidified solution is taken and analysed for HCl and metals content.
Impingers # 3 and # 4	➢ Part of the HNO_3 solution is taken and analysed for metals content.
Impingers # 5, # 6 and # 7	➢ Part of the acidified permanganate solution is taken and analysed for mercury content.
Impinger # 8	➢ No analysis is performed on this component.

3.4 Semi-volatile organic compounds (SVOC)

Semi-Volatile Organic Compounds (SVOC) are defined as organic compounds with boiling points greater than 100 °C. This class of compounds includes PCDD (PolyChlorinated Dibenzo p Dioxins), PCDF (PolyChlorinated DibenzoFurans), CP (ChloroPhenols), CB (ChloroBenzenes), PCB (PolyChlorinated Biphenyls) and PAH (Polycyclic Aromatic Hydrocarbons).

SVOCs were sampled in accordance with the requirements of Environment Canada EPS 1/RM/2 sampling method entitled: " Reference Method for Source Testing: Measurement of Releases of Selected Semi-volatile Organic Compounds from Stationary Sources ". For this project SVOCs included polychlorinated dibenzo-p-dioxins (PCDD) and polychlorinated dibenzofurans (PCDF). Sampling lasted 180 minutes and a minimal volume of at least 3.00 Rm^3 were sampled for each run. At the outlet of the incinerator, three SVOC tests were conducted.

Five (5) train glassware sets were cleaned and one common rinse was analyzed for proofing. Three (3) of these trains were used for testing, one (1) was used as field blank and the remaining one was kept as spares.

A standard Method 5 sampling module was used, with a 5 foot borosilicate lined (proofed) probe. Sampling nozzles, pitot tubes, dry gas meters and orifice flow meters are calibrated in accordance with the EPS testing code.

Sampling train was assembled every day for the test to be held on the same day. Two rinses (Acetone & Hexane – 3 times each) were done before each test. The sampling train was as in the following.

Table 3.4-1 – Main components of the sampling system – SVOC

Components	Description
Sampling probe	➢ A stainless steel nozzle of a precisely measured diameter to allow isokinetic sampling ; ➢ a stainless steel water-cooled probe with a heated glass liner to avoid moisture condensation ; ➢ this probe is fastened to an "S" type Pitot tube for gas velocity measurement and to a thermocouple for temperature measurement.
Sampling train	➢ A 0.3 µm porosity pre-weighted fiber glass filter mounted on an accurate holder and placed in a heated oven to avoid moisture condensation ; ➢ a condenser ; ➢ a XAD-2 resin cartridge ; ➢ a condensate trap ; ➢ three impingers placed in series and containing : ➢ # 1: 100 ml ethylene glycol ; ➢ # 2 : empty ; ➢ # 3: 200 g silica gel ; ➢ the impingers are placed in an ice bath to condense all the flue gas moisture.
Control unit	➢ A diaphragm leak free vacuum pump ; ➢ a dry gas meter ; ➢ an orifice flow meter ; ➢ probe and oven temperature controllers ; ➢ temperature display (stack, gas meter, impingers, resin).

At the end of each sampling run the sampling train was brought back to the field laboratory to process with sample recovery. The procedure followed for sample recovery is as in the following table. Except for the filter, all the sampling train's components were first rinsed three times with acetone and then three times with hexane. After recovery was completed, all samples were clearly documented in lab journals, with each sample container clearly labelled, and stored in a refrigerator.

Along with one of the three SVOC tests, a blank train has been taken to the stack sampling site and left untouched for the duration of the test. At the end of the test, a volume of ambient air equal to the sum of all leak check volumes during the SVOC test was run through the blank train, according to the requirements of reference method EPS 1/RM/2.

The blank train was recovered in the field laboratory in the same manner as the compliance test trains. The field blank train has been analysed by Agat. Because they each constitute a part of the blank train, solvents, reactives, filters and the XAD-2 resin were not sampled and analysed as individual blanks. The train analysis was performed as per methods EPS 1/RM/3, EPS 1/RM/23 and NITEP/Mid Connecticut Combustion Test Methodology for Organic Analysis.

Table 3.4-2 – Sample recovery – SVOC

Components	Description
Nozzle, probe and front half of filter holder	➢ Each component is rinsed three times and brushed with acetone and then three times with hexane ; ➢ all the rinses are kept in amber glass container with a Teflon lid.
Filter	➢ The filter is carefully removed from filter holder and deposited on a pre-cleaned aluminum foil ; ➢ the pieces of the filter stuck to the rubber are carefully replaced with the filter ; ➢ the filter is folded in half and placed in a pre-cleaned glass petri dish.
Back half of filter holder and condenser	➢ The condenser is weighted in order to determine the moisture content ; ➢ each component is soaked 5 minutes each with acetone and hexane ; ➢ each component is rinsed three times with acetone and then three times with hexane ; ➢ all the rinses are kept in amber glass container with a Teflon lid.
Resin cartridge	➢ The cartridge is weighted in order to determine the moisture content ; ➢ both ends of the cartridge are sealed ; ➢ the whole tube is wrapped with an aluminum foil.
Condensate trap and impinger # 1	➢ Each component is weighted in order to determine the moisture content ; ➢ the solution of each container is transferred into a pre-cleaned amber glass bottle ; ➢ each component is rinsed three times each with HPLC water ; ➢ the rinses are added into the same container.
All back half glassware excluding resin cartridge	➢ Each component including connectors are rinsed three times each with acetone and hexane ; ➢ all the rinses are kept into a pre-cleaned glass amber bottle.
Impingers # 2 and # 3	➢ Each component is weighted in order to determine the moisture content.

Procedures in Environment Canada's Reports EPS 1/RM/3 and EPS 1/RM/23 were followed by Agat. All glassware was rinsed (with acetone and hexane) on site prior to usage, as per EPS 1/RM/2. SVOC samples were treated as one combined extract per test. Front and back halves of the sampling trains were not analyzed separately. The following analyses were done by the laboratory.

Table 3.4-3 – Samples analyses – SVOC

Components	Description
Proofing	
	➢ 1 analysis for PCDD/F (1 combined proof rinse for all 5 trains glassware, XAD resin + filters).
Laboratory blank	
	➢ 1 analysis as part of the lab internal quality control.
Field blank	
	➢ 1 analysis for PCDD/F.
Samples	
	➢ 3 analyses (1 analysis per train) for PCDD/F.

The proofing procedures detailed in Environment Canada's Report EPS 1/RM/2 entitled "Reference Method for Source Testing: Measurement of Releases of Selected Semi Volatile Organic Compounds from Stationary Sources" dated June 1989 were followed. These procedures have been carried out several times by the personnel assigned to this study.

Items cleaned by Exova: probe glass liners, all train glassware, petri dishes used for storing filters, XAD-2 traps and sample containers.

Items cleaned by Agat: XAD-2 resin, glass wool and filters.

All solvents and reagents used in this project were supplied by Exova except for the Amberlite XAD-2 resin and glass wool which were supplied by Agat. Exova's and Agat's last rinsings were combined to produce 1 final sample for proofing. One proofing analysis was carried out by Agat.

3.5 Nitrogen oxides (NO_x)

Nitrogen oxides (NO_x) were measured at the stack outlet of the incinerator. The test consisted of taking four grab samples of combustion gas. The sampling method used was Environment Canada EPS 1-AP-77-3. Sampling components are:

Probe liner material: Borosilicate;
Filter: Glass wool at the probe tip;
Flask (2 L): 25 ml of absorbing solution (H_2O_2 / H_2SO_4).

The glass wool used in the sampling train was discarded after the test. The stack gas stayed in contact with the absorbing solution in the flask overnight. All solvents and reagents used in this project were from a single batch. The NO_x present in the stack gas are converted to nitric acid by gas phase oxidation due to oxygen in the sample and the H_2O_2 / H_2SO_4 absorbing solution.

The NO_x sampling is not an isokinetic method. Each grab sample lasts about 2 minutes. If the gas stream at the stack is well mixed, the grab samples are then representative of the emissions at the time they are taken.

3.6 Gas molecular weight

Gas molecular weight was determined by measuring O_2, CO_2 and CO in accordance with the requirements of Environment Canada EPS 1/RM/8 sampling method entitled : "Reference methods for source testing : measurement of releases of particulate from stationary sources".

All system's components in contact with the stack gas were made of stainless steel. The gas composition at the sampling site was measured by connecting the analyser to the exhaust of the control unit. Specifications of the analyser are as in the following table.

Table 3.6-1 – Specifications of the analyser used for gas molecular weight determination

Pollutant	O_2	CO_2	CO
Measuring principle	Electrochemical cell	Thermoconductivity cell	Electrochemical cell
Instrument	Nova 376	Nova 376	Nova 376
Measuring range	0 – 25 % v/v	0 – 20 % v/v	0 – 4 % v/v

3.7 Gas temperature, moisture content and flowrate

Gas temperature, flowrate, velocity and moisture content were measured at the sampling site according to "Reference methods for source testing: measurement of releases of particulate from stationary sources". Methods B and D, Environment Canada, December 1993, EPS 1/RM/8.

4 SAMPLED SOURCE

4.1 Outlet of the incinerator

Sampling was conducted at the outlet of the incinerator. A description of the sampling location is shown below.

Table 4.1-1 – Outlet of the incinerator

Parameter	Value
Stack inside diameter at the sampling site	38.0''
Length of sampling ports	10.0"
No. of straight duct diameters upstream from the sampling ports	5.0 D
No. of straight duct diameters downstream of the sampling ports	2.0 D
No. of sampling traverses	2
Total no. of sampling points per sampling traverse	18
Total no. of sampling points per test	36
Sampling time per point (minutes)	5

4.2 Sampling equipment

The sampling equipment used for particulate matter (PM) / hydrogen chloride (HCl) / metals testing and for SVOC testing is described in the following tables.

Table 4.2-1 – Sampling equipment for PM / HCl / metals train

Parameter	Test # 1	Test # 2	Test # 3
Sampling module	10	10	10
Gas meter factor (γ)	0.9622	0.9622	0.9622
Orifice factor (K_o)	0.9304	0.9304	0.9304
Probe	2' E (eau)	2' E (eau)	2' E (eau)
Pitot factor (Cv)	0.785	0.785	0.785
Nozzle (inches)	0.498	0.498	0.498

Table 4.2-2 – Sampling equipment for SVOC train

Parameter	Test # 1	Test # 2	Test # 3
Sampling module	8	8	8
Gas meter factor (γ)	0.9751	0.9751	0.9751
Orifice factor (K_o)	0.7201	0.7201	0.7201
Probe	2' F (eau)	2' F (eau)	2' F (eau)
Pitot factor (Cv)	0.785	0.785	0.785
Nozzle (inches)	0.498	0.498	0.498

4.3 QA/QC report

The following tables show the quality assurance / quality control parameters applied during the test program. These parameters deal with the gas flow conditions at the sampling location, the sampling equipment/procedures employed and the isokineticity of the tests. The value of each parameter is compared to a quality acceptance criterion formulated in the reference sampling methods.

Table 4.3-1 – Gas flow conditions

Parameter	Actual			Quality criteria
Duct diameter (inches)	38.0			≥ 12.0
Sampling cross-section (ft^2)	7.88			≥ 0.78
No. of duct diam. upstream	5.0 D			≥ 2.0 D
No. of stack diam. downstream	2.0 D			≥ 0.5 D
No. of sampling traverses	2			2 or more
Cyclonic flow	0°			≤ 15°
PM / HCl / metals tests	**# 1**	**# 2**	**# 3**	
Maximum stack gas velocity (ft/s)	26.5	26.6	27.4	≤ 100
Minimum stack gas velocity (ft/s)	18.4	19.3	18.1	≥ 10.0
Highest Ratio Vmax / Vmin	1.4	1.4	1.5	≤ 2.0
SVOC tests	**# 1**	**# 2**	**# 3**	
Maximum stack gas velocity (ft/s)	26.0	28.0	25.7	≤ 100
Minimum stack gas velocity (ft/s)	10.6	13.4	19.0	≥ 10.0
Highest Ratio Vmax / Vmin	2.5	2.1	1.4	≤ 2.0

All the quality criteria required by the reference sampling method were met except for the ratio Vmax / Vmin for the SVOC tests # 1 and 2. These deviations are acceptable since it was still possible to perform an isokinetic sampling using the same diameter for the nozzle.

Table 4.3-2 – Sampling equipment and procedures

PM / HCl / metals	Test # 1	Test # 2	Test # 3	Quality criteria
Filter enclosure temperature (^{O}F)	250	250	250	248 ± 25
Probe temperature (^{O}F)	250	250	250	248 ± 25
Maximum leak rate (cfm)	< 0.02	< 0.02	< 0.02	≤ 0.02
Nozzle diameter (in.)	0.498	0.498	0.498	≥ 0.188
Gas meter calibration factor	0.9622	0.9622	0.9622	0.95 ≤ γ ≤ 1.05
Sampling duration (min)	180	180	180	≥ 120
Gas sample volume (Rm^3)	3.794	3.540	3.621	≥ 2.80
SVOC	**Test # 1**	**Test # 2**	**Test # 3**	**Quality criteria**
Filter enclosure temperature (^{O}F)	249	248	250	248 ± 25
Probe temperature (^{O}F)	249	248	249	248 ± 25
Resin XAD-2 temperature (^{O}F)	55	55	55	≤ 68
Maximum leak rate (cfm)	< 0.02	< 0.02	< 0.02	≤ 0.02
Nozzle diameter (in.)	0.498	0.498	0.498	≥ 0.188
Gas meter calibration factor	0.9751	0.9751	0.9751	0.95 ≤ γ ≤ 1.05
Sampling duration (min)	180	180	180	≥ 180
Gas sample volume (Rm^3)	3.449	3.349	3.290	≥ 3.00

All quality criteria required by the reference sampling method were met concerning the sampling equipment and procedures. No equipment failure, leaks or sample recovery problems were encountered during the testing program.

Table 4.3-3 – Isokineticity

PM / HCl / metals	Test # 1	Test # 2	Test # 3	Quality criteria
Average (%)	96.7	98.9	100.7	90 % ≤ Iso ≤ 110 %
> 110%	0 / 36	0 / 36	0 / 36	≤ 3 / 36
< 90%	0 / 36	0 / 36	0 / 36	
SVOC	**Test # 1**	**Test # 2**	**Test # 3**	**Quality criteria**
Average (%)	94.6	96.3	96.2	90 % ≤ Iso ≤ 110 %
> 110%	0 / 36	0 / 36	0 / 36	≤ 3 / 36
< 90%	0 / 36	0 / 36	0 / 36	

All quality criteria required by the reference sampling method were met concerning the isokineticity of the tests.

5 TABLES OF RESULTS

All the tests results are summarized in section 1.2 and represent the average of three runs with the exception for the NO_x results that represent the average of four grab samples.

Complete results for particulate matter (PM) and chlorhydric acid (HCl) are presented in table # 1. For metals, summary results are presented in table # 2 and detailed results are presented in tables 3 to 5.

For dioxins and furans (PCDD/F), summary results are presented in table # 6 and detailed results are presented in tables 7 to 9 with field blank results. The PCDD/PCDF tables of results give the analytical results in terms of international toxic equivalent (ITEQ) of the dioxin and furan congeners (expressed as 2, 3, 7, 8-T4CDD) as per method EPS 1/RM/2 requirements.

Results of PM / HCl / metals and SVOC include stack gas properties (velocity, flow, temperature, moisture, static pressure, molecular weight) measured during each test.

Complete results for nitrogen oxides (NO_x) are presented in table # 10.

1 : Detailed results of particulate matter (PM) and HCl emissions ;
2 : Summary results of metals emissions ;
3 : Detailed results of metals emissions – test # 1 ;
4 : Detailed results of metals emissions – test # 2 ;
5 : Detailed results of metals emissions – test # 3 ;
6 : Summary results of SVOC emissions ;
7 : Detailed results of PCDD/F emissions – test # 1 ;
8 : Detailed results of PCDD/F emissions – test # 2 ;
9 : Detailed results of PCDD/F emissions – test # 3 ;
10 : Detailed results of NO_x emissions.

The quality of the sampling data and results is good for all measurements. All the data are consistent and reliable.

The operating conditions were maintained stable throughout each day of the test program.

The applicable standard for dioxins and furans (PCDD/F) was met during each test. The applicable standard for mercury (Hg) was met only during test # 3.

All computer print-outs, field data, analytical results and calibration reports are presented in appendix # 1.

TABLE # 1
OUTLET OF INCINERATOR
SUMMARY OF ATMOSPHERIC EMISSIONS
PARTICULATE MATTER - ANIONS

Test	1	2	3	
Date	11-Jul-14	12-Jul-14	13-Jul-14	AVERAGE
Time	12:59 - 16:35	11:22 - 16:00	09:48 - 14:18	
WEIGHT OF SAMPLE				
Particulate matter (mg)	97.53	123.56	87.37	
HCl (mg)	82.07	141.92	98.94	
GAS SAMPLE VOLUME (Rm³)	3.794	3.540	3.621	
CONCENTRATIONS				
Particulate matter (mg/Rm³)	25.7	34.9	24.1	28.2
Particulate matter (mg/Rm³ @ 11 % O2)	72.5	71.4	50.5	64.8
HCl (mg/Rm³)	21.6	40.1	27.3	29.7
HCl (ppmv)	14.5	26.9	18.3	19.9
EMISSION MASS FLOW RATES				
Particulate matter (kg/h)	0.196	0.242	0.169	0.202
HCl (kg/h)	0.165	0.278	0.191	0.211
STACK GAS PROPERTIES				
VELOCITY (m/s)	6.9	7.2	7.1	7.1
VOLUMETRIC FLOW RATES				
m³/h (Actual conditions)	18046	18952	18776	18591
Rm³/h (Reference conditions)	7612	6942	6994	7183
TEMPERATURE (°C)	404	498	494	465
MOISTURE (% v/v, wet basis)	3.6	5.2	5.1	4.6
STATIC PRESSURE (" H2O)	-0.10	-0.10	-0.10	-0.10
GAS COMPOSITION (dry basis)				
O2 (% v/v)	17.39	16.06	16.17	16.54
CO2 (% v/v)	2.49	3.47	3.36	3.11
CO (ppmv)	6.4	2.0	2.6	3.7
AVERAGE ISOKINETICITY (%)	96.7	98.9	100.7	98.8

"R" or "Reference Conditions" at 25°C, 101.3 kPa, dry basis.

TABLE # 2
OUTLET OF INCINERATOR
RESULTS OF METALS ATMOSPHERIC EMISSIONS

Test	1	2	3	Average
Date	11-Jul-14	12-Jul-14	13-Jul-14	
Time	12:59 - 16:35	11:22 - 16:00	09:48 - 14:18	

Metals	Concentrations (µg/Rm³)			
Aluminum (Al)	69.58	21.75	17.12	36.15
Antimony (Sb)	6.04	3.47	4.23	4.58
Arsenic (As)	0.98	0.65	0.69	0.77
Baryum (Ba)	1.48	0.99	0.64	1.03
Beryllium (Be)	< 0.79	< 0.85	< 0.83	< 0.82
Bismuth (Bi)	< 1.32	< 1.41	< 1.38	< 1.37
Boron (B)	< 15.02	22.32	< 17.67	< 18.34
Cadmium (Cd)	0.98	1.13	1.44	1.18
Calcium (Ca)	234.05	222.03	130.90	195.66
Chromium (Cr)	4.67	5.45	6.27	5.46
Cobalt (Co)	4.48	1.61	0.52	2.21
Copper (Cu)	15.08	19.12	14.58	16.26
Iron (Fe)	50.08	38.98	31.21	40.09
Lead (Pb)	57.99	78.25	92.79	76.34
Lithium (Li)	2.56	3.31	2.57	2.81
Magnesium (Mg)	53.24	30.48	28.89	37.54
Manganese (Mn)	56.98	3.53	29.44	29.99
Mercury (Hg)	10.55	70.72	8.53	29.93
Molybdenum (Mo)	1.05	1.41	1.10	1.19
Nickel (Ni)	0.71	0.73	0.55	0.67
Phosphorus (P)	< 75.65	< 93.79	< 92.79	< 87.41
Potassium (K)	5693.20	8163.84	6517.54	6791.53
Selenium (Se)	0.24	0.34	0.41	0.33
Silicium (soluble in HNO3)	80.39	53.95	39.22	57.85
Silver (Ag)	0.66	1.24	0.47	0.79
Sodium (Na)	2952.03	5338.98	3590.17	3960.39
Strontium (Sr)	0.55	0.54	0.30	0.46
Tellurium (Te)	< 0.79	< 0.85	< 0.83	< 0.82
Thallium (Tl)	< 0.79	< 0.85	< 0.83	< 0.82
Tin (Sn)	15.76	26.24	19.61	20.54
Titanium (Ti)	2.95	0.90	0.99	1.62
Uranium (U)	< 0.79	< 0.85	< 0.83	< 0.82
Vanadium (V)	0.13	0.08	0.14	0.12
Zinc (Zn)	142.33	144.92	146.92	144.72

"R" or "Reference Conditions" at 25°C, 101.3 kPa, dry basis.

TABLE # 2 (cont'd)
OUTLET OF INCINERATOR
RESULTS OF METALS ATMOSPHERIC EMISSIONS

Test	1	2	3	Average
Date	11-Jul-14	12-Jul-14	13-Jul-14	
Time	12:59 - 16:35	11:22 - 16:00	09:48 - 14:18	

Metals	Concentrations (µg/Rm³ @ 11 % O2)			
Aluminum (Al)	196.26	44.49	35.84	92.20
Antimony (Sb)	17.02	7.11	8.84	10.99
Arsenic (As)	2.75	1.33	1.45	1.84
Baryum (Ba)	4.16	2.02	1.33	2.50
Beryllium (Be)	< 2.23	< 1.73	< 1.73	< 1.90
Bismuth (Bi)	< 3.72	2.89	< 2.89	< 3.17
Boron (B)	< 42.37	45.65	< 36.99	< 41.67
Cadmium (Cd)	2.75	2.31	3.01	2.69
Calcium (Ca)	660.15	454.16	273.98	462.77
Chromium (Cr)	13.16	11.15	13.12	12.48
Cobalt (Co)	12.64	3.29	1.10	5.68
Copper (Cu)	42.52	39.12	30.52	37.39
Iron (Fe)	141.25	79.74	65.32	95.43
Lead (Pb)	163.55	160.05	194.22	172.61
Lithium (Li)	7.21	6.76	5.38	6.45
Magnesium (Mg)	150.17	62.35	60.46	90.99
Manganese (Mn)	160.73	7.22	61.62	76.52
Mercury (Hg)	29.76	144.65	17.86	64.09
Molybdenum (Mo)	2.97	2.89	2.31	2.72
Nickel (Ni)	2.01	1.50	1.16	1.56
Phosphorus (P)	< 213.36	< 191.83	< 194.22	< 199.80
Potassium (K)	16057.74	16698.77	13641.36	15465.96
Selenium (Se)	0.67	0.69	0.87	0.74
Silicium (soluble in HNO3)	226.74	110.36	82.08	139.73
Silver (Ag)	1.86	2.54	0.98	1.79
Sodium (Na)	8326.24	10920.65	7514.31	8920.40
Strontium (Sr)	1.56	1.10	0.64	1.10
Tellurium (Te)	< 2.23	< 1.73	< 1.73	< 1.90
Thallium (Tl)	< 2.23	< 1.73	< 1.73	< 1.90
Tin (Sn)	44.46	53.68	41.04	46.39
Titanium (Ti)	8.33	1.85	2.08	4.09
Uranium (U)	< 2.23	< 1.73	< 1.73	< 1.90
Vanadium (V)	0.37	0.17	0.29	0.28
Zinc (Zn)	401.44	296.42	307.51	335.12

"R" or "Reference Conditions" at 25°C, 101.3 kPa, dry basis.

TABLE # 2 (cont'd)
OUTLET OF INCINERATOR
RESULTS OF METALS ATMOSPHERIC EMISSIONS

Test	1	2	3	Average
Date	11-Jul-14	12-Jul-14	13-Jul-14	
Time	12:59 - 16:35	11:22 - 16:00	09:48 - 14:18	

Metals	Emission rates (µg/s)			
Aluminum (Al)	147.14	41.94	33.27	74.12
Antimony (Sb)	12.76	6.70	8.21	9.22
Arsenic (As)	2.06	1.25	1.34	1.55
Baryum (Ba)	3.12	1.91	1.23	2.09
Beryllium (Be)	< 1.67	< 1.63	< 1.61	< 1.64
Bismuth (Bi)	< 2.79	< 2.72	< 2.68	< 2.73
Boron (B)	< 31.77	43.03	< 34.34	< 36.38
Cadmium (Cd)	2.06	2.18	2.79	2.34
Calcium (Ca)	494.92	428.15	254.32	392.46
Chromium (Cr)	9.87	10.51	12.18	10.85
Cobalt (Co)	9.47	3.10	1.02	4.53
Copper (Cu)	31.88	36.88	28.33	32.36
Iron (Fe)	105.90	75.17	60.63	80.57
Lead (Pb)	122.62	150.89	180.28	151.26
Lithium (Li)	5.41	6.37	4.99	5.59
Magnesium (Mg)	112.58	58.77	56.12	75.83
Manganese (Mn)	120.50	6.81	57.20	61.50
Mercury (Hg)	22.31	136.36	16.58	58.42
Molybdenum (Mo)	2.23	2.72	2.15	2.37
Nickel (Ni)	1.50	1.42	1.07	1.33
Phosphorus (P)	< 159.96	< 180.85	< 180.28	< 173.69
Potassium (K)	12038.70	15742.31	12662.47	13481.16
Selenium (Se)	0.50	0.65	0.80	0.65
Silicium (soluble in HNO3)	169.99	104.04	76.19	116.74
Silver (Ag)	1.39	2.40	0.91	1.57
Sodium (Na)	6242.29	10295.15	6975.09	7837.51
Strontium (Sr)	1.17	1.03	0.59	0.93
Tellurium (Te)	< 1.67	< 1.63	< 1.61	< 1.64
Thallium (Tl)	< 1.67	< 1.63	< 1.61	< 1.64
Tin (Sn)	33.33	50.60	38.09	40.68
Titanium (Ti)	6.24	1.74	1.93	3.31
Uranium (U)	< 1.67	< 1.63	< 1.61	< 1.64
Vanadium (V)	0.28	0.16	0.27	0.24
Zinc (Zn)	300.97	279.44	285.44	288.62

TABLE # 3

OUTLET OF INCINERATOR
METALS EMISSIONS AT THE STACK

TEST #	*1*
DATE	*11-Jul-14*
TIME	*12:59 - 16:35*

Metals	ANALYSES OF SAMPLE µg	CONCENTRATION (1) µg/Rm³	EMISSION RATE (1) µg/s	CONCENTRATION (1) µg/Rm³ @ 11 % O2
Aluminum (Al)	264.0	69.58	147.14	196.26
Antimony (Sb)	22.9	6.04	12.76	17.02
Arsenic (As)	3.7	0.98	2.06	2.75
Baryum (Ba)	5.6	1.48	3.12	4.16
Beryllium (Be)	< 3.0	< 0.79	< 1.67	< 2.23
Bismuth (Bi)	< 5.0	< 1.32	< 2.79	< 3.72
Boron (B)	< 57.0	< 15.02	< 31.77	< 42.37
Cadmium (Cd)	3.7	0.98	2.06	2.75
Calcium (Ca)	888.0	234.05	494.92	660.15
Chromium (Cr)	17.7	4.67	9.87	13.16
Cobalt (Co)	17.0	4.48	9.47	12.64
Copper (Cu)	57.2	15.08	31.88	42.52
Iron (Fe)	190.0	50.08	105.90	141.25
Lead (Pb)	220.0	57.99	122.62	163.55
Lithium (Li)	9.7	2.56	5.41	7.21
Magnesium (Mg)	202.0	53.24	112.58	150.17
Manganese (Mn)	216.2	56.98	120.50	160.73
Mercury (Hg)	40.03	10.55	22.31	29.76
Molybdenum (Mo)	4.0	1.05	2.23	2.97
Nickel (Ni)	2.7	0.71	1.50	2.01
Phosphorus (P)	< 287.0	< 75.65	< 159.96	< 213.36
Potassium (K)	21600.0	5693.20	12038.70	16057.74
Selenium (Se)	0.9	0.24	0.50	0.67
Silicium (soluble in HNO3)	305.0	80.39	169.99	226.74
Silver (Ag)	2.5	0.66	1.39	1.86
Sodium (Na)	11200.0	2952.03	6242.29	8326.24
Strontium (Sr)	2.1	0.55	1.17	1.56
Tellurium (Te)	< 3.0	< 0.79	< 1.67	< 2.23
Thallium (Tl)	< 3.0	< 0.79	< 1.67	< 2.23
Tin (Sn)	59.8	15.76	33.33	44.46
Titanium (Ti)	11.2	2.95	6.24	8.33
Uranium (U)	< 3.0	< 0.79	< 1.67	< 2.23
Vanadium (V)	0.5	0.13	0.28	0.37
Zinc (Zn)	540.0	142.33	300.97	401.44

GAS SAMPLE VOLUME (Rm³) :	3.794

STACK GAS PROPERTIES	
VELOCITY (m/s)	6.9
VOLUMETRIC FLOW RATE	
m³/h (actual conditions)	18046
Rm³/h (reference conditions)	7612
GAS TEMPERATURE (°C)	404
MOISTURE (% v/v wet basis)	3.6
STATIC PRESSURE (inch H2O)	-0.10
GAS COMPOSITION (dry basis)	
O2 (% v/v)	17.39
CO2 (% v/v)	2.49
CO (ppmv)	6.4

(1) When an analysis is"< D.L.", the detection limit (D.L.) is used in the calculations of concentration and emission.

"R" or "Reference Conditions" at 25°C, 101.3 kPa, dry basis.

TABLE # 4

OUTLET OF INCINERATOR
METALS EMISSIONS AT THE STACK

TEST #	*2*
DATE	*12-Jul-14*
TIME	*11:22 - 16:00*

Metals	ANALYSES OF SAMPLE µg	CONCENTRATION (1) µg/Rm³	EMISSION RATE (1) µg/s	CONCENTRATION (1) µg/Rm³ @ 11 % O2
Aluminum (Al)	77.0	21.75	41.94	44.49
Antimony (Sb)	12.3	3.47	6.70	7.11
Arsenic (As)	2.3	0.65	1.25	1.33
Baryum (Ba)	3.5	0.99	1.91	2.02
Beryllium (Be)	< 3.0	< 0.85	< 1.63	< 1.73
Bismuth (Bi)	5.0	1.41	2.72	2.89
Boron (B)	79.0	22.32	43.03	45.65
Cadmium (Cd)	4.0	1.13	2.18	2.31
Calcium (Ca)	786.0	222.03	428.15	454.16
Chromium (Cr)	19.3	5.45	10.51	11.15
Cobalt (Co)	5.7	1.61	3.10	3.29
Copper (Cu)	67.7	19.12	36.88	39.12
Iron (Fe)	138.0	38.98	75.17	79.74
Lead (Pb)	277.0	78.25	150.89	160.05
Lithium (Li)	11.7	3.31	6.37	6.76
Magnesium (Mg)	107.9	30.48	58.77	62.35
Manganese (Mn)	12.5	3.53	6.81	7.22
Mercury (Hg)	250.34	70.72	136.36	144.65
Molybdenum (Mo)	5.0	1.41	2.72	2.89
Nickel (Ni)	2.6	0.73	1.42	1.50
Phosphorus (P)	< 332.0	< 93.79	< 180.85	< 191.83
Potassium (K)	28900.0	8163.84	15742.31	16698.77
Selenium (Se)	1.2	0.34	0.65	0.69
Silicium (soluble in HNO3)	191.0	53.95	104.04	110.36
Silver (Ag)	4.4	1.24	2.40	2.54
Sodium (Na)	18900.0	5338.98	10295.15	10920.65
Strontium (Sr)	1.9	0.54	1.03	1.10
Tellurium (Te)	< 3.0	< 0.85	< 1.63	< 1.73
Thallium (Tl)	< 3.0	< 0.85	< 1.63	< 1.73
Tin (Sn)	92.9	26.24	50.60	53.68
Titanium (Ti)	3.2	0.90	1.74	1.85
Uranium (U)	< 3.0	< 0.85	< 1.63	< 1.73
Vanadium (V)	0.3	0.08	0.16	0.17
Zinc (Zn)	513.0	144.92	279.44	296.42

GAS SAMPLE VOLUME (Rm³) :	3.540

STACK GAS PROPERTIES	
VELOCITY (m/s)	7.2
VOLUMETRIC FLOW RATE	
m³/h (actual conditions)	18952
Rm³/h (reference conditions)	6942
GAS TEMPERATURE (°C)	498
MOISTURE (% v/v wet basis)	5.2
STATIC PRESSURE (inch H2O)	-0.10
GAS COMPOSITION (dry basis)	
O2 (% v/v)	16.06
CO2 (% v/v)	3.47
CO (ppmv)	2.0

(1) When an analysis is"< D.L.", the detection limit (D.L.) is used in the calculations of concentration and emission.

"R" or "Reference Conditions" at 25°C, 101.3 kPa, dry basis.

TABLE # 5

OUTLET OF INCINERATOR
METALS EMISSIONS AT THE STACK

TEST #	*3*
DATE	*July 13, 2014*
TIME	*09:48 - 14:18*

Metals	ANALYSES OF SAMPLE µg	CONCENTRATION (1) µg/Rm³	EMISSION RATE (1) µg/s	CONCENTRATION (1) µg/Rm³ @ 11 % O2
Aluminum (Al)	62.0	17.12	33.27	35.84
Antimony (Sb)	15.3	4.23	8.21	8.84
Arsenic (As)	2.5	0.69	1.34	1.45
Baryum (Ba)	2.3	0.64	1.23	1.33
Beryllium (Be)	< 3.0	< 0.83	< 1.61	< 1.73
Bismuth (Bi)	< 5.0	< 1.38	< 2.68	< 2.89
Boron (B)	< 64.0	< 17.67	< 34.34	< 36.99
Cadmium (Cd)	5.2	1.44	2.79	3.01
Calcium (Ca)	474.0	130.90	254.32	273.98
Chromium (Cr)	22.7	6.27	12.18	13.12
Cobalt (Co)	1.9	0.52	1.02	1.10
Copper (Cu)	52.8	14.58	28.33	30.52
Iron (Fe)	113.0	31.21	60.63	65.32
Lead (Pb)	336.0	92.79	180.28	194.22
Lithium (Li)	9.3	2.57	4.99	5.38
Magnesium (Mg)	104.6	28.89	56.12	60.46
Manganese (Mn)	106.6	29.44	57.20	61.62
Mercury (Hg)	30.90	8.53	16.58	17.86
Molybdenum (Mo)	4.0	1.10	2.15	2.31
Nickel (Ni)	2.0	0.55	1.07	1.16
Phosphorus (P)	< 336.0	< 92.79	< 180.28	< 194.22
Potassium (K)	23600.0	6517.54	12662.47	13641.36
Selenium (Se)	1.5	0.41	0.80	0.87
Silicium (soluble in HNO3)	142.0	39.22	76.19	82.08
Silver (Ag)	1.7	0.47	0.91	0.98
Sodium (Na)	13000.0	3590.17	6975.09	7514.31
Strontium (Sr)	1.1	0.30	0.59	0.64
Tellurium (Te)	< 3.0	< 0.83	< 1.61	< 1.73
Thallium (Tl)	< 3.0	< 0.83	< 1.61	< 1.73
Tin (Sn)	71.0	19.61	38.09	41.04
Titanium (Ti)	3.6	0.99	1.93	2.08
Uranium (U)	< 3.0	< 0.83	< 1.61	< 1.73
Vanadium (V)	0.5	0.14	0.27	0.29
Zinc (Zn)	532.0	146.92	285.44	307.51

GAS SAMPLE VOLUME (Rm³) :	3.621

STACK GAS PROPERTIES	
VELOCITY (m/s)	7.1
VOLUMETRIC FLOW RATE	
m³/h (actual conditions)	18776
Rm³/h (reference conditions)	6994
GAS TEMPERATURE (°C)	494
MOISTURE (% v/v wet basis)	5.1
STATIC PRESSURE (inch H2O)	-0.10
GAS COMPOSITION (dry basis)	
O2 (% v/v)	16.17
CO2 (% v/v)	3.36
CO (ppmv)	2.6

(1) When an analysis is"< D.L.", the detection limit (D.L.) is used in the calculations of concentration and emission.

"R" or "Reference Conditions" at 25°C, 101.3 kPa, dry basis.

TABLE # 6
OUTLET OF INCINERATOR
SUMMARY OF ATMOSPHERIC EMISSIONS
SVOC

Test	1	2	3	
Date	11-Jul-14	12-Jul-14	13-Jul-14	Average
Time	12:59 - 16:35	11:22 - 16:00	09:48 - 14:18	
Weight of sample				
PCDD/F (pg TEQ)	49.49	84.47	108.01	
Gas sample volume (Rm^3)	3.449	3.349	3.290	
CONCENTRATIONS				
PCDD/F (pg/Rm^3 TEQ)	14.3	25.2	32.8	24.1
PCDD/F (pg/Rm^3 TEQ @ 11 % O2)	40.5	51.6	68.7	53.6
MASS EMISSION RATE				
PCDD/F (ng/h TEQ)	102.2	171.0	218.1	163.8
STACK GAS PROPERTIES				
VELOCITY (m/s)	6.4	7.0	6.8	6.7
VOLUMETRIC FLOW RATES				
m^3/h (Actual conditions)	16795	18462	17860	17706
Rm^3/h (Reference conditions)	7122	6780	6643	6848
TEMPERATURE (°C)	403	499	501	468
MOISTURE (% v/v, wet basis)	3.2	4.9	4.4	4.2
STATIC PRESSURE (" H2O)	-0.10	-0.10	-0.10	-0.10
GAS COMPOSITION (dry basis)				
O2 (% v/v)	17.39	16.06	16.17	16.54
CO2 (% v/v)	2.49	3.47	3.36	3.11
CO (ppmv)	6.4	2.0	2.6	3.7
AVERAGE ISOKINETICITY (%)	94.6	96.3	96.2	95.7

"R" or "Reference Conditions" at 25°C, 101.3 kPa, dry basis.

TABLE # 7

OUTLET OF INCINERATOR
EMISSIONS OF PCDD/PCDF

TEST # 1

PROJECT: R14-034
COMPANY: AGNICO-EAGLE MINES LTD,
SITE: OUTLET OF INCINERATOR
DATE: July 11, 2014

GAS SAMPLE VOLUME: 3.449 Rm³
VOLUMETRIC FLOW RATE: 7122 Rm³/h
OXYGEN (O2): 17.39 % v/v, dry basis

CONGENERS	ANALYSES (1) pg	BLANK (2) pg	TOXIC (4) FACTOR	TEQ (3) pg	CONCENTRATIONS pg/Rm³ TEQ (3)	EMISSIONS (TEQ) pg/s (3)
2,3,7,8-T4CDF without DB-225	25.1	< 0.6	0.1	2.51	0.73	1.44
1,2,3,7,8-P5CDF	18.0	< 0.4	0.05	0.90	0.26	0.52
2,3,4,7,8-P5CDF	37.0	< 0.3	0.5	18.50	5.36	10.61
1,2,3,4,7,8-H6CDF	63.0	< 0.5	0.1	6.30	1.83	3.61
1,2,3,6,7,8-H6CDF	26.0	< 0.5	0.1	2.60	0.75	1.49
2,3,4,6,7,8-H6CDF	45.0	< 0.6	0.1	4.50	1.30	2.58
1,2,3,7,8,9-H6CDF	5.0	< 1.0	0.1	0.50	0.14	0.29
1,2,3,4,6,7,8-H7CDF	86.6	< 0.6	0.01	0.87	0.25	0.50
1,2,3,4,7,8,9-H7CDF	14.7	< 0.9	0.01	0.15	0.04	0.08
1,2,3,4,6,7,8,9-O8CDF	38.0	5.0	0.001	0.04	0.01	0.02
2,3,7,8-T4CDD	4.0	< 0.8	1	4.00	1.16	2.29
1,2,3,7,8-P5CDD	8.0	< 0.6	0.5	4.00	1.16	2.29
1,2,3,4,7,8-H6CDD	5.8	< 0.5	0.1	0.58	0.17	0.33
1,2,3,6,7,8-H6CDD	12.8	< 0.6	0.1	1.28	0.37	0.73
1,2,3,7,8,9-H6CDD	20.6	< 0.6	0.1	2.06	0.60	1.18
1,2,3,4,6,7,8-H7CDD	65.0	2.0	0.01	0.65	0.19	0.37
1,2,3,4,6,7,8,9-O8CDD	61.0	3.5	0.001	0.06	0.02	0.03
TOTAL PCDD/F (5)	535.6	10.5		49.49	14.35	28.39

HOMOLOGUOUS	ANALYSES pg	BLANK (2) pg
T4CDF	599.0	0.9
P5CDF	361.0	< 0.4
H6CDF	272.0	< 1.0
H7CDF	151.0	< 0.9
OCDF	38.0	5.0
T4CDD	161.0	5.1
P5CDD	188.0	4.1
H6CDD	222.0	4.9
H7CDD	154.0	2.0
OCDD	61.0	3.5

NOTES : "R" or "Reference Conditions" correspond to 25 °C, 101.3 kPa, dry basis.
The sign "<" means that the analytical result is less than the detection limit (d.l.).
(1) Analyzed by Agat Laboratories. Results ARE CORRECTED for the recovery of surrogates.
(2) Field blank results are not substracted from the analytical results.
(3) When an analytical result is given as < d.l., the d.l. provided by the laboratory is used in the calculations.
(4) Toxicity factors of method EPS 1/RM/2 of Environment Canada.
(5) When a congener is not detected, the d.l. provided by the laboratory is used in the calculations for total PCDD/F.

TABLE # 8

OUTLET OF INCINERATOR
EMISSIONS OF PCDD/PCDF

TEST # 2

PROJECT: R14-034
COMPANY: AGNICO-EAGLE MINES LTD,
SITE: OUTLET OF INCINERATOR
DATE: July 12, 2014

GAS SAMPLE VOLUME: 3.349 Rm³
VOLUMETRIC FLOW RATE: 6780 Rm³/h
OXYGEN (O2): 16.06 % v/v, dry basis

CONGENERS	ANALYSES (1) pg	BLANK (2) pg	TOXIC (4) FACTOR	TEQ (3) pg	CONCENTRATIONS pg/Rm³ TEQ (3)	EMISSIONS (TEQ) pg/s (3)
2,3,7,8-T4CDF without DB-225	37.9	< 0.6	0.1	3.79	1.13	2.13
1,2,3,7,8-P5CDF	28.0	< 0.4	0.05	1.40	0.42	0.79
2,3,4,7,8-P5CDF	68.7	< 0.3	0.5	34.35	10.26	19.32
1,2,3,4,7,8-H6CDF	118.0	< 0.5	0.1	11.80	3.52	6.64
1,2,3,6,7,8-H6CDF	46.1	< 0.5	0.1	4.61	1.38	2.59
2,3,4,6,7,8-H6CDF	71.9	< 0.6	0.1	7.19	2.15	4.04
1,2,3,7,8,9-H6CDF	4.1	< 1.0	0.1	0.41	0.12	0.23
1,2,3,4,6,7,8-H7CDF	176.0	< 0.6	0.01	1.76	0.53	0.99
1,2,3,4,7,8,9-H7CDF	20.9	< 0.9	0.01	0.21	0.06	0.12
1,2,3,4,6,7,8,9-O8CDF	62.0	5.0	0.001	0.06	0.02	0.03
2,3,7,8-T4CDD	7.0	< 0.8	1	7.00	2.09	3.94
1,2,3,7,8-P5CDD	13.0	< 0.6	0.5	6.50	1.94	3.66
1,2,3,4,7,8-H6CDD	9.0	< 0.5	0.1	0.90	0.27	0.51
1,2,3,6,7,8-H6CDD	19.0	< 0.6	0.1	1.90	0.57	1.07
1,2,3,7,8,9-H6CDD	16.0	< 0.6	0.1	1.60	0.48	0.90
1,2,3,4,6,7,8-H7CDD	87.8	2.0	0.01	0.88	0.26	0.49
1,2,3,4,6,7,8,9-O8CDD	108.0	3.5	0.001	0.11	0.03	0.06
TOTAL PCDD/F (5)	893.4	10.5		84.47	25.22	47.50

HOMOLOGUOUS	ANALYSES pg	BLANK (2) pg
T4CDF	1090.0	0.9
P5CDF	625.0	< 0.4
H6CDF	459.0	< 1.0
H7CDF	272.0	< 0.9
OCDF	62.0	5.0
T4CDD	182.0	5.1
P5CDD	202.0	4.1
H6CDD	262.0	4.9
H7CDD	214.0	2.0
OCDD	108.0	3.5

NOTES : "R" or "Reference Conditions" correspond to 25 °C, 101.3 kPa, dry basis.
The sign "<" means that the analytical result is less than the detection limit (d.l.).
(1) Analyzed by Agat Laboratories. Results ARE CORRECTED for the recovery of surrogates.
(2) Field blank results are not substracted from the analytical results.
(3) When an analytical result is given as < d.l., the d.l. provided by the laboratory is used in the calculations.
(4) Toxicity factors of method EPS 1/RM/2 of Environment Canada.
(5) When a congener is not detected, the d.l. provided by the laboratory is used in the calculations for total PCDD/F.

TABLE # 9

OUTLET OF INCINERATOR
EMISSIONS OF PCDD/PCDF

TEST # 3

PROJECT: R14-034
COMPANY: AGNICO-EAGLE MINES LTD,
SITE: OUTLET OF INCINERATOR
DATE: July 13, 2014

GAS SAMPLE VOLUME: 3.290 Rm³
VOLUMETRIC FLOW RATE: 6643 Rm³/h
OXYGEN (O2): 16.17 % v/v, dry basis

CONGENERS	ANALYSES (1) pg	BLANK (2) pg	TOXIC (4) FACTOR	TEQ (3) pg	CONCENTRATIONS pg/Rm³ TEQ (3)	EMISSIONS (TEQ) pg/s (3)
2,3,7,8-T4CDF without DB-225	36.1	< 0.6	0.1	3.61	1.10	2.02
1,2,3,7,8-P5CDF	31.0	< 0.4	0.05	1.55	0.47	0.87
2,3,4,7,8-P5CDF	79.0	< 0.3	0.5	39.50	12.01	22.16
1,2,3,4,7,8-H6CDF	176.0	< 0.5	0.1	17.60	5.35	9.87
1,2,3,6,7,8-H6CDF	59.8	< 0.5	0.1	5.98	1.82	3.35
2,3,4,6,7,8-H6CDF	103.0	< 0.6	0.1	10.30	3.13	5.78
1,2,3,7,8,9-H6CDF	6.0	< 1.0	0.1	0.60	0.18	0.34
1,2,3,4,6,7,8-H7CDF	302.0	< 0.6	0.01	3.02	0.92	1.69
1,2,3,4,7,8,9-H7CDF	28.0	< 0.9	0.01	0.28	0.09	0.16
1,2,3,4,6,7,8,9-O8CDF	79.0	5.0	0.001	0.08	0.02	0.04
2,3,7,8-T4CDD	7.0	< 0.8	1	7.00	2.13	3.93
1,2,3,7,8-P5CDD	16.0	< 0.6	0.5	8.00	2.43	4.49
1,2,3,4,7,8-H6CDD	12.5	< 0.5	0.1	1.25	0.38	0.70
1,2,3,6,7,8-H6CDD	36.0	< 0.6	0.1	3.60	1.09	2.02
1,2,3,7,8,9-H6CDD	36.0	< 0.6	0.1	3.60	1.09	2.02
1,2,3,4,6,7,8-H7CDD	184.0	2.0	0.01	1.84	0.56	1.03
1,2,3,4,6,7,8,9-O8CDD	196.0	3.5	0.001	0.20	0.06	0.11
TOTAL PCDD/F (5)	1387.4	10.5		108.01	32.83	60.58

HOMOLOGUOUS	ANALYSES pg	BLANK (2) pg
T4CDF	928.0	0.9
P5CDF	756.0	< 0.4
H6CDF	675.0	< 1.0
H7CDF	443.0	< 0.9
OCDF	79.0	5.0
T4CDD	204.0	5.1
P5CDD	392.0	4.1
H6CDD	494.0	4.9
H7CDD	452.0	2.0
OCDD	196.0	3.5

NOTES : "R" or "Reference Conditions" correspond to 25 °C, 101.3 kPa, dry basis.
The sign "<" means that the analytical result is less than the detection limit (d.l.).
(1) Analyzed by Agat Laboratories. Results ARE CORRECTED for the recovery of surrogates.
(2) Field blank results are not substracted from the analytical results.
(3) When an analytical result is given as < d.l., the d.l. provided by the laboratory is used in the calculations.
(4) Toxicity factors of method EPS 1/RM/2 of Environment Canada.
(5) When a congener is not detected, the d.l. provided by the laboratory is used in the calculations for total PCDD/F.

TABLE # 10

OUTLET OF INCINERATOR
MANUAL SAMPLING - NOx

CALCULATIONS OF NITROGEN OXIDES EMISSIONS
REFERENCE METHOD EPS 1-AP-77-3 - ENVIRONMENT CANADA

Test	1	2	3	4	
Date	2014-07-12	2014-07-12	2014-07-13	2014-07-13	Average
Time	17:36	17:34	14:40	14:37	
Volumetric flowrate (Rm³/h)	6861	6861	6819	6819	6840
FIELD DATA					
Container #	G-11	G-12	G-11	G-12	
Volume of flask (ml)	2053.4	2055.6	2053.4	2055.6	
Initial atm. pressure (inch Hg)	29.97	29.97	30.22	30.22	
Final atm. pressure (inch Hg)	30.22	30.22	30.17	30.17	
Initial pres. of flask (inch Hg)	-24.0	-24.0	-24.0	-24.0	
Final pres. of flask (inch H2O)	-4.0	-11.0	-40.0	-14.5	
Initial temp. of flask (deg.F)	70.7	70.7	81.4	81.4	
Final temp. of flask (deg.F)	81.0	81.0	79.0	79.0	
Volume of solution (ml)	25	25	25	25	
Total µg NO2	< 4.0	4.0	12.0	14.0	
Reference volume of flask (ml)	1604.4	1571.5	1421.0	1549.4	
CONCENTRATIONS					
NOx in ppmv	< 1.3	1.4	4.5	4.8	< 3.0
NOx in mg/Rm³ (NO2 equiv.)	< 2.5	2.5	8.4	9.0	< 5.6
EMISSIONS					
NOx in kg/h (NO2 equiv.)	< 0.017	0.017	0.057	0.062	< 0.038

Volumetric flowrates are taken from the daily average of the SVOC and PAM tests.

"R" or "Reference conditions" correspond at 25°C, 101.3 kPa, dry basis.

Report signatories and approval

Author	Pierre Duguay Pierre Duguay – P. Eng. - Supervisor
Approbation	Claude Belanger, chemist – Operations Manager

APPENDIX 1 OUTLET OF THE INCINERATOR

AGNICO-EAGLE MINES LTD, MEADOWBANK DIVISION
BAKER LAKE, NUNAVUT
OUTLET OF INCINERATOR
PAM

Test	Date	Time	Filter	Probe	Cyclone	Vmeter	Dstack	Period
---	----	-------	mg	mg	mg	ft^3	inches	minutes
1	July 11, 2014	12:59 - 16:35	70.67	26.86		141.20	38.00	5

O2 (% v/v) Dry basis	CO2 (% v/v) Dry basis	CO (ppmv) Dry basis	Vol. water mL	Pbar "Hg	Dnozzle inch	Cpitot ----	γ ----	Pstatic "H2O
17.39	2.49	6.4	104.2	29.74	0.498	0.785	0.9622	-0.10

SO2	H2
0	0

Traverse #1

Point	Tstack °F	ΔP "H2O	ΔH "H2O	Volume ft^3	Tinlet °F	Toutlet °F	Isokinetic %	Velocity ft/s
1	781	0.080	1.08	71.50	71	72	99.9	22.9
	781	0.080	1.08	75.47	71	72		
2	784	0.080	1.08	75.47	74	71	93.3	22.9
	784	0.080	1.08	79.18	74	71		
3	788	0.080	1.08	79.18	76	72	96.7	23.0
	788	0.080	1.08	83.03	76	72		
4	783	0.078	1.06	83.03	78	72	96.3	22.6
	783	0.078	1.06	86.83	78	72		
5	797	0.078	1.05	86.83	80	73	97.0	22.8
	797	0.078	1.05	90.65	80	73		
6	801	0.085	1.14	90.65	82	75	97.6	23.8
	801	0.085	1.14	94.67	82	75		
7	816	0.085	1.13	94.67	84	77	98.1	23.9
	816	0.085	1.13	98.70	84	77		
8	765	0.085	1.19	98.70	86	79	94.3	23.4
	765	0.085	1.19	102.67	86	79		
9	761	0.100	1.40	102.67	86	80	97.1	25.4
	761	0.100	1.40	107.11	86	80		
10	775	0.095	1.32	107.11	88	81	100.6	24.9
	775	0.095	1.32	111.58	88	81		
11	756	0.095	1.34	111.58	89	82	96.0	24.7
	756	0.095	1.34	115.89	89	82		
12	757	0.100	1.41	115.89	89	84	98.3	25.3
	757	0.100	1.41	120.42	89	84		
13	757	0.100	1.41	120.42	87	84	97.4	25.3
	757	0.100	1.41	124.90	87	84		
14	733	0.100	1.44	124.90	88	84	94.6	25.1
	733	0.100	1.44	129.30	88	84		
15	738	0.100	1.44	129.30	88	84	97.4	25.1
	738	0.100	1.44	133.82	88	84		
16	747	0.100	1.43	133.82	88	85	95.1	25.2
	747	0.100	1.43	138.22	88	85		
17	751	0.110	1.56	138.22	88	85	95.8	26.5
	751	0.110	1.56	142.86	88	85		
18	725	0.110	1.60	142.86	88	86	97.3	26.2
	725	0.110	1.60	147.63	88	86		
Average	768	0.092	1.287	76.13	84	79	96.8	24.4

A1-1

AGNICO-EAGLE MINES LTD, MEADOWBANK DIVISION
BAKER LAKE, NUNAVUT
OUTLET OF INCINERATOR
PAM

Test #1, Traverse #2								
Point	Tstack °F	ΔP "H2O	ΔH "H2O	Volume ft³	Tinlet °F	Toutlet °F	Isokinetic %	Velocity ft/s
1	815	0.070	0.93	147.77	80	79	94.8	21.7
	815	0.070	0.93	151.30	80	79		
2	813	0.070	0.93	151.30	79	79	95.1	21.7
	813	0.070	0.93	154.84	79	79		
3	813	0.070	0.94	154.84	82	79	96.1	21.7
	813	0.070	0.94	158.43	82	79		
4	823	0.065	0.86	158.43	82	79	96.5	21.0
	823	0.065	0.86	161.89	82	79		
5	814	0.065	0.87	161.89	84	80	95.9	20.9
	814	0.065	0.87	165.35	84	80		
6	832	0.060	0.79	165.35	85	81	96.3	20.2
	832	0.060	0.79	168.67	85	81		
7	794	0.060	0.82	168.67	86	82	96.4	19.9
	794	0.060	0.82	172.05	86	82		
8	786	0.065	0.89	172.05	85	82	91.9	20.7
	786	0.065	0.89	175.41	85	82		
9	754	0.065	0.92	175.41	86	83	96.7	20.4
	754	0.065	0.92	179.00	86	83		
10	755	0.070	0.99	179.00	86	83	95.3	21.2
	755	0.070	0.99	182.67	86	83		
11	759	0.070	0.99	182.67	86	84	98.5	21.2
	759	0.070	0.99	186.46	86	84		
12	741	0.070	1.00	186.46	86	84	99.1	21.1
	741	0.070	1.00	190.30	86	84		
13	740	0.070	1.00	190.30	86	84	97.5	21.1
	740	0.070	1.00	194.08	86	84		
14	743	0.070	1.00	194.08	88	85	97.6	21.1
	743	0.070	1.00	197.87	88	85		
15	731	0.065	0.94	197.87	88	85	97.8	20.2
	731	0.065	0.94	201.55	88	85		
16	604	0.065	1.05	201.55	88	85	94.8	19.1
	604	0.065	1.05	205.32	88	85		
17	607	0.060	0.97	205.32	88	86	99.2	18.4
	607	0.060	0.97	209.11	88	86		
18	604	0.060	0.97	209.11	88	86	97.5	18.4
	604	0.060	0.97	212.84	88	86		
Average	752	0.066	0.937	65.07	85	83	96.5	20.5
Ave. test	760	0.079	1.112	141.20	85	81	96.7	22.5

Velocity		Volumetric flow rates				Temperature		Moisture
ft/s	m/s	ACFM	SDCFM	m³/h	Rm³/h	°F	°C	% v/v
22.5	6.9	10620	4480	18046	7612	760	404	3.6

Total part.	Gas sample volume		Verification of Isokinetic					
mg	SDCF	Rm³	Nb readings	Nb non Iso	Nb < 90%	Nb > 110%	Iso max.	Iso min.
97.53	133.98	3.794	36	0	0	0	100.6	91.9

Pstack "Hg	Pmeter "Hg	Md g/g-mole	Ms g/g-mole	Bwo ------	Ratio Vs max / Vs min ------	Vs max. ft/s	Vs min. ft/s
29.73	29.82	29.09	28.69	0.036	1.4	26.5	18.4

Particulate concentrations				Emission mass flow rate	
gr/ACF	gr/SDCF	mg/m³	mg/Rm³	lb/h	kg/h
0.005	0.011	11	26	0.4	0.2

"R" or "Reference Conditions" at 25°C, 101.3 kPa, dry basis.

A1-2

AGNICO-EAGLE MINES LTD, MEADOWBANK DIVISION
BAKER LAKE, NUNAVUT
OUTLET OF INCINERATOR
PAM

Test	Date	Time	Filter	Probe	Cyclone	Vmeter	Dstack	Period
---	----	-------	mg	mg	mg	ft³	inches	minutes
2	July 12, 2014	11:22 - 16:00	85.38	38.18		132.90	38.00	5

O2 (% v/v) Dry basis	CO2 (% v/v) Dry basis	CO (ppmv) Dry basis	Vol. water mL	Pbar "Hg	Dnozzle inch	Cpitot ----	γ ----	Pstatic "H2O
16.06	3.47	2.0	142.1	29.89	0.498	0.785	0.9622	-0.10

SO2	H2
0	0

Traverse #1								
Point	Tstack °F	ΔP "H2O	ΔH "H2O	Volume ft³	Tinlet °F	Toutlet °F	Isokinetic %	Velocity ft/s
1	856	0.100	1.27	13.18	69	70	102.3	26.3
	856	0.100	1.27	17.50	69	70		
2	944	0.095	1.13	17.50	75	70	100.1	26.5
	944	0.095	1.13	21.51	75	70		
3	954	0.095	1.13	21.51	77	70	100.7	26.6
	954	0.095	1.13	25.54	77	70		
4	948	0.095	1.14	25.54	81	72	96.0	26.5
	948	0.095	1.14	29.41	81	72		
5	943	0.090	1.09	29.41	83	73	98.7	25.8
	943	0.090	1.09	33.30	83	73		
6	938	0.090	1.10	33.30	86	76	100.2	25.7
	938	0.090	1.10	37.28	86	76		
7	936	0.090	1.10	37.28	87	77	99.9	25.7
	936	0.090	1.10	41.26	87	77		
8	889	0.095	1.21	41.26	89	80	98.3	26.0
	889	0.095	1.21	45.37	89	80		
9	890	0.095	1.21	45.37	89	81	99.0	26.0
	890	0.095	1.21	49.51	89	81		
10	900	0.095	1.20	49.51	91	83	100.2	26.1
	900	0.095	1.20	53.70	91	83		
11	916	0.095	1.19	53.70	92	84	98.9	26.2
	916	0.095	1.19	57.82	92	84		
12	890	0.085	1.09	57.82	94	86	101.4	24.6
	890	0.085	1.09	61.87	94	86		
13	894	0.080	1.02	61.87	94	86	98.2	23.9
	894	0.080	1.02	65.67	94	86		
14	892	0.075	0.96	65.67	94	88	100.6	23.1
	892	0.075	0.96	69.45	94	88		
15	885	0.075	0.97	69.45	94	88	97.4	23.0
	885	0.075	0.97	73.12	94	88		
16	885	0.075	0.97	73.12	94	88	99.0	23.0
	885	0.075	0.97	76.85	94	88		
17	872	0.060	0.79	76.85	96	91	94.7	20.5
	872	0.060	0.79	80.07	96	91		
18	867	0.060	0.79	80.07	96	91	94.2	20.5
	867	0.060	0.79	83.28	96	91		
Average	906	0.086	1.076	70.10	88	81	98.9	24.8

AGNICO-EAGLE MINES LTD, MEADOWBANK DIVISION
BAKER LAKE, NUNAVUT
OUTLET OF INCINERATOR
PAM

Test #2, Traverse #2								
Point	Tstack °F	ΔP "H2O	ΔH "H2O	Volume ft³	Tinlet °F	Toutlet °F	Isokinetic %	Velocity ft/s
1	971	0.050	0.60	83.42	88	88	95.4	19.4
	971	0.050	0.60	86.25	88	88		
2	968	0.050	0.61	86.25	91	87	99.5	19.4
	968	0.050	0.61	89.21	91	87		
3	972	0.050	0.61	89.21	95	89	100.4	19.4
	972	0.050	0.61	92.21	95	89		
4	961	0.050	0.61	92.21	94	89	98.8	19.3
	961	0.050	0.61	95.17	94	89		
5	953	0.050	0.62	95.17	98	92	96.9	19.3
	953	0.050	0.62	98.10	98	92		
6	972	0.060	0.73	98.10	99	92	97.8	21.3
	972	0.060	0.73	101.32	99	92		
7	921	0.060	0.76	101.32	100	95	97.8	20.9
	921	0.060	0.76	104.61	100	95		
8	907	0.060	0.77	104.61	100	95	101.4	20.8
	907	0.060	0.77	108.04	100	95		
9	909	0.075	0.96	108.04	100	96	99.5	23.3
	909	0.075	0.96	111.80	100	96		
10	918	0.075	0.96	111.80	101	96	98.1	23.3
	918	0.075	0.96	115.50	101	96		
11	952	0.080	0.99	115.50	99	95	99.0	24.4
	952	0.080	0.99	119.30	99	95		
12	941	0.080	1.00	119.30	100	95	100.4	24.3
	941	0.080	1.00	123.17	100	95		
13	948	0.080	1.00	123.17	100	96	98.4	24.4
	948	0.080	1.00	126.96	100	96		
14	950	0.080	1.00	126.96	100	95	101.2	24.4
	950	0.080	1.00	130.85	100	95		
15	948	0.080	1.00	130.85	100	96	100.3	24.4
	948	0.080	1.00	134.71	100	96		
16	967	0.080	0.98	134.71	100	95	97.9	24.5
	967	0.080	0.98	138.45	100	95		
17	980	0.085	1.04	138.45	100	95	99.2	25.4
	980	0.085	1.04	142.34	100	95		
18	987	0.085	1.03	142.34	100	95	99.2	25.5
	987	0.085	1.03	146.22	100	95		
Average	951	0.068	0.848	62.80	98	93	98.9	22.4
Ave. test	928	0.077	0.962	132.90	93	87	98.9	23.6

Velocity		Volumetric flow rates				Temperature		Moisture
ft/s	m/s	ACFM	SDCFM	m³/h	Rm³/h	°F	°C	% v/v
23.6	7.2	11153	4085	18952	6942	928	498	5.2

Total part.	Gas sample volume		Verification of Isokinetic					
mg	SDCF	Rm³	Nb readings	Nb non Iso	Nb < 90%	Nb > 110%	Iso max.	Iso min.
123.56	125.01	3.540	36	0	0	0	102.3	94.2

Pstack "Hg	Pmeter "Hg	Md g/g-mole	Ms g/g-mole	Bwo ------	Ratio Vs max / Vs min ------	Vs max. ft/s	Vs min. ft/s
29.88	29.96	29.20	28.62	0.052	1.4	26.6	19.3

Particulate concentrations				Emission mass flow rate	
gr/ACF	gr/SDCF	mg/m³	mg/Rm³	lb/h	kg/h
0.006	0.015	13	35	0.5	0.2

"R" or "Reference Conditions" at 25°C, 101.3 kPa, dry basis.

A1-4

AGNICO-EAGLE MINES LTD, MEADOWBANK DIVISION
BAKER LAKE, NUNAVUT
OUTLET OF INCINERATOR
PAM

Test	Date	Time	Filter	Probe	Cyclone	Vmeter	Dstack	Period
---	----	-------	mg	mg	mg	ft³	inches	minutes
3	July 13, 2014	09:48 - 14:18	55.79	31.58		134.05	38.00	5

O2 (% v/v) Dry basis	CO2 (% v/v) Dry basis	CO (ppmv) Dry basis	Vol. water mL	Pbar "Hg	Dnozzle inch	Cpitot ----	γ ----	Pstatic "H2O
16.17	3.36	2.6	143.7	30.21	0.498	0.785	0.9622	-0.10

SO2	H2
0	0

Traverse #1

Point	Tstack °F	ΔP "H2O	ΔH "H2O	Volume ft³	Tinlet °F	Toutlet °F	Isokinetic %	Velocity ft/s
1	868	0.070	0.89	46.36	75	75	101.1	22.0
	868	0.070	0.89	49.94	75	75		
2	840	0.070	0.91	49.94	77	75	101.6	21.8
	840	0.070	0.91	53.58	77	75		
3	831	0.070	0.92	53.58	79	76	100.6	21.7
	831	0.070	0.92	57.21	79	76		
4	849	0.070	0.91	57.21	83	77	100.3	21.9
	849	0.070	0.91	60.82	83	77		
5	855	0.070	0.91	60.82	86	78	99.9	21.9
	855	0.070	0.91	64.42	86	78		
6	914	0.065	0.81	64.42	87	80	102.1	21.6
	914	0.065	0.81	67.90	87	80		
7	925	0.065	0.81	67.90	89	82	101.6	21.7
	925	0.065	0.81	71.36	89	82		
8	931	0.065	0.81	71.36	90	82	100.8	21.7
	931	0.065	0.81	74.79	90	82		
9	933	0.065	0.81	74.79	94	85	98.5	21.7
	933	0.065	0.81	78.16	94	85		
10	935	0.065	0.81	78.16	93	86	100.6	21.7
	935	0.065	0.81	81.60	93	86		
11	945	0.070	0.86	81.60	93	87	102.0	22.6
	945	0.070	0.86	85.21	93	87		
12	967	0.070	0.85	85.21	94	88	99.5	22.8
	967	0.070	0.85	88.71	94	88		
13	954	0.080	0.98	88.71	93	88	100.7	24.3
	954	0.080	0.98	92.51	93	88		
14	962	0.080	0.98	92.51	93	89	100.9	24.3
	962	0.080	0.98	96.31	93	89		
15	974	0.080	0.97	96.31	97	90	103.3	24.5
	974	0.080	0.97	100.20	97	90		
16	964	0.080	0.98	100.20	94	90	104.0	24.4
	964	0.080	0.98	104.12	94	90		
17	971	0.085	1.04	104.12	96	91	99.8	25.2
	971	0.085	1.04	108.00	96	91		
18	954	0.085	1.05	108.00	97	91	99.4	25.0
	954	0.085	1.05	111.89	97	91		

Average	921	0.073	0.906	65.53	89	84	100.9	22.8

AGNICO-EAGLE MINES LTD, MEADOWBANK DIVISION
BAKER LAKE, NUNAVUT
OUTLET OF INCINERATOR
PAM

Test #3, Traverse #2								
Point	Tstack °F	ΔP "H2O	ΔH "H2O	Volume ft³	Tinlet °F	Toutlet °F	Isokinetic %	Velocity ft/s
1	791	0.050	0.69	112.05	85	86	101.1	18.1
	791	0.050	0.69	115.23	85	86		
2	791	0.050	0.68	115.23	84	84	101.1	18.1
	791	0.050	0.68	118.40	84	84		
3	792	0.050	0.69	118.40	86	85	99.9	18.1
	792	0.050	0.69	121.54	86	85		
4	813	0.060	0.81	121.54	87	85	100.1	20.0
	813	0.060	0.81	124.96	87	85		
5	922	0.075	0.94	124.96	89	86	98.0	23.2
	922	0.075	0.94	128.56	89	86		
6	924	0.075	0.93	128.56	89	86	99.9	23.3
	924	0.075	0.93	132.23	89	86		
7	930	0.080	0.99	132.23	89	88	99.4	24.1
	930	0.080	0.99	136.00	89	88		
8	914	0.080	1.01	136.00	91	88	102.4	23.9
	914	0.080	1.01	139.91	91	88		
9	929	0.080	1.00	139.91	92	89	102.7	24.1
	929	0.080	1.00	143.82	92	89		
10	926	0.085	1.06	143.82	92	90	100.2	24.8
	926	0.085	1.06	147.76	92	90		
11	978	0.090	1.09	147.76	92	91	101.7	26.0
	978	0.090	1.09	151.80	92	91		
12	977	0.090	1.09	151.80	93	91	100.0	26.0
	977	0.090	1.09	155.78	93	91		
13	982	0.090	1.09	155.78	94	92	99.5	26.0
	982	0.090	1.09	159.74	94	92		
14	985	0.095	1.14	159.74	92	91	101.7	26.7
	985	0.095	1.14	163.88	92	91		
15	979	0.095	1.15	163.88	93	92	98.8	26.7
	979	0.095	1.15	167.92	93	92		
16	983	0.100	1.21	167.92	93	92	100.8	27.4
	983	0.100	1.21	172.14	93	92		
17	981	0.100	1.21	172.14	94	93	101.0	27.4
	981	0.100	1.21	176.38	94	93		
18	977	0.100	1.21	176.38	94	92	99.7	27.4
	977	0.100	1.21	180.57	94	92		
Average	921	0.080	0.999	68.52	91	89	100.4	23.9
Ave. test	921	0.076	0.953	134.05	90	86	100.7	23.4

Velocity		Volumetric flow rates				Temperature		Moisture
ft/s	m/s	ACFM	SDCFM	m³/h	Rm³/h	°F	°C	% v/v
23.4	7.1	11050	4116	18776	6994	921	494	5.1

Total part.	Gas sample volume		Verification of Isokinetic					
mg	SDCF	Rm³	Nb readings	Nb non Iso	Nb < 90%	Nb > 110%	Iso max.	Iso min.
87.37	127.87	3.621	36	0	0	0	104.0	98.0

Pstack "Hg	Pmeter "Hg	Md g/g-mole	Ms g/g-mole	Bwo ------	Ratio Vs max / Vs min ------	Vs max. ft/s	Vs min. ft/s
30.20	30.28	29.18	28.61	0.051	1.5	27.4	18.1

Particulate concentrations				Emission mass flow rate	
gr/ACF	gr/SDCF	mg/m³	mg/Rm³	lb/h	kg/h
0.004	0.011	9	24	0.4	0.2

"R" or "Reference Conditions" at 25°C, 101.3 kPa, dry basis.

A1-6

Exova Canada Inc.
1390 Rue Hocquart
St-Bruno-de-Montarville
Québec Canada J3V 6E1

Exova

SAMPLING DATA SHEET - MANUAL SAMPLING

Company : Agnico eagle	Control : # SB10 γ = .9622 Ko = .9304	Duct: Dia (") : 38	Port (") 10
City : Nepeagan bay	Probe : # AE10 Cv = .785	Diameter: Bef: 5D	After: 2D
Date : 11-7-16 / Project: R	Nozzle : # 1/2 Dn = .498 Box : #	Sheet : 1 of 3	
Site : Incinerateur	Supposed moisture % = 5%	Leak before: 0.0029	"H2O @ -15 "Hg
Test : 1 Métaux	Pressure : Pbar ("Hg) = 29.80 Pstat ("H2O) = -.16	Leak after:	"H2O @ "Hg

Point	Time	TS (°F)	▲P (" H2O)	▲H (" H2O)	Volume (ft³)	Temperature Tmi (°F)	Tmo (°F)	Timp (°F)	Probe (°F)	Oven (°F)	Vacuum (" Hg)	% ISO (%)	Gases O2 (%)	CO2 (%)	CO (ppmv / %)	NOx ppmv
1	12:59	781	.080	1.08	71.50	71	72		250	250	-4.0	101.7				
		781	.080	1.08		71	72									
2	13:04	784	.080	1.08	~~73.85~~	74	71				-4.0	95.0				
		784	.080	1.08	75.47	74	71									
3	13:09	788	.080	1.08	79.18	76	72				-5.0	98.5				
		788	.080	1.08		76	72									
4	13:14	783	.078	1.06	83.03	78	72				-5.0	98.1				
		783	.078	1.06		78	72									
5	13:19	797	.078	1.05	86.83	80	73				-5.0	98.9				
		797	.078	1.05		80	73									
6	13:24	801	.085	1.14	90.65	82	75				-5.0	99.4	17.6	2.3	7.0	
		801	.085	1.14		82	75									
7	13:29	816	.085	1.13	94.67	84	77				-5.0	99.9				
		816	.085	1.13		84	77									
8	13:34	765	.085	1.19	98.70	86	79				-5.0	96.1	17.4	2.5	17	
		765	.085	1.19		86	79									
9	13:39	761	.100	1.40	102.67	86	80				-6.0	98.8				
		761	.100	1.40		86	80									
10	13:44	775	0.95	1.32	107.11	88	81				-5.0	102.4				
		775	0.95	1.32		88	81									
11	13:49	756	0.095	1.34	111.58	89	82				-5.0	97.8				
		756	.095	1.34		89	82									
12	13:54	757	.100	1.41	116.89	89	84				-6.0	100.0				
	~~16:59~~	757	.100	1.41		89	84									

Constant => K = 31.50 A% = 109.36

Sampler: S. Lapointe

Sampler assistant: S. Demers

Exova Canada Inc.
1390 Rue Hocquart
St-Bruno-de-Montarville
Québec Canada J3V 6E1

Exova

SAMPLING DATA SHEET - MANUAL SAMPLING

Company : Agnico eagle	Control : # SB10 γ = .9622 Ko = .9804	Duct: Dia ("): 38 Port (") 10
City : Goldquest Bank	Probe : # 2E(mm) Cv = .785	Diameter: Bef: 50 After: 25
Date : 11-7-14 / Project: R	Nozzle : # 1/2 Dn = 498 Box : #	Sheet : 2 of 3
Site : Incinerateur	Supposed moisture % = 5%	Leak before: 0.00050 "H2O @ -15 "Hg
Test : 1 Mo Four	Pressure : Pbar ("Hg) = 29.80 Pstat ("H2O) = -0.6	Leak after: "H2O @ "Hg

Point	Time	TS (°F)	▲P (" H2O)	▲H (" H2O)	Volume (ft³)	Temperature Tmi (°F)	Tmo (°F)	Timp (°F)	Probe (°F)	Oven (°F)	Vacuum (" Hg)	% ISO (%)	Gases O2 (%)	CO2 (%)	CO (ppmv / %)	NOx ppmv
13	~~14:04~~	757	.100	1.41	120.42	87	84		250	250	-6.0	99.1				
	13:59	757	.100	1.41		87	84									
14	~~14:09~~	733	.100	1.44	124.90	88	84				-6.0	96.3				
	14:04	733	.100	1.44		88	84									
15	~~14:14~~	738	.100	1.44	129.30	88	84				-7.0	99.1				
	14:09	738	.100	1.44		86	84									
16	~~14:19~~	747	.100	1.43	133.82	88	85				-7.0	96.7	17.2	2.7	21	
	14:14	747	.100	1.43		88	85									
17	~~14:24~~	751	.110	1.56	138.22	88	85				-7.0	97.4				
18	14:19	751	.110	1.56		88	85									
12	14:24	725	.110	1.60	142.86	88	86		↓	↓	-7.0	99.0				
fond	14:29	725	.110	1.60	147.63	88	86									
T	15:05	815	.070	.93	147.77	80	79		250	250						
		815	.070	.93		80	79				-7.0	96.6				
2	15:10	813	.070	.93	151.30	79	79				-7.0	96.9				
		813	.070	.93		79	79									
3	15:15	813	.070	.94	154.84	82	79				-8.0	98.0	17.6	2.3	6	
		813	.070	.94		82	79									
4	15:20	823	.065	.86	158.43	83	79				-8.0	98.4				
		823	.065	.86		82	79									
5	15:25	814	.065	.87	161.89	84	80				-8.0	97.7				
		814	.065	.87		84	80									
6	15:30	832	.060	.79	165.35	85	81		↓	↓	-8.0	98.1				
	[illegible]	832	.060	.79		85	81									

Constant => K = 31.50 A% = 109.36

D

Sampler: S. Lapointe

Sampler assistant: S. Dompierre

D0

Exova Canada Inc.
1390 Rue Hocquart
St-Bruno-de-Montarville
Québec Canada J3V 6E1

Exova

SAMPLING DATA SHEET - MANUAL SAMPLING

Company : Agnico eagle	Control : # 8610 γ = .9622	Ko = .9304	Duct:	Dia ("): 38	Port (") 10
City : Meadow Bank	Probe : # 3E(new)	Cv = .785	Diameter:	Bef: 5D	After: 2D
Date : 11-7-14 / Project: R	Nozzle : # 1/2	Dn = .498 Box : #	Sheet :	3 of 3	
Site : Incinerateurs	Supposed moisture % = 5%		Leak before:	"H2O @	"Hg
Test : # 1 Metaux	Pressure : Pbar ("Hg) = 29.80	Pstat ("H2O) = -0.6	Leak after: 0.0000	"H2O @ -10	"Hg

Point	Time	TS (°F)	▲P (" H2O)	▲H (" H2O)	Volume (ft³)	Temperature Tmi (°F)	Tmo (°F)	Timp (°F)	Probe (°F)	Oven (°F)	Vacuum (" Hg)	% ISO (%)	Gases O2 (%)	CO2 (%)	CO (ppmv / %)	NOx ppmv
7	15:35	794	.060	.82	168.67	86	82		250	250	-8.0	98.2	17.6	2.3	0	
		794	.060	.82		86	82									
8	15:40	786	.065	.89	172.05	85	82				-8.0	93.6				
		786	.065	.89		85	82									
9	15:45	754	.065	.92	175.41	86	83				-9.0	98.5				
		754	.065	.92		86	83									
10	15:50	755	.070	.99	179.00	86	83				-9.0	97.1				
		755	.070	.99		86	83									
11	15:55	759	.070	.99	182.67	86	84				-9.0	100.4				
		759	.070	.99		86	84									
12	16:00	741	.070	1.00	186.46	86	84				-9.0	100.9	17.1	2.7	0	
		741	.070	1.00		86	84									
13	16:05	740	.070	1.00	190.30	86	84				-9.0	99.3				
		740	.070	1.00		86	84									
14	16:10	743	.070	1.00	194.08	88	85				-9.0	99.4				
		743	.070	1.00		88	85									
15	16:15	~~804~~ 731	.065	~~1.05~~ .94	197.87	88	85				-9.0	99.7				
		~~804~~ 731	.065	~~1.05~~ .94		88	85									
16	16:30	604	.065	1.05	201.55	88	85				-9.0	96.5	17.2	2.6	0	
		604	.065	1.05		88	85									
17	16:25	607	.060	.97	205.32	88	86				-9.0	101.0				
		607	.060	.97		88	86									
18	16:30	604	.060	.97	209.11	88	86		1/2	1/2	-9.0					
Fin	16:35	604	.060	.97	212.84	88	86									

Constant => K = 21.50 A% = 109.36

Sampler: S. Lapointe

Sampler assistant: S. Dumas

WEIGHT SHEET

Company	Agnico-Eagle
Location	Baker Lake
Date	11 / 07 / 2014
Site	Outlet incinerator
Train #	13
Test #	1 PAM

DATA		
Pbar: 29,74 po.Hg		
G	O_2 %	17,39
	CO_2 %	2,49
A	CO ppm	6.4
Z	CO %	

	No.	Weight Final (g)	Weight Initial (g)	Weight Particulates
Filter	Q-432		0,46339	
Probe wash				
Cyclone				
			Weight (g)	

Impingers		Final weight	Initial weight	Water weight
1	H2O	540,1	510,7	29,4
2	H2O	542,3	512,3	30,0
3	HNO_3 5% /H_2O_2 10 %	607,8	592,7	15,1
4	HNO_3 5% /H_2O_2 10 %	570,5	5656	4,9
5	Empty	470,6	4698	0,8
6	$KMnO_4$ 4%/ H_2SO_4 10%	586,2	586,0	0,2
7	$KMnO_4$ 4%/ H_2SO_4 10%	624,7	626,1	-1,4
8	Silica gel	689,3	664,1	25,2
			Final weight	104,2

Preparation	Prepared by	Recovered by	Approved by
Date	11-07-14	11-07-14	
On site	S. Demers	S. Demers	
Laboratory			

#1

Gestion des volumes des Barboteurs

Barboteur #	Volume d'eau Condensé	Volume de solution Initiale	Total	Code
1	29,4 mL	+ 100 mL	129.4 mL(1)	
2	30,0 mL	+ 100 mL	130,0 mL(2)	
Rincage (poids)	g	g	18,9 mL(3)	1 g d'eau = 1 mL
Sous-total (1+2+3)			278,3 mL(4)	
Aliquot **(Contenant 3B)**			(-) 100 mL(5)	11 JUIL14-A3-PAM-INC-(1+2-A)-14034.64
Volume final (4-5)			178,3 mL(6)	
Divise par 20			divise par 20 (7)	
Volume d'acide HNO_3 conc. à ajouter			9,0 mL(8)	
Volume final (5+6+8) **(Contenant 3A)**			187,3 mL(9)	11 JUIL14-A3-PAM-INC-(1+2-M1)-14034.65 JUIL14-A3-PAM-INC-(1+2-M2)-14034.66

3	15,1 mL	+ 100 mL	115,1 mL(10)	
4	4,9 mL	+ 100 mL	104,9 mL(11)	
Rincage (poids)	g	g	26,1 mL(12)	
Total (10 + 11 + 12) **(Contenant 4)**			246,1 mL(13)	11 JUIL14-A3-PAM-INC-(3+4-RM)-14034.67

5	0,8 mL	+ 0 mL	0,8 mL(14)	
Rincage (poids)	g	g	14,9 mL(15)	
Total (14 + 15) **(Contenant 5 A)**			15,7 mL(16)	11 JUIL14-A3-PAM-INC-(5)-14034.68

6	~~11,2~~ mL	+ 100 mL	100,2 mL(17)	
7	-1,4 mL	+ 100 mL	98,6 mL(18)	
Rincage ($KMnO_4$)	g	g	21,3 mL(19)	g $KMnO_4$/ 1.124 g/mL = mL $KMnO_4$
Rincage (H_2O)	g	g	43,1 mL(20)	
Total (17 + 18 + 19+ 20) **(Contenant 5 B)**			263,2 mL(21)	11 JUIL14-A3-PAM-INC-(6+7)-14034.69

A1

A1-11

Exova Canada Inc.
1390 Rue Hocquart
St-Bruno-de-Montarville
Québec Canada J3V 6E1

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SAMPLING DATA SHEET - MANUAL SAMPLING

Company : Agnico eagle	Control : #3810 γ = .9622 Ko = .9304	Duct: Dia (") : 38 Port (") : 10
City : Meadow Bank	Probe : #3E(am) Cv = .785	Diameter: Bef: 50 After: 20
Date : 12-7-14 / Project: R	Nozzle : # 1/2 Dn = .498 Box : #	Sheet : 1 of 3
Site : Incinerateur	Supposed moisture % = 5%	Leak before: 0,0050 "H2O @ -15 "Hg
Test : #2 Métaux	Pressure : Pbar ("Hg) = 29,80 Pstat ("H2O) = -0.6	Leak after: "H2O @ "Hg

Point	Time	TS (°F)	▲P (" H2O)	▲H (" H2O)	Volume (ft³)	Temperature Tmi (°F)	Tmo (°F)	Timp (°F)	Probe (°F)	Oven (°F)	Vacuum (" Hg)	% ISO (%)	Gases O2 (%)	CO2 (%)	CO (ppmv / %)	NOx ppmv
1	11:22	856	.100	1.27	13.18	69	70		250	250	-5.0	103.4				
		856	.100	1.27		69	70									
2	11:27	944	.095	1.13	17.50	75	70				-5.0	100.1	15.4	3.8	3	
		944	.095	1.13		75	70									
3	11:32	954	.095	1.13	21.51	77	70				-5.0	100.8				
		954	.095	1.13		77	70									
4	11:37	948	.095	1.14	25.54	81	72				-5.0	96.0	15.3	3.9	1	
		948	.095	1.14		81	72									
5	11:42	943	.090	1.09	29.41	83	73				-5.0	98.7				
		943	.090	1.09		83	73									
6	11:47	938	.090	1.10	33.30	86	76				-5.0	100.3				
		938	.090	1.10		86	76									
7	11:52	936	.090	1.10	37.28	87	77				-5.0	100.0				
		936	.090	1.10		87	77									
8	11:57	889	.095	1.21	41.26	89	80				-6.0	100.6 98.4	15.5	3.6	2	
		889	.095	1.21		89	80									
9	12:02	890	.095	1.21	45.37	89	81				-6.0	99.0				
		890	.095	1.21		89	81									
10	12:07	900	.095	1.20	49.51	91	83				-6.0	100.2				
		900	.095	1.20		91	83									
11	12:12	916	.095	1.19	53.70	92	84				-6.0	99.0	16.0	3.7	4	
		916	.095	1.19		92	84									
12	12:17	890	.085	57.82 1.14	57.82	94	86		↓	↓	-6.0	101.5				
		890	.085	1.09		94	86									
						Constant =>	K = 31,50					A% = 109,36				

Sampler: S. Lapointe

Sampler assistant: S. Demers

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Dernière modification: 16-10-09

Exova Canada Inc.
1390 Rue Hocquart
St-Bruno-de-Montarville
Québec Canada J3V 6E1

Exova

SAMPLING DATA SHEET - MANUAL SAMPLING

Company : Agnico eagle	Control : #3610 γ = .9622 Ko = .9504	Duct: Dia (") : 38	Port (") 10
City : Meadow Bank	Probe : #2E(new) Cv = .765	Diameter: Bef: 50	After: 38
Date : 12-7-14 / Project: R	Nozzle : # 1/2 Dn = .498 Box : #	Sheet : 2	of 3
Site : Incinerateur	Supposed moisture % = 5%	Leak before: 0.0050 "H2O @ -15 "Hg	
Test : #2 Métaux	Pressure : Pbar ("Hg) = 29.80 Pstat ("H2O) = -0.6	Leak after: 0.0000 "H2O @ -6.0 "Hg	

Point	Time	TS (°F)	▲P (" H2O)	▲H (" H2O)	Volume (ft³)	Temperature Tmi (°F)	Tmo (°F)	Timp (°F)	Probe (°F)	Oven (°F)	Vacuum (" Hg)	% ISO (%)	Gases O2 (%)	CO2 (%)	CO (ppmv / %)	NOx ppmv
13	12:22	894	.080	1.02	61.87	94	86		250	250	-6.0	98.3				
		894	.080	1.02		94	86		↓	↓						
14	12:27	892	.075	.96	65.67	94	88				-6.0	100.7				
		892	.075	.96		94	88									
15	12:32	885	.075	.97	69.45	94	88				-6.0	97.5				
		885	.075	.97		94	88									
16	12:37	885	.075	.97	73.12	94	88				-6.0	99.1				
		885	.075	.97		94	88									
17	12:42	872	.060	.79	76.35	96	91				-6.0	94.8				
		872	.060	.79		96	91									
18	12:47	867	.060	.79	80.07	96	91		↓	↓	-6.0	94.3				
tour	12:52	867	.060	.79	83.28	96	91									
1	14h30	971	.050	.60	83.42	88	88		250	250	-6.0	95.5	16.3	3.2	2	
		971	.050	.60		88	88		↓	↓						
2	14h35	968	.050	.61	86.25	91	87				-6.0	99.6				
		968	.050	.61		91	87									
3	14h40	972	.050	.61	89.21	95	89				-6.0	100.6				
		972	.050	.61		95	89									
4	14h45	961	.050	.61	92.21	94	89				-6.0	99.0				
		961	.050	.61		94	89									
5	14h50	953	.050	.62	95.17	98	92				-6.0	97.1				
		953	.050	.62		98	92									
6	14h55	972	.060	.73	98.10	99	92		↓	↓	-6.0	97.8				
		972	.060	.73		99	92									

Constant => K = 31.50 A% = 109.36

Sampler: S. Lapointe Sampler assistant: L. Domerq

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Dernière modification: 16-10-09

Exova Canada Inc.
1390 Rue Hocquart
St-Bruno-de-Montarville
Québec Canada J3V 6E1

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SAMPLING DATA SHEET - MANUAL SAMPLING

Company : Agnico eagle	Control : #SB10 γ = .9622 Ko = .9304	Duct: Dia ("): 38 Port (") 10
City : Mooseo Bank	Probe : #2E(6mm) Cv = .985	Diameter: Bef: 56 After: 24
Date : 12-7-16 / Project: R	Nozzle : # 1/2 Dn = .498 Box : #	Sheet : 3 of 3
Site : Incinérateur	Supposed moisture % = 5%	Leak before: "H2O @ "Hg
Test : #2 Matin	Pressure : Pbar ("Hg) = 29.80 Pstat ("H2O) = -0.10	Leak after: 0.0000 "H2O @ -15 "Hg

Point	Time	TS (°F)	▲P (" H2O)	▲H (" H2O)	Volume (ft³)	Temperature Tmi (°F)	Tmo (°F)	Timp (°F)	Probe (°F)	Oven (°F)	Vacuum (" Hg)	% ISO (%)	Gases O2 (%)	CO2 (%)	CO (ppmv / %)	NOx ppmv
7	15:00	921	.060	.76	102,32	100	95		250	250	-7.0	97.9	17.1	2.9	0	
		921	.060	.76		100	95									
8	15:05	907	.060	.77	104,61	100	95				-7.0	101.6				
		907	.060	.77		100	95									
9	15:10	909	.075	.96	108,04	100	96				-8.0	99.6				
		909	.075	.96		100	96									
10	15:15	918	.075	.96	111,80	101	96				-8.0	98.2				
		918	.075	.96		101	96									
11	15:20	952	.080	.99	115,50	99	95				-8.0	99.1	16.4	3.2	2	
		952	.080	.99		99	95									
12	15:25	941	.080	1.00	119,30	100	95				-8.0	100.5				
		941	.080	1.00		100	95									
13	15:30	948	.080	1.00	123,17	100	96				-9.0	98.5				
		948	.080	1.00		100	96									
14	15:35	950	.080	1.00	126,96	100	95				-9.0	101.3				
		950	.080	1.00		100	95									
15	15:40	948	.080	1.00	130,85	100	96				-9.0	100.4				
		948	.080	1.00		100	96									
16	15:45	967	.080	.98	134,71	100	95				-10.0	98.0				
		967	.080	.98		100	95									
17	15:50	980	.085	1.04	138,45	100	95				-10.0	99.3				
		980	.085	1.04		100	95									
18	15:55	987	.085	1.03	142,34	100	95		↓	↓	-10.0					
fin	16:00	987	.085	1.03	146,22	100	95									

Constant => K = 31,50 A% = 109,36

Sampler: [signature] Sampler assistant: S. Demers

Hi

WEIGHT SHEET

Company	Agnico-Eagle
Location	Baker Lake
Date	12 / 07 / 2014
Site	Outlet incinerator
Train #	13
Test #	2 PAM

DATA		
Pbar: 29.89 po.Hg		
G	O_2 %	16,06
	CO_2 %	3,47
A	CO ppm	2,0
Z	CO %	

	No.	Weight Final (g)	Weight Initial (g)	Weight Particulates
Filter	Q-431		0,46686	
Probe wash				
Cyclone				
			Weight (g)	

Impingers		Final weight	Initial weight	Water weight
1	H2O	567,5	509,7	57,8
2	H2O	557,7	518,6	39,1
3	HNO_3 5% /H_2O_2 10 %	610,9	595,3	15,6
4	HNO_3 5% /H_2O_2 10 %	569,4	565,1	4,3
5	Empty	471,9	470,3	1,6
6	$KMnO_4$ 4%/ H_2SO_4 10%	589,0	587,8	1,2
7	$KMnO_4$ 4%/ H_2SO_4 10%	630,8	631,9	-1,1
8	Silica gel	688,7	665,1	23,6
			Final weight	142,1

Preparation	Prepared by	Recovered by	Approved by
Date	S.L	S.L	
On site	12-7-14	12-07-14	
Laboratory			

#2

Gestion des volumes des Barboteurs

Barboteur #	Volume d'eau Condensé	Volume de solution Initiale	Total	Code
1	57.8 mL	+ 100 mL	157.8 mL(1)	
2	39.1 mL	+ 100 mL	139.1 mL(2)	
Rincage (poids)	g	g	24.1 mL(3)	1 g d'eau = 1 mL
Sous-total (1+2+3)			321 mL(4)	
Aliquot **(Contenant 3B)**			(-) 100 mL(5)	12 JUIL14-A2-PAM-INC-(1+2-A)-14034.54
Volume final (4-5)			221 mL(6)	
Divise par 20			divise par 20 (7)	
Volume d'acide HNO_3 conc. à ajouter			11.05 mL(8)	
Volume final (5+6+8) **(Contenant 3A)**			~~221~~ 332 mL(9)	12 JUIL14-A2-PAM-INC-(1+2-M1)-14034.55 JUIL14-A2-PAM-INC-(1+2-M2)-14034.56

3	15.6 mL	+ 100 mL	115.6 mL(10)	
4	4.3 mL	+ 100 mL	104.3 mL(11)	
Rincage (poids)	g	g	31.3 mL(12)	
Total (10 + 11 + 12) **(Contenant 4)**			251.2 mL(13)	12 JUIL14-A2-PAM-INC-(3+4-RM)-14034.57

5	1.6 mL	+ 0 mL	1.6 mL(14)	
Rincage (poids)	g	g	18.9 mL(15)	
Total (14 + 15) **(Contenant 5 A)**			20.5 mL(16)	12 JUIL14-A2-PAM-INC-(5)-14034.58

6	1.2 mL	+ 100 mL	101.2 mL(17)	
7	-1.1 mL	+ 100 mL	98.9 mL(18)	
Rincage ($KMnO_4$)	g	g	33.6 mL(19)	g $KMnO_4$/ 1.124 g/mL = mL $KMnO_4$
Rincage (H_2O)	g	g	47.3 mL(20)	
Total (17 + 18 + 19+ 20) **(Contenant 5 B)**			281 mL(21)	12 JUIL14-A2-PAM-INC-(6+7)-14034.59

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SAMPLING DATA SHEET - MANUAL SAMPLING

Company : Agnico Eagle	Control : #SB10 γ = .9622 Ko = .9304	Duct: Dia ("): 38 Port (") 10
City : Meadow Bank	Probe : #3E/Equ Cv = .785	Diameter: Bef: 50 After: 20
Date : 13-07-14 / Project: R	Nozzle : # 1/2 Dn = .498 Box : #	Sheet : 1 of 3
Site : Incinérateur	Supposed moisture % = 5%	Leak before: 0.0000 "H2O @ -15 "Hg
Test : #3 Métaux	Pressure : Pbar ("Hg) = 29.80 Pstat ("H2O) = -.10	Leak after: "H2O @ "Hg

Point	Time	TS (°F)	▲P (" H2O)	▲H (" H2O)	Volume (ft³)	Temperature Tmi (°F)	Tmo (°F)	Timp (°F)	Probe (°F)	Oven (°F)	Vacuum (" Hg)	% ISO (%)	Gases O2 (%)	CO2 (%)	CO (ppmv / %)	NOx ppmv
1	9:48	868	.070	.89	46.36	75	75		250	250	-4.0	100.8				
		868	.070	.89		75	75									
2	9:53	840	.070	.91	49.94	77	75				-4.0	101.2				
		840	.070	.91		77	75									
3	9:58	831	.070	.92	53.58	79	76				-4.0	100.3				
		831	.070	.92		79	76									
4	10:03	849	.070	.91	57.21	83	77				-4.0	100.0				
		849	.070	.91		83	77									
5	10:08	855	.070	.91	60.82	86	78				-4.0	99.6				
		855	.070	.91		86	78									
6	10:13	914	.065	.81	64.42	87	80				-4.0	101.8				
		914	.065	.81		87	80									
7	10:18	925	.065	.81	67.90	89	82				-4.0	101.3				
		925	.065	.81		89	82									
8	10:23	931	.065	.81	71.36	90	83				-4.0	100.5				
		931	.065	.81		90	82									
9	10:28	933	.065	.81	74.79	94	86				-4.0	98.2				
		933	.065	.81		94	85									
10	10:33	935	.065	.81	78.16	93	86				-5.0	100.3				
		935	.065	.81		93	86									
11	10:38	945	.070	.86	81.60	93	87				-5.0	101.7				
		945	.070	.86		93	87									
12	10:43	967	.070	.85	85.21	94	88				-5.0	99.2				
		967	.070	.85		94	88									

Constant => K = 31.50 A% = 109.36

Sampler: S. Lapointe Sampler assistant: S. Demers

Exova Canada Inc.
1390 Rue Hocquart
St-Bruno-de-Montarville
Québec Canada J3V 6E1

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SAMPLING DATA SHEET - MANUAL SAMPLING

Company : Agnico eagle	Control : # 5810 γ = .9622 Ko = .9304	Duct: Dia (") : 38	Port (") 10
City : Meadow Eagle	Probe : # 2e(new) Cv = .765	Diameter: Bef: 50	After: 26
Date : 13-07-14 / Project: R	Nozzle : # 1/2 Dn = .498 Box : #	Sheet : 2	of 3
Site : Incinerateur	Supposed moisture % = 5%.	Leak before: 0,0000 "H2O @ -15	"Hg
Test : #3 Métaux	Pressure : Pbar ("Hg) = 29.80 Pstat ("H2O) = -.10	Leak after: "H2O @	"Hg

Point	Time	TS (°F)	▲P (" H2O)	▲H (" H2O)	Volume (ft³)	Temperature Tmi (°F)	Tmo (°F)	Timp (°F)	Probe (°F)	Oven (°F)	Vacuum (" Hg)	% ISO (%)	Gases O2 (%)	CO2 (%)	CO (ppmv / %)	NOx ppmv
13	10:48	954	,080	,98	88,71	93	88		250	250	-5.0	100,4	16,0	3,4	3	
		954	,080	,98		93	88		″	″						
14	10:53	962	,080	,98	92,51	93	89				-5.0	100,6				
		962	,080	,98		93	89									
15	10:58	974	,080	,97	96,31	97	90				-6.0	102,9				
		974	,080	,97		97	90									
16	11:03	964	,080	,98	100,20	94	90				-6.0	103,6				
		964	,080	,98		94	90									
17	11:08	971	,085	1,04	104,12	96	91				-6.0	99,5	16,0	3,3	0	
		971	,085	1,04		96	91									
18	11:13	954	,085	1,05	108,00	97	91		″	″	-6.0	99,0				
four	11:18	954	,085	1,05	111,89	97	91									~
1	12:48	791	,050	,69	112,05	85	86		250	250	-6.0	100,8				
		791	,050	,69		85	86									
2	12:53	791	,050	,68	115,83	84	84				-6.0	100,8				
		791	,050	,68		84	84									
3	12.58	792	,050	,69	118,40	86	85				-6.0	99,6	16,4	3,0	3	
		792	,050	,69		86	85									
4	13:03	813	,060	,81	121,54	87	85				-6.0	99,8				
		813	,060	,81		87	85									
5	13:08	922	,075	,94	124,96	89	86				-6.0	97,6	16,5	3,2	0	
		922	,075	,94		89	86									
6	13:13	924	,075	,93	128,58	89	86				-6.0					
		924	,075	,93		89	86		″	″						

Constant => K = 31,50 A% = 109,36

Sampler: S. Lapointe Sampler assistant: S. Damour

Exova Canada Inc.
1390 Rue Hocquart
St-Bruno-de-Montarville
Québec Canada J3V 6E1

Exova

SAMPLING DATA SHEET - MANUAL SAMPLING

Company : Agnico eagle	Control : #3810 γ = .9622	Ko = .9304	Duct: Dia ("): 38 Port (") 10
City : Meadow Bank	Probe : #2E(m) Cv = .785		Diameter: Bef: 50 After: 20
Date : 13-07-14 / Project: R	Nozzle : # 1/2 Dn = .498	Box : #	Sheet : 3 of 3
Site : Incineration	Supposed moisture % = 5%		Leak before: "H2O @ "Hg
Test : # 3 Metaux	Pressure : Pbar ("Hg) = 29.80	Pstat ("H2O) = -.10	Leak after: "H2O @ "Hg

Point	Time	TS (°F)	▲P (" H2O)	▲H (" H2O)	Volume (ft³)	Temperature Tmi (°F)	Tmo (°F)	Timp (°F)	Probe (°F)	Oven (°F)	Vacuum (" Hg)	% ISO (%)	Gases O2 (%)	CO2 (%)	CO (ppmv / %)	NOx ppmv
7	13:18	930	.080	.99	132.23	89	88		250	250	-8.0	99.1				
		930	.080	.99		89	88									
8	13:23	914	.080	1.01	136.00	91	88				-8.0	102.0				
		914	.080	1.01		91	88									
9	13:28	929	.080	1.00	139.91	92	89				-8.0	102.4	16.0	3.6	4	
		929	.080	1.00		92	89									
10	13:33	926	.085	1.06	143.82	92	90				-8.0	99.9				
		926	.085	1.06		92	90									
11	13:38	978	.090	1.09	147.76	92	91				-8.0	101.3	16.2	3.5	6	
		978	.090	1.09		92	91									
12	13:43	977	.090	1.09	151.80	93	91				-8.0	99.6				
		977	.090	1.09		93	91									
13	13:48	982	.090	1.09	155.78	94	92				-8.0	99.1				
		982	.090	1.09		94	92									
14	13:53	985	.095	1.14	159.74	92	91				-8.0	101.3				
		985	.095	1.14		92	91									
15	13:58	979	.095	1.15	163.88	93	92				-8.0	98.4				
		979	.095	1.15		93	92									
16	14:03	983	.100	1.21	167.92	93	92				-8.0	100.3	16.1	3.5	2	
		983	.100	1.21		93	92									
17	14:08	981	.100	1.21	172.14	94	93				-8.0	100.6				
		981	.100	1.21		94	93									
18	14:13	977	.100	1.21	176.38	94	93				-8.0	99.3				
	14:18	977	.100	1.21	~~176.38~~	94	93									
					180.57	Constant =>		K = 3150				A% = 109.36				

Sampler: S. Lapointe

Sampler assistant: S. Demers

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Dernière modification: 16-10-09

WEIGHT SHEET

Company	Agnico-Eagle
Location	Baker Lake
Date	13 / 07 / 2014
Site	Outlet incinerator
Train #	
Test #	3 PAM

DATA		
Pbar: 30,21 po.Hg		
G	O_2	% 16,17
	CO_2	% 3,36
A	CO	ppm 2,6
Z	CO	%

	No.	Weight Final (g)	Weight Initial (g)	Weight Particulates
Filter	Q-430		1,51478	
Probe wash				
Cyclone				
			Weight (g)	

Impingers		Final weight	Initial weight	Water weight
1	H2O	552,6	503,4	49,2
2	H2O	560,6	520,4	40,2
3	HNO_3 5% /H_2O_2 10 %	614,6	594,8	19,8
4	HNO_3 5% /H_2O_2 10 %	572,2	565,3	6,9
5	Empty	471,6	468,6	3,0
6	$KMnO_4$ 4%/ H_2SO_4 10%	586,5	584,9	1,9
7	$KMnO_4$ 4%/ H_2SO_4 10%	636,1	638,9	-2,8
8	Silica gel	689,6	664,1	25,5
			Final weight	1437

Preparation	Prepared by	Recovered by	Approved by
Date	13-07-14	13-07-14	
On site	SL	SL	
Laboratory			

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Gestion des volumes des Barboteurs

Barboteur #	Volume d'eau Condensé	Volume de solution Initiale	Total	Code
1	49.2 mL	+ 100 mL	149.2 mL(1)	
2	40.2 mL	+ 100 mL	140.2 mL(2)	
Rinçage (poids)	g	g	36.9 mL(3)	1 g d'eau = 1 mL
Sous total (1+2+3)			326.3 mL(4)	
Aliquot **(Contenant 3B)**			(-) 100 mL(5)	13 JUIL14-A3-PAM-INC-(1+2-A)-14034.44
Volume final (4-5)			225.4 mL(6)	
Divise par 20			divise par 20 (7)	
Volume d'acide HNO_3 conc. à ajouter			11 mL(8)	
Volume final (5+6+8) **(Contenant 3A)**			236.4 mL(9)	13 JUIL14-A3-PAM-INC-(1+2-M1)-14034.45 JUIL14-A3-PAM-INC-(1+2-M2)-14034.46

3	19.8 mL	+ 100 mL	119.8 mL (10)	
4	6.9 mL	+ 100 mL	106.9 mL(11)	
Rinçage (poids)	g	g	33.6 mL(12)	
Total (10 + 11 + 12) **(Contenant 4)**			260.3 mL(13)	13 JUIL14-A3-PAM-INC-(3+4-RM)-14034.47

5	3 mL	+ 0 mL	103.0 mL(14)	
Rinçage (poids)	g	g	9.4 mL(15)	
Total (14 + 15) **(Contenant 5 A)**			112.4 mL(16)	13 JUIL14-A3-PAM-INC-(5)-14034.48

6	1.9 mL	+ 100 mL	101.9 mL(17)	
7	-2.8 mL	+ 100 mL	97.2 mL(18)	
Rinçage ($KMnO_4$)	g	g	39.1 mL(19)	g $KMnO_4$/ 1.124 g/mL = mL $KMnO_4$
Rinçage (H_2O)	g	g	66.5 mL(20)	
Total (17 + 18 + 19+ 20) **(Contenant 5 B)**			304.7 mL(21)	13 JUIL14-A3-PAM-INC-(6+7)-14034.49

A3

CALIBRATION OF SAMPLING MODULE

Module Identification:	SB_10
Inventory number:	
Atmospheric pressure ("Hg) :	29.90

Responsable calibration :	Sylvain Lapointe
Responsable data entry:	Simon Demers
Calibration date:	15-Jan-14
Next calibration date:	15-Jan-15

del.H in.H2O	Vw ft³	Vd ft³	Tw deg.F	Tdo deg.F	Td deg.F	time min.	del.m in.H2O	factor count.
1.0	5.00	5.34	71.60	89.00	89.75	6.98	-0.30	0.9992
1.0	5.00	5.35	71.60	89.00	89.80	6.96	-0.30	1.0006
1.5	5.00	5.33	71.60	89.50	89.75	5.63	-0.42	1.0006
1.5	5.00	5.34	71.60	89.50	89.80	5.63	-0.42	1.0006
2.0	5.00	5.34	71.60	88.00	88.80	4.90	-0.51	1.0006
2.0	5.00	5.34	71.60	89.00	89.25	4.90	-0.51	1.0006
2.5	9.00	9.57	71.60	87.50	87.75	7.90	-0.52	1.0006
2.5	10.00	10.65	71.60	87.00	88.75	8.78	-0.52	1.0006
3.0	10.00	10.71	71.60	87.00	89.75	8.06	-0.62	1.0006
3.0	13.00	13.95	71.60	88.00	90.75	10.48	-0.62	1.0006

del.H in.H2O	Vwc ft³	K	del.H@ in.H2O	Qm cfm	Ko	gamma	Acceptability criteria 1.50%	yes/no
1.0	5.00	0.7954	1.05	0.7368	0.9263	0.9639	0.17	yes
1.0	5.00	0.7954	1.04	0.7400	0.9303	0.9641	0.19	yes
1.5	5.00	0.9740	1.02	0.9142	0.9386	0.9661	0.41	yes
1.5	5.00	0.9740	1.02	0.9142	0.9386	0.9644	0.23	yes
2.0	5.00	1.1225	1.04	1.0461	0.9319	0.9613	0.10	yes
2.0	5.00	1.1235	1.03	1.0480	0.9328	0.9621	0.02	yes
2.5	9.01	1.2536	1.04	1.1654	0.9296	0.9624	0.02	yes
2.5	10.01	1.2531	1.04	1.1640	0.9289	0.9627	0.05	yes
3.0	10.01	1.3718	1.05	1.2661	0.9229	0.9576	0.48	yes
3.0	13.01	1.3731	1.05	1.2682	0.9236	0.9576	0.48	yes
AVERAGE			1.04	1.0263	0.9304	0.9622		

Reference method 1/RM/8

A1-22

Probe Identification:	2E EAU QUARTZ	**Calibration date**	6-mars-14
Inventory number	0	**Calibration technician responsable**	S.Saake
		Data prossessing technician responsable	S.Saake
Barometric pressure:	29.76 "Hg		
Ambiant temperature:	73.0 oF	**Ms :** 28.73	

NOZZLES	SCALE	PITOT REFERENCE del p	PITOT "S" TYPE del p	Vs ft/s	Cv
WITHOUT NOZZLE	1	0.725	1.030	57.489	0.839
	2	0.523	0.757	48.795	0.831
	3	0.360	0.524	40.510	0.829
	4	0.230	0.338	32.343	0.824
	5	0.128	0.195	24.121	0.809
	6	0.059	0.089	16.326	0.811
Dia. 1/8 No. 3	1	0.715	1.045	57.087	0.827
	2	0.520	0.763	48.651	0.825
	3	0.356	0.530	40.290	0.820
	4	0.228	0.343	32.195	0.815
	5	0.126	0.197	23.950	0.800
	6	0.058	0.091	16.214	0.798
Dia. 3/16 No. 3	1	0.717	1.045	57.151	0.828
	2	0.518	0.758	48.561	0.826
	3	0.357	0.527	40.319	0.823
	4	0.226	0.342	32.081	0.813
	5	0.124	0.196	23.788	0.796
	6	0.059	0.090	16.340	0.809
Dia. 1/4 No. 3	1	0.714	1.054	57.043	0.823
	2	0.520	0.770	48.651	0.822
	3	0.355	0.532	40.240	0.817
	4	0.227	0.339	32.131	0.817
	5	0.127	0.195	24.026	0.806
	6	0.057	0.089	16.129	0.802
Dia. 5/16 No. 3	1	0.718	1.049	57.187	0.827
	2	0.518	0.771	48.566	0.819
	3	0.353	0.529	40.086	0.817
	4	0.228	0.342	32.216	0.816
	5	0.127	0.197	24.064	0.804
	6	0.057	0.089	16.172	0.804
Dia. 3/8 No. 3	1	0.716	1.084	57.115	0.813
	2	0.516	0.783	48.477	0.811
	3	0.356	0.541	40.296	0.812
	4	0.226	0.348	32.081	0.806
	5	0.125	0.198	23.874	0.796
	6	0.058	0.090	16.200	0.800
Dia. 7/16 No. 3	1	0.721	1.086	57.306	0.815
	2	0.517	0.783	48.543	0.813
	3	0.356	0.540	40.245	0.811
	4	0.227	0.349	32.138	0.806
	5	0.126	0.199	23.960	0.797
	6	0.057	0.090	16.129	0.796
Dia. 1/2 No. 3	1	0.716	1.101	57.103	0.806
	2	0.517	0.794	48.519	0.807
	3	0.356	0.555	40.268	0.801
	4	0.226	0.356	32.110	0.798
	5	0.126	0.201	23.960	0.791
	6	0.056	0.091	16.002	0.785

NOTICE: Shows the average ot three reading taken during calibration.

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BAKER LAKE, NUNAVUT
OUTLET OF INCINERATOR
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Test	Date	Time	Filter	Probe	Cyclone	Vmeter	Dstack	Period
---	----	-------	mg	mg	mg	ft^3	inches	minutes
1	July 11, 2014	12:59 - 16:35				125.30	38.00	5

O2 (% v/v) Dry basis	CO2 (% v/v) Dry basis	CO (ppmv) Dry basis	Vol. water mL	Pbar "Hg	Dnozzle inch	Cpitot ----	γ ----	Pstatic "H2O
17.39	2.49	6.4	85.2	29.74	0.498	0.785	0.9751	-0.10

SO2	H2
0	0

Traverse #1

Point	Tstack °F	ΔP "H2O	ΔH "H2O	Volume ft^3	Tinlet °F	Toutlet °F	Isokinetic %	Velocity ft/s
1	782	0.065	1.44	79.44	64	64	95.1	20.6
	782	0.065	1.44	82.76	64	64		
2	784	0.070	1.55	82.76	65	65	91.6	21.4
	784	0.070	1.55	86.08	65	65		
3	788	0.070	1.55	86.08	68	65	97.2	21.5
	788	0.070	1.55	89.61	68	65		
4	783	0.070	1.56	89.61	69	66	99.9	21.4
	783	0.070	1.56	93.25	69	66		
5	797	0.070	1.55	93.25	73	67	99.7	21.5
	797	0.070	1.55	96.88	73	67		
6	801	0.080	1.77	96.88	78	68	92.4	23.1
	801	0.080	1.77	100.49	78	68		
7	816	0.075	1.65	100.49	80	70	96.1	22.5
	816	0.075	1.65	104.12	80	70		
8	765	0.065	1.50	104.12	83	71	99.1	20.5
	765	0.065	1.50	107.69	83	71		
9	761	0.070	1.62	107.69	82	73	95.6	21.2
	761	0.070	1.62	111.27	82	73		
10	775	0.070	1.60	111.27	82	74	95.7	21.3
	775	0.070	1.60	114.84	82	74		
11	756	0.065	1.52	114.84	86	77	96.8	20.4
	756	0.065	1.52	118.37	86	77		
12	757	0.070	1.63	118.37	86	76	92.9	21.2
	757	0.070	1.63	121.88	86	76		
13	757	0.070	1.63	121.88	81	78	93.5	21.2
	757	0.070	1.63	125.40	81	78		
14	733	0.070	1.66	125.40	83	77	91.7	21.0
	733	0.070	1.66	128.89	83	77		
15	738	0.070	1.65	128.89	80	78	94.4	21.0
	738	0.070	1.65	132.47	80	78		
16	747	0.070	1.64	132.47	79	78	93.8	21.1
	747	0.070	1.64	136.01	79	78		
17	740	0.060	1.41	136.01	79	78	93.5	19.5
	740	0.060	1.41	139.29	79	78		
18	725	0.060	1.43	139.29	78	78	94.2	19.4
	725	0.060	1.43	142.61	78	78		
Average	767	0.069	1.576	63.17	78	72	95.2	21.1

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AGNICO-EAGLE MINES LTD, MEADOWBANK DIVISION
BAKER LAKE, NUNAVUT
OUTLET OF INCINERATOR
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Test #1, Traverse #2								
Point	Tstack °F	ΔP "H2O	ΔH "H2O	Volume ft³	Tinlet °F	Toutlet °F	Isokinetic %	Velocity ft/s
1	815	0.100	2.19	142.72	71	71	92.8	25.9
	815	0.100	2.19	146.73	71	71		
2	813	0.100	2.19	146.73	72	72	92.3	25.9
	813	0.100	2.19	150.73	72	72		
3	813	0.100	2.19	150.73	72	71	93.8	25.9
	813	0.100	2.19	154.79	72	71		
4	823	0.100	2.18	154.79	76	72	93.4	26.0
	823	0.100	2.18	158.84	76	72		
5	815	0.100	2.22	158.84	84	73	92.6	25.9
	815	0.100	2.22	162.90	84	73		
6	792	0.085	1.92	162.90	83	76	93.4	23.7
	792	0.085	1.92	166.72	83	76		
7	797	0.080	1.80	166.72	83	77	94.6	23.0
	797	0.080	1.80	170.47	83	77		
8	786	0.080	1.82	170.47	83	76	95.0	22.9
	786	0.080	1.82	174.25	83	76		
9	755	0.075	1.76	174.25	85	79	94.2	21.9
	755	0.075	1.76	177.94	85	79		
10	753	0.070	1.64	177.94	85	80	94.4	21.2
	753	0.070	1.64	181.52	85	80		
11	740	0.060	1.42	181.52	85	81	94.7	19.5
	740	0.060	1.42	184.87	85	81		
12	741	0.060	1.42	184.87	85	81	93.9	19.5
	741	0.060	1.42	188.19	85	81		
13	737	0.050	1.19	188.19	85	82	93.6	17.8
	737	0.050	1.19	191.22	85	82		
14	742	0.050	1.19	191.22	86	82	93.4	17.8
	742	0.050	1.19	194.24	86	82		
15	731	0.050	1.20	194.24	87	85	93.3	17.7
	731	0.050	1.20	197.28	87	85		
16	604	0.040	1.08	197.28	88	84	94.9	15.0
	604	0.040	1.08	200.21	88	84		
17	607	0.030	0.80	200.21	88	83	95.2	13.0
	607	0.030	0.80	202.75	88	83		
18	604	0.020	0.54	202.75	87	84	96.2	10.6
	604	0.020	0.54	204.85	87	84		

Average	748	0.069	1.597	62.13	83	78	94.0	20.7

Ave. test	758	0.069	1.586	125.30	80	75	94.6	20.9

Velocity		Volumetric flow rates				Temperature		Moisture
ft/s	m/s	ACFM	SDCFM	m³/h	Rm³/h	°F	°C	% v/v
20.9	6.4	9884	4191	16795	7122	758	403	3.2

Total part.	Gas sample volume		Verification of Isokinetic					
mg	SDCF	Rm³	Nb readings	Nb non Iso	Nb < 90%	Nb > 110%	Iso max.	Iso min.
0	121.80	3.449	36	0	0	0	99.9	91.6

Pstack "Hg	Pmeter "Hg	Md g/g-mole	Ms g/g-mole	Bwo ------	Ratio Vs max / Vs min ------	Vs max. ft/s	Vs min. ft/s
29.73	29.86	29.09	28.73	0.032	2.5	26.0	10.6

Particulate concentrations				Emission mass flow rate	
gr/ACF	gr/SDCF	mg/m³	mg/Rm³	lb/h	kg/h
0.000	0.000	0	0	0.0	0.0

"R" or "Reference Conditions" at 25°C, 101.3 kPa, dry basis.

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AGNICO-EAGLE MINES LTD, MEADOWBANK DIVISION
BAKER LAKE, NUNAVUT
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Test	Date	Time	Filter	Probe	Cyclone	Vmeter	Dstack	Period
---	----	-------	mg	mg	mg	ft³	inches	minutes
2	July 12, 2014	11:22 - 16:00				123.01	38.00	5

O2 (% v/v) Dry basis	CO2 (% v/v) Dry basis	CO (ppmv) Dry basis	Vol. water mL	Pbar "Hg	Dnozzle inch	Cpitot ----	γ ----	Pstatic "H2O
16.06	3.47	2.0	125.9	29.89	0.498	0.785	0.9751	-0.10

SO2	H2
0	0

Traverse #1								
Point	Tstack °F	ΔP "H2O	ΔH "H2O	Volume ft³	Tinlet °F	Toutlet °F	Isokinetic %	Velocity ft/s
1	836	0.090	1.91	4.96	64	64	93.3	24.8
	836	0.090	1.91	8.64	64	64		
2	830	0.050	1.05	8.64	66	66	103.5	18.4
	830	0.050	1.05	11.71	66	66		
3	850	0.050	1.06	11.71	68	65	101.2	18.6
	850	0.050	1.06	14.69	68	65		
4	879	0.050	1.04	14.69	74	65	101.4	18.8
	879	0.050	1.04	17.66	74	65		
5	885	0.060	1.27	17.66	81	69	97.1	20.6
	885	0.060	1.27	20.80	81	69		
6	884	0.060	1.26	20.80	83	71	98.5	20.6
	884	0.060	1.26	24.00	83	71		
7	883	0.060	1.27	24.00	86	73	98.1	20.6
	883	0.060	1.27	27.20	86	73		
8	919	0.070	1.45	27.20	89	76	97.0	22.5
	919	0.070	1.45	30.59	89	76		
9	921	0.070	1.45	30.59	90	79	95.8	22.5
	921	0.070	1.45	33.95	90	79		
10	924	0.070	1.45	33.95	90	79	97.6	22.6
	924	0.070	1.45	37.37	90	79		
11	940	0.070	1.43	37.37	91	80	96.9	22.7
	940	0.070	1.43	40.75	91	80		
12	956	0.080	1.62	40.75	93	82	97.6	24.4
	956	0.080	1.62	44.38	93	82		
13	958	0.080	1.62	44.38	94	83	97.4	24.4
	958	0.080	1.62	48.01	94	83		
14	963	0.080	1.62	48.01	93	85	97.3	24.5
	963	0.080	1.62	51.63	93	85		
15	957	0.080	1.63	51.63	93	85	95.4	24.4
	957	0.080	1.63	55.19	93	85		
16	935	0.080	1.65	55.19	93	86	94.4	24.2
	935	0.080	1.65	58.74	93	86		
17	938	0.080	1.65	58.74	94	87	96.4	24.3
	938	0.080	1.65	62.37	94	87		
18	937	0.075	1.55	62.37	93	87	95.2	23.5
	937	0.075	1.55	65.84	93	87		

Average	911	0.070	1.443	60.88	85	77	97.4	22.4

AGNICO-EAGLE MINES LTD, MEADOWBANK DIVISION
BAKER LAKE, NUNAVUT
OUTLET OF INCINERATOR
SVOC

Test #2, Traverse #2								
Point	Tstack °F	ΔP "H2O	ΔH "H2O	Volume ft³	Tinlet °F	Toutlet °F	Isokinetic %	Velocity ft/s
1	1030	0.080	1.53	66.05	82	82	96.6	25.0
	1030	0.080	1.53	69.52	82	82		
2	1035	0.100	1.90	69.52	83	82	97.0	28.0
	1035	0.100	1.90	73.41	83	82		
3	1033	0.095	1.82	73.41	89	84	95.7	27.3
	1033	0.095	1.82	77.18	89	84		
4	1034	0.090	1.74	77.18	93	86	95.5	26.6
	1034	0.090	1.74	80.86	93	86		
5	1040	0.090	1.73	80.86	96	86	95.6	26.6
	1040	0.090	1.73	84.55	96	86		
6	999	0.090	1.79	84.55	98	89	95.2	26.3
	999	0.090	1.79	88.29	98	89		
7	975	0.095	1.92	88.29	99	89	95.5	26.8
	975	0.095	1.92	92.18	99	89		
8	975	0.095	1.92	92.18	99	89	95.3	26.8
	975	0.095	1.92	96.06	99	89		
9	974	0.095	1.92	96.06	98	88	95.4	26.8
	974	0.095	1.92	99.94	98	88		
10	973	0.090	1.82	99.94	98	88	95.4	26.0
	973	0.090	1.82	103.72	98	88		
11	926	0.070	1.46	103.72	98	87	94.6	22.6
	926	0.070	1.46	107.08	98	87		
12	923	0.070	1.47	107.08	98	88	95.5	22.6
	923	0.070	1.47	110.48	98	88		
13	928	0.070	1.46	110.48	99	88	94.8	22.6
	928	0.070	1.46	113.85	99	88		
14	926	0.060	1.26	113.85	99	88	95.6	20.9
	926	0.060	1.26	117.00	99	88		
15	922	0.060	1.26	117.00	98	88	92.8	20.9
	922	0.060	1.26	120.06	98	88		
16	946	0.050	1.03	120.06	98	88	92.8	19.2
	946	0.050	1.03	122.83	98	88		
17	750	0.045	1.08	122.83	98	89	94.9	16.9
	750	0.045	1.08	125.73	98	89		
18	675	0.030	0.77	125.73	98	89	95.0	13.4
	675	0.030	0.77	128.18	98	89		
Average	948	0.076	1.549	62.13	96	87	95.2	23.6
Ave. test	929	0.073	1.496	123.01	90	82	96.3	23.0

Velocity		Volumetric flow rates				Temperature		Moisture
ft/s	m/s	ACFM	SDCFM	m³/h	Rm³/h	°F	°C	% v/v
23.0	7.0	10865	3990	18462	6780	929	499	4.9

Total part.	Gas sample volume		Verification of Isokinetic					
mg	SDCF	Rm³	Nb readings	Nb non Iso	Nb < 90%	Nb > 110%	Iso max.	Iso min.
0.00	118.27	3.349	36	0	0	0	103.5	92.8

Pstack "Hg	Pmeter "Hg	Md g/g-mole	Ms g/g-mole	Bwo ------	Ratio Vs max / Vs min ------	Vs max. ft/s	Vs min. ft/s
29.88	30.00	29.20	28.65	0.049	2.1	28.0	13.4

Particulate concentrations				Emission mass flow rate	
gr/ACF	gr/SDCF	mg/m³	mg/Rm³	lb/h	kg/h
0.000	0.000	0	0	0.0	0.0

"R" or "Reference Conditions" at 25°C, 101.3 kPa, dry basis.

A1-27

AGNICO-EAGLE MINES LTD, MEADOWBANK DIVISION
BAKER LAKE, NUNAVUT
OUTLET OF INCINERATOR
SVOC

Test	Date	Time	Filter	Probe	Cyclone	Vmeter	Dstack	Period
---	----	--------	mg	mg	mg	ft^3	inches	minutes
3	July 13, 2014	09:48 - 14:18				118.75	38.00	5

O2 (% v/v) Dry basis	CO2 (% v/v) Dry basis	CO (ppmv) Dry basis	Vol. water mL	Pbar "Hg	Dnozzle inch	Cpitot ----	γ ----	Pstatic "H2O
16.17	3.36	2.6	110.4	30.21	0.498	0.785	0.9751	-0.10

SO2	H2
0	0

Traverse #1

Point	Tstack °F	ΔP "H2O	ΔH "H2O	Volume ft^3	Tinlet °F	Toutlet °F	Isokinetic %	Velocity ft/s
1	945	0.080	1.58	48.75	67	68	97.0	24.2
	945	0.080	1.58	52.24	67	68		
2	945	0.085	1.68	52.24	73	67	96.1	24.9
	945	0.085	1.68	55.82	73	67		
3	926	0.075	1.50	55.82	72	67	95.7	23.2
	926	0.075	1.50	59.19	72	67		
4	945	0.075	1.49	59.19	77	69	98.3	23.4
	945	0.075	1.49	62.65	77	69		
5	951	0.090	1.79	62.65	80	69	94.4	25.7
	951	0.090	1.79	66.29	80	69		
6	914	0.070	1.44	66.29	84	72	96.2	22.4
	914	0.070	1.44	69.63	84	72		
7	914	0.065	1.34	69.63	85	72	96.5	21.5
	914	0.065	1.34	72.86	85	72		
8	925	0.065	1.33	72.86	89	75	95.3	21.6
	925	0.065	1.33	76.06	89	75		
9	927	0.065	1.33	76.06	89	75	94.8	21.6
	927	0.065	1.33	79.24	89	75		
10	923	0.070	1.44	79.24	91	77	98.6	22.4
	923	0.070	1.44	82.69	91	77		
11	926	0.070	1.44	82.69	91	78	97.2	22.5
	926	0.070	1.44	86.09	91	78		
12	928	0.070	1.44	86.09	91	79	98.0	22.5
	928	0.070	1.44	89.52	91	79		
13	897	0.060	1.27	89.52	93	81	97.9	20.6
	897	0.060	1.27	92.74	93	81		
14	890	0.060	1.28	92.74	94	82	97.8	20.5
	890	0.060	1.28	95.97	94	82		
15	892	0.060	1.28	95.97	94	82	98.2	20.5
	892	0.060	1.28	99.21	94	82		
16	890	0.060	1.28	99.21	96	84	94.7	20.5
	890	0.060	1.28	102.35	96	84		
17	893	0.060	1.28	102.35	96	85	96.8	20.5
	893	0.060	1.28	105.56	96	85		
18	883	0.060	1.29	105.56	95	85	96.3	20.5
	883	0.060	1.29	108.76	95	85		

Average	917	0.069	1.416	60.01	87	76	96.7	22.2

A1-28

AGNICO-EAGLE MINES LTD, MEADOWBANK DIVISION
BAKER LAKE, NUNAVUT
OUTLET OF INCINERATOR
SVOC

Test #3, Traverse #2								
Point	Tstack °F	ΔP "H2O	ΔH "H2O	Volume ft³	Tinlet °F	Toutlet °F	Isokinetic %	Velocity ft/s
1	960	0.075	1.49	108.91	76	76	95.7	23.5
	960	0.075	1.49	112.28	76	76		
2	969	0.075	1.47	112.28	75	76	95.5	23.6
	969	0.075	1.47	115.63	75	76		
3	966	0.080	1.58	115.63	77	76	97.2	24.3
	966	0.080	1.58	119.16	77	76		
4	969	0.075	1.48	119.16	79	77	95.4	23.6
	969	0.075	1.48	122.52	79	77		
5	966	0.075	1.49	122.52	82	78	97.2	23.6
	966	0.075	1.49	125.96	82	78		
6	964	0.075	1.50	125.96	85	77	96.4	23.6
	964	0.075	1.50	129.38	85	77		
7	967	0.075	1.49	129.38	84	80	96.0	23.6
	967	0.075	1.49	132.79	84	80		
8	964	0.080	1.50	132.79	87	79	92.7	24.3
	964	0.080	1.50	136.20	87	79		
9	967	0.075	1.50	136.20	87	81	96.2	23.6
	967	0.075	1.50	139.63	87	81		
10	963	0.075	1.51	139.63	88	81	96.0	23.5
	963	0.075	1.51	143.06	88	81		
11	960	0.080	1.61	143.06	89	82	96.5	24.3
	960	0.080	1.61	146.63	89	82		
12	926	0.060	1.24	146.63	88	84	95.4	20.8
	926	0.060	1.24	149.73	88	84		
13	930	0.060	1.24	149.73	88	84	96.2	20.8
	930	0.060	1.24	152.85	88	84		
14	930	0.060	1.24	152.85	89	85	96.0	20.8
	930	0.060	1.24	155.97	89	85		
15	924	0.055	1.14	155.97	90	86	95.4	19.9
	924	0.055	1.14	158.95	90	86		
16	918	0.055	1.15	158.95	92	86	95.3	19.8
	918	0.055	1.15	161.94	92	86		
17	933	0.050	1.03	161.94	91	87	96.4	19.0
	933	0.050	1.03	164.81	91	87		
18	926	0.050	1.04	164.81	90	87	95.3	19.0
	926	0.050	1.04	167.65	90	87		
Average	950	0.068	1.372	58.74	85	81	95.8	22.3
Ave. test	934	0.069	1.394	118.75	86	79	96.2	22.2

Velocity		Volumetric flow rates				Temperature		Moisture
ft/s	m/s	ACFM	SDCFM	m³/h	Rm³/h	°F	°C	% v/v
22.2	6.8	10511	3910	17860	6643	934	501	4.4

Total part.	Gas sample volume		Verification of Isokinetic					
mg	SDCF	Rm³	Nb readings	Nb non Iso	Nb < 90%	Nb > 110%	Iso max.	Iso min.
0.00	116.18	3.290	36	0	0	0	98.6	92.7

Pstack "Hg	Pmeter "Hg	Md g/g-mole	Ms g/g-mole	Bwo ------	Ratio Vs max / Vs min ------	Vs max. ft/s	Vs min. ft/s
30.20	30.31	29.18	28.70	0.044	1.4	25.7	19.0

Particulate concentrations				Emission mass flow rate	
gr/ACF	gr/SDCF	mg/m³	mg/Rm³	lb/h	kg/h
0.000	0.000	0	0	0.0	0.0

"R" or "Reference Conditions" at 25°C, 101.3 kPa, dry basis.

Exova Canada Inc.
390 Rue Hocquart
St-Bruno-de-Montarville
Québec Canada J3V 6E1

EXOVA

DONNÉES DE TERRAIN - ÉCHANTILLONNAGE MANUEL

Compagnie : Agnico Eagle	Contrôle: #588 γ = 0.9756 Ko = 0.7207	Conduit: Dia ("): 38" Porte (") 10"
Endroit: Baker lake	Sonde: #28 Cv = 0.7855	Diamètre: Av: 50 Ap: 20
Date: 11-07-14 / Projet: R	Buse: #Quartz Dn = 0.4998 Caisson #	Feuille : 1 de 4
Site : Incinerateur	Humidité supposée % = 5%	Fuite Avant: 0.0050 "H2O @ 15 "Hg
Essai: 1 SVOC	Pression: Pbar ("Hg) = Pstat ("H2O) = -0.10	Fuite Après: "H2O @ "Hg

Point	Heure	TS (°F)	▲P (" H2O)	▲H (" H2O)	Volume (pi³)	Température Tmi (°F)	Tmo (°F)	Timp (°F)	Sonde (°F)	Four (°F)	Vacuum (" Hg)	% ISO (%)	Gaz O2 (%)	CO2 (%)	CO (ppmv / %)	NOx ppmv
1	12:59	782	0.065	1.44	79.44	64	64	52	250	251	-7.0	97.1				
		782	0.065	1.44		64	64									
2	13:04	784	0.070	1.55	82.76	65	65		247	271	-7.0	93.5				
		784	0.070	1.55		65	65									
3	13:09	788	0.070	1.55	86.08	68	65		246	249	-7.0	99.3				
		788	0.070	1.55		68	65									
4	13:14	783	0.070	1.56	89.61	69	66		250	252	-7.0	102.0				
		783	0.070	1.56		69	66									
5	13:19	797	0.070	1.55	93.25	73	67		249	246	-8.0	101.8				
		797	0.070	1.55		73	67									
6	13:24	801	0.080	1.77	96.88	78	68		248	245	-8.0	94.3	17.6	2.3	7.0	
		801	0.080	1.77		78	68									
7	13:29	816	0.075	1.65	100.49	80	70	58	251	247	-8.0	98.1				
		816	0.075	1.65		80	70									
8	13:34	765	0.065	1.50	104.12	83	71		250	249	-8.0	101.2				
		765	0.065	1.50		83	71									
9	13:39	761	0.070	1.62	107.69	82	73		248	251	-9.0	97.6	17.4	2.5	17.0	
		761	0.070	1.62		82	73									
10	13:44	775	0.070	1.60	111.27	82	74		247	245	-9.0	97.7				
		775	0.070	1.60		82	74									
11	13:49	756	0.065	1.52	114.84	86	77		248	247	-9.0	98.9				
		756	0.065	1.52		86	77									
12	13:54	757	0.070	1.63	118.37	86	76		244	246	-9.0	94.9				
		757	0.070	1.63		86	76									

Constante => K = 53.057 52.48 A% = 110.90

Échantillonneur: S. Demers

Assistant à l'échantillonneur:

Exova Canada Inc.
1390 Rue Hocquart
St-Bruno-de-Montarville
Québec Canada J3V 6E1

EXOVA

DONNÉES DE TERRAIN - ÉCHANTILLONNAGE MANUEL

Compagnie : Agnico Eagle	Contrôle: # 388 γ = 0.9752 Ko = 0.7202	Conduit: Dia ("): 38" Porte (") 10"
Endroit: Baker Lake	Sonde: # 25 Cv = 0.785	Diamètre: Av: 50 Ap: 20
Date: 11-07-14 / Projet: R	Buse: #Quart2 Dn = 0.498 Caisson #	Feuille : 2 de 4
Site : Incinerateur	Humidité supposée % = 5%	Fuite Avant: "H2O @ "Hg
Essai: 1 SMC	Pression: Pbar ("Hg) = Pstat ("H2O) = -0.10	Fuite Après: "H2O @ "Hg

Point	Heure	TS (°F)	▲P (" H2O)	▲H (" H2O)	Volume (pi³)	Température Tmi (°F)	Tmo (°F)	Timp (°F)	Sonde (°F)	Four (°F)	Vacuum (" Hg)	% ISO (%)	Gaz O2 (%)	CO2 (%)	CO (ppmv / %)	NOx ppmv
13	13:59	757	0.070	1.63	121.88	81	78	54	244	242	-9.0	95.4				
		757	0.070	1.63		81	78									
14	14:04	733	0.070	1.66	125.40	83	77		248	244	-9.0	93.6				
		733	0.070	1.66		83	77									
15	14:09	738	0.070	1.65	128.89	80	78		250	252	-9.0	96.4				
		738	0.070	1.65		80	78									
16	14:14	747	0.070	1.64	132.47	79	78		253	247	-9.0	95.7	19.2	2.7	21	
		747	0.070	1.64		79	78									
17	14:19	740	0.060	1.41	136.01	79	78		250	246	-9.0	95.6				
		740	0.060	1.41		79	78									
18	14:24	725	0.060	1.43	139.29	78	78		250	245	-10.0					
custom	14:29	725	0.060	1.43	142.61	78	78									

Constante => K = 52.48 A% = 110.90

Échantillonneur: S Damaris

Assistant à l'échantillonneur:

Exova Canada Inc.
1390 Rue Hocquart
St-Bruno-de-Montarville
Québec Canada J3V 6E1

EXOVA

DONNÉES DE TERRAIN - ÉCHANTILLONNAGE MANUEL

Compagnie : Agnico Eagle	Contrôle: #588 γ = 0.9757 Ko = 0.7201	Conduit: Dia ("): 38" Porte (") 10"
Endroit: Baker Lake	Sonde: # 2F Cv = 0.785	Diamètre: Av: 50 Ap: 20
Date: 11-07-14 / Projet: R	Buse: #Quartz Dn = 0.498 Caisson #	Feuille : 3 de 4
Site : Incinerator	Humidité supposée % = 5%	Fuite Avant: 0.0010 "H2O @ 12 "Hg
Essai: 1 SVOC	Pression: Pbar ("Hg) = Pstat ("H2O) = -0.10	Fuite Après: "H2O @ "Hg

Point	Heure 15:05	TS (°F)	▲P (" H2O)	▲H (" H2O)	Volume (pi³)	Température Tmi (°F)	Tmo (°F)	Timp (°F)	Sonde (°F)	Four (°F)	Vacuum (" Hg)	% ISO (%)	Gaz O2 (%)	CO2 (%)	CO (ppmv / %)	NOx ppmv
1	~~815~~	~~815~~	0.100	2.19	142.72	71	71		254	261	-11.0	94.6				
	~~815~~	~~815~~	0.100	2.19		71	71									
2	15:10	813	0.100	2.19	146.73	72	72	56	254	253	-11.0	94.1				
		813	0.100	2.19		72	72									
3	15:15	813	0.100	2.19	150.73	72	71		251	249	-12.0	95.6	17.6	2.3	~	
		813	0.100	2.19		72	71									
4	15:20	823	0.100	2.18	154.79	76	73		250	247	-12.0	95.3				
		823	0.100	2.18		76	72									
5	15:25	815	0.100	2.22	158.84	84	73		249	245	-12.0	94.4				
		815	0.100	2.22		84	73									
6	15:30	792	0.085	1.92	162.90	83	76		248	247	-13.0	95.3				
		792	0.085	1.92		83	76									
7	15:35	797	0.080	1.80	166.72	83	77		254	257	-13.0	96.5	17.6	2.3	0	
		797	0.080	1.80		83	77									
8	15:40	786	0.080	1.82	170.47	83	76		249	243	-13.0	97.0				
		786	0.080	1.82		83	76									
9	15:45	755	0.075	1.76	174.25	83	79	56	248	251	-13.0	96.1				
		755	0.075	1.76		85	79									
10	15:50	753	0.070	1.64	177.94	85	80		249	255	-13.0	96.3				
		753	0.070	1.64		85	80									
11	15:55	740	0.060	1.42	181.52	85	81		247	251	-13.0	96.8				
		740	0.060	1.42		85	81									
12	16:00	741	0.060	1.42	184.87	85	81		248	248	-13.0		17.1	2.7	0	
		741	0.060	1.42		85	81									

Constante => K = 52.48 A% = 110.90

Échantillonneur: S. Demers

Assistant à l'échantillonneur:

Exova Canada Inc.
1390 Rue Hocquart
St-Bruno-de-Montarville
Québec Canada J3V 6E1

EXOVA

DONNÉES DE TERRAIN - ÉCHANTILLONNAGE MANUEL

Compagnie : Agnico Eagle	Contrôle: # 588 γ = 0.9751 Ko = 0.7201	Conduit: Dia ("): 38" Porte (") 10"
Endroit: Baker Lake	Sonde: # 2F Cv = 0.785	Diamètre: Av: 5.0 Ap: 2.0
Date: 11-07-14 / Projet: R	Buse: # Quartz Dn = 0.498 Caisson #	Feuille : 4 de 4
Site : Incinerator	Humidité supposée % = 5%	Fuite Avant: "H2O @ "Hg
Essai: 1 SUOC	Pression: Pbar ("Hg) = Pstat ("H2O) = -0.10	Fuite Après: 0.010 "H2O @ 18" "Hg

Point	Heure	TS (°F)	▲P (" H2O)	▲H (" H2O)	Volume (pi³)	Température Tmi (°F)	Tmo (°F)	Timp (°F)	Sonde (°F)	Four (°F)	Vacuum (" Hg)	% ISO (%)	Gaz O2 (%)	CO2 (%)	CO (ppmv / %)	NOx ppmv
13	16:05	737	0.050	1.19	188.19	85	82		249	250	-14.0	95.7				
		737	0.050	1.19		85	82									
14	16:10	742	0.050	1.19	191.22	86	82	55	251	249	-14.0	95.5				
		742	0.050	1.19		86	82									
15	16:15	731	0.050	1.20	194.24	87	85		249	251	-14.0	95.3				
		731	0.050	1.20		87	85									
16	16:20	604	0.040	1.08	197.28	88	84		251	249	-15.0	97.1	17.2	2.6	0	
		604	0.040	1.08		88	84									
17	16:25	607	0.030	0.80	200.21	88	83		250	250	-15.0	97.4				
		607	0.030	0.80		88	83									
18	16:30	604	0.020	0.54	202.75	87	84		249	250	-15.0	98.5				
FIN	16:35	604	0.020	0.54	204.85	87	84									

Constante => K = 52.48 A% = 110.90

Échantillonneur: S. Ormerod

Assistant à l'échantillonneur:

WEIGHT SHEET

Company	Agnico-Eagle
Location	Baker Lake
Date	11 / 07 / 2014
Site	Incinerator
Train #	1 (SVOC-)
Test #	A1 (PCDD/DF)

DATA		
Pbar: 29.74 po.Hg		
G	O_2	% 17.39
	CO_2	% 2.49
A	CO	ppm 6.4
Z	CO	%

ITEM	Final weight	Initial weight	Water weight
Cooler	119.3	119.2	0.1
XAD-2 resin	233.0	234.2	-1.2
Water trap	300.1	262.9	37.2
Impinger #1	654.2	617.6	36.6
Impinger #2	523.5	524.9	-1.4
Impinger #3 (silica gel)	719.1	705.2	13.9
		Final weight	85.2

Preparation	Prepared by	Recovered	Approved by
Date		11-07-14	11-07-14
Laboratory			
On site		S Demers	S. Demers

Exova Canada Inc.
1390 Rue Hocquart
St-Bruno-de-Montarville
Québec Canada J3V 6E1

EXOVA

DONNÉES DE TERRAIN - ÉCHANTILLONNAGE MANUEL

Compagnie : Agnico Eagle	Contrôle: #58 Y = 0.9751 Ko = 0.7202	Conduit: Dia ("): 38" Porte (") 10"
Endroit: Baker Lake	Sonde: #2F Cv = 0.7855	Diamètre: Av: 50 Ap: 20
Date: 12-07-14 / Projet: R	Buse: #Quartz Dn = 0.4948 Caisson # 1	Feuille : 1 de 3
Site : Incinérateur	Humidité supposée % = 5%	Fuite Avant: 0.0002 "H2O @ 15" "Hg
Essai: 2 Sooc	Pression: Pbar ("Hg) = Pstat ("H2O) = -0.10	Fuite Après: "H2O @ "Hg

Point	Heure	TS (°F)	▲P (" H2O)	▲H (" H2O)	Volume (pi³)	Température Tmi (°F)	Tmo (°F)	Timp (°F)	Sonde (°F)	Four (°F)	Vacuum (" Hg)	% ISO (%)	Gaz O2 (%)	CO2 (%)	CO (ppmv / %)	NOx ppmv
1	11:22	836	0.09	1.91	4.96	64	64	54	247	241	-7.0	93.5				
		836	0.09	1.91		64	64									
2	11:27	850	0.05	1.05	8.64	66	66		245	238	-7.0	104.8	15.4	3.8	3	
		850	0.05	1.05		66	66									
3	11:32	850	0.05	1.06	11.71	68	65		249	249	-7.0	101.4				
		850	0.05	1.06		68	65									
4	11:37	879	0.05	1.04	14.69	74	65		248	242	-7.0	102.0	15.3	3.9	1	
		879	0.05	1.04		74	65									
5	11:42	885	0.06	1.27	17.66	81	69		245	245	-7.0	96.3				
		885	0.06	1.27		81	69									
6	11:47	884	0.06	1.26	20.80	83	71		247	239	-7.0	98.9				
		884	0.06	1.26		83	71									
7	11:52	883	0.06	1.27	24.00	86	73		250	245	-7.0	98.4				
		883	0.06	1.27		86	73									
8	11:57	919	0.07	1.45	27.20	89	76		248	240	-7.0	97.3	15.9	3.6	2	
		919	0.07	1.45		89	76									
9	12:02	921	0.07	1.45	30.59	90	79	56	246	249	-7.0	96.1				
		921	0.07	1.45		90	79									
10	12:07	924	0.07	1.45	33.95	90	79		247	253	-8.0	97.9				
		924	0.07	1.45		90	79									
11	12:12	940	0.07	1.43	37.37	91	80		250	253	-8.0	97.2	16.0	3.7	4	
		940	0.07	1.43		91	80									
12	12:17	956	0.08	1.62	40.75	93	82		251	249	-8.0	97.8				
	1	956	0.08	1.62		93	82									

Constante => K = 52418 A% = 110.90

* Note: Il on fermé l'entrée d'air dans stack. buse vit. [illegible] ts

Échantillonneur: S. Dennis

Assistant à l'échantillonneur:

Exova Canada Inc.
1390 Rue Hocquart
St-Bruno-de-Montarville
Québec Canada J3V 6E1

Exova

DONNÉES DE TERRAIN - ÉCHANTILLONNAGE MANUEL

Compagnie : Agnico Eagle	Contrôle: # 568 y = 0.9754	Ko = 0.7207	Conduit: Dia ("): 38"	Porte (") 10"
Endroit: Baker Lake	Sonde: # 2P	Cv = 0.785	Diamètre: Av: 5D	Ap: 2D
Date: 12-07-14 / Projet: R	Buse: # 3mm 1/2	Dn = 0.4428 Caisson #	Feuille : 2	de 3
Site : Incinérateur	Humidité supposée % =	5%	Fuite Avant:	"H2O @ "Hg
Essai: 2 500c	Pression: Pbar ("Hg) =	Pstat ("H2O) = -0.10	Fuite Après:	"H2O @ "Hg

Point	Heure	TS (°F)	▲P (" H2O)	▲H (" H2O)	Volume (pi³)	Température Tmi (°F)	Tmo (°F)	Timp (°F)	Sonde (°F)	Four (°F)	Vacuum (" Hg)	% ISO (%)	Gaz O2 (%)	CO2 (%)	CO (ppmv / %)	NOx ppmv
13	12:22	958	0.08	1.62	44.38	94	89	54	250	250	-8.0	97.7				
		958	0.08	1.62		94	83									
14	12:27	963	0.08	1.62	48.01	93	85		247	250	-8.0	97.5				
		963	0.08	1.62		93	85									
15	12:32	957	0.08	1.63	51.63	93	85		251	249	-9.0	95.7				
		957	0.08	1.63		93	85									
16	12:37	935	0.08	1.65	55.19	93	86		250	250	-9.0	94.6				
		935	0.08	1.65		93	86									
17	12:42	938	0.08	1.65	58.74	94	87		249	252	-9.0	96.7				
		938	0.08	1.65		94	87									
18	12:47	937	0.075	1.55	62.37	93	87		250	249	-9.0	95.5				
Autom	12:52	937	0.075	1.55	65.84	93	87									
1	14:30	1030	0.080	1.53	66.05	82	82	56	247	242	-9.0	96.9				
		1030	0.080	1.53		82	82									
2	14:35	1035	0.100	1.90	69.52	83	82		241	247	-10.0	97.2	16.3	3.2	2	
		1035	0.100	1.90		83	82									
3	14:40	1033	0.095	1.82	73.41	89	84		246	247	-10.0	95.9				
		1033	0.095	1.82		89	84									
4	14:45	1034	0.090	1.74	77.18	93	86		248	252	-10.0	95.7				
		1034	0.090	1.74		93	86									
5	14:50	1040	0.090	1.73	80.86	96	86		246	249	-10.0	93.9				
		1040	0.090	1.73		96	86									
6	14:55	999	0.090	1.74	84.55	98	89		250	252	-10.0					
		999	0.090	1.74		98	89									

Constante => K = 52.48 A% = 110.90

Échantillonneur: S. Demers

Assistant à l'échantillonneur:

Exova Canada Inc.
1390 Rue Hocquart
St-Bruno-de-Montarville
Québec Canada J3V 6E1

EXOVA

DONNÉES DE TERRAIN - ÉCHANTILLONNAGE MANUEL

Compagnie :	Agnico Eagle	Contrôle: # 558 Y = 0.9756	Ko = 0.7202	Conduit: Dia ("): 38"	Porte (") 10"
Endroit:	Baker Lake	Sonde: # 2F	Cv = 0.7885	Diamètre: Av: 5D	Ap: 2D
Date: 12-09-14	/ Projet: R	Buse: # Quartz	Dn = 0.498 Caisson #	Feuille : 3	de 3
Site :	Incinérateur	Humidité supposée % =	5%	Fuite Avant:	"H2O @ "Hg
Essai:	2 500C	Pression: Pbar ("Hg) =	Pstat ("H2O) = -0.10	Fuite Après: 0.0000	"H2O @ 13 "Hg

Point	Heure	TS (°F)	▲P (" H2O)	▲H (" H2O)	Volume (pi³)	Température Tmi (°F)	Tmo (°F)	Timp (°F)	Sonde (°F)	Four (°F)	Vacuum (" Hg)	% ISO (%)	Gaz O2 (%)	CO2 (%)	CO (ppmv / %)	NOx ppmv
7	15:00	975	0.095	1.92	88.29	99	89	56	249	252	-10.0	95.7	17.1	2.9	0	
		975	0.095	1.92		99	89									
8	15:05	975	0.095	1.92	92.18	99	89		246	250	-11.0	95.5				
		975	0.095	1.92		99	89									
9	15:10	974	0.095	1.92	96.06	98	88		248	250	-11.0	95.6				
		974	0.095	1.92		98	88									
10	15:15	973	0.090	1.82	99.94	98	88		247	251	-11.0	95.7				
		973	0.090	1.82		98	88									
11	15:20	926	0.070	1.46	103.72	98	87		248	252	-11.0	94.9	16.4	3.2	2	
		926	0.070	1.46		98	87									
12	15:25	923	0.070	1.47	107.08	98	88		249	252	-12.0	95.8				
		923	0.070	1.47		98	88									
13	15:30	928	0.070	1.46	110.48	99	88	54	250	252	-12.0	96.1				
		928	0.070	1.46		99	88									
14	15:35	926	0.060	1.26	113.85	99	88		250	249	-12.0	95.9				
		926	0.060	1.26		99	88									
15	15:40	922	0.060	1.26	117.00	98	88		252	246	-13.0	93.1				
		922	0.060	1.26		98	88									
16	15:45	946	0.050	1.03	120.06	98	88		251	247	-13.0	93.2				
		946	0.050	1.03		98	88									
17	15:50	750	0.045	1.08	122.83	98	89		250	251	-13.0	95.5				
		750	0.045	1.08		98	89									
18	15:55	675	0.030	0.77	125.73	98	89		247	253	-13.0	95.5				
FIN	16:00	675	0.030	0.77	128.18	98	89									

Constante => K = 52.48 A% = 10.90

Échantillonneur: S. Damers

Assistant à l'échantillonneur:

WEIGHT SHEET

Company	Agnico-Eagle
Location	Baker Lake
Date	12 / 07 / 2014
Site	Incinerateur
Train #	1 (SVOC-)
Test #	A2 (PCDD/DF)

DATA		
Pbar: 29.89 po.Hg		
G A Z	O_2	% 16,06
	CO_2	% 3,47
	CO	ppm 2,0
	CO	%

ITEM	Final weight	Initial weight	Water weight
Cooler	121.2	120.6	0.6
XAD-2 resin	197,7	194,1	3,6
Water trap	364.8	285.3	79,5
Impinger #1	636.1	608.5	27,6
Impinger #2	476.3	476.7	-0,4
Impinger #3 (silica gel)	717.8	702.8	15,0
		Final weight	125,9

Preparation	Prepared by	Recovered	Approved by
Date	12-07-14	12-07-14	
Laboratory			
On site	S. Demers	S Demers	

Exova Canada Inc.
1390 Rue Hocquart
St-Bruno-de-Montarville
Québec Canada J3V 6E1

EXOVA

DONNÉES DE TERRAIN - ÉCHANTILLONNAGE MANUEL

Compagnie : Agnico Eagle	Contrôle: #583 y = 0.9751 Ko = 0.7202	Conduit: Dia ("): 38"	Porte (") 10"
Endroit: Aiken Lake	Sonde: #2F Cv = 0.785	Diamètre: Av: 50	Ap: 20
Date: 13-07-14 / Projet: R	Buse: #Quart Dn = 0.498 Caisson #	Feuille : 1	de 3
Site : Incinerator	Humidité supposée % = 5%	Fuite Avant: 0.0050 "H2O @ 16	"Hg
Essai: 3 Sous	Pression: Pbar ("Hg) = Pstat ("H2O) = -0.10	Fuite Après: "H2O @	"Hg

Point	Heure	TS (°F)	▲P (" H2O)	▲H (" H2O)	Volume (pi³)	Température Tmi (°F)	Tmo (°F)	Timp (°F)	Sonde (°F)	Four (°F)	Vacuum (" Hg)	% ISO (%)	Gaz O2 (%)	CO2 (%)	CO (ppmv / %)	NOx ppmv
1	9:48	945	0,080	1,58	48.75	67	68	55	245	253	-9,0	97.2				
		945	0,080	1,58		67	68									
2	9:53	945	0,085	1,68	52.24	73	67		250	248	-9,0	96,3				
		945	0,085	1,68		73	67									
3	9:58	926	0,075	1,50	55,82	72	67		251	253	-9,0	96,0				
		926	0,075	1,50		72	67									
4	10:03	945	0,075	1,49	59.19	77	69		250	252	-9,0	98,5				
		945	0,075	1,49		77	69									
5	10:08	951	0,090	1,79	62,65	80	69		248	251	-9,0	94,6				
		951	0,090	1,79		80	69									
6	10:13	914	0,070	1,44	66,29	84	72		247	249	-9,0	96,5				
		914	0,070	1,44		84	72									
7	10:18	914	0,065	1,34	69,63	85	72		248	255	-10,0	96,7				
		914	0,065	1,34		85	72									
8	10:23	925	0,065	1,33	72,86	89	75		251	248	-10,0	95,6				
		925	0,065	1,33		89	75									
9	10:28	927	0,065	1,33	76,06	89	75		254	260	-10,0	95,0				
		927	0,065	1,33		89	75									
10	10:33	923	0,070	1,44	79,24	91	77	56	251	253	-10,0	98,9				
		923	0,070	1,44		91	77									
11	10:38	926	0,070	1,44	82,69	91	78		249	240	-10,0	97,4				
		926	0,070	1,44		91	78									
12	10:43	928	0,070	1,44	86,09	91	79		250	252	-10,0		16,0	3,4	3	
	1	928	0,070	1,44		91	79									

Constante => K = 52,48 A% = 110,90

D-13-20

Échantillonneur: S. Demers

Assistant à l'échantillonneur: _____

Exova Canada Inc.
1390 Rue Hocquart
St-Bruno-de-Montarville
Québec Canada J3V 6E1

EXOVA

DONNÉES DE TERRAIN - ÉCHANTILLONNAGE MANUEL

Compagnie : Agnico Eagle	Contrôle: #583 γ = 0.9752 Ko = 0.7202	Conduit: Dia ("): 38" Porte (") 10"
Endroit: Baker Lake	Sonde: # 25 Cv = 0.7825	Diamètre: Av: 50 Ap: 20
Date: 13-07-14 / Projet: R	Buse: #Quatre Dn = 0.4198 Caisson #	Feuille : 2 de 3
Site : Incinerateur	Humidité supposée % = 5%	Fuite Avant: "H2O @ "Hg
Essai: 3 Suoc	Pression: Pbar ("Hg) = Pstat ("H2O) = -0.10	Fuite Après: 0.000 "H2O @ 13 "Hg

Point	Heure	TS (°F)	▲P (" H2O)	▲H (" H2O)	Volume (pi³)	Température Tmi (°F)	Tmo (°F)	Timp (°F)	Sonde (°F)	Four (°F)	Vacuum (" Hg)	% ISO (%)	Gaz O2 (%)	CO2 (%)	CO (ppmv / %)	NOx ppmv
13	10:48	897	0.060	1.27	89.52	93	81	55	249	250	-11.0	98.3				
		897	0.060	1.27		93	81									
14	10:53	890	0.060	1.28	92.74	94	82		247	252	-11.0	98.2				
		890	0.060	1.28		94	82									
15	10:58	892	0.060	1.28	95.97	94	82		250	250	-11.0	98.4				
		892	0.060	1.28		94	82									
16	11:03	890	0.060	1.28	99.21	96	84		249	250	-11.0	95.0				
		890	0.060	1.28		96	84									
17	11:08	893	0.060	1.28	102.35	96	85		247	253	-11.0	97.0	16.0	3.3	0	
		893	0.060	1.28		96	85									
18	11:13	883	0.060	1.29	105.56	95	85		248	250	-11.0	96.7				
	11:18	883	0.060	1.29	108.76	95	85									
1	12:48	960	0.075	1.49	108.91	76	76	54	251	250	-11.0	95.9				
		960	0.075	1.49		76	76									
2	12:53	969	0.075	1.47	112.28	75	76		250	247	-11.0	95.8				
		969	0.075	1.47		75	76									
3	12:58	966	0.080	1.58	115.63	77	76		251	252	-12.0	97.4	16.4	3.0	3	
		966	0.080	1.58		77	76									
4	13:03	969	0.075	1.48	119.16	79	77		250	252	-12.0	95.6				
		969	0.075	1.48		79	77									
5	13:08	966	0.075	1.49	122.52	82	78		247	250	-12.0	97.4	16.5	3.2	0	
		966	0.075	1.49		82	78									
6	13:13	964	0.075	1.50	125.96	85	77		249	250	-12.0					
		964	0.075	1.50		85	77									

Constante => K = 52.42 A% = 110.90

D

Échantillonneur: S. Demers

Assistant à l'échantillonneur: _____

07

Exova Canada Inc.
1390 Rue Hocquart
St-Bruno-de-Montarville
Québec Canada J3V 6E1

EXOVA

DONNÉES DE TERRAIN - ÉCHANTILLONNAGE MANUEL

Compagnie : Agnico Eagle	Contrôle: #588 y = 0,9752 Ko = 0,7207	Conduit: Dia ("): 38"	Porte (") 10"
Endroit: Baker Lake	Sonde: # 2C Cv = 0,785	Diamètre: Av: 50	Ap: 20
Date: 13-09-14 / Projet: R	Buse: #Quad Dn = 0,498 Caisson #	Feuille : 8	de 3
Site : Incinerator	Humidité supposée % = 5%	Fuite Avant:	"H2O @ "Hg
Essai: 3 500C	Pression: Pbar ("Hg) = Pstat ("H2O) = -0,10	Fuite Après: 0,000	"H2O @ 15 "Hg

Point	Heure	TS (°F)	▲P (" H2O)	▲H (" H2O)	Volume (pi³)	Température Tmi (°F)	Tmo (°F)	Timp (°F)	Sonde (°F)	Four (°F)	Vacuum (" Hg)	% ISO (%)	Gaz O2 (%)	CO2 (%)	CO (ppmv / %)	NOx ppmv
7	13:18	963	0,075	1,49	129,38	84	80	55	250	248	-12,0	96,2				
		963	0,075	1,49		84	80									
8	13:23	964	0,080	1,50	132,39	87	79		249	252	-13,0	96,0				
		964	0,080	1,50		87	79									
9	13:28	963	0,075	1,50	136,20	87	81		247	246	-12,0	96,5	16,0	3,6	4	
		963	0,075	1,50		87	81									
10	13:33	963	0,075	1,51	139,63	88	81		249	248	-12,0	96,2				
		963	0,075	1,51		88	81									
11	13:38	960	0,080	1,61	143,06	89	82		251	251	-13,0	96,7	16,2	3,5	6	
		960	0,080	1,61		89	82									
12	13:43	926	0,060	1,24	146,63	88	84		253	254	-13,0	95,7				
		926	0,060	1,24		88	84									
13	13:48	930	0,060	1,24	149,73	88	84	55	252	257	-13,0	96,5				
		930	0,060	1,24		88	84									
14	13:53	930	0,060	1,24	150,85	89	85		251	257	-13,0	96,3				
		930	0,060	1,24		89	85									
15	13:58	924	0,055	1,14	155,97	90	86		247	260	-13,0	95,9				
		924	0,055	1,14		90	86									
16	14:03	918	0,055	1,15	158,95	92	86		244	263	-13,0	95,6	16,1	3,5	2	
		918	0,055	1,15		92	86									
17	14:08	933	0,050	1,03	161,24	91	87		237	249	-13,0	96,8				
		933	0,050	1,03		91	87									
18	14:13	926	0,050	1,04	164,81	90	87		241	232	-13,0	95,6				
FIN	14:18	926	0,050	1,04	167,65	90	87									

Constante => K = 52,48 A% = 110,90

Échantillonneur: S. Dome

Assistant à l'échantillonneur: _____

WEIGHT SHEET

Company	Agnico-Eagle
Location	Baker Lake
Date	13 / 07 / 2014
Site	Incinerateur
Train #	1 (SVOC-)
Test #	3 (PCDD/DF)

DATA			
Pbar: 30,21 po.Hg			
G A Z	O_2	%	16,17
	CO_2	%	3,36
	CO	ppm	2,6
	CO	%	

ITEM	Final weight	Initial weight	Water weight
Cooler	118.1	117.5	0,6
XAD-2 resin	237.9	236.5	1,4
Water trap	325.9	256.2	69,7
Impinger #1	652.8	628.9	23,9
Impinger #2	467,0	468.2	-1,2
Impinger #3 (silica gel)	718.8	702.8	16,0
		Final weight	110,4

Preparation	Prepared by	Recovered	Approved by
Date	13-07-14	13-07-14	
Laboratory			
On site	S. Demers	S. Demers	

CALIBRATION OF SAMPLING MODULE

Module Identification:	SB_8
Inventory number:	0
Atmospheric pressure ("Hg) :	29.90

Responsable calibration :	B.Bouchard
Responsable data entry:	0
Calibration date:	25-févr-14
Next calibration date:	25-févr-15

del.H in.H2O	Vw ft³	Vd ft³	Tw deg.F	Tdo deg.F	Td deg.F	time min.	del.m in.H2O	factor count.
1.0	5.00	5.07	71.0	72.0	72.5	8.82	-0.30	1.0034
1.0	5.00	5.10	71.0	70.0	73.0	8.82	-0.30	1.0034
2.0	5.00	5.12	71.0	70.0	72.5	6.20	-0.50	1.0034
2.0	5.00	5.14	71.0	70.5	74.3	6.20	-0.50	1.0034
3.0	5.00	5.13	70.0	70.0	74.8	5.13	-0.70	1.0034
3.0	5.00	5.16	70.0	70.5	75.5	5.15	-0.70	1.0034
4.0	10.00	10.38	70.0	71.5	77.5	8.92	-0.10	1.0034
4.0	10.00	10.37	70.0	71.5	78.3	8.92	-0.10	1.0034
5.0	10.00	10.40	70.0	71.5	78.5	7.95	-1.40	1.0034
5.0	10.00	10.40	70.0	71.5	78.3	7.95	-1.40	1.0034

del.H in.H2O	Vwc ft³	K	del.H@ in.H2O	Qm cfm	Ko	gamma	Acceptability criteria 1.50%	yes/no
1.0	5.02	0.7830	1.74	0.5681	0.7255	0.9892	1.45	yes
1.0	5.02	0.7815	1.73	0.5659	0.7241	0.9843	0.95	yes
2.0	5.02	1.1039	1.71	0.8027	0.7272	0.9766	0.16	yes
2.0	5.02	1.1044	1.71	0.8035	0.7275	0.9760	0.10	yes
3.0	5.02	1.3503	1.75	0.9691	0.7177	0.9778	0.28	yes
3.0	5.02	1.3510	1.76	0.9663	0.7153	0.9735	0.16	yes
4.0	10.03	1.5595	1.75	1.1168	0.7161	0.9706	0.46	yes
4.0	10.03	1.5595	1.75	1.1168	0.7161	0.9728	0.23	yes
5.0	10.03	1.7415	1.74	1.2460	0.7155	0.9650	1.03	yes
5.0	10.03	1.7415	1.74	1.2460	0.7155	0.9646	1.07	yes
	AVERAGE		1.74	0.9401	0.7201	0.9751		

Reference: Method 1/RM/8

Probe Identification:	2F EAU QUARTZ	**Calibration date**	6-mars-14
Inventory number	0	**Calibration technician responsable**	S.Saake
		Data prossessing technician responsable	S.Saake
Barometric pressure:	29.76 "Hg		
Ambiant temperature:	73.0 oF	**Ms :** 28.73	

NOZZLES	SCALE	PITOT REFERENCE del p	PITOT "S" TYPE del p	Vs ft/s	Cv
	1	0.720	1.054	57.266	0.826
	2	0.521	0.735	48.721	0.842
WITHOUT	3	0.357	0.539	40.341	0.814
NOZZLE	4	0.229	0.348	32.329	0.812
	5	0.128	0.196	24.168	0.808
	6	0.060	0.088	16.589	0.828
	1	0.715	1.045	57.087	0.827
	2	0.520	0.763	48.651	0.825
Dia. 1/8	3	0.356	0.530	40.290	0.820
No. 3	4	0.228	0.343	32.195	0.815
	5	0.126	0.197	23.950	0.800
	6	0.058	0.091	16.214	0.798
	1	0.717	1.045	57.151	0.828
	2	0.518	0.758	48.561	0.826
Dia. 3/16	3	0.357	0.527	40.319	0.823
No. 3	4	0.226	0.342	32.081	0.813
	5	0.124	0.196	23.788	0.796
	6	0.059	0.090	16.340	0.809
	1	0.714	1.054	57.043	0.823
	2	0.520	0.770	48.651	0.822
Dia. 1/4	3	0.355	0.532	40.240	0.817
No. 3	4	0.227	0.339	32.131	0.817
	5	0.127	0.195	24.026	0.806
	6	0.057	0.089	16.129	0.802
	1	0.718	1.049	57.187	0.827
	2	0.518	0.771	48.566	0.819
Dia. 5/16	3	0.353	0.529	40.086	0.817
No. 3	4	0.228	0.342	32.216	0.816
	5	0.127	0.197	24.064	0.804
	6	0.057	0.089	16.172	0.804
	1	0.716	1.084	57.115	0.813
	2	0.516	0.783	48.477	0.811
Dia. 3/8	3	0.356	0.541	40.296	0.812
No. 3	4	0.226	0.348	32.081	0.806
	5	0.125	0.198	23.874	0.796
	6	0.058	0.090	16.200	0.800
	1	0.721	1.086	57.306	0.815
	2	0.517	0.783	48.543	0.813
Dia. 7/16	3	0.356	0.540	40.245	0.811
No. 3	4	0.227	0.349	32.138	0.806
	5	0.126	0.199	23.960	0.797
	6	0.057	0.090	16.129	0.796
	1	0.716	1.101	57.103	0.806
	2	0.517	0.794	48.519	0.807
Dia. 1/2	3	0.356	0.555	40.268	0.801
No. 3	4	0.226	0.356	32.110	0.798
	5	0.126	0.201	23.960	0.791
	6	0.056	0.091	16.002	0.785

NOTICE: Shows the average ot three reading taken during calibration.

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Exova Canada Inc.
1390 Rue Hocquart
St-Bruno-de-Montarville
Québec Canada J3V 6E1

Exova

ÉCHANTILLONNAGE DES OXIDES D'AZOTE
MÉTHODE ENVIRONNEMETN CANADA EPS-1-AP-77-3
DONNÉES DE CHANTIER

USINE : Agnico Eagle **ENDROIT :** Baker Lake

Source : Incinérateur **DATE :** 12-13-14 juillet 2014

Projet : R14-034 **TECHNICIEN :** S. Demers

Ballon	Heure	Vol. solution	Pbar initiale	Temps initial	Vide initial	Pbar finale	Temp. finale	Pression finale
12-07-2014		ml	'Hg	°C F	'Hg	'Hg	°C F	'H₂O
G-11	17:36	25	29.97	70,7	-24	30.22	81,0	-4,0
G-12	17:34	25	29.97	70,7	-24	30.22	81,0	-11,0
13-07-2014								
G-11	14:40	25	30.22	81,4	-24	30.17	79,0	-40,0
G+12	14:37	25	30.22	81,4	-24	30.17	79,0	-14.5

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Technicien responsable :	Sy. La.
Date de l'étalonnage :	11-mars-14

Numéro du ballon	Poids		Volume du ballon
	Vide	Plein d'eau	
G-1			
G-2	538.36	2589.36	2051.00
G-3	573.87	2602.81	2028.94
G-4	513.45	2569.89	2056.44
G-5	581.13	2606.41	2025.28
G-6			
G-7	497.07	2567.94	2070.87
G-8			
G-9	858.73	2833.89	1975.16
G-10	471.42	2536.08	2064.66
G-11	469.35	2522.74	2053.39
G-12	481.83	2537.45	2055.62
G-20			
G-21	455.73	2538.80	2083.07

Rapport des codes d'échantillons

Code échantillon	Projet	Date	Site de prélèvement	Test (description)	Paramètres
14034-4004	R14-034	16-juil-14	Incinerateur	Test #A1 SVOC (FH) 14034.1	PCDD/DF
14034-4005	R14-034	16-juil-14	Incinerateur	Test #A1 SVOC (F) 14034.2	PCDD/DF
14034-4006	R14-034	16-juil-14	Incinerateur	Test #A1 SVOC (X) 14034.3	PCDD/DF
14034-4007	R14-034	16-juil-14	Incinerateur	Test #A1 SVOC (FCR) 14034.4	PCDD/DF
14034-4008	R14-034	16-juil-14	Incinerateur	Test #A1 SVOC (C1) 14034.5	PCDD/DF
14034-4009	R14-034	16-juil-14	Incinerateur	Test #A1 SVOC (GR) 14034.7	PCDD/DF
14034-4010	R14-034	16-juil-14	Incinerateur	Test #A2 SVOC (FH) 14034.10	PCDD/DF
14034-4011	R14-034	16-juil-14	Incinerateur	Test #A2 SVOC (F) 14034.11	PCDD/DF
14034-4012	R14-034	16-juil-14	Incinerateur	Test #A2 SVOC (X) 14034.12	PCDD/DF
14034-4013	R14-034	16-juil-14	Incinerateur	Test #A2 SVOC (FCR) 14034.13	PCDD/DF
14034-4014	R14-034	16-juil-14	Incinerateur	Test #A2 SVOC (C1) 14034.14	PCDD/DF
14034-4015	R14-034	16-juil-14	Incinerateur	Test #A2 SVOC (GR) 14034.16	PCDD/DF
14034-4016	R14-034	16-juil-14	Incinerateur	Test #A3 SVOC (FH) 14034.20	PCDD/DF
14034-4017	R14-034	16-juil-14	Incinerateur	Test #A3 SVOC (F) 14034.21	PCDD/DF
14034-4018	R14-034	16-juil-14	Incinerateur	Test #A3 SVOC (X) 14034.22	PCDD/DF
14034-4019	R14-034	16-juil-14	Incinerateur	Test #A3 SVOC (FCR) 14034.23	PCDD/DF

Code échantillon	Projet	Date	Site de prélèvement	Test (description)	Paramètres
14034-4020	R14-034	16-juil-14	Incinerateur	Test #A3 SVOC (C1) 14034.24	PCDD/DF
14034-4021	R14-034	16-juil-14	Incinerateur	Test #A3 SVOC (GR) 14034.26	PCDD/DF
14034-4022	R14-034	16-juil-14	Incinerateur	Test #A3 SVOCBT (FH) 14034.30	PCDD/DF
14034-4023	R14-034	16-juil-14	Incinerateur	Test #A3 SVOCBT (F) 14034.31	PCDD/DF
14034-4024	R14-034	16-juil-14	Incinerateur	Test #A3 SVOCBT (X) 14034.32	PCDD/DF
14034-4025	R14-034	16-juil-14	Incinerateur	Test #A3 SVOCBT (FCR) 14034.33	PCDD/DF
14034-4026	R14-034	16-juil-14	Incinerateur	Test #A3 SVOCBT (C1) 14034.34	PCDD/DF
14034-4027	R14-034	16-juil-14	Incinerateur	Test #A3 SVOCBT (GR) 14034.35	PCDD/DF

Rapport des codes d'échantillons

Code échantillon	Projet	Date	Site de prélèvement	Test (description)	Paramètres
14034-4128	R14-034	28-juil-14	Incinérateur	Test #1 Filtre	Part., Métaux, Hg
14034-4129	R14-034	28-juil-14	Incinérateur	Test #1 Lav-sonde (ace)	Part., Métaux, Hg
14034-4130	R14-034	28-juil-14	Incinérateur	Test #1 Lav-sonde (HNO3 0.1N)	Métaux, Hg
14034-4131	R14-034	28-juil-14	Incinérateur	Test #1 Aliquot	HCl
14034-4132	R14-034	28-juil-14	Incinérateur	Test #1 Imp 1-2	Métaux, Hg
14034-4133	R14-034	28-juil-14	Incinérateur	Test #1 Imp 3-4	Métaux, Hg
14034-4134	R14-034	28-juil-14	Incinérateur	Test #1 Imp 5	Hg
14034-4135	R14-034	28-juil-14	Incinérateur	Test #1 Imp 6-7	Hg
14034-4136	R14-034	28-juil-14	Incinérateur	Test #2 Filtre	Part., Métaux, Hg
14034-4137	R14-034	28-juil-14	Incinérateur	Test #2 Lav-sonde (ace)	Part., Métaux, Hg
14034-4138	R14-034	28-juil-14	Incinérateur	Test #2 Lav-sonde (HNO3 0.1N)	Métaux, Hg
14034-4139	R14-034	28-juil-14	Incinérateur	Test #2 Aliquot	HCl
14034-4140	R14-034	28-juil-14	Incinérateur	Test #2 Imp 1-2	Métaux, Hg
14034-4141	R14-034	28-juil-14	Incinérateur	Test #2 Imp 3-4	Métaux, Hg
14034-4142	R14-034	28-juil-14	Incinérateur	Test #2 Imp 5	Hg
14034-4143	R14-034	28-juil-14	Incinérateur	Test #2 Imp 6-7	Hg

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Code échantillon	Projet	Date	Site de prélèvement	Test (description)	Paramètres
14034-4144	R14-034	28-juil-14	Incinérateur	Test #3 Filtre	Part., Métaux, Hg
14034-4145	R14-034	28-juil-14	Incinérateur	Test #3 Lav-sonde (ace)	Part., Métaux, Hg
14034-4146	R14-034	28-juil-14	Incinérateur	Test #3 Lav-sonde (HNO3 0.1N)	Métaux, Hg
14034-4147	R14-034	28-juil-14	Incinérateur	Test #3 Aliquot	HCl
14034-4148	R14-034	28-juil-14	Incinérateur	Test #3 Imp 1-2	Métaux, Hg
14034-4149	R14-034	28-juil-14	Incinérateur	Test #3 Imp 3-4	Métaux, Hg
14034-4150	R14-034	28-juil-14	Incinérateur	Test #3 Imp 5	Hg
14034-4151	R14-034	28-juil-14	Incinérateur	Test #3 Imp 6-7	Hg
14034-4152	R14-034	28-juil-14	Incinérateur	Blanc filtre	Métaux, Hg
14034-4153	R14-034	28-juil-14	Incinérateur	Blanc HNO3 0.1N	Métaux, Hg
14034-4154	R14-034	28-juil-14	Incinérateur	Blanc eau	HCl
14034-4155	R14-034	28-juil-14	Incinérateur	Blanc H2O2/HNO3	Métaux, Hg
14034-4156	R14-034	28-juil-14	Incinérateur	Blanc KMnO4/H2SO4	Hg

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Rapport des codes d'échantillons

Code échantillon	Projet	Date	Site de prélèvement	Test (description)	Paramètres
14034-4185	R14-034	29-juil-14	Incinérateur	Test #1 Ballon G-11	NOx
14034-4186	R14-034	29-juil-14	Incinérateur	Test #1 Ballon G-12	NOx
14034-4187	R14-034	29-juil-14	Incinérateur	Test #2 Ballon G-11	NOx
14034-4188	R14-034	29-juil-14	Incinérateur	Test #2 Ballon G-12	NOx

AGAT Laboratories

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

CLIENT NAME: EXOVA
1390 RUE HOCQUART
ST-BRUNO DE DE MONTARVILLE, QC J3V6E1
(450) 441-5880

ATTENTION TO: CHRISTIAN ST-PIERRE

PROJECT: R14-034

AGAT WORK ORDER: 14M848982

ULTRA TRACE REVIEWED BY: Philippe Morneau, chimiste

DATE REPORTED: 2014-06-18

VERSION*: 1

PAGES (INCLUDING COVER): 7

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

*NOTES

A1-52

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

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

Certificate of Analysis

AGAT WORK ORDER: 14M848982

PROJECT: R14-034

ATTENTION TO: CHRISTIAN ST-PIERRE

CLIENT NAME: EXOVA

SAMPLING SITE:

SAMPLED BY:

Dioxins & Furans - Air (Sampling Train - NATO 1988)

DATE RECEIVED: 2014-06-06 **DATE REPORTED: 2014-06-18**

		SAMPLE DESCRIPTION:		PROOF R14-034
		SAMPLE TYPE:		Liquid
		DATE SAMPLED:		2014-06-06
Parameter	Unit	G / S	RDL	5450041
2,3,7,8-TCDD (ppq)	pg		0.5	<0.5
1,2,3,7,8 PeCDD (ppq)	pg		0.5	<0.5
1,2,3,4,7,8 HxCDD (ppq)	pg		0.8	<0.8
1,2,3,6,7,8 HxCDD (ppq)	pg		0.8	<0.8
1,2,3,7,8,9 HxCDD (ppq)	pg		0.8	<0.8
1,2,3,4,6,7,8 HpCDD (ppq)	pg		1.5	<1.5
OCDD (ppq)	pg		1	<1
2,3,7,8 TCDF (ppq)	pg		0.4	<0.4
1,2,3,7,8 PeCDF (ppq)	pg		0.4	<0.4
2,3,4,7,8-PeCDF (ppq)	pg		0.4	<0.4
1,2,3,4,7,8 HxCDF (ppq)	pg		0.5	<0.5
1,2,3,6,7,8 HxCDF (ppq)	pg		0.5	<0.5
2,3,4,6,7,8-HxCDF (ppq)	pg		0.6	<0.6
1,2,3,7,8,9 HxCDF (ppq)	pg		1	<1
1,2,3,4,6,7,8 HpCDF (ppq)	pg		0.7	<0.7
1,2,3,4,7,8,9 HpCDF (ppq)	pg		1	<1
OCDF (ppq)	pg		1.5	<1.5
Total Tetrachlorodibenzodioxins	pg		0.5	<0.5
Total Pentachlorodibenzodioxins	pg		0.5	<0.5
Total Hexachlorodibenzodioxins	pg		0.8	1.3
Total Heptachlorodibenzodioxins	pg		1	1
Total PCDDs	pg		1.5	3
Total Tetrachlorodibenzofurans	pg		0.4	0.4
Total Pentachlorodibenzofurans	pg		0.4	<0.4
Total Hexachlorodibenzofurans	pg		1	<1
Total Heptachlorodibenzofurans	pg		1.5	<1.5
Total PCDFs	pg		1.5	<1.5
2,3,7,8-Tetra CDD (TEF 1.0)	TEQ			0

D
1
W

Certified By:

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 14M848982

PROJECT: R14-034

CLIENT NAME: EXOVA

ATTENTION TO: CHRISTIAN ST-PIERRE

SAMPLED BY:

SAMPLING SITE:

Dioxins & Furans - Air (Sampling Train - NATO 1988)

DATE RECEIVED: 2014-06-06

DATE REPORTED: 2014-06-18

		SAMPLE DESCRIPTION:		PROOF R14-034
		SAMPLE TYPE:		Liquid
		DATE SAMPLED:		2014-06-06
Parameter	Unit	G / S	RDL	5450041
1,2,3,7,8-Penta CDD (TEF 0.5)	TEQ			0
1,2,3,4,7,8-Hexa CDD (TEF 0.1)	TEQ			0
1,2,3,6,7,8-Hexa CDD (TEF 0.1)	TEQ			0
1,2,3,7,8,9-Hexa CDD (TEF 0.1)	TEQ			0
1,2,3,4,6,7,8-Hepta CDD (TEF 0.01)	TEQ			0
Octa CDD (TEF 0.001)	TEQ			0
2,3,7,8-Tetra CDF (TEF 0.1)	TEQ			0
1,2,3,7,8-Penta CDF (TEF 0.05)	TEQ			0
2,3,4,7,8-Penta CDF (TEF 0.5)	TEQ			0
1,2,3,4,7,8-Hexa CDF (TEF 0.1)	TEQ			0
1,2,3,6,7,8-Hexa CDF (TEF 0.1)	TEQ			0
2,3,4,6,7,8-Hexa CDF (TEF 0.1)	TEQ			0
1,2,3,7,8,9-Hexa CDF (TEF 0.1)	TEQ			0
1,2,3,4,6,7,8-Hepta CDF (TEF 0.01)	TEQ			0
1,2,3,4,7,8,9-Hepta CDF (TEF 0.01)	TEQ			0
Octa CDF (TEF 0.001)	TEQ			0
Total PCDDs & PCDFs (TEQ)				0

A-15-14

Certified By:

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 14M848982

PROJECT: R14-034

CLIENT NAME: EXOVA

ATTENTION TO: CHRISTIAN ST-PIERRE

SAMPLED BY:

SAMPLING SITE:

Dioxins & Furans - Air (Sampling Train - NATO 1988)

DATE RECEIVED: 2014-06-06

DATE REPORTED: 2014-06-18

		SAMPLE DESCRIPTION:	PROOF R14-034
		SAMPLE TYPE:	Liquid
		DATE SAMPLED:	2014-06-06
Surrogate	Unit	Acceptable Limits	5450041
13C-2378-TCDF	%	30-140	93
13C-12378-PeCDF	%	30-140	99
13C-23478-PeCDF	%	30-140	94
13C-123478-HxCDF	%	30-140	80
13C-123678-HxCDF	%	30-140	73
13C-234678-HxCDF	%	30-140	74
13C-123789-HxCDF	%	30-140	59
13C-1234678-HpCDF	%	30-140	100
13C-1234789-HpCDF	%	30-140	95
13C-2378-TCDD	%	30-140	75
13C-12378-PeCDD	%	30-140	86
13C-123478-HxCDD	%	30-140	81
13C-123678-HxCDD	%	30-140	74
13C-1234678-HxCDD	%	30-140	87
13C-OCDD	%	30-140	63

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

5450041 Le lab blank was subtracted from the sample results.
The results in Total pg correspond to the composite of all parts of the sampling train.

R1-55

Certified By:

AGAT Laboratories

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

Quality Assurance

CLIENT NAME: EXOVA
PROJECT: R14-034
SAMPLED BY:

AGAT WORK ORDER: 14M848982
ATTENTION TO: CHRISTIAN ST-PIERRE
SAMPLING SITE:

Ultra Trace Analysis

RPT Date: 2014-06-18			DUPLICATE			REFERENCE MATERIAL				METHOD BLANK			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Dioxins & Furans - Air (Sampling Train - NATO 1988)															
2,3,7,8-TCDD (ppq)	1	NA	NA	NA	0.0%	< 0.3	NA	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,7,8 PeCDD (ppq)	1	NA	NA	NA	0.0%	< 0.4	NA	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,4,7,8 HxCDD (ppq)	1	NA	NA	NA	0.0%	< 1	NA	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,6,7,8 HxCDD (ppq)	1	NA	NA	NA	0.0%	< 0.7	NA	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,7,8,9 HxCDD (ppq)	1	NA	NA	NA	0.0%	< 1	NA	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,4,6,7,8 HpCDD (ppq)	1	NA	NA	NA	0.0%	< 1.5	NA	70%	130%	NA	70%	130%	NA	70%	130%
OCDD (ppq)	1	NA	NA	NA	0.0%	5.7	NA	70%	130%	NA	70%	130%	NA	70%	130%
2,3,7,8 TCDF (ppq)	1	NA	NA	NA	0.0%	< 0.2	NA	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,7,8 PeCDF (ppq)	1	NA	NA	NA	0.0%	< 0.3	NA	70%	130%	NA	70%	130%	NA	70%	130%
2,3,4,7,8-PeCDF (ppq)	1	NA	NA	NA	0.0%	< 0.3	NA	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,4,7,8 HxCDF (ppq)	1	NA	NA	NA	0.0%	< 0.3	NA	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,6,7,8 HxCDF (ppq)	1	NA	NA	NA	0.0%	< 0.3	NA	70%	130%	NA	70%	130%	NA	70%	130%
2,3,4,6,7,8-HxCDF (ppq)	1	NA	NA	NA	0.0%	< 0.8	NA	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,7,8,9 HxCDF (ppq)	1	NA	NA	NA	0.0%	< 1	NA	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,4,6,7,8 HpCDF (ppq)	1	NA	NA	NA	0.0%	< 0.4	NA	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,4,7,8,9 HpCDF (ppq)	1	NA	NA	NA	0.0%	< 0.5	NA	70%	130%	NA	70%	130%	NA	70%	130%
OCDF (ppq)	1	NA	NA	NA	0.0%	< 1.5	NA	70%	130%	NA	70%	130%	NA	70%	130%

Certified By:

A1-56

AGAT Laboratories

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

Method Summary

CLIENT NAME: EXOVA

AGAT WORK ORDER: 14M848982

PROJECT: R14-034

ATTENTION TO: CHRISTIAN ST-PIERRE

SAMPLED BY:

SAMPLING SITE:

PARAMETER	DATE PREPARED	DATE ANALYZED	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Ultra Trace Analysis					
2,3,7,8-TCDD (ppq)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,7,8 PeCDD (ppq)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,7,8 HxCDD (ppq)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,6,7,8 HxCDD (ppq)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,7,8,9 HxCDD (ppq)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,6,7,8 HpCDD (ppq)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
OCDD (ppq)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
2,3,7,8 TCDF (ppq)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,7,8 PeCDF (ppq)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
2,3,4,7,8-PeCDF (ppq)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,7,8 HxCDF (ppq)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,6,7,8 HxCDF (ppq)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
2,3,4,6,7,8-HxCDF (ppq)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,7,8,9 HxCDF (ppq)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,6,7,8 HpCDF (ppq)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,7,8,9 HpCDF (ppq)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
OCDF (ppq)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Total Tetrachlorodibenzodioxins	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Total Pentachlorodibenzodioxins	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Total Hexachlorodibenzodioxins	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Total Heptachlorodibenzodioxins	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Total PCDDs	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Total Tetrachlorodibenzofurans	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Total Pentachlorodibenzofurans	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Total Hexachlorodibenzofurans	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Total Heptachlorodibenzofurans	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Total PCDFs	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
2,3,7,8-Tetra CDD (TEF 1.0)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,7,8-Penta CDD (TEF 0.5)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,7,8-Hexa CDD (TEF 0.1)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,6,7,8-Hexa CDD (TEF 0.1)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,7,8,9-Hexa CDD (TEF 0.1)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,6,7,8-Hepta CDD (TEF 0.01)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Octa CDD (TEF 0.001)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
2,3,7,8-Tetra CDF (TEF 0.1)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,7,8-Penta CDF (TEF 0.05)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
2,3,4,7,8-Penta CDF (TEF 0.5)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,7,8-Hexa CDF (TEF 0.1)	2014-06-13	2014-06-18	HR_151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,6,7,8-Hexa CDF (TEF 0.1)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
2,3,4,6,7,8-Hexa CDF (TEF 0.1)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,7,8,9-Hexa CDF (TEF 0.1)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,6,7,8-Hepta CDF (TEF 0.01)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,7,8,9-Hepta CDF (TEF 0.01)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Octa CDF (TEF 0.001)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Total PCDDs & PCDFs (TEQ)	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-2378-TCDF	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-12378-PeCDF	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-23478-PeCDF	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-123478-HxCDF	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS

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AGAT Laboratories

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

Method Summary

CLIENT NAME: EXOVA

AGAT WORK ORDER: 14M848982

PROJECT: R14-034

ATTENTION TO: CHRISTIAN ST-PIERRE

SAMPLED BY:

SAMPLING SITE:

PARAMETER	DATE PREPARED	DATE ANALYZED	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
13C-123678-HxCDF	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-234678-HxCDF	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-123789-HxCDF	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-1234678-HpCDF	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-1234789-HpCDF	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-2378-TCDD	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-12378-PeCDD	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-123478-HxCDD	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-123678-HxCDD	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-1234678-HxCDD	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-OCDD	2014-06-13	2014-06-18	HR-151-5400	EPA 1613/EPA Method 23	HRMS

A1-58

Exova Inc.
1390 Rue Hocquart
St-Bruno de Montarville
Québec
Canada
J3V 6E1

T : +1 (450) 441-5880
F : +1 (450) 441-4316
E : sales@exova.com
W: www.exova.com

Certificat d'analyses

Agnico-Eagle Mines Ltd, Meadowbank Division

Baker Lake, Nunavut

Stack sampling

Project R14-034

Samples	Laboratory Number	Particle Matters (g)
Detection limit		0.00004
Incinerator		
Test #1 Filter	14034-4128	0.07067
Front wash	14034-4129	0.02686
Total		0.09753
Test #2 Filter	14034-4136	0.08538
Front wash	14034-4137	0.03818
Total		0.12356
Test #3 Filter	14034-4144	0.05579
Front wash	14034-4145	0.03158
Total		0.08737
Front wash blank (has not been subtracted from results)		0.00205

Reception date : July 28th, 2014
Date of analysis : July 29th, 2014
Report date: July 30th, 2014
Reference method : A-01
File number: R14034-01 version 1

CHIMISTE Christian St-Pierre 2003-107 QUÉBEC

Christian St-Pierre, B. Sc. Chemist

A1-59

Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
W: www.exova.com

Certificate of Analysis

Request number: **14-611972**

Date Received: 2014-07-29

Date Certificate Issued: 2014-08-01

Certificate Version: 1

☑ Official Certificate of Analysis

☐ Preliminary Certificate of Analysis

Client

Exova

1390 rue Hocquart
St-Bruno, Québec, Canada
J3V 6E1
Telephone : (450) 441-5880
Fax : (450) 441-4316

P.O. Number	Your project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

Comments

This certificate replaces and invalidates the preliminary version of the certificate (COA 609943).

This version replaces and cancels all earlier version.

NA : Information Not Available

A1-6D

Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
W: www.exova.com

Certificate of Analysis

Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

	Sample(s)			
Lab. No.	**2635988**	**2635994**	**2636004**	**2636008**
Your Reference	14034-4134 (15mL)+4135 (263mL)	14034-4142 (20mL)+4143 (281mL)	14034-4150 (12mL)+4151 (304mL)	14034-4156 (100mL)
Matrix	Air	Air	Air	Air
Sampled by	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
Site sampled	Meadowbank	Meadowbank	Meadowbank	Meadowbank
Date sampled	2014-07-11	2014-07-12	2014-07-13	2014-07-13
Date received	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Parameter(s) / Method / Reference				
Mercury (subcontract) — Preparation	-	-	-	-
(Analysis done by sub-contracting) — Analysis	-	-	-	-
Sequential No.	NA	NA	NA	NA
Mercury	<Annexe>	<Annexe>	<Annexe>	<Annexe>

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
W: www.exova.com

Certificate of Analysis

Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

Sample(s)

Lab. No.	2635980	2635991	2635996	2636006
Your Reference	14034-4131 (278mL) #1	14034-4139 (321mL) #2	14034-4147 (326mL) #3	14034-4154 (128mL) Blanc
Matrix	Air	Air	Air	Air
Sampled by	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
Site sampled	Meadowbank	Meadowbank	Meadowbank	Meadowbank
Date sampled	2014-07-11	2014-07-12	2014-07-13	2014-07-13
Date received	2014-07-29	2014-07-29	2014-07-29	2014-07-29

Parameter(s) / Method / Reference					
Chlorides (IC)	Preparation	2014-07-30	2014-07-30	2014-07-30	2014-07-30
Anions by ion chromatography. (Non Accredited) E-A-EN-EN-CHI-PC-MD028 (REF MA300-IONS 1.1 CEAEQ)	Analysis	2014-07-30	2014-07-30	2014-07-30	2014-07-30
	Sequential No.	471987	471987	471987	471987
Chloride	µg	79800	138000	96200	< 1280

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
W: www.exova.com

Certificate of Analysis

Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

	Sample(s)			
Lab. No.	**2635985**	**2635986**	**2635992**	**2635993**
Your Reference	14034-4132 (287mL) #1	14034-4133 (246mL)	14034-4140 (332mL) #2	14034-4141 (251mL)
Matrix	Air	Air	Air	Air
Sampled by	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
Site sampled	Meadowbank Imp 1-2	Meadowbank Imp 3.4	Meadowbank Imp 1-2	Meadowbank Imp 3-4
Date sampled	2014-07-11	2014-07-11	2014-07-12	2014-07-12
Date received	2014-07-29	2014-07-29	2014-07-29	2014-07-29

Parameter(s) / Method / Reference					
Aluminum (Al)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Aluminum	µg	< 29	26	< 33	< 25
Antimony (Sb)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Antimony	µg	< 3	< 2	< 3	< 3
Arsenic (As)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Arsenic	µg	< 3	< 2	< 3	< 3
Baryum (Ba)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Barium	µg	< 29	< 25	< 33	< 25
Beryllium (Be)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Beryllium	µg	< 3	< 2	< 3	< 3
Bismuth (Bi)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Bismuth	µg	< 3	< 2	< 3	< 3
Boron (B)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Boron	µg	< 57	< 49	< 66	< 50

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
W: www.exova.com

Certificate of Analysis

Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

	Sample(s)			
Lab. No.	**2635985**	**2635986**	**2635992**	**2635993**
Your Reference	14034-4132 (287mL)	14034-4133 (246mL)	14034-4140 (332mL)	14034-4141 (251mL)
	#1		#2	
Matrix	Air	Air	Air	Air
Sampled by	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
Site sampled	Meadowbank	Meadowbank	Meadowbank	Meadowbank
	Imp 1-2	Imp 3-4	Imp 1-2	Imp 3-4
Date sampled	2014-07-11	2014-07-11	2014-07-12	2014-07-12
Date received	2014-07-29	2014-07-29	2014-07-29	2014-07-29

Parameter(s) / Method Reference					
Cadmium (Cd)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Cadmium	µg	< 1.4	< 1.2	< 1.7	< 1.3
Calcium (Ca)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Calcium	µg	78	180	< 66	175
Chromium (Cr)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Chromium	µg	< 3	< 2	< 3	< 3
Cobalt (Co)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Cobalt	µg	< 3	< 2	< 3	< 3
Copper (Cu)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Copper	µg	< 3	< 2	< 3	< 3
Iron (Fe)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Iron	µg	< 144	< 123	< 166	< 126
Lead (Pb)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Lead	µg	< 3	< 2	< 3	< 3

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
W: www.exova.com

Certificate of Analysis

Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

	Sample(s)			
Lab. No.	**2635985**	**2635986**	**2635992**	**2635993**
Your Reference	14034-4132 (287mL)	14034-4133 (246mL)	14034-4140 (332mL)	14034-4141 (251mL)
	#1		#2	
Matrix	Air	Air	Air	Air
Sampled by	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
Site sampled	Meadowbank	Meadowbank	Meadowbank	Meadowbank
	Imp 1-2	Imp 3-4	Imp 1-2	Imp 3-4
Date sampled	2014-07-11	2014-07-11	2014-07-12	2014-07-12
Date received	2014-07-29	2014-07-29	2014-07-29	2014-07-29

Parameter(s) / Method / Reference					
Lithium (Li)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911	471911
Lithium	µg	< 3	< 2	< 3	< 3
Magnesium (Mg)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911	471911
Magnesium	µg	6	39	5	34
Manganese (Mn)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911	471911
Manganese	µg	< 3	211	< 3	6
Mercury (Hg)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911	471911
Mercury	µg	< 0.3	< 0.2	< 0.3	< 0.3
Molybdenum (Mo)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911	471911
Molybdenum	µg	< 3	< 2	< 3	< 3
Nickel (Ni)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911	471911
Nickel	µg	< 3	< 2	< 3	< 3
Phosphorus (P)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911	471911
Phosphorus	µg	< 287	< 246	< 332	< 251

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E: ventes@exova.com
W: www.exova.com

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Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

Sample(s)

Lab. No.	2635985	2635986	2635992	2635993
Your Reference	14034-4132 (287mL)	14034-4133 (246mL)	14034-4140 (332mL)	14034-4141 (251mL)
		#1		#2
Matrix	Air	Air	Air	Air
Sampled by	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
Site sampled	Meadowbank	Meadowbank	Meadowbank	Meadowbank
	Imp 1-2	Imp 3-4	Imp 1-2	Imp 3-4
Date sampled	2014-07-11	2014-07-11	2014-07-12	2014-07-12
Date received	2014-07-29	2014-07-29	2014-07-29	2014-07-29

Parameter(s) / Method / Reference					
Potassium (K)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911	471911
Potassium	µg	< 1440	< 1230	< 1660	< 1260
Selenium (Se)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911	471911
Selenium	µg	< 3	< 2	< 3	< 3
Silicon extractable (Si)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911	471911
Silicium	µg	< 144	< 123	< 166	< 126
Silver (Ag)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911	471911
Silver	µg	< 1.4	< 1.2	< 1.7	< 1.3
Sodium (Na)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911	471911
Sodium	µg	< 1440	< 1230	< 1660	< 1260
Strontium (Sr)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911	471911
Strontium	µg	< 3	< 2	< 3	< 3
Tellurium (Te)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911	471911
Tellurium	µg	< 3	< 2	< 3	< 3

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
W: www.exova.com

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Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

	Sample(s)			
Lab. No.	**2635985**	**2635986**	**2635992**	**2635993**
Your Reference	14034-4132 (287mL)	14034-4133 (246mL)	14034-4140 (332mL)	14034-4141 (251mL)
	#1		#2	
Matrix	Air	Air	Air	Air
Sampled by	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
Site sampled	Meadowbank	Meadowbank	Meadowbank	Meadowbank
	Imp 1-2	Imp 3-4	Imp 1-2	Imp 3-4
Date sampled	2014-07-11	2014-07-11	2014-07-12	2014-07-12
Date received	2014-07-29	2014-07-29	2014-07-29	2014-07-29

Parameter(s) / Method / Reference					
Thallium (Tl)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Thallium	µg	< 3	< 2	< 3	< 3
Tin (Sn)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Tin	µg	< 3	21	< 3	24
Titanium (Ti)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Titanium	µg	< 3	< 2	< 3	< 3
Uranium (U)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Uranium	µg	< 3	< 2	< 3	< 3
Vanadium (V)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Vanadium	µg	< 3	< 2	< 3	< 3
Zinc (Zn)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911	471911
Zinc	µg	< 20	< 17	< 23	< 18

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237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
W: www.exova.com

Certificate of Analysis

Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

Sample(s)

Lab. No.	2635997	2635998	2636007
Your Reference	14034-4148 (336mL)	14034-4149 (260mL)	14034-4155 (100mL)
		#3	Blank
Matrix	Air	Air	Air
Sampled by	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
Site sampled	Meadowbank	Meadowbank	Meadowbank
	Imp 1-2	Imp 3-4	
Date sampled	2014-07-13	2014-07-13	2014-07-13
Date received	2014-07-29	2014-07-29	2014-07-29

Parameter(s) / Method / Reference				
Aluminum (Al)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Aluminum	µg	< 34	< 26	< 10
Antimony (Sb)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Antimony	µg	< 3	< 3	< 1
Arsenic (As)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Arsenic	µg	< 3	< 3	< 1
Baryum (Ba)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Barium	µg	< 34	< 26	< 10
Beryllium (Be)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Beryllium	µg	< 3	< 3	< 1
Bismuth (Bi)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Bismuth	µg	< 3	< 3	< 1
Boron (B)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Boron	µg	< 67	< 52	< 20

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237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
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Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

	Sample(s)		
Lab. No.	**2635997**	**2635998**	**2636007**
Your Reference	14034-4148 (336mL)	14034-4149 (260mL) #3	14034-4155 (100mL) Blank
Matrix	Air	Air	Air
Sampled by	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
Site sampled	Meadowbank Imp 1-2	Meadowbank Imp 3-4	Meadowbank
Date sampled	2014-07-13	2014-07-13	2014-07-13
Date received	2014-07-29	2014-07-29	2014-07-29

Parameter(s) / Method / Reference				
Cadmium (Cd)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Cadmium	µg	< 1.7	< 1.3	< 0.5
Calcium (Ca)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Calcium	µg	< 67	145	< 20
Chromium (Cr)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Chromium	µg	< 3	< 3	< 1
Cobalt (Co)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Cobalt	µg	< 3	< 3	< 1
Copper (Cu)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Copper	µg	< 3	< 3	< 1
Iron (Fe)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Iron	µg	< 168	< 130	< 50
Lead (Pb)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Lead	µg	< 3	< 3	< 1

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
W: www.exova.com

Certificate of Analysis

Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

	Sample(s)		
Lab. No.	**2635997**	**2635998**	**2636007**
Your Reference	14034-4148 (336mL)	14034-4149 (260mL)	14034-4155 (100mL)
	# 3		Blank
Matrix	Air	Air	Air
Sampled by	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
Site sampled	Meadowbank	Meadowbank	Meadowbank
	Imp 1-2	Imp 3-4	
Date sampled	2014-07-13	2014-07-13	2014-07-13
Date received	2014-07-29	2014-07-29	2014-07-29

Parameter(s) / Method / Reference				
Lithium (Li)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911
Lithium	µg	< 3	< 3	< 1
Magnesium (Mg)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911
Magnesium	µg	6	33	< 1
Manganese (Mn)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911
Manganese	µg	97	5	< 1
Mercury (Hg)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911
Mercury	µg	< 0.3	< 0.3	< 0.1
Molybdenum (Mo)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911
Molybdenum	µg	< 3	< 3	< 1
Nickel (Ni)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911
Nickel	µg	< 3	< 3	< 1
Phosphorus (P)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471911	471911	471911
Phosphorus	µg	< 336	< 260	< 100

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
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Certificate of Analysis

Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

	Sample(s)		
Lab. No.	**2635997**	**2635998**	**2636007**
Your Reference	14034-4148 (336mL)	14034-4149 (260mL)	14034-4155 (100mL)
		#3	Blank
Matrix	Air	Air	Air
Sampled by	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
Site sampled	Meadowbank	Meadowbank	Meadowbank
	Imp 1-2	Imp 3-4	
Date sampled	2014-07-13	2014-07-13	2014-07-13
Date received	2014-07-29	2014-07-29	2014-07-29

Parameter(s) / Method / Reference				
Potassium (K)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Potassium	µg	< 1680	< 1300	< 500
Selenium (Se)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Selenium	µg	< 3	< 3	< 1
Silicon extractable (Si)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Silicium	µg	< 168	< 130	< 50
Silver (Ag)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Silver	µg	< 1.7	< 1.3	< 0.5
Sodium (Na)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Sodium	µg	< 1680	< 1300	< 500
Strontium (Sr)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Strontium	µg	< 3	< 3	< 1
Tellurium (Te)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Tellurium	µg	< 3	< 3	< 1

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
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Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

	Sample(s)		
Lab. No.	**2635997**	**2635998**	**2636007**
Your Reference	14034-4148 (336mL) #3	14034-4149 (260mL)	14034-4155 (100mL) Blank
Matrix	Air	Air	Air
Sampled by	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
Site sampled	Meadowbank Imp 1-2	Meadowbank Imp 3-4	Meadowbank
Date sampled	2014-07-13	2014-07-13	2014-07-13
Date received	2014-07-29	2014-07-29	2014-07-29

Parameter(s) / Method / Reference				
Thallium (Tl)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Thallium	µg	< 3	< 3	< 1
Tin (Sn)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Tin	µg	< 3	22	3
Titanium (Ti)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Titanium	µg	< 3	< 3	< 1
Uranium (U)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Uranium	µg	< 3	< 3	< 1
Vanadium (V)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Vanadium	µg	< 3	< 3	< 1
Zinc (Zn)	Preparation	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471911	471911	471911
Zinc	µg	< 24	< 18	< 7

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
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Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

	Sample(s)			
Lab. No.	**2635977**	**2635989**	**2635995**	**2636005**
Your Reference	14034-4128+4129+4130 #1	14034-4136+4137+4138 #2	14034-4144+4145+4146 #3	14034-4152+4153 Blank
Matrix	Air	Air	Air	Air
Sampled by	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
Site sampled	Meadowbank F+P	Meadowbank F+P	Meadowbank F+P	Meadowbank F+P
Date sampled	2014-07-11	2014-07-12	2014-07-13	2014-07-13
Date received	2014-07-29	2014-07-29	2014-07-29	2014-07-29

Parameter(s) / Method / Reference					
Aluminum (Al)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Aluminum	µg	238	77	62	< 10
Antimony (Sb)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Antimony	µg	22.9	12.3	15.3	< 0.5
Arsenic (As)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Arsenic	µg	3.7	2.3	2.5	< 0.5
Baryum (Ba)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Barium	µg	5.6	3.5	2.3	< 0.5
Beryllium (Be)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Beryllium	µg	< 0.2	< 0.2	< 0.2	< 0.2
Bismuth (Bi)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Bismuth	µg	< 5	5	< 5	< 5
Boron (B)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Boron	µg	< 20	79	< 20	< 20

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
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Certificate of Analysis

Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

	Sample(s)			
Lab. No.	**2635977**	**2635989**	**2635995**	**2636005**
Your Reference	14034-4128+4129+4130 #1	14034-4136+4137+4138 #2	14034-4144+4145+4146 #3	14034-4152+4153 Blank
Matrix	Air	Air	Air	Air
Sampled by	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
Site sampled	Meadowbank F+P	Meadowbank F+P	Meadowbank F+P	Meadowbank F+P
Date sampled	2014-07-11	2014-07-12	2014-07-13	2014-07-13
Date received	2014-07-29	2014-07-29	2014-07-29	2014-07-29

Parameter(s) / Method / Reference					
Cadmium (Cd)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471909	471909	471909	471909
Cadmium	µg	3.7	4.0	5.2	< 0.5
Calcium (Ca)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471909	471909	471909	471909
Calcium	µg	630	611	329	61
Chromium (Cr)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471909	471909	471909	471909
Chromium	µg	17.7	19.3	22.7	< 0.5
Cobalt (Co)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471909	471909	471909	471909
Cobalt	µg	17.0	5.7	1.9	0.6
Copper (Cu)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471909	471909	471909	471909
Copper	µg	57.2	67.7	52.8	< 0.5
Iron (Fe)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471909	471909	471909	471909
Iron	µg	190	138	113	3.6
Lead (Pb)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Sequential No.	471909	471909	471909	471909
Lead	µg	220	277	336	< 0.5

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

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Certificate of Analysis

Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

	Sample(s)			
Lab. No.	**2635977**	**2635989**	**2635995**	**2636005**
Your Reference	14034-4128+4129+4130 #1	14034-4136+4137+4138 #2	14034-4144+4145+4146 #3	14034-4152+4153 Blank
Matrix	Air	Air	Air	Air
Sampled by	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
Site sampled	Meadowbank F+P	Meadowbank F+P	Meadowbank F+P	Meadowbank F+P
Date sampled	2014-07-11	2014-07-12	2014-07-13	2014-07-13
Date received	2014-07-29	2014-07-29	2014-07-29	2014-07-29

Parameter(s) Method Reference					
Lithium (Li)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Lithium	µg	9.7	11.7	9.3	< 0.5
Magnesium (Mg)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Magnesium	µg	157	68.9	65.6	4.1
Manganese (Mn)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Manganese	µg	5.2	6.5	4.6	0.4
Mercury (Hg)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Mercury	µg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum (Mo)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Molybdenum	µg	4	5	4	< 1
Nickel (Ni)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Nickel	µg	2.7	2.6	2.0	< 0.5
Phosphorus (P)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Phosphorus	µg	< 100	< 100	< 100	< 100

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E: ventes@exova.com
W: www.exova.com

Certificate of Analysis

Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

	Lab. No.	2635977	2635989	2635995	2636005
	Your Reference	14034-4128+4129+4130 #1	14034-4136+4137+4138 #2	14034-4144+4145+4146 #3	14034-4152+4153 Blank
	Matrix	Air	Air	Air	Air
	Sampled by	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
	Site sampled	Meadowbank F+P	Meadowbank F+P	Meadowbank F+P	Meadowbank F+P
	Date sampled	2014-07-11	2014-07-12	2014-07-13	2014-07-13
	Date received	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Parameter(s) Method Reference					
Potassium (K)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Potassium	µg	21600	28900	23600	< 25
Selenium (Se)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Selenium	µg	0.9	1.2	1.5	< 0.5
Silicon (Si)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Silicon	µg	305	191	142	37
Silver (Ag)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Silver	µg	2.5	4.4	1.7	< 0.5
Sodium (Na)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Sodium	µg	11200	18900	13000	< 25
Strontium (Sr)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Strontium	µg	2.1	1.9	1.1	< 0.5
Tellurium (Te)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Tellurium	µg	< 1	< 1	< 1	< 1

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
W: www.exova.com

Certificate of Analysis

Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

	Lab. No.	Sample(s) 2635977	2635989	2635995	2636005
	Your Reference	14034-4128+4129+4130 #1	14034-4136+4137+4138 #2	14034-4144+4145+4146 #3	14034-4152+4153 Blank
	Matrix	Air	Air	Air	Air
	Sampled by	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
	Site sampled	Meadowbank F+P	Meadowbank F+P	Meadowbank F+P	Meadowbank F+P
	Date sampled	2014-07-11	2014-07-12	2014-07-13	2014-07-13
	Date received	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Parameter(s) Method Reference					
Thallium (Tl)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Thallium	µg	< 3	< 3	< 3	< 3
Tin (Sn)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Tin	µg	38.8	68.9	49.0	< 0.5
Titanium (Ti)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Titanium	µg	11.2	3.2	3.6	< 0.5
Uranium (U)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Uranium	µg	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium (V)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Vanadium (V)	µg	0.5	0.3	0.5	< 0.1
Zinc (Zn)	Preparation	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Metals by ICP (not accredited) E-A-EN-EN-CHI-PC-MD017 (REF:MA.200-Mét1.2,CEAEQ)	Analysis	2014-07-29	2014-07-29	2014-07-29	2014-07-29
	Sequential No.	471909	471909	471909	471909
Zinc	µg	540	513	532	0.8

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
W: www.exova.com

Certificate of Analysis

Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

	Sample(s)			
Lab. No.	**2635980**	**2635985**	**2635986**	**2635991**
Your Reference	14034-4131 (278mL)	14034-4132 (287mL)	14034-4133 (246mL)	14034-4139 (321mL)
Matrix	Air	Air	Air	Air
Sampled by	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
Site sampled	Meadowbank	Meadowbank	Meadowbank	Meadowbank
Date sampled	2014-07-11	2014-07-11	2014-07-11	2014-07-12
Date received	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Parameter(s) / Method Reference				
Volume	Preparation	-	-	-	-
Not applicable	Analysis	-	-	-	-
	Sequential No.	NA	NA	NA	NA
Volume	mL	278	287	246	321

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237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
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Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

	Sample(s)			
Lab. No.	**2635992**	**2635993**	**2635996**	**2635997**
Your Reference	14034-4140 (332mL)	14034-4141 (251mL)	14034-4147 (326mL)	14034-4148 (336mL)
Matrix	Air	Air	Air	Air
Sampled by	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
Site sampled	Meadowbank	Meadowbank	Meadowbank	Meadowbank
Date sampled	2014-07-12	2014-07-12	2014-07-13	2014-07-13
Date received	2014-07-29	2014-07-29	2014-07-29	2014-07-29
Parameter(s) / Method Reference				
Volume	Preparation	-	-	-	-
Not applicable	Analysis	-	-	-	-
	Sequential No.	NA	NA	NA	NA
Volume	mL	332	251	321	336

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237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
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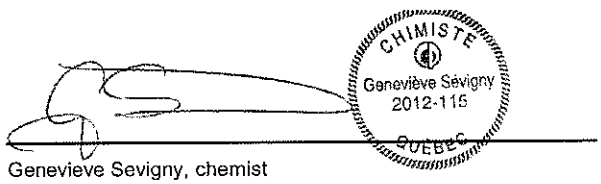
Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

		Sample(s)		
Lab. No.		**2635998**	**2636006**	**2636007**
Your Reference		14034-4149 (260mL)	14034-4154 (128mL)	14034-4155 (100mL)
Matrix		Air	Air	Air
Sampled by		Exova St-Bruno	Exova St-Bruno	Exova St-Bruno
Site sampled		Meadowbank	Meadowbank	Meadowbank
Date sampled		2014-07-13	2014-07-13	2014-07-13
Date received		2014-07-29	2014-07-29	2014-07-29
Parameter(s) Method Reference				
Volume	Preparation	-	-	-
Not applicable	Analysis	-	-	-
	Sequential No.	NA	NA	NA
Volume	mL	260	128	100

Note 1: Results and comments, if any, relate only to samples submitted for analysis at the Pointe-Claire laboratory.



Genevieve Sevigny, chemist

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
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Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

Quality Control Results (CQ)

Parameters (Sequential ID No.)	Units	RDL	Blank	Certified Control Result	Certified Control Expected Range
Chlorides (IC)					
Sequential ID No.: 471987					
Chloride	µg	< 100	< 100	479	446 - 604
Silver (Ag)					
Sequential ID No.: 471911					
Silver	µg	< 0.5	< 0.5	103	80 - 120
Silver (Ag)					
Sequential ID No.: 471909					
Silver	µg	< 0.5	< 0.5	NA	NA
Aluminum (Al)					
Sequential ID No.: 471911					
Aluminum	µg	< 10	< 10	101	80 - 120
Aluminum (Al)					
Sequential ID No.: 471909					
Aluminum	µg	< 10	< 10	NA	NA
Arsenic (As)					
Sequential ID No.: 471911					
Arsenic	µg	< 1	< 1	91	80 - 120
Arsenic (As)					
Sequential ID No.: 471909					
Arsenic	µg	< 0.5	< 0.5	NA	NA
Baryum (Ba)					
Sequential ID No.: 471911					
Barium	µg	< 10	< 10	105	80 - 120
Baryum (Ba)					
Sequential ID No.: 471909					
Barium	µg	< 0.5	< 0.5	NA	NA
Boron (B)					
Sequential ID No.: 471911					
Boron	µg	< 20	< 20	99	80 - 120
Beryllium (Be)					
Sequential ID No.: 471911					
Beryllium	µg	< 1	< 1	81	80 - 120
Beryllium (Be)					
Sequential ID No.: 471909					
Beryllium	µg	< 0.2	< 0.2	NA	NA

RDL : Reported Detection Limit

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237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
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Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

Quality Control Results (CQ)

Parameters (Sequential ID No.)	Units	RDL	Blank	Certified Control Result	Certified Control Expected Range
Boron (B) Sequential ID No.: 471909					
Boron	µg	< 20	< 20	NA	NA
Bismuth (Bi) Sequential ID No.: 471911					
Bismuth	µg	< 1	< 1	103	80 - 120
Bismuth (Bi) Sequential ID No.: 471909					
Bismuth	µg	< 5	< 5	NA	NA
Calcium (Ca) Sequential ID No.: 471911					
Calcium	µg	< 20	< 20	507	400 - 600
Calcium (Ca) Sequential ID No.: 471909					
Calcium	µg	< 1	< 1	NA	NA
Cadmium (Cd) Sequential ID No.: 471911					
Cadmium	µg	< 0.5	< 0.5	93.9	80 - 120
Cadmium (Cd) Sequential ID No.: 471909					
Cadmium	µg	< 0.5	< 0.5	NA	NA
Cobalt (Co) Sequential ID No.: 471911					
Cobalt	µg	< 1	< 1	91	80 - 120
Cobalt (Co) Sequential ID No.: 471909					
Cobalt	µg	< 0.5	< 0.5	NA	NA
Chromium (Cr) Sequential ID No.: 471911					
Chromium	µg	< 1	< 1	86	80 - 120
Chromium (Cr) Sequential ID No.: 471909					
Chromium	µg	< 0.5	< 0.5	NA	NA
Copper (Cu) Sequential ID No.: 471911					
Copper	µg	< 1	< 1	90	80 - 120

RDL : Reported Detection Limit

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237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
W: www.exova.com

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Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

Quality Control Results (CQ)

Parameters (Sequential ID No.)	Units	RDL	Blank	Certified Control Result	Certified Control Expected Range
Copper (Cu) Sequential ID No.: 471909					
Copper	µg	< 0.5	< 0.5	NA	NA
Iron (Fe) Sequential ID No.: 471911					
Iron	µg	< 50	< 50	98	80 - 120
Iron (Fe) Sequential ID No.: 471909					
Iron	µg	< 0.5	< 0.5	NA	NA
Mercury (Hg) Sequential ID No.: 471911					
Mercury	µg	< 0.1	< 0.1	4.8	4 - 6
Mercury (Hg) Sequential ID No.: 471909					
Mercury	µg	< 0.1	< 0.1	NA	NA
Potassium (K) Sequential ID No.: 471911					
Potassium	µg	< 500	< 500	491	400 - 600
Potassium (K) Sequential ID No.: 471909					
Potassium	µg	< 25	< 25	NA	NA
Lithium (Li) Sequential ID No.: 471911					
Lithium	µg	< 1	< 1	81	80 - 120
Lithium (Li) Sequential ID No.: 471909					
Lithium	µg	< 0.5	< 0.5	NA	NA
Magnesium (Mg) Sequential ID No.: 471911					
Magnesium	µg	< 1	< 1	506	400 - 600
Magnesium (Mg) Sequential ID No.: 471909					
Magnesium	µg	< 0.5	< 0.5	NA	NA
Manganese (Mn) Sequential ID No.: 471911					
Manganese	µg	< 1	< 1	85	80 - 120

RDL : Reported Detection Limit

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237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
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Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

Quality Control Results (CQ)

Parameters (Sequential ID No.)	Units	RDL	Blank	Certified Control Result	Certified Control Expected Range
Manganese (Mn) Sequential ID No.: 471909					
Manganese	µg	< 0.25	< 0.3	NA	NA
Molybdenum (Mo) Sequential ID No.: 471911					
Molybdenum	µg	< 1	< 1	98	80 - 120
Molybdenum (Mo) Sequential ID No.: 471909					
Molybdenum	µg	< 1	< 1	NA	NA
Sodium (Na) Sequential ID No.: 471911					
Sodium	µg	< 500	< 500	494	400 - 600
Sodium (Na) Sequential ID No.: 471909					
Sodium	µg	< 25	< 25	NA	NA
Nickel (Ni) Sequential ID No.: 471911					
Nickel	µg	< 1	< 1	88	80 - 120
Nickel (Ni) Sequential ID No.: 471909					
Nickel	µg	< 0.5	< 0.5	NA	NA
Phosphorus (P) Sequential ID No.: 471911					
Phosphorus	µg	< 100	< 100	98	80 - 120
Lead (Pb) Sequential ID No.: 471911					
Lead	µg	< 1	< 1	98	80 - 120
Lead (Pb) Sequential ID No.: 471909					
Lead	µg	< 0.5	< 0.5	NA	NA
Phosphorus (P) Sequential ID No.: 471909					
Phosphorus	µg	< 100	< 100	NA	NA
Antimony (Sb) Sequential ID No.: 471911					

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
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Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

Quality Control Results (CQ)

Parameters (Sequential ID No.)	Units	RDL	Blank	Certified Control Result	Certified Control Expected Range
Antimony	µg	< 1	< 1	95	80 - 120
Antimony (Sb) Sequential ID No.: 471909					
Antimony	µg	< 0.5	< 0.5	NA	NA
Selenium (Se) Sequential ID No.: 471911					
Selenium	µg	< 1	< 1	91	80 - 120
Selenium (Se) Sequential ID No.: 471909					
Selenium	µg	< 0.5	< 0.5	NA	NA
Silicon extractable (Si) Sequential ID No.: 471911					
Silicium	µg	< 50	< 50	486	400 - 600
Silicon (Si) Sequential ID No.: 471909					
Silicon	µg	< 1	< 1	NA	NA
Tin (Sn) Sequential ID No.: 471911					
Tin	µg	< 1	< 1	86	80 - 120
Tin (Sn) Sequential ID No.: 471909					
Tin	µg	< 0.5	< 0.5	NA	NA
Strontium (Sr) Sequential ID No.: 471911					
Strontium	µg	< 1	< 1	105	80 - 120
Strontium (Sr) Sequential ID No.: 471909					
Strontium	µg	< 0.5	< 0.5	NA	NA
Tellurium (Te) Sequential ID No.: 471911					
Tellurium	µg	< 1	< 1	85	80 - 120
Tellurium (Te) Sequential ID No.: 471909					
Tellurium	µg	< 1	< 1	NA	NA

RDL : Reported Detection Limit

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
F : +1 (418) 878-7185
E : ventes@exova.com
W: www.exova.com

Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
F : +1 (514) 697-2090
E : ventes@exova.com
W: www.exova.com

Certificat d'analyses

Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

Quality Control Results (CQ)

Parameters (Sequential ID No.)	Units	RDL	Blank	Certified Control Result	Certified Control Expected Range
Titanium (Ti) Sequential ID No.: 471911					
Titanium	µg	< 1	< 1	93	80 - 120
Titanium (Ti) Sequential ID No.: 471909					
Titanium	µg	< 0.5	< 0.5	NA	NA
Thallium (Tl) Sequential ID No.: 471911					
Thallium	µg	< 1	< 1	102	80 - 120
Thallium (Tl) Sequential ID No.: 471909					
Thallium	µg	< 2.5	< 3	NA	NA
Uranium (U) Sequential ID No.: 471911					
Uranium	µg	< 1	< 1	93	80 - 120
Uranium (U) Sequential ID No.: 471909					
Uranium	µg	< 0.5	< 0.5	NA	NA
Vanadium (V) Sequential ID No.: 471911					
Vanadium	µg	< 1	< 1	88	80 - 120
Vanadium (V) Sequential ID No.: 471909					
Vanadium (V)	µg	< 0.1	< 0.1	NA	NA
Zinc (Zn) Sequential ID No.: 471911					
Zinc	µg	< 7	< 7	91	80 - 120
Zinc (Zn) Sequential ID No.: 471909					
Zinc	µg	< 0.5	< 0.5	NA	NA

Comments

RDL : Reported Detection Limit

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

Sans Frais: +1 (866) 365-2310
T : +1 (418) 878-4927
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Exova
121 Boulevard Hymus
Pointe-Claire
Québec
Canada
H9R 1E6

T : +1 (514) 697-3273
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Certificat d'analyses

Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

Quality Control Results - Part 2

Parameters (Sequential ID No.)	Units	Duplicate Value 1	Duplicate Value 2	Duplicate Difference (%)
Aluminum (Al)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Aluminum	µg	< 29	< 29	-
Antimony (Sb)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Antimony	µg	< 3	< 3	-
Arsenic (As)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Arsenic	µg	< 3	< 3	-
Baryum (Ba)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Barium	µg	< 29	< 29	-
Beryllium (Be)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Beryllium	µg	< 3	< 3	-
Bismuth (Bi)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Bismuth	µg	< 3	< 3	-
Boron (B)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Boron	µg	< 57	< 57	-
Cadmium (Cd)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Cadmium	µg	< 1.4	< 1.4	-
Calcium (Ca)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Calcium	µg	78	76	2.6
Chlorides (IC)				
Sequential ID No: 471987	(Sample no)		(2635980)	
Chloride	µg	79800	82300	3.1
Chromium (Cr)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Chromium	µg	< 3	< 3	-

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Québec
Canada
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Certificat d'analyses

Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

Quality Control Results - Part 2

Parameters (Sequential ID No.)	Units	Duplicate Value 1	Duplicate Value 2	Duplicate Difference (%)
Cobalt (Co)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Cobalt	µg	< 3	< 3	-
Copper (Cu)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Copper	µg	< 3	< 3	-
Iron (Fe)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Iron	µg	< 144	< 144	-
Lead (Pb)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Lead	µg	< 3	< 3	-
Lithium (Li)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Lithium	µg	< 3	< 3	-
Magnesium (Mg)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Magnesium	µg	6	5	18.2
Manganese (Mn)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Manganese	µg	< 3	< 3	-
Mercury (Hg)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Mercury	µg	< 0.3	< 0.3	-
Molybdenum (Mo)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Molybdenum	µg	< 3	< 3	-
Nickel (Ni)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Nickel	µg	< 3	< 3	-
Phosphorus (P)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Phosphorus	µg	< 287	< 287	-

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

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Certificat d'analyses

Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

Quality Control Results - Part 2

Parameters (Sequential ID No.)	Units	Duplicate Value 1	Duplicate Value 2	Duplicate Difference (%)
Potassium (K)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Potassium	µg	< 1440	< 1440	-
Selenium (Se)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Selenium	µg	< 3	< 3	-
Silicon extractable (Si)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Silicium	µg	< 144	< 144	-
Silver (Ag)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Silver	µg	< 1.4	< 1.4	-
Sodium (Na)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Sodium	µg	< 1440	< 1440	-
Strontium (Sr)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Strontium	µg	< 3	< 3	-
Tellurium (Te)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Tellurium	µg	< 3	< 3	-
Thallium (Tl)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Thallium	µg	< 3	< 3	-
Tin (Sn)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Tin	µg	< 3	< 3	-
Titanium (Ti)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Titanium	µg	< 3	< 3	-
Uranium (U)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Uranium	µg	< 3	< 3	-

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Exova
237 rue de Liverpool
Saint-Augustin-de-Desmaures
Québec
Canada
G3A 2C8

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T : +1 (418) 878-4927
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121 Boulevard Hymus
Pointe-Claire
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H9R 1E6

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Certificat d'analyses

Client: **Exova**

Request Number: 14-611972

P.O. Number	Your Project ID.	Project Manager
NA	R14-034	M. Christian St-Pierre

Quality Control Results - Part 2

Parameters (Sequential ID No.)	Units	Duplicate Value 1	Duplicate Value 2	Duplicate Difference (%)
Vanadium (V)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Vanadium	µg	< 3	< 3	-
Zinc (Zn)				
Sequential ID No: 471911	(Sample no)		(2635985)	
Zinc	µg	< 20	< 20	-

A1-90

SM^{i} LABORATOIRES D'ANALYSES S.M. INC.

2350, Chemin du Lac
Longueuil, Québec J4N 1G8
Tél. (514) 332-6001 Téléc. (514) 332-5066

740, Galt Ouest, 2e étage
Sherbrooke, Québec J1H 1Z3
Tél. (819) 566-8855 Téléc. (819) 566-0224

3705, boul. Industriel
Sherbrooke, Québec J1L 1X8
Tél. (819) 566-8855 Téléc. (819) 566-0224

Annexe au certificat d'analyses

M902978 version 1

Description	Unités	Limite de détection	Blanc	Matériaux de référence		Récupération		Duplicata	
				% obtenu	limites (%)	% obtenu	limites (%)	% écart	limites (%)
Méthode d'analyse: Vapeur froide et AA / MA.203-Hg 1.0 / ILCE-032									
Date d'analyse: 2014-07-30									
No séquence: CS435719									
			Blanc			-		-	
Mercure (Hg)	mg/L	0.0002	<0.0002	106	80 - 120	-	-	-	-

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SM LABORATOIRES D'ANALYSES S.M. INC.

2350, Chemin du Lac
Longueuil, Québec J4N 1G8
Tél. (514) 332-6001 Téléc. (514) 332-5066

740, Galt Ouest, 2e étage
Sherbrooke, Québec J1H 1Z3
Tél. (819) 566-8855 Téléc. (819) 566-0224

3705, boul. Industriel
Sherbrooke, Québec J1L 1X8
Tél. (819) 566-8855 Téléc. (819) 566-0224

Certificat d'analyse

No M902978, version 1

Émis le: 2014-07-31

Client: **EXOVA (Pte-Claire)**
Mme Geneviève Ségigny
121, boul. Hymus
Pointe-Claire, Québec
H9R 1E6

No client: 10596
Tél.: 514-697-3273
Téléc.:
No projet: 16404
Bon de commande: CT-046116
No dossier MDDEFP:

Projet: Analyse d'extrait pour le mercure
Sous-projet: Analyse pour le mercure

Nature de l'échantillon: Air

No éch. / Description		Résultat	Unité	Norme	Analysé le
2323335 / 2635988					
Prélevé le: 2014-07-11	**Par: Client**	**Reçu le: 2014-07-30**			
Mercure (Hg)		0.1440	mg/L	40,03 µg	2014-07-30
Remarques: Les résultats sont exprimés en ug total.		278 mL			
2323336 / 2635994					
Prélevé le: 2014-07-11	**Par: Client**	**Reçu le: 2014-07-30**			
Mercure (Hg)		0.8317	mg/L	250.34 µg	2014-07-30
Remarques: Les résultats sont exprimés en ug total.		301 mL			
2323339 / 2636004					
Prélevé le: 2014-07-11	**Par: Client**	**Reçu le: 2014-07-30**			
Mercure (Hg)		0.0978	mg/L	30.90 µg	2014-07-30
Remarques: Les résultats sont exprimés en ug total.		316 mL			
2323342 / 2636008					
Prélevé le: 2014-07-11	**Par: Client**	**Reçu le: 2014-07-30**			
Mercure (Hg)		<0.02	mg/L	< 2.00 µg	2014-07-30
Remarques: Les résultats sont exprimés en ug total.		100 mL			

Méthode d'analyse	Description	Référence externe	Procédure interne
Mercure	Vapeur froide et AA	MA.203-Hg 1.0	ILCE-032

A1-92

Certificat d'analyse (suite)

No M902978, version 1

Émis le: 2014-07-31

France Luneau, Chimiste, chargée de projet

CHIMISTE France Luneau 1993-133 QUÉBEC

Denise Arbic, Chimiste, Chef de service

CHIMISTE Denise Arbic 86-094 QUÉBEC

Nader Daoud, Chimiste, superviseur

CHIMISTE Nader Daoud 89-105 QUÉBEC

A1-93

AGAT Laboratoires

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

NOM DU CLIENT: EXOVA
1390 RUE HOCQUART
ST-BRUNO DE DE MONTARVILLE, QC J3V6E1
(450) 441-5880

À L'ATTENTION DE: Claude Bélanger

N° DE PROJET: R14-034

N° BON DE TRAVAIL: 14M865864

HAUTE RÉSOLUTION VÉRIFIÉ PAR: Marc-André Desjardins, chimiste

DATE DU RAPPORT: 2014-08-01

VERSION*: 1

NOMBRE DE PAGES: 7

Si vous désirez de l'information concernant cette analyse, S.V.P. contacter votre chargé de projets au (514) 337-1000.

NOTES

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Nous disposerons des échantillons dans les 30 jours suivants les analyses. S.V.P. Contactez le laboratoire si vous désirez avoir un délai d'entreposage.

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ST. LAURENT, QUEBEC
CANADA H4S 1V9
TEL (514)337-1000
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Certificat d'analyse

N° BON DE TRAVAIL: 14M865864

N° DE PROJET: R14-034

NOM DU CLIENT: EXOVA

PRÉLEVÉ PAR:

À L'ATTENTION DE: Claude Bélanger

LIEU DE PRÉLÈVEMENT:

Dioxines et furanes - Air (train d'échantillonnage - OTAN 1988)

DATE DE RÉCEPTION: 2014-07-17

DATE DU RAPPORT: 2014-08-01

				14034-4004+4005+4006+4007+4008+4		14034-4010+4011+401 2+4013+4014+4		14034-4016+4017+401 8+4019+4020+4		14034-4022+4023+402 4+4025+4026+4
IDENTIFICATION DE L'ÉCHANTILLON:				009		015		021		027
MATRICE:				Eau		Eau		Eau		Eau
DATE D'ÉCHANTILLONNAGE:				2014-07-16		2014-07-16		2014-07-16		2014-07-16
Paramètre	**Unités**	**C / N**	**LDR**	**5595856**	**LDR**	**5595877**	**LDR**	**5595923**	**LDR**	**5595924**
2,3,7,8-TCDD (pg total)	pg		2	4	1	7	2	7	0.8	<0.8
1,2,3,7,8 PeCDD (pg total)	pg		3	8	1	13	1	16	0.6	<0.6
1,2,3,4,7,8 HxCDD (pg total)	pg		0.8	5.8	1	9	0.9	12.5	0.5	<0.5
1,2,3,6,7,8 HxCDD (pg total)	pg		0.8	12.8	1	19	1	36	0.6	<0.6
1,2,3,7,8,9 HxCDD (pg total)	pg		0.8	20.6	1	16	1	36	0.6	<0.6
1,2,3,4,6,7,8 HpCDD (pg total)	pg		1	65	0.8	87.8	2	184	1	2
OCDD (pg total)	pg		1	61	1	108	1	196	0.9	3.5
2,3,7,8 TCDF (pg total)	pg		0.5	25.1	0.4	37.9	0.5	36.1	0.6	<0.6
1,2,3,7,8 PeCDF (pg total)	pg		2	18	1	28	2	31	0.4	<0.4
2,3,4,7,8-PeCDF (pg total)	pg		3	37	0.9	68.7	2	79	0.3	<0.3
1,2,3,4,7,8 HxCDF (pg total)	pg		2	63	0.6	118	0.9	176	0.5	<0.5
1,2,3,6,7,8 HxCDF (pg total)	pg		1	26	0.6	46.1	0.8	59.8	0.5	<0.5
2,3,4,6,7,8-HxCDF (pg total)	pg		2	45	0.6	71.9	0.9	103	0.6	<0.6
1,2,3,7,8,9 HxCDF (pg total)	pg		2	5	0.8	4.1	1	6	1	<1
1,2,3,4,6,7,8 HpCDF (pg total)	pg		0.6	86.6	0.7	176	1	302	0.6	<0.6
1,2,3,4,7,8,9 HpCDF (pg total)	pg		0.8	14.7	0.9	20.9	1	28	0.9	<0.9
OCDF (pg total)	pg		1	38	1	62	1	79	1	5
Sommation des Tétrachlorodibenzodioxines	pg		2	161	1	182	2	204	0.8	5.1
Sommation des Pentachlorodibenzodioxines	pg		3	188	1	202	1	392	0.6	4.1
Sommation des Hexachlorodibenzodioxines	pg		0.8	222	1	262	1	494	0.6	4.9
Sommation des Heptachlorodibenzodioxines	pg		1	154	0.8	214	2	452	1	2
Sommation des PCDDs	pg		3	786	1	968	2	1740	1	19

D1-69-15

Certifié par:

AGAT Laboratoires

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

Certificat d'analyse

N° BON DE TRAVAIL: 14M865864

N° DE PROJET: R14-034

NOM DU CLIENT: EXOVA

À L'ATTENTION DE: Claude Bélanger

PRÉLEVÉ PAR:

LIEU DE PRÉLÈVEMENT:

Dioxines et furanes - Air (train d'échantillonnage - OTAN 1988)

DATE DE RÉCEPTION: 2014-07-17

DATE DU RAPPORT: 2014-08-01

				14034-4004+4005+4006+4007+4008+4		14034-4010+4011+401 2+4013+4014+4		14034-4016+4017+401 8+4019+4020+4		14034-4022+4023+402 4+4025+4026+4
IDENTIFICATION DE L'ÉCHANTILLON:				009		015		021		027
MATRICE:				Eau		Eau		Eau		Eau
DATE D'ÉCHANTILLONNAGE:				2014-07-16		2014-07-16		2014-07-16		2014-07-16
Paramètre	**Unités**	**C / N**	**LDR**	**5595856**	**LDR**	**5595877**	**LDR**	**5595923**	**LDR**	**5595924**
Sommation des Tétrachlorodibenzofuranes	pg		0.5	599	0.4	1090	0.5	928	0.6	0.9
Sommation des Pentachlorodibenzofuranes	pg		3	361	1	625	2	756	0.4	<0.4
Sommation des Hexachlorodibenzofuranes	pg		2	272	0.8	459	1	675	1	<1
Sommation des Heptachlorodibenzofuranes	pg		0.8	151	0.9	272	1	443	0.9	<0.9
Sommation des PCDFs	pg		3	1420	1	2510	2	2880	1	6
2,3,7,8-Tetra CDD (TEF 1.0)	TEQ			3.94		7.22		6.74		0
1,2,3,7,8-Penta CDD (TEF 0.5)	TEQ			4.03		6.47		7.85		0
1,2,3,4,7,8-Hexa CDD (TEF 0.1)	TEQ			0.582		0.924		1.25		0
1,2,3,6,7,8-Hexa CDD (TEF 0.1)	TEQ			1.28		1.87		3.59		0
1,2,3,7,8,9-Hexa CDD (TEF 0.1)	TEQ			2.06		1.62		3.59		0
1,2,3,4,6,7,8-Hepta CDD (TEF 0.01)	TEQ			0.653		0.878		1.84		0.0146
Octa CDD (TEF 0.001)	TEQ			0.0615		0.108		0.196		0.00346
2,3,7,8-Tetra CDF (TEF 0.1)	TEQ			2.51		3.79		3.61		0
1,2,3,7,8-Penta CDF (TEF 0.05)	TEQ			0.905		1.41		1.55		0
2,3,4,7,8-Penta CDF (TEF 0.5)	TEQ			18.5		34.4		39.4		0
1,2,3,4,7,8-Hexa CDF (TEF 0.1)	TEQ			6.27		11.8		17.6		0
1,2,3,6,7,8-Hexa CDF (TEF 0.1)	TEQ			2.63		4.61		5.98		0
2,3,4,6,7,8-Hexa CDF (TEF 0.1)	TEQ			4.52		7.19		10.3		0
1,2,3,7,8,9-Hexa CDF (TEF 0.1)	TEQ			0.524		0.412		0.626		0
1,2,3,4,6,7,8-Hepta CDF (TEF 0.01)	TEQ			0.866		1.76		3.02		0
1,2,3,4,7,8,9-Hepta CDF (TEF 0.01)	TEQ			0.147		0.209		0.276		0
Octa CDF (TEF 0.001)	TEQ			0.0376		0.0623		0.0785		0.00460

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Certifié par:

AGAT Laboratoires

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

Certificat d'analyse

N° BON DE TRAVAIL: 14M865864

N° DE PROJET: R14-034

NOM DU CLIENT: EXOVA

À L'ATTENTION DE: Claude Bélanger

PRÉLEVÉ PAR:

LIEU DE PRÉLÈVEMENT:

Dioxines et furanes - Air (train d'échantillonnage - OTAN 1988)

DATE DE RÉCEPTION: 2014-07-17

DATE DU RAPPORT: 2014-08-01

				14034-4004+4005+4006+4007+4008+4		14034-4010+4011+401 2+4013+4014+4		14034-4016+4017+401 8+4019+4020+4		14034-4022+4023+402 4+4025+4026+4	
IDENTIFICATION DE L'ÉCHANTILLON:				**009**		**015**		**021**		**027**	
MATRICE:				**Eau**		**Eau**		**Eau**		**Eau**	
DATE D'ÉCHANTILLONNAGE:				**2014-07-16**		**2014-07-16**		**2014-07-16**		**2014-07-16**	
Paramètre	**Unités**	**C / N**	**LDR**	**5595856**	**LDR**	**5595877**	**LDR**	**5595923**	**LDR**	**5595924**	**LDR**
Sommation des PCDDs et PCDFs (TEQ)				49.5		84.7		107		0.0227	
Étalon de recouvrement	**Unités**	**Limites**									
13C-2378-TCDF	%	30-140		85		88		85		89	
13C-12378-PeCDF	%	30-140		91		88		90		92	
13C-23478-PeCDF	%	30-140		95		112		96		102	
13C-123478-HxCDF	%	30-140		71		73		67		71	
13C-123678-HxCDF	%	30-140		88		70		73		76	
13C-234678-HxCDF	%	30-140		74		77		66		70	
13C-123789-HxCDF	%	30-140		76		74		74		74	
13C-1234678-HpCDF	%	30-140		69		60		64		70	
13C-1234789-HpCDF	%	30-140		76		66		73		79	
13C-2378-TCDD	%	30-140		83		84		83		86	
13C-12378-PeCDD	%	30-140		98		117		104		109	
13C-123478-HxCDD	%	30-140		87		78		83		81	
13C-123678-HxCDD	%	30-140		85		82		74		86	
13C-1234678-HxCDD	%	30-140		77		66		70		76	
13C-OCDD	%	30-140		69		57		63		63	

Commentaires: LDR - Limite de détection rapportée; C / N - Critères Normes

5595856-5595924 Le blanc a été soustrait de l'échantillon.
Le résultat en pg total correspond au composite de chacune des parties du train d'échantillonnage.

Certifié par:

AGAT Laboratoires

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

Contrôle de qualité

NOM DU CLIENT: EXOVA
N° DE PROJET: R14-034
PRÉLEVÉ PAR:

N° BON DE TRAVAIL: 14M865864
À L'ATTENTION DE: Claude Bélanger
LIEU DE PRÉLÈVEMENT:

Analyse haute résolution

Date du rapport: 2014-08-01			DUPLICATA			MATÉRIAU DE RÉFÉRENCE				BLANC FORTIFIÉ			ÉCH. FORTIFIÉ		
PARAMÈTRE	Lot	N° éch.	Dup #1	Dup #2	% d'écart	Blanc de méthode	% Récup.	Limites		% Récup.	Limites		% Récup.	Limites	
								Inf.	Sup.		Inf.	Sup.		Inf.	Sup.
Dioxines et furanes - Air (train d'échantillonnage - OTAN 1988)															
2,3,7,8-TCDD (pg total)	1	NA	NA	NA	0.0	< 1	130%	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,7,8 PeCDD (pg total)	1	NA	NA	NA	0.0	< 1	111%	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,4,7,8 HxCDD (pg total)	1	NA	NA	NA	0.0	< 0.9	109%	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,6,7,8 HxCDD (pg total)	1	NA	NA	NA	0.0	< 0.9	110%	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,7,8,9 HxCDD (pg total)	1	NA	NA	NA	0.0	< 0.9	106%	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,4,6,7,8 HpCDD (pg total)	1	NA	NA	NA	0.0	< 1	110%	70%	130%	NA	70%	130%	NA	70%	130%
OCDD (pg total)	1	NA	NA	NA	0.0	< 2	106%	70%	130%	NA	70%	130%	NA	70%	130%
2,3,7,8 TCDF (pg total)	1	NA	NA	NA	0.0	< 0.8	118%	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,7,8 PeCDF (pg total)	1	NA	NA	NA	0.0	< 0.6	111%	70%	130%	NA	70%	130%	NA	70%	130%
2,3,4,7,8-PeCDF (pg total)	1	NA	NA	NA	0.0	< 0.6	111%	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,4,7,8 HxCDF (pg total)	1	NA	NA	NA	0.0	< 0.4	122%	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,6,7,8 HxCDF (pg total)	1	NA	NA	NA	0.0	< 0.3	108%	70%	130%	NA	70%	130%	NA	70%	130%
2,3,4,6,7,8-HxCDF (pg total)	1	NA	NA	NA	0.0	< 0.4	121%	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,7,8,9 HxCDF (pg total)	1	NA	NA	NA	0.0	< 0.6	127%	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,4,6,7,8 HpCDF (pg total)	1	NA	NA	NA	0.0	< 1	122%	70%	130%	NA	70%	130%	NA	70%	130%
1,2,3,4,7,8,9 HpCDF (pg total)	1	NA	NA	NA	0.0	< 1	127%	70%	130%	NA	70%	130%	NA	70%	130%
OCDF (pg total)	1	NA	NA	NA	0.0	< 2	112%	70%	130%	NA	70%	130%	NA	70%	130%

Certifié par:

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AGAT Laboratoires

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

Sommaire de méthode

NOM DU CLIENT: EXOVA **N° BON DE TRAVAIL: 14M865864**

N° DE PROJET: R14-034 **À L'ATTENTION DE: Claude Bélanger**

PRÉLEVÉ PAR: **LIEU DE PRÉLÈVEMENT:**

PARAMÈTRE	PRÉPARÉ LE	ANALYSÉ LE	AGAT P.O.N.	RÉFÉRENCE DE LITTÉRATURE	TECHNIQUE ANALYTIQUE
Analyse haute résolution					
2,3,7,8-TCDD (pg total)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,7,8 PeCDD (pg total)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,7,8 HxCDD (pg total)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,6,7,8 HxCDD (pg total)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,7,8,9 HxCDD (pg total)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,6,7,8 HpCDD (pg total)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
OCDD (pg total)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
2,3,7,8 TCDF (pg total)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,7,8 PeCDF (pg total)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
2,3,4,7,8-PeCDF (pg total)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,7,8 HxCDF (pg total)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,6,7,8 HxCDF (pg total)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
2,3,4,6,7,8-HxCDF (pg total)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,7,8,9 HxCDF (pg total)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,6,7,8 HpCDF (pg total)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,7,8,9 HpCDF (pg total)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
OCDF (pg total)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Sommation des Tétrachlorodibenzodioxines	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Sommation des Pentachlorodibenzodioxines	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Sommation des Hexachlorodibenzodioxines	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Sommation des Heptachlorodibenzodioxines	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Sommation des PCDDs	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Sommation des Tétrachlorodibenzofuranes	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Sommation des Pentachlorodibenzofuranes	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Sommation des Hexachlorodibenzofuranes	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Sommation des Heptachlorodibenzofuranes	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Sommation des PCDFs	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
2,3,7,8-Tetra CDD (TEF 1.0)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,7,8-Penta CDD (TEF 0.5)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,7,8-Hexa CDD (TEF 0.1)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,6,7,8-Hexa CDD (TEF 0.1)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,7,8,9-Hexa CDD (TEF 0.1)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,6,7,8-Hepta CDD (TEF 0.01)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Octa CDD (TEF 0.001)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
2,3,7,8-Tetra CDF (TEF 0.1)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,7,8-Penta CDF (TEF 0.05)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
2,3,4,7,8-Penta CDF (TEF 0.5)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,7,8-Hexa CDF (TEF 0.1)	2014-07-28	2014-07-31	HR_151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,6,7,8-Hexa CDF (TEF 0.1)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
2,3,4,6,7,8-Hexa CDF (TEF 0.1)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,7,8,9-Hexa CDF (TEF 0.1)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,6,7,8-Hepta CDF (TEF 0.01)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
1,2,3,4,7,8,9-Hepta CDF (TEF 0.01)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS

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AGAT Laboratoires

9770 ROUTE TRANSCANADIENNE
ST. LAURENT, QUEBEC
CANADA H4S 1V9
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NOM DU CLIENT: EXOVA **N° BON DE TRAVAIL: 14M865864**

N° DE PROJET: R14-034 **À L'ATTENTION DE: Claude Bélanger**

PRÉLEVÉ PAR: **LIEU DE PRÉLÈVEMENT:**

PARAMÈTRE	PRÉPARÉ LE	ANALYSÉ LE	AGAT P.O.N.	RÉFÉRENCE DE LITTÉRATURE	TECHNIQUE ANALYTIQUE
Octa CDF (TEF 0.001)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
Sommation des PCDDs et PCDFs (TEQ)	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-2378-TCDF	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-12378-PeCDF	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-23478-PeCDF	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-123478-HxCDF	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-123678-HxCDF	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-234678-HxCDF	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-123789-HxCDF	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-1234678-HpCDF	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-1234789-HpCDF	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-2378-TCDD	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-12378-PeCDD	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-123478-HxCDD	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-123678-HxCDD	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-1234678-HxCDD	2014-07-28	2014-07-31	HR-151-5400	EPA 1613/EPA Method 23	HRMS
13C-OCDD	2014-07-28	2014-07-31	HR-151-5400	CEAEQ MA.400 - DF 1.0	HRMS

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Exova Inc.
1390 Rue Hocquart
St-Bruno de Montarville
Québec
Canada
J3V 6E1

T : +1 (450) 441-5680
F : +1 (450) 441-4316
E : sales@exova.com
W: www.exova.com

Certificat d'analyses

Agnico-Eagle Mines Ltd, Meadowbank Division

Baker Lake, Nunavut

Stack sampling

Project R14-034

Samples	Laboratory Number	NOx (µg)
Detection limit		4
Incinerator		
Test #1	Flask G-11	14034-4185	< 4
Test #1	Flask G-12	14034-4186	4
Test #2	Flask G-11	14034-4187	12
Test #2	Flask G-12	14034-4188	14

Reception date : July 29th, 2014

Date of analysis : July 31th, 2014

Report date: August 01st, 2014

Reference method : non accredited

File number: 14034-02 version 1

CHIMISTE Christian St-Pierre E003-107 QUÉBEC

Christian St-Pierre, B. Sc. Chemist

AI-101